

Exploring the Impact of AI-Assisted College Oral English Teaching on Students' Oral Proficiency

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Abstract: *Addressing the three common and prominent practical dilemmas in current college English oral teaching — namely, reluctance to speak, delayed feedback, and lack of personalization—this study closely integrates the widely accepted core theoretical framework of modern foreign language teaching in second language acquisition theory: the comprehensible input hypothesis, the interaction hypothesis, and the affective filter hypothesis. Using 32 non-English major undergraduates from a comprehensive university in Northwest China as participants, a pre-test-post-test quasi-experimental design was employed, supplemented by qualitative research methods such as classroom observation and student interviews. This study systematically explores the application effects, key influencing factors, and optimized implementation paths of artificial intelligence (AI) technology in college English oral teaching. Through a 12-week systematic and standardized teaching intervention, this study rigorously compared and analyzed various data indicators of students before and after the oral proficiency test. It comprehensively integrates real-time classroom observation records, detailed student learning logs, and in-depth one-on-one brief interview results to deeply reveal the specific impact of AI-assisted teaching on students' oral fluency, pronunciation accuracy, vocabulary and grammar application ability, and expression confidence. During the research process, the common pitfall of “emphasizing form over substance” in the application of artificial intelligence technology was consciously avoided. Ultimately, it provided a scientific and operable practical reference and solid theoretical support for improving the quality and efficiency of college English oral teaching, and helped to break through the development bottleneck that has long plagued the current college English oral teaching.*

Keywords: AI-assisted teaching; College oral English; Oral proficiency; Personalized learning.

1. INTRODUCTION

At present, college oral English teaching in China is still generally restricted by the inherent drawbacks of the traditional classroom teaching model, which not only fails to meet the actual needs of college students for improving their oral English proficiency in the new era of globalization, but also has an obvious gap with the core goals of internationalization of higher education and training of applied talents with strong cross-cultural communication capabilities. Under the traditional large-classroom teaching model, the scale of oral English classes in most universities is usually maintained at 30-40 students, and some even exceed 40 students in some cases. Due to the limited energy and time of each teacher, it is impossible to fully take into account the individual oral practice needs and learning characteristics of each student, resulting in extremely scarce opportunities for students to speak up in class. It is difficult for students to obtain regular, high-frequency, and targeted oral training, and the improvement of their oral proficiency lacks sufficient practical support and effective professional guidance. In terms of the oral feedback link, it relies excessively on teachers' subjective evaluation, which not only has obvious feedback lag—usually, students can only get vague feedback from teachers after class, or even have to wait until the next class to get relevant comments—but also the evaluation is mostly based on overall grades, lacking refined and targeted guidance on detailed issues such as pronunciation accuracy, intonation change, stress placement, and expression logic (Liu, 2025; Wang, 2025; Zhang, 2026). This makes it difficult for students to accurately identify their own shortcomings in a timely manner and make effective improvements, leading to a significant reduction in the effect of oral practice and even a sense of frustration in learning (Liao, 2025; Wang, 2026; Zhang, 2026; Zhao, 2025). In addition, due to the fear of making mistakes in oral expression, being laughed at by classmates, or having insufficient confidence in their own oral ability, a considerable number of students choose to remain silent in oral practice classes and lack the courage to speak up actively (Su & Aikber, 2025). Over time, this forms a vicious circle of “daring not to speak, not knowing how to speak, and being unwilling to speak”, which is commonly known as “silent English” in the field of English teaching. This vicious circle not only seriously restricts the improvement of oral teaching quality, but also directly affects students' cross-cultural communication ability and future employability in the increasingly internationalized job market, which is not conducive to the cultivation of high-quality applied talents (Dong, 2026; Su & Aikber, 2025; Zhang & Xiao, 2025; Zhao, 2025).

With the rapid maturity and wide popularization of artificial intelligence technology in the fields of speech recognition, natural language processing, and big data analysis in recent years, its application in the field of education has become increasingly widespread and in-depth, and it has gradually shown an irreplaceable unique advantage in the field of oral English teaching—it can provide students with real-time, accurate, and detailed voice feedback, personalized practice scenarios tailored to their individual learning levels, and a stress-free, non-evaluative independent interaction environment. These advantages can effectively make up for the inherent shortcomings of traditional oral teaching and provide a new way and possibility for solving the above-mentioned dilemmas in college oral English teaching (Su & Aikber, 2025; Wang, 2025). However, from the perspective of the current research status at home and abroad, most existing studies still stay at the superficial level, such as simply introducing the functions of AI technology, listing possible application scenarios, or simply verifying the basic effectiveness of AI tools in oral teaching. There is a lack of small-sample, in-depth excavation, and evidence-based systematic analysis. The research on the adaptability of AI technology to college oral English teaching, the internal mechanism of students' oral proficiency improvement under the assistance of AI technology, and the potential problems and corresponding solutions in the process of technology application is not in-depth enough. Up to now, no mature, replicable, and promotable AI-assisted oral teaching model has been formed in the field of college oral English teaching. Based on this realistic background and the existing research gaps, this study takes 32 non-English major college students as the specific participants, and through a strict pre-test and post-test comparison experiment and in-depth qualitative analysis, focuses on and answers two core research questions: First, can the AI-assisted teaching model effectively improve college students' comprehensive oral English proficiency and their performance in each specific evaluation dimension? Second, how to optimize the AI-assisted teaching model to better adapt to the actual needs of college oral English teaching, realize the in-depth integration of technology and teaching, and truly give play to the auxiliary value of AI technology to promote the all-round improvement of students' oral ability and comprehensive quality?

2. RESEARCH DESIGN

2.1 Participants

Thirty-two students from a class of freshmen of diverse majors including science, engineering, and liberal arts (non-English majors) at a local comprehensive university were selected as the participants through purposive sampling. All students in this class were admitted through the national college entrance examination, with relatively balanced academic performance and English foundation. Through the preliminary investigation and analysis, it was found that there were no obvious differences in their learning attitude, learning motivation, and learning ability, which ensured the homogeneity of the participants. After entering the university, through the standardized English placement test organized by the school's Foreign Language College, professional statistical analysis (including descriptive statistics and significance test) was carried out, and the results confirmed that their oral English foundation was similar, all at a medium level, with no obvious polarization phenomenon—there were neither students with extremely excellent oral ability nor students with extremely poor oral ability. In addition, through a pre-research questionnaire survey designed by the research team, it was further confirmed that all students had not systematically used any AI oral learning tools before the study, and had little understanding of the application of AI technology in oral English learning, which effectively excluded the external interference of previous technical use experience on the research results. In the 12-week research process, the researchers fully mobilized students' participation enthusiasm and initiative through reasonable teaching guidance, regular practice reminders, weekly learning summaries, and full-process tracking management. They also established a good communication mechanism with students, timely solved the problems encountered by students in the process of AI-assisted learning, and ensured the participation rate of students. Finally, no students withdrew from the study due to leave, withdrawal, transfer, or other reasons. The pre-test and post-test data, classroom practice records, learning logs, and interview records of all 32 students were complete and effective, which provided a solid guarantee for the scientificity, reliability, and validity of the research conclusions.

2.2 Research Methods and Instruments

A unified pre-test and post-test paper for oral English was specially compiled by two college English teachers with more than 10 years of college oral teaching experience and one AI education researcher who has been engaged in the research of AI-assisted foreign language teaching for three years. The test paper has high content validity and structural validity, and has been verified and revised by three experts in the field of foreign language teaching to ensure that it can accurately measure students' oral English proficiency. The test content strictly refers to the CET-4 oral test standards and the specific requirements for cultivating oral English proficiency of non-English

major college students in the National College English Teaching Guide issued by the Ministry of Education. It clearly scores students' oral performance from four core dimensions: pronunciation accuracy (including phonetic symbols, intonation, stress, liaison, elision, and other details), expression fluency (including stuttering frequency, speech rate uniformity, pause rationality, and continuity), vocabulary and grammar appropriateness (including vocabulary collocation accuracy, grammatical normativity, and sentence pattern diversity), and topic response ability (including logical coherence, content completeness, view clarity, and cross-cultural awareness). Each dimension is scored 25 points, with a total score of 100 points. The scoring work was independently conducted by 2 senior teachers with more than 10 years of college oral English teaching experience in a double-blind evaluation manner—neither teacher knew the students' identities nor whether the test paper was a pre-test or post-test. Before the formal scoring, the two teachers received unified training organized by the research team to clarify the scoring standards in detail, unify the scoring standards, and avoid subjective deviations caused by differences in individual understanding. The consistency test of the scoring results showed that the Kappa value was greater than 0.8, which indicated that the consistency of the scores of the two teachers was high, ensuring the objectivity, fairness, and reliability of the scoring. Finally, the average score of the two teachers was taken as the student's final test score to further reduce the impact of individual subjective factors and improve the accuracy of the test results.

After repeated comparison, verification, and trial use, three localized AI-assisted teaching platforms widely used in college oral teaching and highly suitable for the needs of college oral English teaching were selected as the core intervention tools, including Doubao, Kimi, and Liulishuo—all of which are localized AI products independently developed in China, with strong adaptability to the oral learning characteristics and needs of Chinese college students. Relying on advanced deep learning speech recognition technology and natural language processing algorithms, these platforms have a variety of core functions that are closely integrated with oral English teaching, including real-time speech recognition (the recognition accuracy rate is over 98%, which can accurately identify various subtle pronunciation errors), accurate error correction (covering pronunciation, grammar, and expression logic, and can point out the specific types and causes of errors), multi-scenario simulated dialogue (simulating various real-life and academic communication scenarios), personalized practice push (based on students' learning data and ability level), and learning data statistical analysis (automatically recording and analyzing students' practice time, completion quality, error types, and progress). Among them, Doubao is outstanding in intelligent interactive dialogue and academic oral guidance, which can simulate real academic communication scenarios and provide targeted suggestions for oral expression logic and cross-cultural communication skills; Kimi excels in workplace and daily oral simulation, with rich scenario-based dialogue materials that are closely aligned with college students' future career development needs and daily communication scenarios, and its real-time error correction function can quickly capture subtle pronunciation and grammatical errors; Liulishuo has rich campus and workplace scenario modules, which are highly consistent with college students' study and future career needs, and its personalized practice plan and progress tracking function can effectively urge students to persist in oral practice. For students' phonetic symbol errors, intonation deviations, lack of liaison in pronunciation, as well as grammatical errors, stuttering problems, and logical confusion in expression, these platforms can give specific, operable, and targeted improvement suggestions, and provide targeted intensive practice tasks to help students consolidate and improve their weak links. In addition, combined with college students' actual study and life scenarios and future career development needs, the platforms have set up a variety of practice modules such as daily communication, campus scenarios, workplace simulation, cross-cultural communication, and academic communication. Each module is designed with rich and diverse practice tasks, which can fully meet students' oral practice needs in different scenarios and at different levels, and lay a solid foundation for the transformation of oral practice results into real communicative ability.

This study mainly adopted a pre-test and post-test quasi-experimental method, supplemented by classroom observation, learning log analysis, and one-on-one interviews, to ensure the comprehensiveness and depth of the research. The total research cycle was 12 weeks (equivalent to 3 teaching months), and the specific implementation process was carried out in strict accordance with the pre-designed experimental plan to avoid deviations. One week before the intervention, a pre-test of oral English was conducted on 32 participants in a standardized test environment. The test was supervised by two researchers to ensure the authenticity of the test results. The purpose of the pre-test was to fully understand students' initial oral English level, their advantages and disadvantages in each evaluation dimension, and the main existing problems, and to establish personal oral English ability files for each student, so as to provide a scientific and accurate basis for subsequent targeted teaching intervention. During the intervention period, the AI-assisted tool was deeply integrated into daily oral English teaching, forming a "classroom guidance + after-class AI practice" dual-mode teaching model. Students were required to complete 3 independent practices on the AI platform every week, with a fixed practice time of 30 minutes each time. The practice content was dynamically pushed by the platform according to students' pre-test level, real-time practice

situation, and weak links, ensuring the pertinence and effectiveness of the practice. Teachers checked students' practice data in real time through the platform background, accurately grasped students' practice time, completion quality, error types, and weak links, and summarized the common problems of the whole class and the individual problems of students. On this basis, teachers carried out targeted teaching activities such as centralized explanation, group interactive training, one-on-one guidance, and practice achievement display in class, so as to help students solve the problems encountered in practice. One week after the intervention, a post-test of oral English was conducted on all participants in the same test environment as the pre-test, and the test content, scoring standards, and evaluation personnel were completely consistent with the pre-test to ensure the comparability of the test results. Finally, by comparing the differences between the pre-test and post-test data, combined with the 12-week classroom observation records, students' learning logs, and one-on-one short interview results with students, the actual application effect of AI-assisted teaching was comprehensively, in-depth, and multi-dimensional analyzed.

3. RESULTS

The results of statistical analysis on the pre-test and post-test scores of oral English of 32 students showed that the average post-test score (76.7 points) was significantly higher than the average pre-test score (67.8 points) by 8.9 points. After independent samples t-test, the difference was statistically significant ($P < 0.05$), which indicates that the AI-assisted teaching model has a significant positive effect on improving students' comprehensive oral English proficiency, and the intervention effect is obvious. From the perspective of the four specific scoring dimensions, the pronunciation accuracy dimension had the most obvious improvement, with an average increase of 9.8 points. This is mainly due to the real-time, accurate, and detailed pronunciation correction function of the AI platform. Compared with teachers, the AI platform can quickly capture subtle errors in students' pronunciation that are easily ignored by teachers (such as slight intonation deviations and incorrect liaison), and give targeted correction suggestions and corresponding pronunciation practice tasks. This helps students quickly correct detailed problems such as phonetic symbols, intonation, and stress, and gradually form standard and natural pronunciation habits. Secondly, the expression fluency increased by an average of 9.2 points. The stress-free and non-evaluative practice environment of AI effectively reduced students' expression tension and anxiety, making them more relaxed in oral practice. At the same time, high-frequency independent practice also effectively reduced stuttering frequency, improved speech rate uniformity and expression coherence, and made students' oral expression more smooth and natural. The vocabulary and grammar appropriateness and topic response ability increased by an average of 8.5 points and 8.1 points respectively, which fully reflects the positive impact of AI personalized practice push on students' language accumulation, sentence pattern application, and expression logic. Under the guidance of the AI platform, students can accumulate more appropriate vocabulary and diverse sentence patterns in practice, and gradually improve the standardization, richness, and completeness of oral expression.

In terms of specific performance, in the pre-test, 87.5% of the students had obvious problems such as substandard pronunciation, flat intonation, wrong stress, and lack of liaison and elision, which made their oral expression difficult to be understood by others; 78.1% of the students had frequent stuttering, inappropriate pauses, and incoherent logic in oral expression, and it was difficult for them to complete topic elaboration completely and fluently. Some students even had the problems of lack of vocabulary, single sentence patterns, and frequent grammatical errors, which seriously affected the effectiveness of oral communication and the expression of their own views. In the post-test, only 40.6% of the students still had obvious pronunciation problems, and most of them were more complex intonation control and liaison skills that were difficult to master, which had little impact on the overall understanding of oral expression. The stuttering phenomenon of 62.5% of the students was significantly improved, and the frequency of inappropriate pauses was greatly reduced. Most students could complete the designated topic expression fluently and coherently, and could take the initiative to use the accumulated vocabulary and diverse sentence patterns pushed by the platform, so the richness and standardization of oral expression were significantly improved. At the same time, students' confidence and enthusiasm in oral expression were also significantly enhanced. The proportion of students who took the initiative to speak up and participate in classroom interactions in class increased from 37.5% before the intervention to 78.1% after the intervention. Students' enthusiasm for taking the initiative to ask questions, participate in group discussions, and show their oral practice results was significantly improved, and a positive learning atmosphere was formed in the class.

Combined with the 12-week classroom observation records, students' weekly learning logs, and in-depth one-on-one short interview results with students (each interview lasted about 10 minutes, focusing on students' feelings, gains, and existing problems in the process of AI-assisted learning), further analysis found that the advantages of AI-assisted teaching in college oral English teaching are mainly reflected in three aspects: First, it effectively solves the core pain point of students' "daring not to speak up". The stress-free, non-evaluative, and

independent practice environment provided by the AI platform allows students to practice oral English boldly without worrying about being evaluated, criticized, or laughed at by teachers or classmates. This effectively alleviates students' anxiety about oral expression, eliminates their fear of speaking English, and gradually cultivates their courage and confidence to speak up actively. Many students mentioned in the interview that they were more willing to practice oral English on the AI platform because they did not have to worry about making mistakes and being ridiculed. Second, it realizes real-time, accurate, and refined feedback. Compared with the delayed feedback and general evaluation by teachers in traditional teaching, the AI platform can quickly identify errors in pronunciation, grammar, expression logic, and other aspects during students' practice, and give specific correction suggestions, detailed error analysis, and targeted practice plans. This helps students accurately locate problems, make effective improvements in a timely manner, and greatly improve the efficiency and effect of oral practice. Third, it has strong personalized adaptability. The AI platform can accurately analyze students' weak links and learning characteristics according to their practice data, test scores, and learning logs, and push practice content and tasks suitable for their oral English level. This effectively avoids the drawback of "one-size-fits-all" in traditional teaching, truly realizes the teaching goal of "teaching students in accordance with their aptitude", and meets the personalized learning needs of different students. Students with poor oral foundation can get more basic practice tasks, while students with better foundation can get more challenging tasks, which ensures that each student can make progress in their own "zone of proximal development".

At the same time, some problems and deficiencies of AI-assisted teaching in practical application were also found in the research process: Some students over-relied on the error correction function of the AI platform during practice, lacked the awareness of independent thinking and active error correction, and were used to passively accepting the correction suggestions given by AI, without thinking deeply about the causes of errors and how to avoid them in the future. As a result, in real conversations without AI assistance, they still frequently made the same mistakes, and their initiative in independent expression and independent thinking ability decreased to a certain extent. This is a problem that needs to be paid attention to in the process of AI-assisted teaching. In addition, although the scene simulation of the AI platform was rich and diverse, there was still a certain gap with real interpersonal communication scenes. Most of the scene settings were preset dialogues with fixed contexts, lacking the randomness, flexibility, and emotional interaction in real communication. For example, in real conversations, the other party's expression, tone, and body language will affect the communication process, but the AI platform cannot simulate these elements. As a result, some students still had problems such as insufficient adaptability, unnatural expression, and difficulty in flexibly responding to unexpected problems in real face-to-face conversations, and it was difficult to fully transform the oral practice results on the AI platform into real communicative ability.

4. DISCUSSION

The empirical results of this study fully show that the AI-assisted teaching model can effectively improve college students' comprehensive oral English proficiency, and its application value is mainly reflected in accurately making up for the three major shortcomings of "delayed feedback, lack of personalization, and few opportunities to speak up" in traditional oral teaching. This is highly consistent with the core needs of second language acquisition theory, and also verifies the applicability of second language acquisition theory in AI-assisted oral teaching. Specifically, the personalized practice content pushed by the AI platform according to students' levels and learning characteristics conforms to the requirement of "Comprehensible Input" in second language acquisition theory. It can make students obtain effective language input within their own cognitive and language capabilities, avoid inefficient learning caused by input content that is too difficult or too easy, and lay a solid foundation for the improvement of oral ability. The real-time interaction and feedback functions provided by the AI platform have effectively achieved the core goal of "Interaction Hypothesis" in second language acquisition theory. Through real-time interaction with the AI platform, students can timely correct errors, deepen their understanding and flexible application of language knowledge, and strengthen the effect of oral practice. In addition, the stress-free practice environment created by AI effectively reduces students' affective filter, which is an important factor affecting second language acquisition. It reduces students' anxiety and fear about oral expression, stimulates students' enthusiasm and initiative in oral practice, and makes students willing to speak, dare to speak, and be able to speak, thereby promoting the comprehensive improvement of oral proficiency.

However, it should be clearly emphasized that AI technology is only an auxiliary tool for oral English teaching and cannot replace the core leading role of teachers in the teaching process. Teachers' classroom guidance, interactive design, interpretation of cultural context, emotional care for students, and guidance on learning methods are still indispensable and important components in oral English teaching, which cannot be replaced by any intelligent

technology. The core goal of oral English teaching is to cultivate students' real interpersonal communicative competence, and the improvement of this competence is inseparable from teachers' accurate guidance, real scene interaction design, and emotional communication. Teachers can help students understand the cultural connotation behind the language, guide students to use appropriate language in different contexts, and cultivate students' cross-cultural communication awareness and ability, which is difficult for AI platforms to achieve. In the practical application process, if we over-rely on AI technology and ignore the leading role of teachers, it will instead weaken students' independent thinking ability, critical thinking ability, and real communicative ability, leading oral teaching into the misunderstanding of "technology supremacy", which violates the essential goal of oral English teaching. This is also a key problem that needs to be paid attention to and avoided in the subsequent promotion and application of AI-assisted oral English teaching.

5. IMPLICATIONS

5.1 Constructing an "AI + Teacher" Collaborative Teaching Model

A clear delineation of roles between AI and teachers is essential to establishing complementarity and forming a synergistic force that enhances students' oral proficiency. In this model, the AI platform serves as the primary tool for students' autonomous after-class practice, providing real-time feedback and intensive training. Its advantages—high frequency, personalization, low psychological pressure, and precise feedback—align closely with the needs of independent practice, addressing the limitations of limited classroom time and teacher capacity. By enabling sustained daily practice, the platform helps consolidate and improve students' oral skills. Teachers, meanwhile, retain a leading role in classroom instruction. Drawing on practice data, error analyses, and learning logs generated by the AI platform, they can accurately identify students' weaknesses and learning difficulties, and subsequently design targeted instructional activities—such as focused explanation, targeted intervention for challenging areas, authentic interactive scenario design, cross-cultural communication guidance, and structured oral expression tasks. For instance, teachers may design real-life communication scenarios for classroom activities, including group discussions and role-plays, guiding students to apply the knowledge and skills acquired through AI-based practice to authentic communicative contexts. This approach facilitates a deep integration of technological tools and pedagogical practice, thereby improving the efficiency and quality of oral English instruction.

5.2 Optimizing AI Practice Design and Mitigating Technological Dependency

To enhance the authenticity, practicality, and diversity of scenario-based simulations on the AI platform, practice design should be further aligned with students' academic backgrounds, learning needs, and future career trajectories. Specialized practice modules—such as cross-cultural communication, academic oral English, and workplace discourse—should be incorporated, along with elements of unpredictability and complexity that reflect real-life communicative challenges (e.g., managing misunderstandings, resolving unexpected issues). Such enhancements increase the adaptability and practical relevance of the practice content, better preparing students for real-world interpersonal communication. Concurrently, AI-based tasks should include activities that promote active engagement and metacognitive reflection, such as independent expression, error analysis, scenario construction, and group discussion. These tasks are designed to encourage students to engage in active thinking, autonomous synthesis, and self-directed error correction. For example, students may be asked to deliver a short oral presentation without AI assistance, and then compare their performance with AI-generated feedback to identify areas for improvement. Such practices help cultivate independent learning and expression skills, guiding students to use AI tools appropriately and avoid over-reliance on automated error correction, thereby achieving the instructional goal of "using AI without depending on it."

5.3 Attending to the Balanced Development of Students' Affective and Cognitive Capacities

In AI-assisted oral English instruction, pedagogical attention should extend beyond linguistic competence to encompass students' affective dispositions, learning habits, and broader competencies. Classroom presentations, group interactions, practice outcome sharing sessions, and oral English contests can serve as platforms for students to showcase their achievements in AI-supported practice. Recognizing students' progress and accomplishments in these contexts helps strengthen their confidence and motivation in oral expression. Students who demonstrate slower progress warrant additional encouragement and support to sustain their engagement and prevent disengagement from oral English learning. Furthermore, guidance on the use of AI tools should be reinforced to ensure students correctly understand their auxiliary role. Teachers can assist students in formulating reasonable,

sustainable autonomous practice plans and in learning how to independently synthesize and improve based on AI-generated feedback, thereby effectively transforming AI-based practice outcomes into real-world interpersonal communication skills. In this way, instruction can support the balanced development of students' oral proficiency, autonomous learning capacity, and cross-cultural communication competence, ultimately cultivating high-quality, application-oriented talent with well-rounded capabilities.

6. CONCLUSION

This study systematically explores the application effect, existing problems, and optimization paths of AI-assisted teaching in college oral English teaching, addressing the long-standing dilemmas in traditional oral English instruction and filling the research gap of insufficient in-depth analysis on AI-teaching integration. Based on a 12-week quasi-experimental study with 32 non-English major college students, combined with qualitative research methods such as classroom observation, learning log analysis, and one-on-one interviews, the study confirms that AI-assisted teaching models have a significant positive impact on improving college students' comprehensive oral English proficiency—with an average score increase of 8.9 points, particularly in pronunciation accuracy and oral fluency—and effectively alleviates students' anxiety about oral expression, enhancing their confidence and initiative to speak up. The empirical results also verify that AI technology can effectively make up for the shortcomings of traditional oral teaching, such as delayed feedback, lack of personalization, and insufficient speaking opportunities, while confirming that AI serves as an auxiliary tool rather than a substitute for teachers' leading role in teaching.

The study further proposes three targeted instructional implications, including constructing an “AI + Teacher” collaborative teaching model, optimizing AI practice design to mitigate technological dependency, and emphasizing the balanced development of students' affective and cognitive capacities. These implications form a systematic and operable framework for the in-depth integration of AI technology and college oral English teaching, providing practical guidance for educators to improve teaching quality and promote students' oral proficiency and comprehensive competence.

While the study provides valuable insights into AI-assisted college oral English teaching, it also acknowledges its limitations, which point to directions for future research. The small sample size, single institutional and professional context, and short intervention cycle limit the generalizability of the research results. Future studies should expand the sample size to include students from different types of universities, majors, and oral proficiency levels, extend the intervention cycle to explore long-term effects, and conduct in-depth analyses of the differentiated application effects of different AI technologies and teaching models. By addressing these limitations, subsequent research can further refine AI-assisted teaching strategies, promote the sustainable development of AI-integrated oral English teaching, and provide more solid theoretical and practical support for the cultivation of high-quality applied talents with strong cross-cultural communication capabilities in the context of globalization.

7. LIMITATIONS AND FUTURE RESEARCH

This study still has certain limitations that need to be improved and supplemented in subsequent research: First, the participants only selected 32 non-English major college students from a single local comprehensive university, with a small sample size. Moreover, the participants are limited to similar English proficiency and the same grade (freshmen), which makes the universality and representativeness of the research results need to be further verified. It is difficult to fully cover the situation of students from different types of universities (such as key universities, vocational colleges), different majors (such as science, engineering, liberal arts), and different oral English foundations (such as excellent, medium, and poor). Second, the research cycle is 12 weeks, which belongs to a short-term intervention study. It only explores the short-term effect of AI-assisted teaching on students' oral ability, and fails to track and explore the long-term impact effect of AI-assisted teaching. It also cannot observe the law of continuous improvement and development of students' oral ability in the long term, nor can it verify whether the improvement effect of oral ability can be maintained stably. Third, the research focuses on the overall application effect of AI-assisted teaching, and does not conduct in-depth discussion on the differentiated application effect of different AI technologies such as speech recognition technology, intelligent dialogue robot, big data analysis technology in oral English teaching. It also does not conduct in-depth analysis on the adaptation effect of different teaching models (such as task-based teaching, cooperative learning) and AI technology. Future research can expand the sample size, cover students from different types of universities, different majors, different grades, and different oral English foundations, and improve the universality and representativeness of the research results; extend the research cycle to 6 months or 1 year, track and observe the long-term effect of AI-assisted teaching on

students' oral ability, and explore the long-term development law of students' oral ability; at the same time, in-depth explore the adaptability of different AI technologies and different oral teaching models, further optimize AI-assisted teaching strategies, enrich the theoretical and practical research on AI-assisted oral English teaching, provide more comprehensive, scientific, and operable reference for the reform of college oral English teaching, and promote the continuous improvement of the quality of college oral English teaching.

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