

Artificial Intelligence in English Speaking Instruction: Learner Impacts and Teacher Role Reconstruction

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Abstract. The rapid development of artificial intelligence, especially generative AI and intelligent voice technology, has profoundly reshaped the landscape of English oral language teaching. Increasing research indicates that using AI-assisted teaching can increase opportunities for oral practice, improve feedback efficiency, and alleviate learners' anxiety about oral expression. However, new research also points out persistent limitations in pragmatic depth, cultural context, interaction authenticity, and ethical issues. These mixed research results suggest that a systematic review of both positive and negative aspects has been conducted, focusing on its impact on learners' oral performance, learning experience, psychological factors, and self-regulation. This review reveals a dual influence model: AI effectively supports the development of basic oral skills and learning autonomy, but still has limitations in cultivating higher-level communicative and pragmatic abilities. Based on these findings at the learner level, this paper further explores how the integration of AI needs to fundamentally reshape the role of English oral language teachers. Specifically, it analyzes the evolution of teachers' roles as instructional designers, pragmatic ability assessors, emotional facilitators, and ethical guardians in the context of AI-assisted teaching. By integrating evidence from both learners' and teachers' perspectives, this review aims to provide theoretical insights for the responsible integration of AI in English oral language teaching and practical implications for the professional development of teachers in the era of human-AI collaboration.

Keywords: English speaking instruction, AI-assisted language learning, learner outcomes, teacher role reconstruction, human–AI collaboration

1. Introduction

Generative artificial intelligence and intelligent speech technology have quickly swept into the English oral language teaching practice in the past few years and have become a part of the daily practice of the learners, ranging, though not limited, to classroom support tools. A series of findings suggests that AI constructively boosts the availability of speaking practice and feedback efficiency, in addition to reducing learning anxiety, which proves that it can have massive opportunities to be used in present-day English speaking teaching [1-3].

Nevertheless, AI technologies are starting to be integrated into the educational process, which makes their shortcomings more noticeable. According to the current research findings, AI is lagging behind in terms of such aspects like pragmatic depth, construction of cultural context, interactional authenticity or the likely risks of ethics that restrict the full achievement of the goals of oral language teaching to a certain degree.

To some degree, it is demonstrated that existing studies show that AI is still limited in its pragmatic depth, cultural contextualization, interactional authenticity, and management of ethical risks, which in turn limits the overall achievement of the goals of teaching oral language. Such findings are not only related to the outcomes of learning on the learner level but present practical problems of instructional decision making and instructor front-line teacher roles. Several questions related to AI-based instructions face teachers in actual classrooms, including whether to implement AI-based speaking tools, how to apply AI in and out of classroom, and to what extent do teachers have to depend on AI to provide feedback and evaluation. It is against this context that AI does not simply take the role of teaching performed by teachers; instead, in addition to transforming the composition of teaching oral languages, it presents novel needs concerning the work of teachers in the field of learning facilitation, the regulation of the assessment, as well as the ethical supervision.

It is based on this background that the current paper will critically survey how AI-assisted learning in English speaking affects oral performance, learning experience, and psychological aspects of the learners with special attention to the affordances and constraints of AI-assisted learning. Based on this it also discusses avenues of how the role of English-speaking teachers can be changed in AI-mediated situations, and how the professional location of teachers under human-AI collaborative teaching situations, speaking assessment regulation, learning assistance, and moral guidance can be changed. Combining the evidence provided by the teacher research and learner research, this article will provide theoretical sources used to be responsible AI technologies on English speaking instruction and give some practical data concerning the frontline practice of teaching and professional development of teachers.

2. The impact of AI-assisted instruction on students' English-speaking learning

2.1. Transformation of practice paradigms: from scarcity to abundant accessibility and immersion

In British-English pedagogy, there is a shortage of hours of instruction, less than conducive teacher to student ratios and lack of opportunities in genuine communication that have traditionally limited the frequency of oral production and mastery of oral practice in learners. In the past few years, as artificial intelligence technology is applied to language pedagogy, specifically, the development of dialogue systems and virtual communicative environments using natural language processing, English speaking practice has demonstrated improvements concerning accessibility in time and continuity of the practice.

According to previous researchers, conversational agents included in the AI-powered can be successfully used (as instructional sabots) with the aim of developing non-evaluative settings, offering instant feedback, and providing relevant practice, thus, improving speaking skills along with reducing anxiety [1]. Based on a mixed-method design, Ding and Yusof divided a group of 60 undergraduate students, enrolled in an International English Language Testing System (IELTS) preparation center, into an experimental group, where they used the AI platform Mondly and a control group and collected the research results during a one-month intervention, based on IELTS speaking tests, a 19-item anxiety scale, and semi-structured interviews [1]. The findings indicated

that the learners who used AI conversational tools performed much better in terms of speaking performance and reduction in anxiety and panic, compared to the control group. Moreover, students usually noted that AI dialogue tools contribute to gaining more fluency, better pronunciation, less grammar errors, and motivation to learn. Using these results, the researchers had claimed that through establishment of a non-evaluative interactive setting, AI prominently elevates the readiness to participate in spoken production in learners.

Nonetheless, it has also been established that AI-induced sense of immersion is mostly mirrored in contextually simulated and interactionally sustained sense of immersion, and that there are still gaps in AI-mediated interaction and real interpersonal communication in communicative and social regards. Thus, even though AI-aided speaking practice is significantly sure to grow the prospects of oral production, the effectiveness of its instruction on learning level has to be reviewed together with the following learning processes and feedback. Besides, the human interaction is also an important source of AI compensation in the cases of cultural contextualization, especially the transmission of pragmatic norms, cultural metaphors and the information about the social identity.

2.2. Precision feedback and skill development: the empowerment of pronunciation accuracy and its limitations

When the paradigm of AI-assisted speaking instruction is applied, there is no longer an oral practice opportunity that predetermines the development of proficiency; the quality of feedback received in the course of the practice, in particular, the immediate feedback required in terms of multidimensional linguistic characteristics of pronunciation, grammar, and discourse structure, has increasingly become an aspect that influences learning outcomes. In this regard, the main strength of the AI-based speech generation systems compared to the conventional form of teaching is the ability to provide immediate feedback in the form of automatic speech recognition and scoring technologies.

Current literature reveals that AI-based speech assessment programs are important in correcting the accuracy of pronunciation and boosting the motivation to learn and provide instant retouch and practice convenience to aid fluency acquisition, and that they are also characterized by a fairly high level of consistency and permanence in delineating simple grammatical characteristics [4]. Using a mixed-methods study design, which involved both questionnaires (N = 366) and semi-structured interviews (N = 9), Zou et al. examined the perceptions of the university students who used the AI system English for Academic Purposes (EAP) Talk to practice speaking and found that most EFL learners perceived the usefulness of AI-based feedback in terms of immediacy and convenience and, on the one hand, because it allowed them to understand whether the problem with pronunciation could be removed, and on the other hand, because they could train specific aspects in that way [4].

Simultaneously, it was also observed that the research also had significant limitations concerning the AI feedback evaluating higher-order language skills. Among the challenges mentioned by learners were inaccurate speech recognition, feedback that was too general, and a lack of advice on grammar and discourse structure, which were seen to limit further growth of overall competence in speaking in complex communicative situations. According to these findings, AI systems are more adept at dealing with form-based linguistic characteristics, and therefore speaking AI systems have been more appropriately placed as a supplement to improve the frequency and confidence of the learners than a replacement to the teacher-led instruction [4].

2.3. Shaping the psychological learning environment: the coexistence of enhanced learning motivation and emerging forms of anxiety

In addition to being detected as having an impact on cognitive and skill-building, AI-assisted oral language learning also produces a notable influence on the experiences and emotions of learners, as well as on the psychological space. The emotional variables like anxiety and motivation have always been the major focus of the research on foreign language learning that affect the oral performance of the learners, and AI support offers the new opportunities to regulate these variables.

Experimental research conducted by Kang, which compares AI and native speakers as interlocutors, represents the finding that the group of AI made greater contributions in terms of accuracy, fluency, coherence, and interactivity than the group of human partners [2]. Nonetheless, this improvement was more significant among the lower level learners, and higher level learners were well prepared to cope with the native language speakers. This can be explained by the features of the AI interaction environment, including non-judgmental feedback and self-paced practice, better suited to the needs of lower-level learners of the low-risk practice and emotional support [2]. It has been argued that AI is an un-judgmental mode that helps facilitate a less stressful, more tolerant practice environment, resulting in a lower anxiety and pressure perception, as well as less emotional filter that hinders language input, in consequence leading to greater levels of engagement and desire to communicate in the learner [2].

However, there are now studies that are starting to pay attention to innovative psychological concerns that could emerge in the use of AI, including uncertainty in the accuracy of scoring, disillusionment with technical malfunctions, and reliance on AI feedback. It means that AI can reduce emotional hindrances in the conventional way of learning oral language, but it is also able to reorganize the form of the psychological experiences of learners, which allows defining the intricacy of the effects [4]. Moreover, AI and native speakers are efficient partners of oral interaction, and teaching should be provided in the way, which will address the needs of learners, considering different levels of their skills [2].

2.4. The double-edged nature of skill development: partial enhancement of communicative competence and the potential absence of pragmatic ability

Considering the reason behind learning outcomes, AI will have a dual tendency, namely, in relation to the mastery of English speaking proficiency; the ability to acquire basic oral skills will be accompanied by restricting to high levels of communicative competence. On the one hand, it is true that, regarding the relevant research, AI tends to confirm its quality contribution to the improvement of the basic conversational skills, the task-focused oral performance, and the traditionally focused communicative structures of the learner, on the other hand, when it comes to the assessment of the deeper communicative competence and the pragmatics, the limitations of AI become visible over time.

A single study on a vision of intercultural professional communication, placed an emphasis on the fact that AI possesses inherent drawbacks in acquiring the capacity of building interactive competence [5]. Interactive competence involves the capacity to operate face-to-face relations, negotiate professional identity, as well as to apply domain-specific knowledge to particular sociocultural settings. Consequently, it constitutes a basis of effective professional communications (e.g., within a clinical or business context). Whereas AI is capable of processing transactional and behavioral elements of the communication process, such as information exchange, standardized expressions, AI demonstrates apparent inabilities at the interpersonal one, such as reading of

emotional signals, dealing with nuanced cultural metaphors and adaptive social circumstances. Such discrepancy creates the inherent differences in terms of social characteristics between human-machine interaction and human-human interaction [5].

As such, language competence and structural aspects restrict the growth of speaking skills among learners catalyzed by AI to a significant level. Nevertheless, there are still serious shortcomings in the development of intercultural pragmatic competence, especially customs pertinent to identity negotiation, cultural sensitivity and emotional responsiveness.

2.5. Toward autonomous learning: the empowering role of personalized pathways and data visualization

In addition to having a direct impact on oral performance, AI technology can not only make the learning experience efficient giving personalized feedback and adaptive practice but also help learners in the development of self-regulation in setting the goals to achieve, tracking their progress, and trying new strategies, as well as contribute to the development of the metacognitive strategies. AI systems are capable of producing diagnostic reports based on behavioral data of learners and as a result, learners can get a better insight into their learning condition.

Within the frame of Chinese EFL learners, Qiao and Zhao undertook a quantitative study during a 13week intervention and gathered the data by conducting IELTS speaking tests, self-regulated language learning questionnaire and CET-3 [3]. They found out that learners, who practiced language learning tools (Duolingo) based on AI significantly performed better than traditional instruction learners in speaking skills and self-regulation skills. According to the study, AI does not require learners to be taught the explicit strategies of metacognitions, on the contrary, AI enables monitoring and adaptation of the learning process by learners within feedback mechanisms and adjustable task design [3].

2.6. The unfinished path ahead: technological equity, ethical risks, and research gaps

Even though the current studies generally admit the possible utility of AI-assisted learning with the use of English as a speaker, the modern literature notes that the usage of this approach continues to encounter various obstacles. At the macro level, Eden et al. addressed in a systematic manner the ethical risks, equity concerns, and the privacy of the data in the idea of incorporating AI in the education process, stating that technological solutions are to be considered within a certain educational setting [6].

In addition, according to Dai et al., speech recognition trained in generative AI systems, and dialogue generation that promotes the continuation of particular cultural expression patterns, can systematically reduce the assessment accuracy, interactions experience with non-native or culturally diverse learners, and their view of cultural genuineness [5]. The vast majority of the available research is aimed at short-term effects of interventions, and a systematic longitudinal effect of AI on the structural formation of the speaking skills and adjustability of learners in intercultural communication remains insufficiently presented [6].

3. A review of role reconstruction for English speaking teachers in AI-assisted instruction

Based on the previous analysis of the performance and limitations of learners in AI-assisted spoken English learning, it can be found that technical intervention does not diminish the importance of teachers. On the contrary, it places higher demands on teachers' professional judgment and

instructional design. In the context of AI's deep integration into oral teaching practice, the role of English teachers is gradually shifting from knowledge transmitters to learning facilitators, evaluation coordinators and ethical guides. Therefore, it is necessary to systematically clarify the reorganization path of the role of oral English teachers in the context of artificial intelligence.

In the era of artificial intelligence, the role of English oral language teachers is undergoing a profound structural transformation. It is important to note that the relationship between teachers and the development of AI is not a zero-sum game, but rather a dialectical abandonment. Teachers can delegate repetitive skill practice to AI, thereby releasing valuable cognitive resources and focusing on core educational aspects such as optimizing teaching design, providing emotional support, implementing in-depth feedback, and guiding ethical values. These high-level functions are highly dependent on human judgment and value orientation, constituting the essential characteristics of the teaching profession and cannot be fully replaced by algorithms.

The future of oral language teaching is likely to enter a symbiotic stage, in which the efficiency of AI is closely linked to the wisdom of teachers. This transformation requires teachers to enhance their stronger adaptability, that is, not only to update their knowledge in AI, but also to reshape their human beliefs and follow the essential requirements for educating people in this trend.

3.1. The architect role: integrating human-machine collaborative teaching

In traditional models, teachers were often the single source of language input and the organiser of practice, while in the AI era, the primary responsibility of teachers gradually changes to the architect of integrating technology and teaching methods, and no longer just a passive technology user. They are responsible for constructing a human-machine collaborative learning ecosystem, which involves the systematic design of tool selection, task allocation, and classroom interaction structures based on teaching objectives.

The Technological Pedagogical Content Knowledge (TPACK) framework proposed by Mishra & Koehler has been given a new connotation with intelligent decision-making and teaching judgment as the core in the AI context, that is, "Intelligent-TPACK" [7]. As noted by Latip et al., the competency of teachers is no longer limited to operational skills (Technological Knowledge), but also in having the wisdom of teaching methods to judge "when to introduce AI and when to withdraw AI" (Technological Pedagogical Knowledge) [8,9]. In the face of a large number of AI tools, teachers must assume the role of architects, screen tools according to teaching goals, and seamlessly embed de-contextualised AI exercises into the curriculum system to avoid the "disconnection" phenomenon of technology application and teaching practice [10].

Meanwhile, AI tools offer significant advantages in providing standardised speech input and repetitive sentence pattern exercises, which can save teachers' time and effort spent on low-level cognitive teaching. The study of Gan and Ismael points out that the core functions of teachers should shift towards designing of complex communication tasks that AI cannot complete independently, especially the reconstruction of task design to achieve the bridge between form and meaning. Teachers need to design blended learning pathways, such as "AI pre-class warm-up → in-class interpersonal interaction → AI post-class consolidation." For example, AI is used to generate basic language materials and then teachers create real practical scenarios in the classroom. This division of labour reflects the principle of complementarity: AI handles automated training of language form, while teachers are responsible for the contextualized construction of language meaning.

3.2. The evaluator role: transitioning from precision identification to pragmatic depth

Although AI speech evaluation technology achieves millisecond-level error correction feedback, its feedback often focuses on the matching of acoustic characteristics and lacks in-depth analysis of discourse-level logic and pragmatic decency, which may cause students to have a bias in understanding in real communication. This will make teachers no longer consumed by tedious error correction, so that they can interpret more complex contextual information and carry out more semantic information interventions.

The concept of "AI assessment literacy" proposed is particularly important against this background. When students encounter AI-generated fluency scores or grammar corrections, they may easily fall into the trap of "score-chasing" or experience cognitive confusion. Teachers play the role of "decoder" here, translating algorithm data into actionable instructional decisions.

They interpret the often opaque data generated by AI, transforming cold quantitative metrics into concrete, operable teaching strategies. It emphasises the dynamism of teachers in the Assessment Agency. Teachers need to integrate AI data and classroom observation to form a comprehensive profile of students' language ability and realise the "Assessment of Learning" transforms to "Assessment for Learning".

In addition, the missing replacement for AI pragmatics is also a key part. Although AI has matured in phoneme-level recognition, it is still stiff in the processing of hypersegment characteristics (such as intonation, stress) and pragmatics. Zou et al. found that it is often difficult for AI to accurately identify euphemisms or ironies in specific cultural contexts [11]. Therefore, teachers' feedback should focus on the blind spots of AI, namely critical thinking, cross-cultural awareness and non-verbal communication strategies. When AI points out "incorrect pronunciation", the teacher needs to intervene and further point out whether it is an error of "improper tone" or "logical fracture". This layered feedback mechanism ensures that oral training not only stays at the level of accuracy, but also rises to the level of logic and decency.

3.3. The empathetic facilitator role: building emotional connection to alleviate speaking anxiety

Speaking learning is often accompanied by high psychological pressure, known as "foreign language anxiety" (FLA). Although the non-judgemental characteristics of AI technology lower the practice threshold, it cannot provide human-specific emotional resonance. The role of teachers in emotional support and social connection construction is becoming more and more prominent.

The research of Ding & Yusof confirms that AI dialogue robots can significantly reduce students' oral anxiety by providing a low-risk practice environment [1]. However, Kang's comparative study reveals a key paradox: although AI can alleviate the embarrassment of low-level learners, real-life interaction still has an irreplaceable advantage in stimulating the deep motivation of high-level learners. Therefore, teachers need to build a "psychological scaffolding", using progressive task design to help students build communication confidence. This guides students from the "comfort zone" of human-machine dialogue gradually into the "learning zone" of interpersonal conversation. Through eye contact, instant encouragement and empathy, teachers make up for the "emotional vacuum" of AI interaction and help students overcome the "social readjustment anxiety" when facing real-life communication, avoid their formation of "dumb English" and long-term avoidance of real communication.

Moreover, simple human-computer interaction is easy to lead to the "social island" effect. Zou et al. emphasise that social network interaction is the key to maintaining the motivation of AI-assisted

learning [11]. Teachers need to re-embed individual AI exercises into community learning, such as organising group discussions or peer evaluations to break the sense of isolation brought about by technology. As researchers pointed out, technology is reshaping the identity of teachers. Teachers are no longer just the teachers of language skills, but also the "ignition agent" of students' sense of language self-efficacy, inspiring students to "connect the world with language" through value guidance.

3.4. The ethical guardian role: safeguarding algorithmic ethics and cognitive boundaries

Among the problems of AI generation, the bias of algorithms, data privacy, and the integrity of academic results are gaining growing importance. Educators have to be more than simple tool users. Students have to be instructed on how to use technology in a reasonable manner, as to how to be attentive to eliminate technical risks as well as to understand the boundaries of algorithm ethics. According to a systematic review by Yan et al., there is a delay in AI ethics policies in the sphere of education [12]. This implies that the teachers are made the first front force at the classroom micro-level, who have the responsibility of reducing the technological threats. As an illustration, AI models can be trained on a dataset of a particular accent, and, consequently, non-standard accents will receive discriminative scores [13]. Respectively, educators should inform students about the drawbacks of algorithms, remove the effects of the possible technological bias on the language of students and instruct them to be vigilant of so-called hallucination information that could be produced by generative AI, develop critical thinking of output of technologies and carry out the de-fascination process of AI.

As emphasised by Schiff the importance of "education for AI", teachers need to strictly define the boundaries of "auxiliary" and "alternative" in teaching [14]. Especially in tasks such as oral script writing, teachers should prevent students from falling into the trap of "Cognitive Offloading". At this time, teachers are not just "acting as supervisors", but also guiding students to find a balance between using AI to improve efficiency and maintaining independent thinking, ensuring that technology empowerment rather than technology dependence is realised.

4. Conclusion

This study examined the reconstruction of the role of spoken English teachers in the context of AI-assisted teaching. Combined with the multi-dimensional impact of AI on oral English learning and the transformation practice of teachers' roles, the following core conclusions are drawn. The widespread adoption of AI technology has reshaped the traditional paradigm of English-speaking instruction. It has significant advantages, such as increased accessibility to practice, the provision of immediate feedback, and the reduction of anxiety in foundational learning, thereby creating unprecedented opportunities for learner-autonomous practice. However, the limitations of technology are also prominent. AI technology has natural shortcomings in terms of pragmatic decency, cultural context construction, emotional resonance transmission and ethical risk avoidance, which highlights a fundamental conclusion: AI cannot replace the core educational functions of teachers, and the promotion of AI technology promotes teachers' roles to become more professional. The transformation has shifted teachers' professional focus toward greater specialization and comprehensiveness.

With the deep integration of AI technology into daily teaching, the role of oral English teachers has completely jumped out of the framework of traditional knowledge transferors and transformed into a composite role with multiple functions. In the new teaching scenario of human-computer

collaboration, teachers need to accurately connect technical tools with the help of intelligent-TPACK (Intelligent-Technological Pedagogical Content Knowledge) relevant teaching concepts. The teaching goal is to create a hybrid learning mode of "AI-assisted basic exercises + classroom in-depth interactive communication", so that technology can truly become a help to teaching, rather than replacing teachers' functions. In oral assessment processes, teachers should not be confined to the surface-level feedback provided by AI. But it should focus on the logic of students' language use, cross-text higher-level abilities such as the adaptability of communication, and transform the quantitative data generated by AI into practical teaching adjustment strategies. Simultaneously, educators should be able to address the drawbacks of AI in emotional communication as well, and allow learners to be easily introduced to the transition between the dialogue with AI and face-to-face communication through the gradual design of tasks and the creation of the classroom social environment. Moreover, it is the responsibility of the teachers to deal with related risks as ethical leaders during the classroom implementation of technology. They must instruct students on how to have a critical view of the shortcomings of AI so that they can strike a balance between the ability to use technology to become more efficient in their learning processes and the ability to think on their own.

This metamorphosis of the role is a dialectical unity of the technological empowerment and the very essence of the education. Transferring monotonous and routine instructional material to AI, teachers can shift attention and attention to more significant aspects of their work related to human judgment and empathy, including the design of instruction, emotional, and value imparting. This, respectively, reveals the critical nature of the fact why algorithms cannot replace the teaching profession.

The efficient empowerment of the AI technology and the profound integration of the professional wisdom of teachers will determine high-quality development of the oral English teaching in the future.

Through a literature review on the available research on the topic of relevance, this study offers a systematic address and reference to the wheels of the application of optimisation of teaching of oral English and professional growth of the teachers in the AI era. At the level of teaching practice, it is necessary to build a collaborative ecology of "technical assistance-teacher-student autonomy", so that technical advantages can be organically integrated with the essence of education; the professional development of teachers needs to comprehensively cultivate intelligent technical literacy, high-level evaluation, emotional support and ethical judgement ability to adapt to the actual needs of role transformation. Future research can further focus on the differentiated needs of learners of different language levels, explore more targeted human-computer collaborative teaching models, and strengthen the long-term tracking research on the transformation of teachers' roles to supplement richer empirical support for the deep integration of AI and foreign language teaching.

Authors' contribution

All the authors contributed equally and their names were listed in alphabetical order.

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