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The Implementation of Artificial Intelligence (AI) in Enhancing Teachers' English Speaking Skills: A Systematic Literature Review

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A B S T R A K

Di era transformasi digital, integrasi Kecerdasan Buatan (AI) telah muncul sebagai solusi yang menjanjikan untuk meningkatkan kemampuan berbicara bahasa Inggris. Meskipun banyak penelitian telah berfokus pada hasil belajar siswa, implementasi AI secara khusus untuk meningkatkan kompetensi lisan guru masih kurang dieksplorasi, meskipun guru merupakan agen utama perubahan pendidikan. Studi ini bertujuan untuk secara sistematis meninjau implementasi AI dalam meningkatkan keterampilan berbicara bahasa Inggris guru, mengidentifikasi platform yang efektif, manfaat utama, dan tantangan yang dihadapi selama integrasi. Tinjauan Literatur Sistematis (SLR) dilakukan mengikuti pedoman PRISMA. Sebanyak 25 studi relevan yang diterbitkan antara tahun 2015 dan 2026 dianalisis, dengan fokus pada penggunaan AI dalam Pengajaran Bahasa Inggris (ELT). Temuan menunjukkan bahwa alat AI, seperti chatbot generatif (ChatGPT) dan aplikasi pengenalan suara (Speechace, Elsa Speak), secara signifikan meningkatkan kelancaran, akurasi pengucapan, dan kepercayaan diri guru. Namun, implementasi sering terhambat oleh kegagalan teknis, pemahaman pedagogis yang terbatas tentang potensi AI, dan kesenjangan kelembagaan. Selain itu, adopsi oleh guru sangat dipengaruhi oleh kognisi individu dan agensi profesional. Implementasi AI menawarkan pendekatan transformatif untuk pengembangan profesional guru. Untuk memaksimalkan dampaknya, pelatihan teknis terstruktur dan dukungan kebijakan diperlukan untuk menjembatani kesenjangan antara potensi teknologi dan praktik di kelas.

Kata Kunci :
Artificial Intelligence, Speaking Skills, Teacher Professional Development, Systematic Literature Review, ELT

A B S T R A C T

In the era of digital transformation, the integration of Artificial Intelligence (AI) has emerged as a promising solution to enhance English speaking proficiency. While many studies have focused on student learning outcomes, the implementation of AI specifically to improve teachers' oral competence remains underexplored, despite teachers being the primary agents of educational change. This study aims to systematically review the implementation of AI in enhancing teachers' English speaking skills, identifying effective platforms, key benefits, and challenges encountered during integration. A Systematic Literature Review (SLR) was conducted following PRISMA guidelines. A total of 25 relevant studies published between 2015 and 2026 were analyzed, with a focus on the use of AI in English Language Teaching (ELT). Findings indicate that AI tools, such as generative chatbots (ChatGPT) and speech recognition applications (Speechace, Elsa Speak), significantly improve teachers' fluency, pronunciation accuracy, and confidence. However, implementation is often hindered by technical failures, limited pedagogical understanding of AI's potential, and institutional gaps. Moreover, adoption by teachers is strongly influenced by individual cognition and professional agency. AI implementation offers a transformative approach to teacher professional development. To maximize its impact, structured technical training and policy support are necessary to bridge the gap between technological potential and classroom practice.

Keywords:
Artificial Intelligence, Speaking Skills, Teacher Professional Development, Systematic Literature Review, ELT

1. INTRODUCTION

Based on various studies, many teachers in Indonesia still face challenges in English speaking proficiency. In contrast, in several other developing countries, teachers are able to use English actively

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in their daily lives. This situation underscores the importance of educators possessing adequate English language competence, as such proficiency is considered a key prerequisite for supporting the quality of teaching. In today's rapidly evolving digital era, English remains the primary language for international connectivity, tourism, and the global economy (Crompton et al., 2024). However, English teachers often face significant challenges, particularly in achieving adequate speaking proficiency. In many institutions, such as boarding schools in Indonesia, teachers are frequently required to implement bilingual policies despite having limitations in their daily spoken English skills (Mardhiah et al., 2025). This gap between pedagogical demands and practical competence creates an urgent need for innovative and effective learning media.

The integration of Artificial Intelligence (AI) in education, particularly in English Language Teaching (ELT), has opened new paradigms to address these challenges. AI technologies provide substantial support for developing specific language skills through tools such as chatbots, speech recognition applications, and intelligent tutoring platforms (Crompton et al., 2024). Recent studies indicate that AI use can significantly enhance fluency, confidence, and pronunciation accuracy for both students and teachers (Gultom, 2026). Furthermore, meta-analyses of various experimental studies confirm that AI exerts a strong positive effect on the development of speaking skills compared to traditional instructional methods (Jantakoon et al., 2025).

Despite its considerable potential, AI implementation in practice faces complex challenges. Teachers' interactions with AI tools are influenced not only by technology availability but also by their cognition, instructional values, professional agency, and institutionally imposed political agendas (Zaimoğlu & Dağtaş, 2025). Moreover, there is a clear disparity in how teachers respond to and integrate generative AI, often due to insufficient technical training and concerns regarding AI's limitations (Wang, 2025). Technical challenges, such as system failures and limited understanding of AI affordances, remain major barriers to the widespread adoption of these technologies (Crompton et al., 2024).

Previous literature reviews have explored the effectiveness of technology-assisted project-based learning (Rochimah et al., 2025) and trends in language learning within virtual environments (Lin & Lan, 2015). However, research that systematically reviews how AI is specifically implemented to enhance teachers' speaking skills remains limited. Focusing on teachers is crucial, as they are the frontline of educational transformation; the quality of their instruction directly impacts student learning outcomes (Sumarni & Salsabila, 2023).

Therefore, this article aims to address this literature gap through a Systematic Literature Review (SLR). The study will examine recent research to map how AI implementation can improve English speaking skills among teachers, identify the most effective AI platforms, and analyze the challenges and opportunities arising from this integration. Through the title "The Implementation of Artificial Intelligence (AI) in Enhancing Teachers' English Speaking Skills: A Systematic Literature Review", this study is expected to provide both theoretical and practical contributions to the professional development of teachers in the future.

Research questions guiding this review are:

1) What types of Artificial Intelligence (AI) technologies are used to support teachers in improving English speaking skills?
2) How does the implementation of Artificial Intelligence (AI) contribute to the improvement of teachers' English speaking skills?

2. METHOD

This study adopted a qualitative approach using a Systematic Literature Review (SLR) to investigate the implementation of Artificial Intelligence (AI) in enhancing teachers' English speaking skills in English Language Teaching (ELT) contexts. The SLR method was employed to synthesize existing empirical evidence, identify research gaps related to teacher-centered AI integration, and provide a comprehensive overview of AI-supported speaking development for teachers. In line with the objectives of this review, the method enabled a systematic examination of how various AI technologies, such as generative chatbots and speech recognition applications, have been utilized to support teachers' oral proficiency.

2.1 DATA SOURCES

The literature search was conducted across major academic databases, namely Scopus, ERIC, and Google Scholar via Publish or Perish which are widely recognized for their coverage of research in English Language Teaching (ELT) and educational technology. The search was limited to studies published between 2015 and 2026 to capture recent developments in AI-based language learning tools. Search terms were combined using Boolean operators and included: Artificial Intelligence, AI, English speaking skills, speaking proficiency, English Language Teaching (ELT), teachers, speech recognition, and chatbots. These keywords were adapted to each database to ensure comprehensive retrieval of relevant studies.

Table 1. Inclusion and Exclusion Criteria of the Study Selection

Aspect	*Inclusion Criteria*	*Exclusion Criteria*
Research Focus	Studies examining the use of Artificial Intelligence (AI) in English Language Teaching (ELT) contexts	Studies not related to AI or not conducted within ELT contexts
Language Skill	Studies focusing on speaking skills or oral communication	Studies focusing on language skills other than speaking (e.g., reading, writing, or listening only)
Participants	Studies involving teachers as participants or targeting teacher professional development	Studies focusing exclusively on students without implications for teacher development
Research Design	Empirical research studies, systematic literature reviews, or meta-analyses	Opinion papers, editorials, conceptual papers, or anecdotal reports
Publication Type	Articles published in peer-reviewed journals and written in English	Non-peer-reviewed publications and articles written in languages other than English

Table 1 presents the inclusion and exclusion criteria applied in selecting studies for this research, organized into five main aspects. In terms of research focus, this study includes literature that examines the use of Artificial Intelligence (AI) in English Language Teaching (ELT) contexts, while studies unrelated to AI or ELT are excluded. With regard to language skills, the review concentrates specifically on speaking or oral communication, thereby excluding studies that focus on other language skills such as reading or writing. Concerning participants, the selection prioritizes studies involving teachers or teacher professional development, whereas studies that exclusively involve students without implications for teachers are not considered. From a methodological perspective, the review includes empirical studies, systematic literature reviews, and meta-analyses, while opinion-based or purely conceptual papers are excluded. Finally, in terms of publication type, only peer-reviewed articles written in English are included, and non-peer-reviewed publications or studies published in other languages are excluded.

2.2 DATA ABSTRACTION

This study employed PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) as a guiding framework for conducting and reporting the systematic literature review. PRISMA was used to ensure transparency and clarity in documenting the rationale, procedures, and key findings of the review. Accordingly, this research followed the four main PRISMA stages identification, screening, eligibility, and inclusion to systematically select and analyze relevant studies addressing the research questions on the implementation of Artificial Intelligence (AI) in enhancing teachers' English speaking skills (Page et al., 2021; Sohrabi et al., 2021).

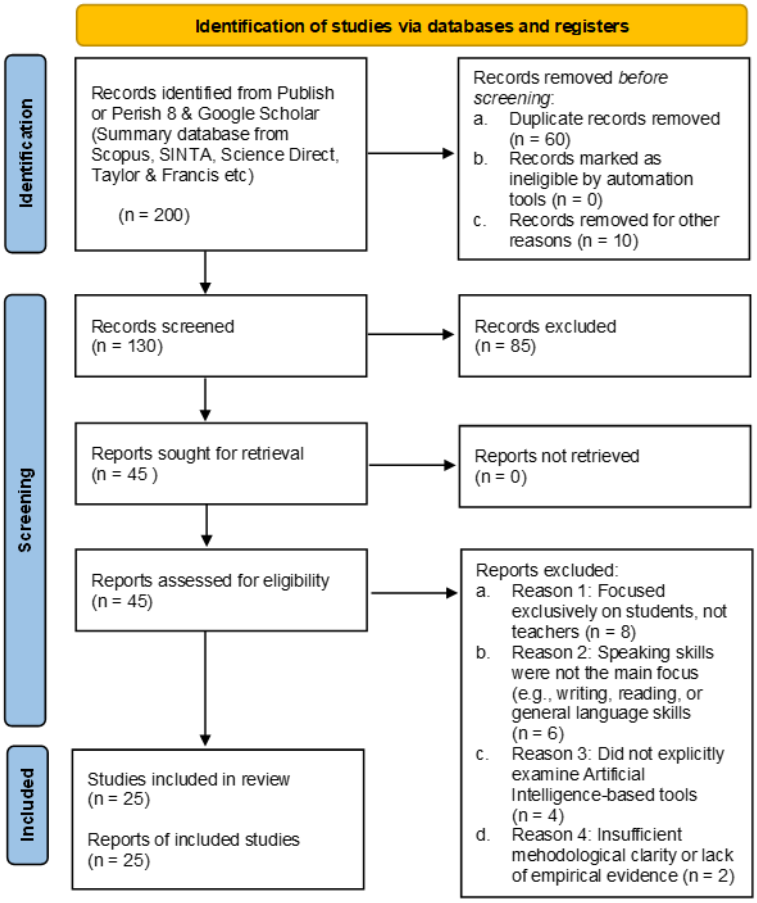

Figure 1. PRISMA Flow Diagram 2020 of Literature Research and Review Process Source Diagram Template: Page MJ, et al. BMJ 2021;372:n71. Doi: 10.1136/bmj.n71

2.3 RESEARCH DATA ANALYSIS

After determining the data sources and abstracting the SLR data, the most critical stage of this research involved conducting an in-depth review analysis of the selected articles. This study employed a structured review protocol encompassing bibliographic information, research details, research focus, and publication content, as adopted in previous systematic literature reviews in English language education (Rochimah, Japar, & Solihatin, 2025). The bibliographic analysis encompassed key publication information, including authorship, year of publication, article title, type of study, journal name, and the scope of the publication (Sanchez et al., 2024). Research details were examined with particular attention to methodological aspects, such as research objectives, research design, participant characteristics, population, and analytical models employed. Furthermore, the analysis of research focus and publication content was directed at addressing the research questions outlined in the introduction, specifically by synthesizing findings related to the types of media utilized, their effectiveness, and the influencing factors identified across the reviewed studies.

2.4 ANALYSIS

The findings were reported in accordance with the established review protocol. The results were derived from the analysis of 25 journal articles that were systematically selected through the PRISMA process.

Table 1. Summary of Reviewed Studies on AI in Enhancing Teachers' English Speaking Skills

No	Author(s)	Year	Title	Research Objectives	Key Findings
1	**Abdallah, M. M. S.**	2025	How to Use Conversational AI Chatbots in ELT...	To review the use of chatbots for linguistic competency and teacher CPD.	Advanced AI chatbots (ChatGPT) provide immediate feedback and scalable pedagogical support.
2	**Almegren, A., et al.**	2025	AI powered ELT: Instructors' transformative roles and opportunities	To examine the changing role of teachers in AI-integrated classrooms.	Teachers shift from being primary knowledge sources to facilitators of AI-driven learning.
3	**Almehmadi, W. S.**	2024	Exploring the potential of AI techniques in teaching EFL: A SLR	To explore AI integration methods and their impact on core English skills.	AI has high potential to enhance all four skills, but identifying reliable tools remains a challenge.
4	**Amin, M. Y. M.**	2023	AI and Chat GPT in Language Teaching...	To explore the impact of GenAI on EFL instruction and assessment.	AI promotes personalized learning and increases efficiency in automated grading and feedback.
5	**Annie Limiya, V. G., & Prasantha Kumar, N. S.**	2025	Generative AI in Enhancing English Language Skills: A SLR	To systematically review GenAI's role in boosting student language proficiency.	GenAI creates immersive environments that significantly improve writing and vocabulary.
6	**Bibi, S., & Shahzad, A. K.**	2025	Impact of AI on ELT at University Level: A Study of EFL Teachers...	To explore Pakistani EFL teachers' perspectives on the impact of AI.	86% of teachers view AI as effective for personalized learning, despite ethical concerns.
7	**Crompton, H., et al.**	2024	AI and English language teaching: Affordances and challenges	To identify specific pedagogical affordances and hurdles of AI in ELT.	AI aids self-regulation and speaking practice, but technical breakdowns remain a barrier.
8	**Delgado, H. O. K., et al.**	2020	Artificial intelligence adaptive learning tools	To evaluate the functionality and teacher feedback on adaptive platforms.	Adaptive platforms promote student autonomy and provide immediate corrective feedback.
9	**Fakhar, H., et al.**	2024	Towards a New AI-based Framework for Teachers' Online CPD	To analyze AI integration in teacher professional development programs.	AI-based frameworks allow for scalable and personalized professional training for educators.
10	**Fang, L.**	2025	The Impact of AI Tools on ESL Learners' Engagement and Motivation	To investigate how AI tools influence learner motivation and interest.	AI creates a low-anxiety environment that significantly boosts student willingness to speak.
11	**Fatihah, A., et al.**	2024	The Role of AI in Enhancing English	To evaluate how AI (NLP, chatbots)	AI tools provide dynamic, adaptive

			Language Skills: A SLR	improves the four core skills.	environments that effectively personalize the learning path.
12	**Georgiou, G. P.**	2025	AI in Pronunciation Teaching: Use and Beliefs of FL Teachers	To examine how demographics influence teachers' AI use for phonetics.	Extensive teacher training is the most significant predictor of successful AI adoption in class.
13	**Göçmez, L., & Okur, M. R.**	2023	AI Applications in Open and Distance Education: A SLR	To review AI applications in distance learning (2007-2021).	Intelligent Tutoring Systems (ITS) are the most widely used and effective AI applications.
14	**Jantakoon, T., et al.**	2025	The effectiveness of AI in English instruction for speaking and listening...	To conduct a meta-analysis on AI's impact on oral and aural skills.	AI-driven instruction shows a high positive effect size on speaking/listening performance.
15	**Kessler, G.**	2018	Technology and the future of language teaching	To discuss leveraging emerging tech (AI, AR) for authentic communication.	Technology provides a "highly participatory culture" that teachers must learn to navigate.
16	**Kundu, A., & Bej, T.**	2025	Transforming EFL Teaching with AI: A Systematic Review	To evaluate the effectiveness and challenges of AI in school-level EFL.	AI fosters hands-on experiential learning but requires a major "pedagogic shift" for teachers.
17	**Kyaw, E. M., & Jie, D.**	2025	SLR of AI Integration in ELT: Trends, Applications, and Implications	To identify trends and pedagogical shifts in AI for ELT (2015-2025).	AI supports language structure and fluency but struggles with deep cultural nuances.
18	**Laoha, R., et al.**	2025	AI and EFL Teachers' Competencies: A SLR	To examine how AI influences teacher pedagogical and technical skills.	AI integration demands a re-definition of "teacher competency" in the digital age.
19	**Lin, T. J., & Lan, Y. J.**	2015	Language learning in virtual reality environments	To investigate research trends in VR-based language learning (2004-2013).	VR is highly effective for interactive communication and reducing learner anxiety.
20	**Mardhiah, A., et al.**	2025	Leveraging AI to Enhance Teachers' Spoken English...	To examine AI's (Speechace) role in teacher fluency at a boarding school.	Targeted AI apps significantly improve pronunciation and daily communication skills.
21	**Oluwafemi Ayotunde, O., et al.**	2023	The Impact of AI in Foreign Language Learning Using LMS	To review AI's impact on language learning within LMS platforms.	AI modules within LMS help create more engaging and personalized student experiences.
22	**Pokrivcakova, S.**	2019	Preparing teachers for the application	To analyze AI technologies and	Teachers must be trained in ICALL to

			of AI-powered technologies...	suggest teacher preparation frameworks.	make language teaching less time-consuming.
23	**Rochimah, H., et al.**	2025	SLR: The Effectiveness of Technology-Assisted Project-Based Learning	To evaluate the effectiveness of tech-assisted PBL in English learning.	Technology-assisted PBL significantly fosters 21st-century skills and student collaboration.
24	**Shehata, M. G. M.**	2024	A Program Based on AI to Enhance Prospective Teachers' English Pronunciation	To investigate the effect of ELSA Speak on teacher pronunciation.	AI programs provide precise phonetic feedback that traditional classrooms cannot offer.
25	**Wang, D.**	2025	Mind the gap in AI integration: a comparative study of language teachers...	To compare teacher responses to AI integration across a national survey.	Significant gaps exist in AI readiness, requiring tailored institutional support for teachers.
26	**Zaimoğlu, S., & Dağtaş, A.**	2025	Teacher Cognition and Practices in Using GenAI Tools...	To explore how teachers interpret GenAI tools for student engagement.	Teachers' personal values and institutional context dictate how effectively AI is used.

2.4.1 ANALYSIS OF SELECTED STUDIES ON AI IMPLEMENTATION IN ENHANCING TEACHERS' ENGLISH SPEAKING SKILLS

This section analyzes 25 selected studies reviewed in this Systematic Literature Review (SLR) to address the two research questions: (1) the types of Artificial Intelligence (AI) technologies employed to support teachers' English speaking skills, and (2) the contributions of AI implementation to the improvement of teachers' oral proficiency. The analysis is structured thematically based on patterns identified in the reviewed literature.

2.4.2 TYPES OF AI TECHNOLOGIES USED TO SUPPORT TEACHERS' ENGLISH SPEAKING SKILLS (RQ1)

The reviewed studies demonstrate a growing diversity of AI technologies applied in English Language Teaching (ELT), particularly to support teachers' speaking skills and professional development. The most frequently identified technologies include generative AI chatbots, speech recognition and pronunciation tools, and adaptive AI-based learning platforms.

First, generative AI chatbots, such as ChatGPT and other conversational agents, are the most dominant technologies reported across recent studies (Abdallah, 2025; Amin, 2023; Annie Limiya et al., 2025). These tools function as interactive speaking partners, enabling teachers to engage in simulated dialogues, receive instant feedback, and practice communicative competence in low-anxiety environments. Chatbots are also utilized for role-play scenarios, instructional simulations, and reflective professional learning, positioning them as scalable tools for Continuous Professional Development (CPD). Second, speech recognition and pronunciation-based AI applications, including tools such as Elsa Speak, Speechace, and AI-powered speech analyzers, are widely employed to enhance pronunciation accuracy, fluency, and intelligibility (Almehmadi, 2024; Fatihah et al., 2024). These tools provide automated, real-time feedback on segmental and suprasegmental features of speech, which is particularly beneficial for teachers who lack access to native-speaker interaction or formal pronunciation coaching.

Third, several studies highlight the use of adaptive and intelligent learning platforms that personalize learning pathways based on teachers' performance data (Delgado et al., 2020; Fakhar et al., 2024). These systems integrate AI algorithms to adjust speaking tasks, feedback intensity, and learning pace, supporting autonomous and self-regulated professional learning. Such platforms are increasingly aligned with online CPD frameworks, enabling flexible and context-sensitive teacher development. Overall, the findings indicate that AI technologies supporting teachers' speaking skills are predominantly interaction-driven, feedback-oriented, and adaptive, reflecting a shift from traditional teacher training models toward technology-enhanced professional learning ecosystems.

2.4.3 CONTRIBUTIONS OF AI IMPLEMENTATION TO TEACHERS' ENGLISH SPEAKING SKILLS IMPROVEMENT (RQ2)

In response to RQ2, the reviewed studies consistently report that AI implementation contributes positively to multiple dimensions of teachers' English speaking skills, including fluency, pronunciation accuracy, confidence, and self-regulation. One major contribution identified is the enhancement of speaking fluency and accuracy. AI tools allow teachers to practice speaking repetitively without time constraints or social pressure, leading to noticeable improvements in speech rate, coherence, and articulation (Crompton et al., 2024; Fang, 2025). Automated corrective feedback enables immediate awareness of linguistic errors, supporting faster skill refinement compared to delayed human feedback.

Another significant contribution lies in increasing teachers' confidence and willingness to speak. Several studies emphasize that AI creates a low-anxiety, non-judgmental learning environment, which is particularly important for non-native English-speaking teachers (Bibi & Shahzad, 2025). As teachers gain confidence through AI-assisted practice, they are more likely to use English actively in instructional contexts and professional communication. Furthermore, AI implementation supports teacher autonomy and professional agency. Adaptive AI systems empower teachers to control their learning goals, monitor progress, and engage in self-directed speaking practice (Delgado et al., 2020). This aligns with findings that successful AI adoption is strongly influenced by teachers' cognition, beliefs, and readiness to integrate technology into their professional routines.

However, despite these benefits, the literature also identifies several implementation challenges. Technical issues, limited digital literacy, insufficient pedagogical training, and lack of institutional support frequently hinder optimal AI utilization (Almegren et al., 2025; Crompton et al., 2024). These barriers suggest that AI effectiveness is not solely determined by technological capability but also by contextual and systemic factors. In summary, AI implementation contributes to the improvement of teachers' English speaking skills by providing personalized practice, immediate feedback, enhanced confidence, and flexible professional learning opportunities. Nevertheless, to fully realize its potential, AI integration must be accompanied by structured training, pedagogical guidance, and supportive educational policies.

3. RESULT AND DISCUSSION

This section presents and discusses the results of the Systematic Literature Review (SLR) concerning the implementation of Artificial Intelligence (AI) in enhancing teachers' English speaking skills. The discussion is organized in alignment with the two research questions and integrates empirical findings from the selected studies with broader theoretical and pedagogical perspectives.

3.1 RESULTS

The analysis of 25 selected studies published between 2015 and 2025 reveals consistent evidence that Artificial Intelligence plays a significant role in supporting teachers' English speaking development. The results are categorized into two major areas: (1) types of AI technologies implemented, and (2) the outcomes of AI implementation on teachers' speaking skills.

3.1.1 AI TECHNOLOGIES IMPLEMENTED TO SUPPORT TEACHERS' SPEAKING SKILLS

The findings indicate that the most widely implemented AI technologies in ELT contexts are generative AI chatbots, speech recognition-based applications, and adaptive AI learning platforms. Among these, generative chatbots such as ChatGPT emerge as the most frequently cited tools, particularly in studies published after 2023. These chatbots are primarily used for conversational practice, instructional simulations, and reflective professional learning. Speech recognition and pronunciation tools are also prominently reported, focusing on improving phonological accuracy, fluency, and intelligibility. These tools are especially beneficial for teachers in EFL contexts where exposure to authentic spoken English is limited. Meanwhile, adaptive AI platforms are commonly embedded in online CPD programs, enabling personalized learning trajectories based on teachers' performance and needs.

Overall, the results demonstrate a clear trend toward AI technologies that emphasize interaction, immediate feedback, and personalization, indicating a shift from traditional, lecture-based teacher training toward technology-mediated professional development models.

3.1.2 OUTCOMES OF AI IMPLEMENTATION ON TEACHERS' ENGLISH SPEAKING SKILLS

Across the reviewed studies, AI implementation yields positive outcomes in multiple aspects of teachers' speaking competence. The most frequently reported improvements include fluency, pronunciation accuracy, speaking confidence, and self-directed learning capacity. Teachers using AI-based tools show measurable progress in oral fluency due to repeated practice opportunities and real-time corrective feedback. Pronunciation accuracy improves as AI systems provide detailed phonetic analysis that is often unavailable in conventional teacher training programs. In addition, many studies report increased confidence and reduced speaking anxiety, as AI creates a non-threatening environment where teachers can practice without fear of negative evaluation.

However, the results also highlight recurring challenges. Technical limitations, insufficient digital literacy, lack of pedagogical integration, and weak institutional support are identified as major obstacles that affect the sustainability and effectiveness of AI adoption. These challenges suggest that positive outcomes are contingent upon both technological readiness and systemic support.

3.2 DISCUSSION

The findings of this review confirm that Artificial Intelligence has substantial potential to enhance teachers' English speaking skills, particularly when implemented as part of structured professional development programs. This section discusses the implications of these results in relation to existing theories and prior research. First, the dominance of generative AI chatbots supports socio-constructivist perspectives on language learning, where interaction and meaningful communication are central to speaking development. AI chatbots function as dialogic partners that facilitate authentic language use, aligning with communicative language teaching (CLT) principles and task-based learning frameworks. For teachers, this interaction not only enhances linguistic competence but also models pedagogical practices that can be transferred to classroom instruction.

Second, the effectiveness of speech recognition tools reinforces the importance of immediate, formative feedback in oral skill development. From a cognitive perspective, instant feedback accelerates noticing and error correction, leading to faster improvement in pronunciation and fluency. This finding is particularly relevant for non-native English-speaking teachers, whose professional credibility is often linked to oral proficiency. Third, the review highlights the critical role of teacher cognition and professional agency in AI adoption. Studies consistently indicate that teachers who perceive AI as a supportive tool rather than a threat to professional identity are more likely to engage in sustained use. This aligns with research on technology acceptance models (TAM), which emphasize perceived usefulness and ease of use as key determinants of adoption.

Nevertheless, the challenges identified across studies reveal a persistent gap between technological potential and pedagogical practice. Without adequate training, policy support, and ethical guidelines, AI risks being underutilized or misapplied. Therefore, AI should not be viewed as a standalone solution but as an integrated component of comprehensive teacher professional development.

In summary, the results and discussion suggest that AI implementation contributes meaningfully to improving teachers' English speaking skills by enhancing interaction, feedback quality, confidence, and autonomy. However, maximizing its impact requires deliberate instructional design, ongoing professional training, and institutional commitment.

4. CONCLUSION

This Systematic Literature Review examined the implementation of Artificial Intelligence (AI) in enhancing teachers' English speaking skills by analyzing 25 empirical studies published between 2015 and 2025. The review was guided by two research questions focusing on the types of AI technologies employed and their contributions to teachers' oral proficiency development. The findings indicate that AI technologies—particularly generative AI chatbots, speech recognition-based applications, and adaptive learning platforms—play a significant role in supporting teachers' speaking skills. These tools facilitate interactive speaking practice, provide immediate and personalized feedback, and enable flexible, self-directed professional learning. As a result, teachers demonstrate improvements in fluency, pronunciation accuracy, confidence, and overall communicative competence.

Furthermore, the review reveals that AI implementation contributes not only to linguistic development but also to teachers' professional agency. AI-supported environments empower teachers to engage in autonomous learning, reflect on their performance, and integrate innovative pedagogical practices into their teaching. However, the effectiveness of AI adoption is highly dependent on contextual factors, including digital literacy, pedagogical understanding, institutional support, and policy alignment. Despite its transformative potential, the integration of AI in teacher professional development remains challenged by technical limitations, inadequate training, and uneven access to resources. These constraints highlight the need for structured professional development programs, clear ethical guidelines, and supportive institutional frameworks to ensure sustainable and effective AI use.

In conclusion, AI represents a promising and transformative approach to enhancing teachers' English speaking skills when implemented strategically and pedagogically. Future research should focus on longitudinal studies, classroom-based interventions, and policy-driven models of AI integration to bridge the gap between technological innovation and professional practice in English Language Teaching.

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