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Examining the Challenges and Opportunities of ChatGPT in EFL Education: A Systematic Literature Review

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Abstract

English as a Foreign Language (EFL) education faces challenges in effectively promoting language learning, and the integration of ChatGPT holds promise as a solution. This systematic literature review (SLR) aims to comprehensively explore the challenges and opportunities of ChatGPT integration in the EFL context, specifically focusing on its impact on learner autonomy and self-directed learning. Through a systematic search across ScienceDirect, Education Resources Information Center (ERIC), and Google Scholar, with Full text databases, 13 relevant articles were identified and analysed. The review revealed several challenges associated with ChatGPT integration, including language accuracy issues, limited context sensitivity, and the need to strike a balance between technology and human interaction. However, it also identified promising opportunities, such as personalised and interactive language learning experiences, immediate feedback provision, and enhanced learner engagement. These findings underscore the importance of considering both challenges and opportunities in ChatGPT integration. To optimise the benefits while maintaining the essential role of human interaction, adequate training for educators is crucial. This SLR significantly contributes to understanding the challenges and opportunities related to ChatGPT integration in EFL education. The identified lacunae and recommendations provide valuable insights for EFL educators, researchers, and policymakers, guiding effective implementation strategies to improve language learning experiences. Further research is needed to explore the pedagogical implications and long-term effects of ChatGPT integration in diverse EFL contexts. Addressing these voids will enable EFL education to harness the full potential of ChatGPT, enhancing language learning outcomes, fostering learner autonomy and self-directed learning, and transforming instructional practices.

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Introduction

EFL education is a dynamic field that continuously seeks to improve language learning outcomes and adapt to the changing demands of learners. In this ongoing quest, the integration of technology has emerged as a key avenue for exploration and innovation (Azmi, 2017; Fitriah, 2018; Flavin, 2017; Sabiri, 2020; Shadiev & Yang, 2020). Among the various technological tools that have gained significant attention, ChatGPT, an AI-based language model developed by OpenAI, has shown immense potential in revolutionising the landscape of language learning (Duha, 2023; Hassani & Silva, 2023; Qureshi et al., 2023). At its core, ChatGPT harnesses the power of natural language processing and machine learning algorithms to simulate human-like conversation (Lund et al., 2023; Rahm & Rahm-Skågeby, 2023; Zhou et al., 2023). This unique capability enables learners to engage in interactive and dynamic language learning experiences. Through intelligent and contextually relevant responses, ChatGPT fosters a conversational environment that promotes active engagement, fluency development, and linguistic proficiency (Chen et al., 2023; Rudolph & Tan, 2023). By leveraging the vast amount of language data that it has been trained on, ChatGPT can offer learners personalised feedback and guidance, facilitating individualised language acquisition (Bonsu & Baffour-Koduah, 2023; Kasneci et al., 2023; Zhu & Wang, 2023). The incorporation of ChatGPT into EFL education presents a range of exciting possibilities. Firstly, it has the potential to address existing challenges faced by language learners and educators alike. For instance, learners often struggle with finding opportunities for meaningful practice and interaction outside the classroom. ChatGPT bridges this shortcoming by providing a virtual conversational partner that is available anytime, anywhere (Duha, 2023; Haman & Školník, 2023). Moreover, it offers a non-judgmental and low-anxiety environment where learners can practice their language skills, experiment with different linguistic structures, and receive immediate feedback (Chen et al., 2023; Rospigliosi, 2023).

Furthermore, ChatGPT opens up new horizons for language learning by expanding the boundaries of traditional classroom instruction. It enables learners to engage with authentic language use, explore cultural nuances, and develop their communicative competence (Lund & Wang, 2023; Slamet, 2024; Su & Yang, 2023). Through its ability to generate contextually relevant responses, ChatGPT facilitates immersive language experiences that mimic real-life communication scenarios. This not only enhances learners' linguistic proficiency but also nurtures their cultural awareness and intercultural competence. The integration of ChatGPT into EFL education represents a significant opportunity for educators and learners to reimagine and redefine the language learning landscape (Rudolph & Tan, 2023; Seetharaman, 2023). However, it is important to approach this integration with a critical lens. While ChatGPT offers exciting prospects (Baskara & Mukarto, 2023; Duha, 2023; Lund et al., 2023), it is essential to consider potential limitations, such as language accuracy issues, lack of context sensitivity, and the need to strike a balance between technology and human interaction (Kasneci et al., 2023; Sok & Heng, 2023). By critically examining the promises and challenges of ChatGPT integration in EFL education, this current research aims to provide a comprehensive understanding of its potential impact. It seeks to identify effective strategies for leveraging the strengths of ChatGPT while mitigating its limitations.

In recent years, the integration of technology in language education has garnered significant attention and has been shown to offer various benefits to language learners (For examples: Azmi,

2017; Reyes et al., 2017; Sabiri, 2020; Sointu et al., 2019). However, when it comes to the specific integration of AI-based language models like ChatGPT in the EFL context, the literature remains limited in its exploration of the challenges and opportunities (Baskara, 2023; Baskara & Mukarto, 2023; Han et al., 2023; Koraishi, 2023; Liu, 2023; Saeed & Moqbel, 2023; Schmidt-Fajlik, 2023; Yan, 2023; Zhu & Wang, 2023). While some studies have examined the broader use of technology in language learning, there is a notable lacuna in understanding the unique implications of ChatGPT integration in the EFL educational setting (Baskara, 2023; Chen et al., 2023; Haman & Školník, 2023; Koraishi, 2023; Zhou et al., 2023). Previous research has primarily focused on traditional instructional approaches and computer-assisted language learning tools, such as online language courses, virtual language exchanges, and intelligent tutoring systems (Çelik & Arkin, 2012; Comi et al., 2017; Nikolić, et al., 2019; Sabiri, 2020; Somekh, 2008). These studies have contributed valuable insights into the effectiveness and pedagogical benefits of technology integration. However, they often overlook the specific characteristics and implications of AI-powered language models like ChatGPT (Duha, 2023; Hassani & Silva, 2023; Qureshi et al., 2023). The lack of in-depth exploration in this area is a significant research gap that needs to be addressed.

As the integration of AI-based language model, ChatGPT becomes more prevalent and concerns have been raised regarding their potential impact on EFL education (Duha, 2023; Seetharaman, 2023; Shen et al., 2023). Critics argue that excessive reliance on technology could hinder the development of essential skills and diminish the role of human interaction and personalised instruction in language acquisition (Chen et al., 2023; Haman & Školník, 2023). Given these concerns, it is crucial to critically examine both the challenges and opportunities posed by ChatGPT's integration into EFL education. This study seeks to offer a balanced assessment, focusing on the impact of ChatGPT on language learning while highlighting the continued importance of human interaction and personalised instruction.

This study offers a balanced evaluation of ChatGPT's impact, addressing the challenges of maintaining academic integrity while exploring its opportunities to enhance language learning. By examining these issues, the study provides a comprehensive understanding of how ChatGPT affects EFL education, considering its benefits and limitations. Focusing on both the risks of misuse and the potential for academic dishonesty, this research aims to clarify how ChatGPT can be integrated effectively into EFL settings. It also explores how educators can leverage ChatGPT to enrich learning without compromising academic standards. Employing a systematic literature review (SLR) methodology, the study seeks to bridge critical gaps in knowledge and inform future research on ChatGPT's role in EFL education. By offering evidence-based strategies, the research empowers educators to make informed decisions about incorporating ChatGPT into their teaching practices. The study addresses the need for pedagogical alignment with technological advances, ensuring that the integration of ChatGPT enhances educational outcomes while safeguarding academic integrity. This research provides insights that support evidence-based decision-making in EFL contexts, guiding the effective use of ChatGPT to shape the future of language learning. This study is guided by the following question:

1. What are the challenges and opportunities associated with the integration of ChatGPT in EFL education?

Literature

EFL education is a constantly evolving domain, motivated by the necessity to enhance language learning outcomes and adapt to the evolving needs of learners. In response to these challenges, there has been a growing interest in leveraging AI technology for language education, as it offers new avenues and possibilities for effective language instruction (Hassani & Silva, 2023; Mhlanga, 2023; Slamet, 2024; Wollowski, 2023). One emerging technology that has shown promise in this regard is ChatGPT, an AI-based language model developed by OpenAI. Several studies have explored the general use of technology in language learning, highlighting its potential to enhance engagement, interactivity, and learner autonomy (Baidoo-Anu & Ansah, 2023; Cooper, 2023; Rahm & Rahm-Skågeby, 2023; Sok & Heng, 2023). However, there exists a notable research gap regarding the specific challenges and opportunities associated with the integration of AI-based language models like ChatGPT in the EFL context (Baskara, 2023; Baskara & Mukarto, 2023; Halaweh, 2023; Javaid et al., 2023). Understanding the unique implications of ChatGPT integration is crucial for educators and researchers seeking to harness its full potential and address any potential drawbacks.

ChatGPT, powered by natural language processing and machine learning algorithms, simulates human-like conversation and offers interactive language learning experiences. Previous studies have demonstrated the effectiveness of AI-based language models in various educational contexts, such as providing personalised feedback, promoting learner engagement, and facilitating language practice (Baidoo-Anu & Ansah, 2023; Bonsu & Baffour-Koduah, 2023; Cooper, 2023; Lund et al., 2023; Wu & Yu, 2023). However, the application of ChatGPT specifically in EFL education requires careful consideration of its challenges and opportunities (Adiguzel et al., 2023; Javaid et al., 2023; Mhlanga, 2023; Zhai, 2023). The challenges of ChatGPT integration in EFL education encompass several aspects. Firstly, ensuring language accuracy and context sensitivity remains a crucial concern, as AI models may not always generate precise or contextually appropriate responses (Adiguzel et al., 2023; Baskara, 2023; Yan, 2023b). Secondly, finding the right balance between technology and human interaction is essential, as excessive reliance on AI models may diminish the role of human teachers and social interaction, which are vital for language learning (Bahrami et al., 2023; Mhlanga, 2023). Additionally, considerations around data privacy and ethical use of AI should also be addressed (Kefalaki, et al., 2022; Tan, 2023; Tlili et al., 2023).

Previous studies on ChatGPT in EFL education have made significant contributions to understanding its potential applications and limitations (Baidoo-Anu & Ansah, 2023; Bonsu & Baffour-Koduah, 2023; Lund et al., 2023; Schmidt-Fajlik, 2023; Wu & Yu, 2023). Several investigations have examined the effectiveness of ChatGPT in fostering language learning, highlighting its ability to provide immediate and personalised feedback, engage learners in interactive conversations, and promote autonomous language practice (Baskara, 2023; Han et al., 2023; Koraishi, 2023; Yan, 2023b). These studies have explored various aspects of ChatGPT implementation, including its impact on language learners. Furthermore, researchers have investigated the factors influencing the successful integration of ChatGPT in EFL classrooms, such as learner motivation, the role of teachers in scaffolding interactions, and the design of effective prompts and tasks (Halaweh, 2023; Javaid et al., 2023). However, despite these valuable insights, there are still several gaps in the existing literature that need to be addressed,

such as the long-term impact of ChatGPT on language proficiency, the assessment of its pedagogical effectiveness in comparison to traditional instruction, and the exploration of ethical considerations and potential biases associated with AI-powered chatbots in language education (Bahrami et al., 2023; Baskara, 2023; Han et al., 2023; Koraishi, 2023; Mhlanga, 2023; Zhai, 2023).

In sum, while AI-based language models like ChatGPT offer significant potential for enhancing EFL education by providing personalised feedback, promoting engagement, and facilitating language practice, there remain critical gaps in understanding their full impact. Challenges related to language accuracy, the balance between AI and human interaction, and ethical considerations need careful attention. Additionally, further research is needed to explore the long-term effects of ChatGPT on language proficiency, its comparative effectiveness to traditional methods, and the ethical implications of its use in the classroom. Addressing these gaps will be essential for maximising the benefits of ChatGPT in EFL contexts.

Method

The systematic review followed the guidelines provided by the Cochrane Collaboration's Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Moher et al., 2009) as a framework. While resembling a systematic review in methodology and incorporating certain components, a systematised review may not fulfil all the requirements for a comprehensive systematic review (Grant & Booth, 2009). In this study, the researchers strictly adhered to the PRISMA guidelines to ensure a structured and rigorous approach throughout the review process. Employing the SLR methodology, the study aimed to analyse the challenges and opportunities associated with integrating ChatGPT in EFL education in a comprehensive and transparent manner. The review was conducted by two researchers: the first author led the literature search, data extraction, and initial analysis, while the second author assisted with these tasks and contributed to synthesising findings. This collaborative approach ensured a thorough and reliable review. The SLR methodology enabled a systematic identification, selection, and evaluation of relevant articles, ensuring a rigorous and replicable analysis. The process followed a predefined protocol, including a comprehensive search strategy, clear inclusion and exclusion criteria, and a structured approach to data extraction and synthesis.

Search Strategy

A computer-based database search approach was employed to conduct the literature search, utilising three prominent databases: ScienceDirect, Education Resources Information Center (ERIC), and Google Scholar. These databases were selected due to their comprehensive coverage of publications in the education field (ERIC), scholarly works (ScienceDirect), and a wide range of disciplines (Google Scholar). It is important to note that although scholarly journals may be indexed in multiple databases, the chosen databases were carefully selected to ensure comprehensive coverage within their respective areas. Web of Science, ERIC, and Google Scholar were accessed to retrieve relevant articles for the review. These databases offer a diverse collection of scholarly literature, including peer-reviewed journal articles, conference proceedings, and other relevant publications. By utilising these databases, we aimed to gather a

comprehensive and representative range of literature in the field of EFL education, considering publications from various disciplines and sources.

The search strategy for this systematic literature review was meticulously designed to ensure a thorough and comprehensive examination of the integration of ChatGPT in EFL education. We conducted a detailed search across three prominent databases: ScienceDirect, ERIC, and Google Scholar. The initial search employed targeted keywords such as *ChatGPT*, *EFL education*, *EFL classroom*, *language learning*, and *technology integration*. Boolean operators were utilised to refine the search and ensure a focus on relevant studies. For example, combinations like *ChatGPT AND EFL education* and *language learning AND technology integration* were used to narrow down the results to articles specifically addressing the intersection of these themes. In the case of ERIC, the search yielded four pertinent articles, which were identified through a combination of keyword search and title and abstract screening. The limited number of results from ERIC can be attributed to its specialised focus on educational resources and its narrower scope compared to broader databases. Conversely, ScienceDirect provided a substantial yield of 215 articles, reflecting its extensive repository of scholarly works in various disciplines. Google Scholar contributed 146 studies, offering a diverse range of perspectives and methodologies from multiple fields. These results were further screened based on relevance to the research questions, inclusion criteria, and methodological rigor, ensuring that the selected studies significantly contribute to understanding both the challenges and opportunities of integrating ChatGPT in EFL education contexts. The rigorous application of these search strategies and criteria aimed to build a solid foundation for the review, enhancing the robustness and depth of the findings.

In addition to the selected databases, other sources of literature were also considered to enhance the comprehensiveness of the review. This included searching through conference proceedings and exploring grey literature, which refers to non-traditional sources such as reports, dissertations, and working papers. By including these additional sources, the aim was to gather a wide range of perspectives and insights on the challenges and opportunities of ChatGPT integration in EFL education. The systematic search process involved carefully screening the titles, abstracts, and full texts of the identified articles based on predetermined inclusion and exclusion criteria. This rigorous screening process ensured that only relevant and high-quality articles were selected for further analysis. By employing a systematic and comprehensive search strategy, this study aims to provide a thorough and robust examination of the existing literature on ChatGPT integration in EFL education, capturing a diverse range of perspectives and insights from various sources.

Selection Criteria

The selection criteria applied in this research were meticulously designed to ensure the inclusion of pertinent studies while maintaining methodological rigor. Inclusion criteria focused on articles that specifically investigated the challenges and opportunities related to integrating ChatGPT in EFL education. Additionally, studies examining the application of ChatGPT in English language learning contexts were considered relevant, as they provided broader insights into the integration of AI-based language models or technologies in educational settings. These studies contributed valuable perspectives that enhanced understanding of the specific challenges and opportunities associated with ChatGPT integration in EFL education. Conversely, exclusion criteria were

rigorously applied to studies that did not directly address ChatGPT or EFL education, ensuring the selection of articles closely aligned with the research focus and objectives. This approach aimed to facilitate a comprehensive and nuanced exploration of the literature, supporting informed discussions and insights into the implications of integrating ChatGPT into language learning environments.

Data Extraction and Analysis

In the data extraction phase, a systematic approach was employed to extract pertinent information from the selected articles. This involved meticulously recording details such as the authors' names, publication year (2022-May 2023), research objectives, methodologies employed, key findings, and implications. The systematic organisation of this information provided a robust foundation for synthesising a comprehensive overview of the literature on ChatGPT integration in EFL education. Furthermore, the extracted data underwent a rigorous thematic analysis to uncover underlying patterns, recurring themes, and relationships embedded within the collected information. This analytical process involved categorising and comparing findings across studies, highlighting commonalities and discrepancies in how ChatGPT is perceived and utilised in EFL educational contexts. By systematically grouping and analysing similar ideas, this approach facilitated a nuanced exploration of the complexities surrounding ChatGPT integration, offering deeper insights into its potential impacts on language learning outcomes and pedagogical practices.

Quality Assessment

In order to uphold the validity and reliability of the selected articles, a rigorous quality assessment process was meticulously conducted. This assessment scrutinised several critical factors, including the clarity and specificity of research objectives, appropriateness and rigor of methodologies employed, reliability of data analysis procedures, and the direct relevance of findings to the research questions posed. Each article underwent thorough evaluation against these criteria to ensure its adherence to high standards of scholarly integrity and methodological rigor. By implementing such stringent quality assessment measures, the study aimed to include only those sources that met these rigorous criteria, thereby enhancing the credibility and robustness of the SLR (Grant & Booth, 2009). This approach ensured that the conclusions and insights drawn from the selected articles were grounded in sound research practices and dependable data analysis methodologies, thus contributing to a comprehensive and reliable examination of the challenges and opportunities associated with ChatGPT integration in EFL education contexts.

Data Synthesis

The synthesis of data from the selected articles aimed to provide a comprehensive overview of the challenges and opportunities associated with ChatGPT integration in EFL education. This involved a meticulous process of thematic organisation, ensuring a cohesive and logical presentation of the findings. Initially, each article was reviewed to extract pertinent data points, which were then categorised into common themes. Through this detailed exploration, the study identified both converging and diverging perspectives, highlighting emerging trends within the

literature. By analysing the data holistically, the synthesis process uncovered underlying complexities and nuanced insights into the practical implications of ChatGPT integration. This approach not only revealed the multifaceted nature of the topic but also facilitated the identification of key themes, such as pedagogical effectiveness, student engagement, and technological challenges. Consequently, these insights enabled the formulation of meaningful conclusions and actionable recommendations, aimed at enhancing the implementation of ChatGPT in EFL education.

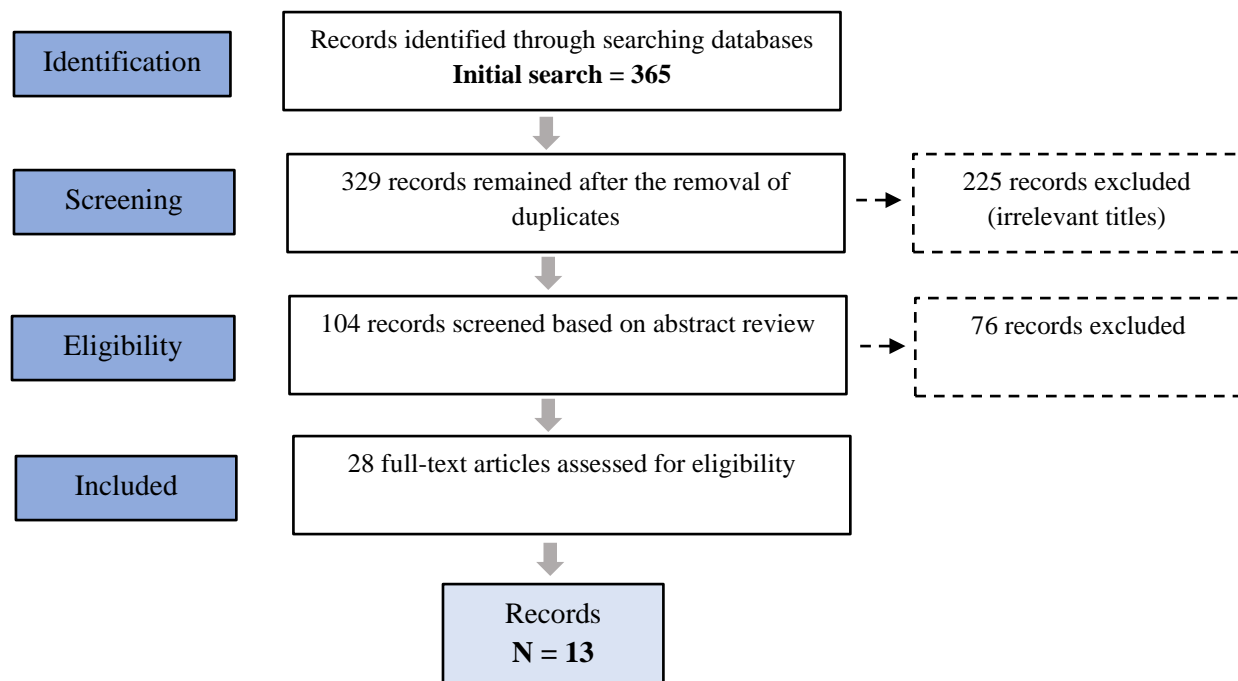
Results

Results Articles' Retrieval Information

The article retrieval process resulted in the identification of 13 eligible articles for inclusion in the study. The PRISMA diagram illustrating the selection process is depicted in Figure 1, while Table 1 presents the search results organised by databases.

Figure 1

PRISMA Flow Diagram for Retrieving Articles



Note. Adapted from Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement (Moher, Liberati, Tetzlaff, & Altman, 2009), p. 339.

Table 1*Search Results Organised by Databases*

Database	Number of Articles
ScienceDirect	215
Education Resources Information Center (ERIC)	4
Google Scholar	146

Then, the following table 2 provides a crucial role in the research by presenting essential details about the articles selected for analysis. This table provides key information such as the authors' names, publication years, titles and aims of the included articles. By consolidating this bibliographic data, Table 2 serves as a valuable reference point, enabling researchers and readers to easily access and locate the specific articles that were considered in this SLR. It facilitates efficient navigation through the body of research and contributes to the transparency and reproducibility of this study.

Table 2*Bibliographic Information of the Included Articles*

No Article	Authors	Year	Title	Aim(s)
1	Perkins, M.	2023	Academic integrity considerations of AI large language models in the post-pandemic era: ChatGPT and beyond	Exploring the academic integrity considerations of students' use of artificial intelligence (AI) tools using large language models (LLMs) such as ChatGPT in formal assessments
2	Zang, et al.	2023	Chatbot-based learning of logical fallacies in EFL writing: Perceived effectiveness in improving target knowledge and learner motivation	Investigating the effectiveness of chatbots in developing knowledge of logical fallacy in EFL writing and enhancing learner motivation

3	Vera, F.	2023	Enhancing English language learning in undergraduate students using ChatGPT: A quasi-experimental study	Examining the effectiveness of ChatGPT as a language learning tool for undergraduate students studying English as a foreign language (L2) at a Chilean private university
4	Muñoz, et al.	2023	Examining the impacts of ChatGPT on student motivation and engagement	Investigating the effects of ChatGPT on student motivation and engagement
5	Han, et al.	2023	RECIPE: How to integrate ChatGPT into EFL writing education	Investigating EFL students' perception and usage of generative AI, including ChatGPT, in academic courses.
6	Koraishi, O.	2023	Teaching English in the age of AI: Embracing ChatGPT to optimize EFL materials and assessment	Exploring the versatile applications of ChatGPT as a valuable tool in any EFL teacher's toolkit, specifically focusing on material development and assessment
7	Hong, W. C. H.	2023	The impact of ChatGPT on foreign language teaching and learning: Opportunities in education and research	Exploring the mechanisms, functions, and common misconceptions associated with ChatGPT on foreign language
8	Aktay, et al.	2023	ChatGPT in education	Investigating students' thoughts on the use of ChatGPT in education
9	Schmidt-Fajlik, R.	2023	ChatGPT as a grammar checker for Japanese English language learners: A comparison with Grammarly and ProWritingAid	Exploring the use of ChatGPT to help students understand and improve their English grammar in comparison with Grammarly and ProWritingAid.

10	Zhou, et al.	2023	Chinese intermediate English learners outdid ChatGPT in deep cohesion: Evidence from English narrative writing	Investigating the writing performance on a narrative topic by ChatGPT and Chinese intermediate English (CIE) learners to reveal the chatbot's advantage and disadvantage in writing
11	Liu, B.	2023	Chinese university students' attitudes and perceptions in learning English using ChatGPT	Assessing Chinese university students' attitudes towards using ChatGPT to improve their English learning and their perceptions regarding the advantages and disadvantages of ChatGPT
12	Yan, D.	2023	Impact of ChatGPT on learners in a L2 writing practicum: An exploratory investigation	Gaining insights into the use of ChatGPT's text generation function for completing L2 writing tasks and understanding students' perception of it
13	Baskara, FX. R	2023	Integrating ChatGPT into EFL writing instruction: Benefits and challenges	Exploring the potential benefits and challenges of using ChatGPT in EFL writing instruction

Table 2 presents a detailed overview of the articles reviewed, providing bibliographic information and aims of each study. To build on this foundation, it is crucial to explore the broader implications of integrating ChatGPT into EFL education by addressing both the challenges and opportunities identified in the literature.

Challenges Associated with ChatGPT Integration in EFL Education

One significant challenge in integrating ChatGPT into EFL education is its accuracy and reliability in generating language content. Perkins (2023) examines the implications of ChatGPT for academic integrity, noting that the AI's responses can sometimes be imprecise or inaccurate. This issue poses a risk of disseminating incorrect information or generating misleading feedback, which can compromise the learning experience. Schmidt-Fajlik (2023) further supports this view by comparing ChatGPT with traditional grammar-checking tools, revealing that while ChatGPT can provide useful feedback, it occasionally falls short in precision compared to specialised tools like Grammarly and ProWritingAid. This discrepancy underscores the need for educators to carefully evaluate and supplement AI-generated feedback with human oversight to ensure

accuracy and reliability. Another challenge is contextual understanding and adaptability. Zang et al. (2023) highlight that while ChatGPT can engage learners in interactive exercises, its responses often lack the depth of contextual understanding required for nuanced language learning. This limitation can result in feedback that is overly generalised or not sufficiently tailored to the learner's specific needs. Han et al. (2023) also point out that EFL students have varying perceptions of ChatGPT's effectiveness, suggesting that the AI's uniform approach may not address the diverse needs of all learners effectively. This calls for a more nuanced integration of ChatGPT, where its responses are calibrated to better fit individual learning contexts and proficiency levels. Furthermore, there is a concern regarding the balance between technology and human interaction. Liu (2023) argues that overreliance on ChatGPT could diminish the essential human elements of language learning, such as interpersonal communication and emotional support. While ChatGPT provides a non-judgmental environment for practice, it lacks the empathetic feedback and motivational support that human instructors offer. This challenge emphasises the need for a blended approach that combines AI tools with traditional teaching methods to maintain the relational and interactive aspects of language education.

Opportunities Offered by ChatGPT in Enhancing EFL Education

Despite these challenges, the integration of ChatGPT presents several compelling opportunities for enhancing EFL education. One notable opportunity is the personalisation of learning experiences. Vera (2023) demonstrates that ChatGPT can adapt to individual learner needs, offering tailored feedback that caters to various proficiency levels and learning styles. This personalised approach is particularly beneficial in addressing specific areas of difficulty and providing targeted practice, thereby supporting more effective language acquisition. Muñoz et al. (2023) also highlight how ChatGPT's personalised interactions contribute to increased student motivation and engagement, as learners receive immediate and relevant feedback that aligns with their progress. Another significant opportunity is the enhancement of authentic language use. Koraishi (2023) discusses how ChatGPT can be utilised to develop and assess language materials, creating more engaging and contextually relevant content for EFL learners. Hong (2023) further explores how ChatGPT can simulate real-life language scenarios, allowing learners to practice their language skills in contexts that closely mirror actual usage. This simulation of authentic communication scenarios not only improves learners' practical language skills but also fosters a deeper understanding of cultural and contextual nuances. Additionally, ChatGPT enables innovative pedagogical approaches. Aktay et al. (2023) highlight the versatility of ChatGPT in supporting various educational activities, from practice exercises to exploratory tasks. This versatility allows educators to incorporate ChatGPT into a wide range of instructional strategies, promoting interactive and dynamic learning environments. The AI's ability to generate diverse types of content and feedback supports the development of creative and engaging language learning activities, which can enhance the overall educational experience.

Overall, while the integration of ChatGPT into EFL education presents challenges related to accuracy, contextual understanding, and balancing technology with human interaction, it also offers substantial opportunities for personalised learning, authentic language practice, and innovative pedagogical strategies. Addressing the challenges through careful implementation and integrating ChatGPT's capabilities with traditional teaching methods can maximise its potential to

enhance EFL education. This comprehensive approach will be crucial in leveraging ChatGPT to support effective language learning and teaching practices.

The following table provides a comprehensive overview of the main themes and categories explored in this SLR. These themes and categories represent the key areas investigated in the 13 included articles, all focused on understanding the integration of ChatGPT in EFL education. The table highlights the different dimensions examined, including academic integration, language learning outcomes, student engagement and motivation, teacher roles and instructional strategies, writing support and feedback, language assessment and feedback, ethical considerations, and technological integration and support.

Table 3

Themes and Categories of ChatGPT Integration in EFL Education

Theme	Category	Indicator	Article no.
Integration of ChatGPT in EFL education	Academic integration	Use of ChatGPT in EFL assessments	1, 6
Effectiveness of ChatGPT in language learning	Language learning outcomes	Impact of ChatGPT on improving language skills	1, 2, 3, 5, 6, 8, 9 and 11
Motivation and engagement in ChatGPT-based language learning	Student engagement and motivation	Influence of ChatGPT on student motivation	2, 3, 4, 5, 6, 8, 10, 11 and 12
Pedagogical strategies and ChatGPT integration	Teacher roles and instructional strategies	Incorporation of ChatGPT in EFL instructional practices	1, 2, 5, 6, 7 and 13
Writing support and feedback with ChatGPT	Writing assistance and feedback	Utilisation of ChatGPT as a tool for writing support	2, 5, 8, 10, 12 and 13
ChatGPT for language assessment and feedback	Language assessment and feedback	Application of ChatGPT for language assessment	1, 3, 5, 6, 7, 8, 10, 11, 12 and 13
Ethical considerations in ChatGPT integration	Ethical implications and bias	Examination of ethical issues in using ChatGPT in EFL	1, 2, 6, 7 and 13
Technological integration of ChatGPT in EFL	Technological integration and Support	Integration of ChatGPT in EFL learning platforms	1, 6, 8, 9 and 13

Table 3 provides a multifaceted thematic analysis of ChatGPT integration in EFL education, revealing its diverse applications and implications through a comprehensive synthesis of existing research.

Integration of ChatGPT in EFL Education

The integration of ChatGPT in EFL education is rapidly gaining attention, especially in its role in formal assessments. Perkins (2023) explores the ethical implications of using ChatGPT for assessments, emphasising the necessity for academic integrity in AI-mediated evaluations. One of the significant potentials of ChatGPT is its ability to automate grading and provide real-time feedback, which could significantly streamline traditional assessment methods. This capability is seen as a game-changer in improving assessment efficiency, especially in large EFL classrooms where personalised feedback may be challenging to achieve. Moreover, Koraishi (2023) extends this by discussing ChatGPT's potential to dynamically generate customised assessment questions that adapt to individual student needs, thus personalising the assessment experience. This adaptability allows for a more differentiated approach to evaluating language proficiency. However, despite these benefits, a substantial challenge lies in ensuring the fairness and reliability of AI-driven assessments. As AI tools like ChatGPT become more integrated into academic assessments, educators face the task of mitigating potential biases in grading algorithms and ensuring that AI tools do not inadvertently disadvantage certain groups of students.

Effectiveness of ChatGPT in Language Learning

ChatGPT's effectiveness in enhancing language learning outcomes has been supported by various studies, which highlight its role in promoting vocabulary acquisition, grammar understanding, and fluency. Vera (2023) provides evidence that ChatGPT's interactive exercises facilitate vocabulary retention by placing words in contextualised dialogues, while also improving grammatical accuracy through corrective feedback. Han et al. (2023) explore the application of ChatGPT in refining fluency and pronunciation, suggesting that the tool's interactive nature offers a more immersive experience compared to traditional language learning methods. The continuous dialogue and real-time responses offered by ChatGPT enable learners to engage in active communication, which is essential for improving spoken language skills. Furthermore, Liu (2023) notes that ChatGPT creates personalised learning pathways by tracking learner progress and adjusting its interactions to meet individual needs, which enhances language acquisition efficiency. Moreover, Schmidt-Fajlik (2023) and Aktay et al. (2023) reinforce these findings, emphasising that ChatGPT helps students develop language proficiency by providing instant feedback on grammar, syntax, and vocabulary. However, these studies also point out a critical challenge: while ChatGPT can offer instant corrections, it must be able to handle a wide range of linguistic needs and provide contextually appropriate responses. This remains a major challenge, as AI tools may not always fully understand the nuances of different languages or contexts, which can lead to incomplete or misleading feedback.

Motivation and Engagement in ChatGPT-based Language Learning

Motivation and engagement are critical components of effective language learning, and ChatGPT shows considerable promise in enhancing these aspects. Zang et al. (2023) highlight how ChatGPT's conversational features stimulate student interest by creating a dynamic, interactive

learning environment that keeps students engaged. ChatGPT's ability to engage in natural conversations and respond in real-time helps foster a more active learning experience, contrasting with the passive nature of traditional language learning materials. This interactivity is particularly important in language acquisition, where learners often struggle to find opportunities for practice outside the classroom.

Muñoz et al. (2023) further support this by demonstrating how ChatGPT can boost student motivation by providing immediate, personalised feedback, which is crucial for maintaining interest in language learning tasks. This level of personalised engagement has been shown to improve learners' confidence, as they feel more supported and recognised for their efforts. Han et al. (2023) also explore how students' perceptions of ChatGPT's use in academic writing courses positively correlate with increased motivation to improve writing skills. By adapting its feedback to the learner's level, ChatGPT helps students stay motivated by ensuring that challenges are appropriately aligned with their current capabilities.

These findings underscore ChatGPT's transformative potential in fostering motivation and engagement, particularly in EFL classrooms where maintaining student interest can be challenging. Given these insights, educators are encouraged to consider how AI tools can be integrated into curricula to enhance both engagement and learning outcomes.

Pedagogical Strategies and ChatGPT Integration

A key area of interest in the integration of ChatGPT is its potential to reshape pedagogical strategies in EFL instruction. Several studies in the synthesis examine how educators can leverage ChatGPT to optimise material development and enhance teaching practices. Zang et al. (2023) highlight ChatGPT's utility in supporting teachers with the creation of customised instructional materials, thus reducing preparation time while offering tailored content for diverse learning needs. Perkins (2023) also discusses how ChatGPT can support teachers in creating dynamic learning environments through adaptive learning technologies that respond to student input. This enables more flexible and responsive teaching, which can address various learning styles and paces, thereby promoting more individualised learning.

Moreover, Koraishi (2023) and Han et al. (2023) emphasize that ChatGPT's versatility allows educators to adjust their teaching strategies based on real-time student feedback. For instance, teachers can use ChatGPT-generated insights to identify common areas where students are struggling, adapting their lessons to target these weaknesses. This level of adaptability is particularly valuable in fostering student engagement and improving learning outcomes, as it allows for a more learner-centred approach.

Writing Support and Feedback with ChatGPT

Writing support is another critical area where ChatGPT has shown effectiveness in EFL education. Zang et al. (2023), Han et al. (2023), and Baskara (2023) emphasise ChatGPT's capacity to provide personalised feedback that extends beyond basic grammar checking. This feedback includes suggestions for improving coherence, enhancing vocabulary, and refining writing structure. Yan (2023) further compares ChatGPT with other grammar-checking tools, noting that ChatGPT's unique feature lies in its ability to offer contextualised suggestions based on the writer's intent, something that traditional grammar-checking software often lacks. By

providing this nuanced feedback, ChatGPT has the potential to significantly improve students' writing proficiency over time. Baskara (2023) highlights that students appreciate ChatGPT's ability to guide them through the writing process, particularly in helping them develop complex ideas and refine their writing skills in an iterative, supportive manner.

Ethical Considerations in ChatGPT Integration

Ethical considerations are a prominent concern regarding the use of ChatGPT in EFL education. Perkins (2023), Zang et al. (2023), and Koraishi (2023) discuss the ethical implications of using AI tools in academic settings, particularly concerning academic integrity. The risk of plagiarism and the fairness of AI-assisted assessments are key issues that need to be addressed as ChatGPT becomes more integrated into educational practices. Perkins (2023) argues that clear ethical guidelines must be established to prevent misuse of ChatGPT, particularly in academic writing and formal assessments. These ethical concerns are compounded by the potential for biases in AI models, which may reflect or amplify existing societal biases. Ensuring the responsible use of AI tools in education is essential, and educators must remain vigilant in monitoring how these tools are used and ensuring they align with academic standards.

Technological Integration of ChatGPT in EFL

Technological integration is another critical theme in ChatGPT's deployment in EFL education. Perkins (2023), Koraishi (2023), and Schmidt-Fajlik (2023) explore how AI tools like ChatGPT can be integrated into existing EFL learning platforms to enhance both teaching and learning experiences. These studies highlight the challenges and advantages of integrating ChatGPT into various educational technologies, noting that its success hinges on the infrastructure available and the support provided to both students and instructors. These findings suggest that a successful integration of ChatGPT requires a combination of technological innovation and adequate training for both teachers and students. Educators must be equipped with the knowledge and resources to effectively use AI in their classrooms, ensuring that ChatGPT becomes a valuable asset in improving educational practices.

Overall, this SLR provides a comprehensive understanding of the challenges and opportunities presented by ChatGPT in EFL education. As highlighted in these results, ChatGPT offers numerous benefits, including improved language learning outcomes, enhanced student motivation, and increased pedagogical efficiency. However, these advantages are tempered by the ethical challenges, reliability issues, and the need for thoughtful integration into educational practices. These findings equip educators and researchers with valuable insights to inform their decisions and improve teaching and learning practices in the field of EFL education.

Discussion

This SLR synthesizes the 13 articles examining the integration of ChatGPT in EFL education, providing insights into its transformative potential as well as its challenges. One central theme that emerged from the literature is the potential of ChatGPT to redefine traditional pedagogical approaches in EFL education. By shifting the role of the educator from a sole provider of content to a facilitator of personalised learning, ChatGPT enables learners to engage with language learning in a more autonomous and interactive manner. As highlighted by Perkins (2023), ChatGPT facilitates personalised feedback, a crucial aspect in fostering individualised learning

paths. This autonomy helps students progress at their own pace, reinforcing the concept of self-regulated learning, which is often a challenge in traditional EFL classrooms. Moreover, ChatGPT's ability to provide immediate, personalised feedback helps mitigate one of the common drawbacks of traditional teaching: the delay in feedback that often hampers learners' progression.

While ChatGPT's integration holds significant promise in transforming EFL teaching, it also presents ethical concerns, particularly in the context of academic integrity. As Perkins (2023) underscores, the use of AI tools in formal assessments raises critical questions about plagiarism and academic honesty. These concerns emphasise the need for an ethical framework within which AI tools like ChatGPT can be used effectively and responsibly in EFL education. Educational institutions must establish clear guidelines for using ChatGPT to prevent misuse, ensuring that its integration supports rather than undermines academic integrity. Moreover, the risk of dependency on AI-generated content, where students may rely too heavily on ChatGPT for their academic work, underscores the importance of developing educational strategies that promote critical thinking and independent problem-solving skills.

In addition to the ethical considerations, the effectiveness of ChatGPT in supporting language learning outcomes is another critical theme explored in this review. The findings from Zang et al. (2023) and Vera (2023) suggest that ChatGPT can significantly enhance understanding in areas such as logical fallacies and writing skills. These results indicate a significant shift in how language education is approached, as AI tools like ChatGPT help demystify abstract concepts and make them more accessible. However, while ChatGPT offers enhanced support for writing tasks, the challenge remains that students may become overly reliant on the tool for idea generation and formulation. This concern necessitates a balance between leveraging AI for support and fostering students' creativity and independent critical thinking skills. Thus, while ChatGPT provides significant advantages in enhancing writing proficiency and language learning outcomes, educators must be mindful of the potential for students to use AI as a crutch rather than a complement to their language development.

Another prominent theme in the literature concerns the role of ChatGPT in fostering student motivation and engagement. Several studies (Muñoz et al., 2023; Han et al., 2023; Zang et al., 2023) have shown that ChatGPT can increase student engagement by creating dynamic and interactive learning environments. This engagement is particularly critical in EFL contexts, where motivation often wanes due to the perceived difficulty of mastering a new language. ChatGPT's interactive and adaptive nature provides a learning experience tailored to individual needs, encouraging students to participate actively and take ownership of their learning. For instance, studies have shown that students are more likely to engage with language tasks when they receive instant feedback that is both constructive and personalised (Zang et al., 2023).

However, while ChatGPT fosters motivation and engagement, the need for careful implementation is also evident. ChatGPT's capabilities in enhancing motivation may be undermined if its integration is not thoughtfully designed. For example, if ChatGPT is used solely for drill-and-practice exercises without considering learners' individual preferences and learning styles, the engagement levels may diminish. Teachers must therefore integrate ChatGPT in ways that encourage critical thinking and creativity, ensuring that students are not passively receiving information but are actively engaging in tasks that require cognitive effort and personal reflection.

Pedagogically, ChatGPT offers a wealth of opportunities to optimise learning materials and assessment practices in EFL education. Koraishi (2023) and Han et al. (2023) highlight how ChatGPT can be used to design customised learning materials, catering to a variety of learner levels and needs. The ability to generate and adapt content in real-time can significantly enhance teaching practices, particularly in large, diverse classrooms where catering to individual learning needs can be a challenge. Moreover, ChatGPT's potential to support formative assessments and provide instant feedback creates a more responsive learning environment, allowing teachers to quickly address knowledge gaps and adjust teaching strategies accordingly.

Despite these advantages, the integration of ChatGPT in assessments also raises concerns about fairness and bias. As Perkins (2023) discusses, the use of AI tools in assessments must be carefully monitored to ensure that the evaluation process remains equitable. There is a risk that automated assessments could fail to capture the complexity of students' language proficiency, especially in subjective areas such as writing and speaking. Furthermore, biases inherent in AI models, such as ChatGPT, may inadvertently influence grading and feedback, leading to potential discrepancies in how students are assessed. It is crucial, therefore, that educators continue to refine their use of ChatGPT in assessments to ensure fairness and reliability, while also maintaining the human element in evaluation.

In terms of writing support, ChatGPT has proven to be a powerful tool for enhancing students' writing skills, particularly in terms of providing personalised feedback and aiding in idea generation. Studies by Zang et al. (2023), Yan (2023), and Baskara (2023) confirm that ChatGPT offers valuable assistance in improving writing proficiency by helping students brainstorm, organise ideas, and refine their language use. However, there is a delicate balance to strike between providing support and encouraging independence. If students rely too heavily on ChatGPT for generating ideas or structuring their essays, they may miss out on the cognitive benefits of the writing process itself. Therefore, educators must be proactive in guiding students on how to effectively use ChatGPT as a tool, not a substitute, for developing their writing skills.

Similarly, ChatGPT's potential in enhancing language assessment practices should not be overlooked. As noted by Perkins (2023) and Liu (2023), ChatGPT can improve the quality of language assessments by providing timely, detailed feedback and offering multiple avenues for evaluation. However, the over-reliance on automated feedback could diminish the importance of human judgment in assessments. Educators must carefully assess the role of ChatGPT in evaluations, ensuring that it complements rather than replaces the nuanced understanding that teachers bring to the assessment process.

Finally, the ethical concerns surrounding ChatGPT's integration into EFL education cannot be overstated. Issues of academic integrity, biases, and fairness must be addressed to ensure that ChatGPT is used responsibly. Perkins (2023) and Hong (2023) explore these concerns, emphasising the importance of establishing clear guidelines for ChatGPT's use in assessments. While the potential benefits of ChatGPT are undeniable, educators and institutions must approach its integration with caution, ensuring that its use aligns with academic and ethical standards.

Overall, this study's findings provide a comprehensive exploration of the integration of ChatGPT in EFL education. Through the examination of various themes, such as academic integration, language learning outcomes, student motivation and engagement, teacher roles and instructional

strategies, writing support and feedback, language assessment and feedback, ethical considerations, and technological integration and support, the review sheds light on the challenges, opportunities, and implications of utilising ChatGPT in the EFL context. While significant progress has been made in understanding the potential benefits and applications of ChatGPT in EFL education, further research is needed to address the gaps and limitations identified in the reviewed articles, ensuring responsible and effective integration of ChatGPT in EFL teaching and learning practices.

Conclusion

This study's findings provide valuable insights into the challenges and opportunities of integrating ChatGPT in EFL education. The findings reveal a diverse range of themes and categories explored in the included articles, including academic integration, language learning outcomes, student engagement and motivation, teacher roles and instructional strategies, writing support and feedback, language assessment and feedback, ethical considerations, and technological integration and support. This SLR demonstrates that ChatGPT holds promise as a tool for academic integration, with its potential application in formal EFL assessments, material development, and assessment optimisation. It has also shown positive effects on language learning outcomes, enhancing language skills and knowledge in learners. Moreover, ChatGPT has been found to positively influence student motivation and engagement, offering a new avenue for fostering active and participatory learning experiences. However, it is important to acknowledge the limitations of this study. This SLR may have missed relevant publications due to potential biases in database selection and search strategies. Additionally, the focus on English-language articles may have resulted in language bias, disregarding valuable insights from non-English sources. The exclusion of non-article publications, such as dissertations, could have limited the scope of the review and missed potential indicators. Furthermore, the conclusions drawn from this review are based on the available literature up until the research cut-off date and may not reflect the most recent developments in the field. To address these limitations, future research should adopt a more comprehensive approach to literature search, including a wider range of databases and publication types. An inclusive perspective that encompasses studies in multiple languages will provide a more global understanding of ChatGPT integration in EFL education. Additionally, regular updates and continuous monitoring of the literature are necessary to stay current with the evolving research landscape. Overall, this systematic literature review contributes to the existing body of knowledge on ChatGPT integration in EFL education. The findings offer insights for educators and researchers to make informed decisions regarding the implementation of ChatGPT in various educational contexts. By understanding the challenges and opportunities associated with ChatGPT, educators can effectively harness its potential to enhance teaching and learning practices, while also being mindful of ethical considerations and the evolving technological landscape.

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