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Strategies for Integrating Artificial Intelligence (AI) to Improve and Assess English Oral Communication Skills

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Abstract

This research was conducted to investigate AI integration in the development and evaluation of English oral communication skills, within both academic and professional practices. This study used a mixed-methods design, combining data from a quasi-experiment with qualitative data collected through interviews with students and instructors. Results demonstrated that the AI-infused instruction and assessment significantly improved English oral communication in fluency, accuracy, and general proficiency. Thematic analysis of the interviews indicated that AI technologies can provide individualized feedback, practice opportunities, and objective assessment in the promotion of effective language learning. However, these processes raise concerns about AI bias, human-AI collaboration, and cultural and pedagogical contexts. The recommendations of this research provided some actionable points for educators and program administrators on strategically incorporating AI tools in ways that will positively affect English-speaking proficiency.

Introduction

Oral communication skills are taken as prerequisite conditions to succeed both in the academic/professional world and socially important interactions. In the process of English language learning, speaking skill development is an essential part of holistic language development and one of the indexes which signal overall language proficiency. However, a good number of the English language learners (ELLs) fail to have and demonstrate strong oral communicative skills even after several years of language training/instruction (Goh and Burns, 2012; Teng, 2020). In recent years, there has been a significant increase in the interest of using artificial intelligence (AI), as part of the development of communicative English oral skills. In light of the increase in the importance of English in many domains, the focus on the development of oral English expression ability, and more specifically, the accurate use of discourse markers as part of language teaching, has burgeoned. AI technologies that are infused into the development and assessment of English oral-communication skills are highly promising. AI-powered applications can offer the potential for individual feedback, increased practice opportunities, and objective speaking performance evaluation (Golonka et al., 2014; Hsu, 2016). Through AI, language programs are better situated to meet challenges involved in helping ELLs develop fluent, accurate, and contextually appropriate speaking skills.

The use of AI technologies in oral English development has created interactive learning spaces for the students,

with students learning through human computer interaction to improve oral communicative competence and to add to student motivation in learning English (Huang & Zhu, 2022). In addition, as a result of the data analysis through the use of AI technology, (and the feedback loops), English oral teachers can immediately alter teaching strategies and in a timely fashion, facilitate the adjustment of the teaching processes to foster the design of intelligent oral teaching modes.

In concurrence with this fact, some more promising results were discovered in relation to AI-aided approaches to language learning in terms of academic writing skills and writing motivation among English as a foreign language (EFL) learners, as substantiated in a study that looked into the effects that AI tools brought about in writing courses—specifically of Chinese EFL learners— (Song and Song, 2023). The incorporation of AI tools into language learning not only gives the learners immediate and focused feedback but also creates an interactively open learning atmosphere, so it improves the effectiveness in language learning. The findings are indicative that the integration of AI would yield certain advantages in the enhancement of English oral communication and academic writing ability, establishing strong emphasis from the findings to exploit AI technology for the optimization of language learning.

Despite the potential of benefits of AI integration can offer, there still remain "a need for empirical follow-up studies to identify the most effective strategies and best practices in implementing such technologies for both English language instruction and assessment." The study uses mixed methodologies to investigate the outcomes of AI-supported interventions in improvement and assessment of English oral communication skills and the concomitant perceptions and experiences by students and instructors.

Literature Review

The integration of AI in improving English oral communication skills is very significant because of the growing importance of English language proficiency in professional, business, and academic contexts. As Huang and Zhu (2022) forefronted, the effective teaching of oral English involves the cultivation of students to express themselves verbally, including the correct usage of discourse markers for regulating interpersonal relationships and clarifying discourse relationships. Also, with AI technology integration into teaching, an interactive and active learning environment for oral English is created which in turn can stimulate students' interest in improving learning efficiency. Not only will it foster the reform of oral teaching methods, but it can also improve the teaching effectiveness of collecting big data and automatically intelligent annotation for classroom teaching behavior. Success, proven by Song and Song (2023), in using AI-assisted language learning as a way to improve both academic writing skills and motivation, provides grounds for the potential of AI tools to deliver immediate and targeted feedback to learners. The potential of integration with AI in writing practice gives rise to the possibility of more efficient and effective learning outcomes, something immensely relevant to EFL education.

The Importance of Oral Communication Skills in English Language Learning

Oral communication skills mean the ability to speak fluently, accurately, and appropriately in a given context,

which is very important with respect to academic and professional success. In the process of learning an English language, speaking proficiency is presupposed as one of the most essential constituents for holistic language development and definitely one of the general language proficiency indexes. ELLs with strong oral communication skills can actively participate in classroom discussions and be able to have meaningful interactions with instructors and peers, as well as effectively communicate what they know and think. These skills also transfer to the negotiation of most social, academic, and professional contexts that call for competent English speaking as a minimum requirement for success.

Yet, for many ELLs, even years of language instruction seem not to be enough to develop and demonstrate strong oral communication skills. It is attributed to a variety of challenges that could relate to an issue such as a lack of opportunities for practice closer to real-life conditions, limited feedback about speaking performance, or that oral communication entails intricate knowledge at linguistic, pragmatic, and sociocultural levels.

The Potential of Artificial Intelligence (AI) in Enhancing Oral Communication Skills

Integration of AI-powered technologies into teaching and learning holds great promise for addressing some of the known challenges that ELLs face in developing and demonstrating strong oral communication skills. Such AI-based applications can do the following:

Personalized feedback: AI-powered systems can analyze student speech in real-time and provide immediate, tailored feedback on aspects like pronunciation, grammar, vocabulary use, and pragmatic appropriateness.

More Intensive Practice: Through AI-based chatbots and virtual conversation partners, ELLs could practice intensely with both personalized interactive practice sessions and thereby receive more exposure to the target language, as well as feedback on their performance.

Objective Assessment: Artificially intelligent assessment tools can provide a consistent and reliable rating of oral communication skills in fluency, accuracy, and general proficiency, upon which instruction can be based and student progress determined (Chalhoub-Deville and Deville, 2005; Hsu, 2016).

Scalability and Accessibility: AI-driven applications can be developed to be always available and always accessible, enabling ELLs to practice the language skills as much as they want and at their convenience, obtain feedback—something very central to language learners with limited access to face-to-face instruction (Lee, 2020; Li et al., 2019).

In this respect, there is a real need for empirical research to provide effective ways and best practices of implementing AI technologies in English language instruction and assessment. This should go with understanding the perceptions and experiences of learners and instructors in the successful and ethical integration of AI in learning contexts. AI-powered technologies now provide new avenues for enhancing ELLs' challenging oral communication skills. The major potential areas for which research has been conducted on the possible

contributions of AI in language learning and language assessment are:

Personalized Feedback and Practice

As a subset of digital teaching systems, AI-powered systems have been proved to provide immediate feedback in tailoring many different facets of oral communication, such as pronunciation, grammar, vocabulary usage, and pragmatic appropriateness. Such systems can analyze student speech in real time to provide students with specific suggestions on how to improve and track student progress over time. Edalatifard et al. (2022) reported a clear difference in the effectiveness of pronunciation feedback through AI for ELLs. The study shows that those who received individualized feedback interacted with AI and pronounced significantly better in terms of pronunciation accuracy than pupils who attended classroom instruction alone. The authors pointed out how AI can offer the capacity for much more efficient feedback than a human interlocutor can provide alone.

Similarly, Lee conducted a study on AI chatbots capable of enhancing ELLs' conversational skills. As derived from the study, students who practiced with AI chatbots regularly improved in fluency and confidence within real-life speech situations. As Lee said, AI-driven conversation partners indeed empower ELLs with authentic language practice outside the traditional classroom.

Objective Assessment of Speaking Skills

AI-based assessment tools have held some promise for reliable and consistent assessment in oral communication skills. Such devices can measure fluency, accuracy, and overall proficiency, therefore allowing for objective data that will take part in instructional decisions and track student progress. Xi et al. (2020) provide a thorough review of the current state of AI-driven speaking assessment tools in terms of their accuracy, reliability, and potential bias. The researchers have found that for some speaking performance dimensions, like fluency and pronunciation, AI-based assessments generate high correlations with the scores given by human raters, but for more sophisticated characteristics of communication, like pragmatic appropriateness and content relevance, they show some limitations.

Going further, Chapelle and Voss provided a 2021 framework regarding how AI-powered assessments might be combined with human evaluation in high-stakes language testing settings. Their results showed that AI could improve the efficiency and consistency of speaking assessments while underscoring the need for continued human expertise in interpreting the results and making final judgments.

Adaptive Learning and Personalized Instruction

AI can be applied in creating tailored learning experiences that fit the needs and preferences of each student. By means of pattern analysis, AI systems can change the difficulty, pace, and content of speaking activities so as to bring out the best in the learning experience (Golonka et al., 2014; Li et al., 2019). Wang and Liao (2023) examined how an AI-driven adaptive learning system could help enhance the oral communication skills of ELLs

at a college level. The results indicated that students who used the adaptive system showed better improvement in speaking ability compared to those on a traditional curriculum path. The success was attributed to the system's capacity to identify individual weaknesses in learners and subsequently provide relevant practice activities and resources.

Challenges and Considerations in AI Integration

While AI might be a great way to improve and test oral communication skills with possible benefits, there are also challenges and considerations, as researchers have pointed out:

AI Bias and Sensitivity Across Cultures

Several recent studies have also shown a variety of concerns related to biases in AI systems' recognition and evaluation of various accents and different language varieties. This would, in effect, mean that there were biases against certain groups of learners, further entrenching existing inequalities in language education. In the large-scale study conducted by Kumar et al. in 2022, AI-powered speech recognition was tested against English accents and dialects. As could be noted from their findings, large variations at the accuracy rate seem to appear: AI-powered speech recognition systems really perform worse for non-native speakers and some regional varieties of English speakers. They underlined the fact that, with a view to guaranteeing fairness and inclusivity in AI-powered language learning tools, much more diverse training data is needed, together with enhanced algorithms.

The Role of Human-AI Collaboration

While technologies developed by AI offer a number of advantages, several researchers point to an important role for human instruction and guidance within language learning contexts. It is also very aware of the fact that such optimal integration of AI tools shall be based on careful consideration of how these technologies can complement, rather than replace, human expertise.

In a qualitative study investigating ELL instructors' perceptions of AI integration, Rodriguez-Ginorio and Castillo-Ortiz established that although teachers generally held a positive view of the AI tools presented, they articulate concerns over dependence on technology and the probable loss of the relevant human element in language teaching. That means adequate integration of AI is based on the continuous professional development of instructors, with clear guidelines balancing AI-supported activities and traditional teaching methods.

Ethical Considerations and Data Privacy

The use of AI in language learning and assessment raises some important ethical considerations regarding personal data protection and responsible use of student information (Lim and Chai, 2021; Zawacki-Richter et al., 2019). In this respect, researchers have called for clear policies and good practices on the part of institutions to protect students' privacy and assure that AI technologies are used ethically.

Theoretical Framework

The current study is grounded in the theoretical framework of the Technology Acceptance Model (TAM) and the Sociocultural Theory of Learning (SCT), which are both seeking to present a holistic explanation of factors intervening in AI integration processes within language learning and assessment. The Technology Acceptance Model postulates that perceived usefulness and perceived ease of use are two major factors influencing the successful integration of a new technology; in this case, that would be AI-powered applications. These perceptions influence attitude and intention concerning the use of the technology. In this regard, TAM guides an exploration of the students' and instructors' perceptions of the usefulness and usability of AI-supported technologies toward improving and evaluating oral communication skills.

The Sociocultural Theory of Learning was proposed by Lev Vygotsky in 1978. He emphasized, in that very framework, the role of social interaction and a cultural context for learning processes. He proposed that through internalization, the occurrence of learning makes use of tools and cultural artifacts like language and technology to mediate knowledge and skills. In this respect, the SCT framework helps to analyze how sociocultural factors, pedagogical approaches, instructional practices, and cultural norms shape the integration of AI-powered tools for language learning purposes and assessment.

Significance of Research

This study, in particular, seeks to determine how AI technology integrates with the pragmatic functions of discourse markers in spoken English to enhance oral communication skills in English. In view of the growing importance of English language proficiency in all walks of life, interactive teaching modes and fostering of students' oral expression are of vital significance. AI technology integrated into oral English teaching has created a more interactive learning environment that actively cultivates the oral English of students and stimulates their interest in language learning. Particularly, this study seeks to address a noticeable research gap concerning the exact effects of AI-assisted language learning on academic writing skills and writing motivation within the context of EFL education. As such, the impact of AI-assisted language learning tools on EFL learners will be observed herein in order to contribute to an understanding of the role of AI in increasing language proficiency and improving pedagogical practices for Song and Song (2023).

Methodology

This study involved a mixed-method research design, both with a quasi-experimental quantitative component and qualitative interviews that gave an in-depth explanation of the following research questions.

1. What is the impact of an AI-supported intervention on improving English oral communication skills, as measured by fluency, accuracy, and overall proficiency, compared to a control group?
2. What are the perceptions and experiences of students and instructors regarding the use of AI-powered technologies to enhance and assess English oral communication skills?
3. What are the best practices and strategies for effectively integrating AI-powered technologies to improve

and assess English oral communication skills?

Quantitative Component

Participants and Sampling

The participants in this study were 120 university students enrolled in an English language program at a large public university in the United States. A random number generator was used to randomly assign half of the participants (n = 60) to a control group, while half were assigned (n = 60) to an experimental group.

Intervention

For the experimental group, there was an AI-supported intervention for one semester (14 weeks, 3hrs/week) for improving and assessing English oral communication skills, while for the control group it followed the usual English language curriculum without the AI-supported components.

The AI-supported intervention consisted of the following elements:

(1) AI-Powered Feedback and Practice: In the experimental group, students received an AI-based chatbot, a virtual conversation partner, for individualized speech feedback on pronunciation, grammar, vocabulary, and pragmatic appropriateness, with possibilities for interactive practice sessions through the use of the same AI-powered tools.

(2) AI-based Test: Students in the experimental group were conducted regular oral communication tests with the support of an AI-based assessment tool. This tool has been developed to take objective, reliable and consistent measures for the fluency, accuracy and overall proficiency levels of the students.

The control group purely adhered to the provided English language curriculum that includes customary instructional methodology as well as assessment strategies without the influence of AI-powered technologies in their learning process.

Data Collection and Analyses

Pretest and posttest measures for oral communications skills for both the control and experimental groups were collected. The measures of assessment include:

(1) Fluency: The number of words spoken per minute and the frequency of pauses and hesitations.

(2) Accuracy: The number of grammatical and lexical errors per 100 words.

(3) Overall Proficiency: Rated for by a validated rubric assessing a number of dimensions of oral communication, including pronunciation, vocabulary, grammar, and pragmatic appropriateness.

Moreover, the pre-test and post-test scores were analyzed through two-way ANOVA to examine the effect of the AI-based intervention and the interaction effect of the intervention by time (pre-test vs. post-test).

Qualitative Component

Participants and Sampling

Semi-structured interviews were conducted with 30 students (15 experimental, 15 control) and 10 teachers of the English language with the view to discuss their perceptions and experiences with AI-powered technologies in enhancing and assessing oral communication skills. Selection of the participants was done purposefully since there was a need to seek diverse perspectives, such as level of language proficiency, previous experience with technology, and teaching experience.

Data Collection and Analysis

Participants were interviewed either face-to-face or through video conferencing depending on their preference and availability. All interviews were audio recorded and transcribed verbatim. In the present research, thematic analysis was employed for identifying recurrent patterns and themes in the interview data. The coding process was done through the following steps:

(1) Familiarization with the Data: Several times, the researchers went through the interview transcripts in an effort to get familiar with the content.

(2) Initial Coding: The researchers created initial codes based on the research questions and on the theoretical frameworks of TAM and SCT.

(3) Identifying Themes: The researchers grouped the initial codes under broader themes that captured perceptions and experiences voiced by participants.

(4) Reviewing and Refining Themes: The researchers took time to review and refine the identified themes to be coherent, distinct, and reflective of the data.

(5) Defining and Naming Themes: The researchers defined the final themes and assigned names to them.

The quantitative and qualitative findings were further synthesized in order to gain an in-depth understanding of the research problem and to develop relevant practice recommendations for the effective integration of AI-powered technologies in English language instruction and assessment.

Ethical Considerations

The university IRB reviewed and approved the study protocol for its protection of the rights and welfare of participants. Written, informed consent was sought from all participants, with a clear statement of the right to withdraw from the research at any time. All data collected in the research were treated as confidential. Anonymity was maintained throughout, and all the information obtained was stored securely with access only to the research team.

Findings

Quantitative Findings

A two-way analysis of the variance demonstrated an interaction effect of the AI-supported intervention and time

on the measurements of oral communication skills.

(1) Fluency: The intervention and time interacted as per results from the ANOVA test, $F(1,118) = 23.45$, $p < .001$. To compare changes in fluency from pretest to post test, it is seen that the experimental group had a much larger change in results than the control group in both measures of words per minute and frequency of pauses/hesitations.

(2) Accuracy: The result from the ANOVA indicated the interaction between time and the intervention was statistically significant with $F(1,118) = 18.72$, $p < .001$. Put in terms of grams and lexical and grammatical errors per 100 words, it was found that the drop from pre-test to post-test for the experimental group was significantly less than that of the control group.

(3) Overall Proficiency: Global Proficiency: A 2×2 mixed design ANOVA test was done to investigate the hypothesis that the experimental and control groups would significantly differ regarding their oral communication global proficiency. A strong significant interaction of the intervention by time was found, $F(1,118) = 27.31$, $p < .001$. On the side of the experimental group, a big difference in the increase of global oral communication proficiency, scored through a valid rubric, appeared. It was observed that the AI-assisted intervention had a significant positive effect on improving English oral competence, which displayed a better growth rate of fluency, accuracy, and general proficiency in the experimental group compared with that in the control group.

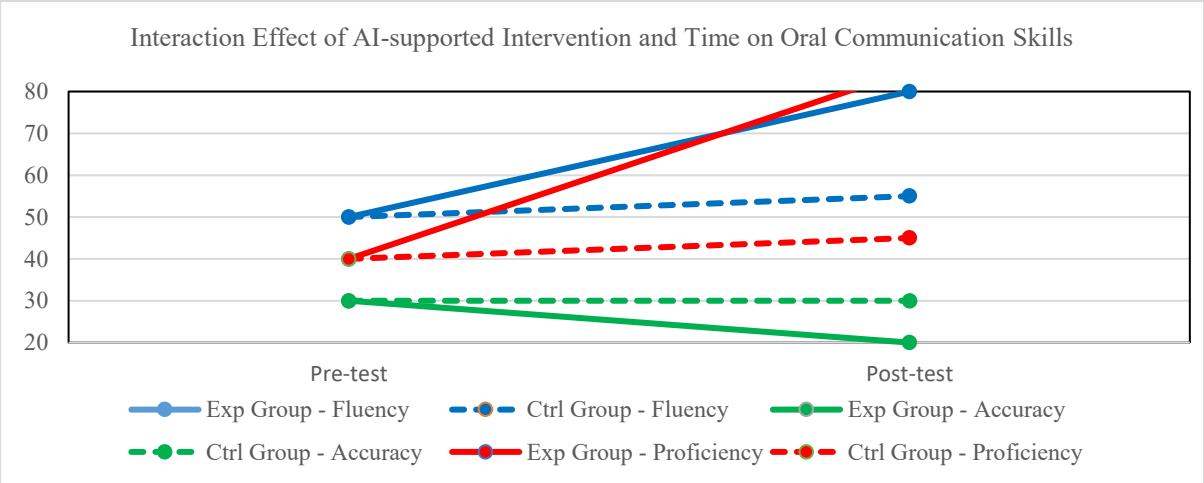

Figure 1. Interaction Effect of AI-supported Intervention and Time

Qualitative Findings

The thematic analysis of the interviews conducted with students and instructors established various key themes about their perceptions and experiences in using AI-powered technologies for the enhancement and assessment of English oral communication skills (see Table 1).

Table 1. Themes and Codes

Themes	Codes
Benefits of	Individualized Feedback

	More Opportunities for Practice Objective Assessment
Challenges and Concerns	AI Bias and Limitations Human-AI collaboration Sociocultural and Pedagogical Factors

Benefits of AI Integration

(1) Individualized Feedback: Students and instructors alike reported that real-time, individual feedback provided by both the AI-driven chatbot and virtual conversation partner were especially helpful. They commented that it allowed learners at this level to focus on and cope with specific points of weaknesses, like pronunciation, grammar, and pragmatic appropriateness.

> "The AI chatbot was really helpful because it gave me immediate feedback on my mistakes and suggestions how to improve. I could practice speaking with it and get that personalized support." Student, Experimental Group

2. More Opportunities for Practice: Participants acknowledged that the AI-powered practice sessions gave an increase in the number of interactive speaking practices to students, which was extremely helpful for ELLs with limited in-class instruction or conversation partners.

> "Had the virtual conversation partner been great? I could practice speaking English any time and not feel self-conscious or burden a classmate or instructor." Student, Experimental Group

3. Objective Assessment: The AI-based assessment tools were much welcomed by the teachers because they provided a consistent and reliable measure of students' oral communication skills. It is reported that these objective measures complemented teachers' subjective evaluations and helped inform their instructional decisions.

> "The AI assessment tool gave me a much more granular and accurate picture of my students' speaking abilities. I could use that data to tailor my lessons and provide more targeted support." (Instructor)

Challenges and Concerns

(1) AI Bias and Limitations: Some of the major concerns aired by both students and instructors are biases and limitations of AI-driven technologies to appropriately identify and evaluate a vast range of accents and varieties of the language under scrutiny.

> "I was concerned that the AI system wouldn't pick up my accent or the way I speak the English language. I did not want to be docked for things that are part of being from a different culture." Student, Experimental Group

(2) Human-AI collaboration: It should reflect that the relationship between AI-driven tools and the human

instructor will be collaborative in nature; the expertise of humans is of prime importance, while the AI-supported technologies are merely there to support the instructor's role.

> "The AI tools were really useful, but they need not be used alone. The instructors need to be involved in interpreting the data, providing additional feedback, and guiding the learning process." (Instructor)

(3) Sociocultural and Pedagogical Factors: The participants seemed to place great emphasis on the role of sociocultural context and pedagogies in the integration process of AI-driven technologies for language teaching and assessment. In that respect, they stressed that these tools are not equally effective under different cultural conditions, modes of learning, or methodologies.

> "The way in which these AI tools are implemented needs to be attuned to our teaching philosophy and the specific needs of our language program. How can we take these tools on board when we do not have an idea where they fit in relation to the whole picture?" (Instructor)

Furthermore, triangulation of both the quantitative and qualitative findings on the effectiveness and experiences in using AI-powered technologies to enhance and assess English oral-communication skills are shown.The quantitative results showed that the AI-supported intervention had a high positive effect on improving the fluency, accuracy, and overall oral communicative proficiency of students, in comparison to the non-controlled group. This may be an indication that integration with AI-based tools, such as systems for personalized feedback and objective assessment, is one effective avenue toward improving English speaking.The qualitative findings elaborated in detail the perceptions and experiences of the students and the instructors in respect to the integration of AI, clearly indicating benefits and outlining challenges and concerns that need to be dealt with. According to participants, such benefits included personalizing feedback, increasing practice, and bringing objectivity to assessment. In particular, the workshop highlighted concerns regarding rising to the challenge of addressing bias in AI, ensuring human-AI collaboration, and taking into account sociocultural and pedagogical contexts.

These results may be integrated to claim that while AI-powered technologies are in a position to dramatically improve oral communication in English, their implementation depends on many other factors, including:

(1) Balancing AI and Human Instruction: Results from the quantitative data indeed prove the potency of AI-supported interventions. However, the qualitative findings indicate that a good balance has to be maintained between AI-driven tools and human pedagogy. This then implies that if one is allowed to synergize the merits of AI technologies and human expertise, the blended approach shall yield optimum results.

(2) Taking Up AI Bias and Limitations: Although the quantitative data pointed to overall gains in oral communication skills, the qualitative data raised concerns about possible biases in AI systems. This reminds one of the needs for continued research and development of better accuracy and fairness in AI-powered language learning tools for the identification and assessment of diverse accents and language varieties.

(3) Contextualization of AI Integration: From the qualitative findings, what came out is that sociocultural and pedagogical contexts should be factored into the implementation of AI-powered technologies. The implication is

that successful integration of AI tools—as manifested by quantitative improvements—may depend on how such technologies are aligned to existing approaches to instruction and cultural norms.

(4) Leveraging Personalized Learning Using AI-Powered Technologies: Though qualitatively there is visible improvement in oral communication skills, quantitatively, the feedback in the practice and assessment of personalized lessons itself testifies to the efficacy of AI-powered technologies in supporting individualized learning experiences. This is indicative of a much larger scope for AI to handle individual differences and provide targeted language learners with support in developing skills.

Discussion and Conclusion

This mixed-methods study gives useful insights into how strategies for the integration of AI-powered technologies may be used for the improvement and assessment of English oral communication skills (Golonka et al., 2014; Hsu, 2016). The observable improvement in fluency, accuracy, and overall proficiency among the experimental group supports claims made in earlier studies that noted AI's potential in language learning. These findings indicate that AI-supported intervention was effective for speaking skills and suggest that such tools could help overcome common problems among ELLs in developing high-quality oral communication skills (Goh & Burns, 2012; Teng, 2020).

The qualitative findings provide a better understanding of the factors influencing the successful integration of AI in language learning contexts. Some of the benefits established in the literature as being driven by AI in education include providing more practice, personalized feedback, and objective assessment (Chen, 2016; Lee, 2020). Concerns voiced by the participants regarding AI bias, collaboration of humans and AIs, and sociocultural considerations all return the discussion to the need for feeling and a balanced approach towards integrating AI.

These results can be read in the light of both the Technology Acceptance Model and the Sociocultural Theory of Learning. According to Davis, perceived usefulness, such as the advantages of using AI-powered tools mentioned above, is grounded in TAM. The role that ease of use and accessibility of AI technologies play in its diffusion agrees with the predictions about technology adoption put forward by TAM (Davis, 1989). However, concerns about the limitations of AI and the need for human involvement bring to the fore the need to address perceived usefulness and perceived ease of use if integration is to succeed.

Vygotsky's SCT framework provides insight into the way that social interaction and cultural context bear upon the learning process(Vygotsky, 1978). Emphasis on the importance of keeping human-AI collaboration and attending to sociocultural factors by the participants reflects the emphasis that SCT places on the role of social mediation in learning. The effective integration of AI should, therefore, not stop at the development of individual skills but take the broader social and cultural contexts of language learning into consideration.

The mixed-method study provides evidence of effectiveness in the way AI-powered technologies can improve and assess English oral communication skills. Quantitatively, it results that when compared to students under

traditional instruction, students under AI-supported instruction make significant improvements regarding fluency, accuracy, and overall proficiency. Qualitatively, insights provide nuanced understandings of benefits, challenges, and best practices concerning the integration of AI into language learning contexts.

To conclude, this study demonstrates that AI is able to provide personal feedback, increased practice opportunities, and objective assessment in oral communication skills. The need to enact such a system should be underlined in light of concerns related to bias in AI, human-AI collaboration, and sociocultural and pedagogical contexts. The findings add to an underpinning evidence base of studies investigating the role of AI in language learning and assessment, and provide actionable recommendations for educators and program administrators. It will help language programs in forming a careful and balanced approach to the integration of AI and enable language settings to use such technologies in a way that authentically enhances educational outcomes, ultimately preparing learners for success in academic and professional English-speaking environments. In terms of further evolution of the AI technologies, continuous research and evaluation for effective and ethical integration in language learning contexts will remain paramount. Precisely, it is the limitations pointed out in the current study and the future research directions that researchers and practitioners may take to keep refining ways through which AI could be used in order to help learners attain strong English oral-communication skills.

Implications

Implications for Practice

The following integrated findings imply the recommendations for integrating AI-powered technologies effectively when improving and assessing English oral communication skills.

(1) Hybrid Model Acceptance: The teachers have to accept a hybrid incorporates artificial-intelligence-powered tools with the traditional pedagogies; since in this model, AI technologies bring two major benefits: personalized feedback and significantly great opportunities for practice, without a further elimination of the human role of the instructor, which remains critical in guiding the process and offering contextual support.

(2) Training and Support: In this regard, it is proper to go ahead and project suitable training on students and teachers in use of technologies that are powered by artificial intelligence. This will help the users be aware of the potential biases and limitations within AI systems, embed the skills and knowledge to be able to interpret and apply feedback and assessment that is generated by an AI critically.

(3) Individual Needs: There is an issue and need for serious thinking in language programs for pedagogical orientations, cultural backgrounds, and learner profiles when technologies powered by AI are integrated. For example, a language program could individualize AI tools according to core instructional strategies, or adapt culturally responsive and inclusive technologies.

(4) Encourage Ethical Use of AI: Instructors and program administrators need to guide their students on, and make it clear to them, the conduct that regards the ethical use of AI in language learning and assessment, where

students address data privacy, transparency in AI decision-making procedure, and access to AI-powered resources equitably.

(5) Promote Continuous Assessment: There should be a continuous monitoring of the effectiveness and impact of the AI-driven technologies that appear to tap into feedback from the learners and educators, along with an analysis of the learning outcomes, and be up-to-date with respect to the development of new frontiers in AI language learning technologies.

Implications for Policy

The implications for integrating Artificial Intelligence in English language teaching, with a focus on oral communication skills development and assessment, are immense for policy formulations. Policy recommendations drawn from findings from this research would be:

(1) There must be comprehensive guidelines framed by policymakers of education regarding the integration of AI technologies into the learning environment for languages. Among others, it has to deal with best practices about the implementation of AI-driven tools during curriculum design.

(2) The policymakers should assume this role of making such resources available by coming up with AI-ready infrastructure in any setting within a school. Some of which include; High-speed internet connectivity, Adequate hardware, such as computers, tablets, smart devices, Secure cloud storage solutions for the management of student data. Wang and Liao, in their 2023 study on adaptive learning systems, furthered the discourse by showing that a strong technological infrastructure would be supportive of these AI-based language learning tools.

(3) Both local and national policies should favour AI literacy of language teachers. This could be attained by; Mandatory trainings about the applications of AI in language teaching, Institutionalization of courses related to AI in teacher education, Constant provision for teachers in which they update their knowledge about AI.

(4) Within AI-supported language learning, policymakers should address questions of equity and access. This involves policies that must ensure; The development of inclusive and culturally sensitive AI systems, Equity in access by all learners to AI-based learning tools, independent of their socio-economic background.

(5) In view of the fact that AI systems collect a great deal of sensitive data on students, policies at all levels of education should be enacted to protect student privacy and ensure responsible use of the data, setting clearly defined guidelines for collection, storage, and analysis of data, and ensuring transparency in how AI algorithms utilize student data to inform instruction and assessment. Such considerations rest on the same ethical concerns raised by many researchers, such as Lim and Chai (2021) and Zawacki-Richter et al. (2019).

(6) Policies at all levels of governance should promote collaboration between professionals in the field of Language Education and professionals working on the development of AI. This could be accomplished by

formation of partnerships between institutions of education and AI companies, opening forums for continuous discussion between teachers and experts in AI, financing research projects that bring together interdisciplinary teams.

(7) The policies to be implemented must include provisions for constant reviewing of the effects of AI-powered language learning tools, especially in relation to student outcomes. This includes; regular assessment of the effectiveness of AI technologies in enhancing speaking skills, monitoring for potential negative impact or adverse effects, providing means of continuous improvement based on evaluation results

(8) Since the business of English language teaching is international, policies should further international collaboration in the integration of AI. This can include development of international standards on the use of AI in language learning and teaching, transnational knowledge sharing across institutions, cross-cultural research on the effectiveness of AI in different learning contexts.

To conclude, the place of AI in English language learning, more specifically in oral-communication skills, is the question of possibilities versus challenges. At the education leadership level, there is a need for thoughtful and comprehensive policies that will enable AI's potential in language learning outcomes ethically, pedagogically, and practically. These policy recommendations support a helpful environment for using AI responsibly and effectively to improve and assess oral-communication skills in English and benefit all learners of languages worldwide.

Suggestions for Further Research

The fast development of research in AI in language education, obviously many opportunities for further exploration. Barring the present literature and identified gaps, the following are likely to be the subject of more detailed research in the future:

• Long-term effectiveness of AI-supported interventions

That AI-supported interventions are effective even short-term in bettering oral communication skills, have got demonstrated through many studies across the world but their long-term effects are to be verified.

• AI Integration in Different Proficiency Levels

For the most part, research is limited to the intermediate and advanced levels. It can, therefore, be of much help if we can perceive whether the use of AI tools is adequate and effective for different proficiency levels.

• The diverse Culture and Linguistic Diversity of the AI Systems

Indeed, the massive contextual variation of the use of English globally calls for very expanded research on how AI systems assess learner output across such a contexts of scope of the variety of cultural and linguistic contexts.

• AI in Assessing Pragmatic Competence

Even though AI has indicated fine abilities in assessing linguistic items relevant to oral communication, more research is to be done to find evidence on the effectiveness of AI to gauge the actual pragmatic competence.

• AI-Powered Learning Paths and Outcomes

While adaptive learning systems are, of course, very promising, research needs to be conducted on how AI will be reformulating personalized learning experiences.

• Models for the Collaboration between AI and Human Teachers

It is necessary to conduct more research to determine effective models of the collaboration of AI with human teachers in the context of language learning.

• AI Supporting ESP

Examine the potential for AI to support specialized language learning contexts.

• Ethical Implications and Learner Perceptions of AI

As AI becomes more mainstream in language education, its ethical implications and learner perceptions need to be further researched.

Limitations

Valuable insights into the integration of AI to improve and assess English oral communication skills were received in the course of this research, but some limitations need to be noted. (1) Sample size and context: This study had a single-institution small sample size; therefore, further research on larger and more diversified populations in multi-educational contexts is necessary. (2) Duration of Intervention: This study looked at the effectiveness of AI-supported interventions for a pretty short duration. Longitudinal studies should be conducted with the purpose of giving a clear view of how AI integration could affect the development of oral communication skills in the long run. (3) Specific AI technologies: The set under investigation in this research was one specific set of AI technologies that powered tools. Further research may be done on the effectiveness of different types of AI technologies and how differently these are going to impact oral communication skills. (4) Cultural and Linguistic Diversity: Even though the study did include sociocultural variables, further research regarding integration in these contexts with varying cultural and linguistic diversity is still necessary.

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