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UTILIZATION OF ARTIFICIAL INTELLIGENCE FOR PUBLIC SPEAKING SKILLS DEVELOPMENT AMONG YOUNG PROFESSIONALS ENTERING THE WORKFORCE: A DESCRIPTIVE STUDY OF AI IMPLEMENTATION

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ABSTRAK

Keterampilan berbicara di depan umum merupakan kompetensi penting bagi profesional muda yang memasuki dunia kerja, namun sering terhambat oleh kecemasan berbicara, keterbatasan umpan balik berkualitas, dan minimnya kesempatan latihan yang terstruktur. Perkembangan artificial intelligence (AI) menawarkan peluang untuk mendukung pengembangan keterampilan komunikasi secara lebih personal, fleksibel, dan berbasis data. Penelitian ini bertujuan untuk mendeskripsikan tantangan public speaking yang dihadapi profesional muda, mengidentifikasi dan mengklasifikasikan alat AI yang relevan, serta mengusulkan kerangka implementasi praktis. Penelitian menggunakan pendekatan systematic literature review (SLR) dengan analisis deskriptif tematik. Literatur diperoleh dari Google Scholar, Semantic Scholar, dan Taylor & Francis Online pada periode 2010-2025. Proses seleksi mengikuti tahapan identification, screening, eligibility, dan inclusion dengan kriteria inklusi berupa sumber akademik yang membahas AI, public speaking, dan pengembangan keterampilan komunikasi. Dari 352 dokumen yang teridentifikasi, 26 artikel memenuhi kriteria dan dianalisis. Hasil kajian menunjukkan bahwa AI mampu memberikan umpan balik yang konsisten terhadap aspek teknis berbicara, seperti kecepatan bicara, penggunaan filler words, variasi intonasi, dan kontak mata. Namun, AI masih memiliki keterbatasan dalam mengevaluasi aspek interpersonal dan kontekstual. Penelitian ini mengusulkan kerangka Preparation-Practice-Reflection (PPR) sebagai panduan implementasi AI dalam pengembangan keterampilan public speaking bagi profesional muda.

Keywords:
Artificial Intelligence; Young Professionals; Work Readiness; Communication Anxiety; Skills Training

ABSTRACT

Public speaking skills represent a crucial competency for young professionals entering the workforce, yet are frequently hindered by speaking anxiety, limited access to quality feedback, and insufficient opportunities for structured practice. The development of artificial intelligence (AI) offers opportunities to support communication skills development in a more personalized, flexible, and data-driven manner. This study aims to describe the public speaking challenges faced by young professionals, identify and classify relevant AI tools, and propose a practical implementation framework. The study employs a systematic literature review (SLR) approach with descriptive thematic analysis. Literature was obtained from Google Scholar, Semantic Scholar, and Taylor & Francis Online covering the period 2010-2025. The selection process followed the stages of identification, screening, eligibility, and inclusion, with inclusion criteria comprising academic sources addressing AI, public speaking, and communication skills development. Of 352 identified documents, 26 articles met the criteria and were analyzed. The findings indicate that AI is capable of providing consistent feedback on technical aspects of speaking, such as speech rate, filler word usage, intonation variation, and eye contact. However, AI still has limitations in

evaluating interpersonal and contextual aspects. This study proposes the Preparation-Practice-Reflection (PPR) framework as a guide for AI implementation in the development of public speaking skills among young professionals.

1. INTRODUCTION

The ability to speak effectively in public has long been recognized as one of the most critical skills in professional environments, as it is closely related to the ability to convey ideas, build relationships, and demonstrate individual competence in the workplace. Various employment surveys consistently place oral communication skills as one of the main attributes sought by employers in new candidates (Robles, 2012; Succi & Canovi, 2020). Public speaking ability is also an important competency in both educational and professional settings as it is directly related to the individual's ability to convey ideas and build interpersonal relationships. Nevertheless, the gap between the communication skills expected by the workforce and the competencies possessed by new graduates remains a problem that has not been systematically resolved in various countries, including Indonesia (Situmorang et al., 2022). Findings by Tee et al. (2024) show that the largest skills gap between graduates and employer expectations in Southeast Asia lies in communication and collaboration abilities rather than technical skills.

For young professionals who are newly entering the workforce, communication challenges are not merely technical matters, but also psychological ones. Speaking in front of supervisors, clients, or cross-functional teams often presents high social pressure. This condition is closely related to Public Speaking Anxiety (PSA), which is defined as a form of situational social anxiety that arises when a person anticipates or performs oral presentations before an audience (Bodie, 2010; Yatri et al., 2025). More broadly, communication anxiety is understood as the level of fear or anxiety associated with actual or anticipated communication with others (McCroskey, 1982). PSA is reported to affect approximately 70 to 75 percent of the general population at various levels (Bodie, 2010; McCroskey, 1982), and tends to increase in new social situations of a hierarchical nature as experienced by young professionals at the beginning of their careers.

Manifestations of PSA can appear in the form of physiological responses such as increased heart rate and trembling, cognitive responses in the form of negative self-thoughts, and behavioral responses such as avoiding eye contact and speaking haltingly. This condition is not merely ordinary nervousness, but can affect the quality of performance and a person's professional image. Among young professionals and new graduates, PSA is increasingly relevant because they are in a transition phase toward a work environment that demands high communication abilities. PSA is often exacerbated by limited experience with formal presentations, unfamiliarity with organizational

communication norms, and pressure to make a good first impression. Individuals with high levels of PSA tend to avoid public speaking situations, which further limits practice opportunities and perpetuates the cycle of anxiety (Bodie, 2010). If this condition is not addressed, the impact can affect career development and professional self-confidence in the long term.

Various studies show that public speaking anxiety can be reduced by systematic practice and exposure approaches. Ebrahimi et al. (2019) in a meta-analysis of various psychological interventions found that exposure-based approaches, including simulation and repeated practice, consistently produce significant reductions in PSA. Likewise, Premkumar et al. (2021) noted that self-directed virtual reality-based exposure done without therapist supervision is also effective in reducing PSA and physiological responses such as increased heart rate in individuals with high levels of anxiety.

Beyond anxiety factors, public speaking performance is also influenced by an individual's belief in their own abilities. In self-efficacy theory, Bandura (1997) explains that a person's belief in their ability to complete a task (self-efficacy) is an important predictor of actual performance. In the context of public speaking, individuals with low self-efficacy tend to prepare themselves suboptimally, display performance below their actual capacity, and interpret speaking experiences as confirmation of their own inadequacy. However, self-efficacy is not a permanent condition as it can be developed through repeated success experiences, observation of relevant models, and positive social support (Bandura, 1997; Zimmerman, 2000).

Developing effective speaking ability requires a systematic and performance-oriented practice approach. Ericsson et al. (1993) introduced the concept of deliberate practice, which is structured, focused practice accompanied by direct feedback and designed to address specific weaknesses. This approach differs from ordinary practice because it requires individuals to continuously work at the edge of their abilities while receiving specific evaluations and making ongoing adjustments. In line with this, (Kolb, 2014) through experiential learning theory emphasizes the importance of active reflection on experience as part of the meaningful learning process. In the context of public speaking, a practice approach that enables repetition, reflection, and evaluation is important to help individuals build competence while reducing anxiety.

Traditionally, communication skill development has been conducted through communication courses, workplace training, or self-development communities. Although these approaches have great benefits, various limitations are still found, particularly related to scalability, accessibility, practice frequency, and the quality of feedback provided. Feedback from peers or supervisors is often general, poorly structured, and difficult to provide consistently (Baker & Baker, 2023; Robles, 2012).

The rapid development of artificial intelligence (AI) presents new opportunities in communication skill development by providing a more flexible, personalized, and independently accessible practice environment. Various AI-based tools are now capable of analyzing speaking performance in real-time or post-session through evaluation of verbal and nonverbal aspects of communication (Liu et al., 2016; Zou et al., 2023). Fourati et al. (2025) explain that AI integration has reshaped how communication skill

development is conducted by providing faster and more consistent feedback. Findings by Isotalus et al. (2025) also show that participants in AI-based public speaking courses rated AI feedback as more objective and less biased compared to peer feedback.

The potential of AI in the context of communication development is further strengthened by various previous studies. Yang et al. (2022) showed that AI chatbots can increase participants' communicative engagement and speaking confidence. Baker and Baker (2023) highlight that although feedback from business professionals is more specific, access to such feedback is limited, making AI a more scalable alternative. Furthermore, Liu et al. (2016) showed that communication training systems based on automated nonverbal behavior analysis are effective in improving participants' communication self-awareness. Dai et al. (2025) highlight the opportunities of generative AI for cross-cultural professional communication. García-Monge et al. (2023) found that simulation and structured feedback are capable of reducing anxiety responses, while Seuling et al. (2024) showed the effectiveness of technology-based simulation that is comparable to direct exposure.

Although various studies have demonstrated the effectiveness of technology-based communication training, existing research still reveals several important limitations. The development of public speaking based on artificial intelligence (AI), virtual reality (VR), augmented reality (AR), and automated feedback systems has largely been examined within the contexts of language learning, higher education, health education, and general student populations, with a primary focus on improving speaking performance, reducing anxiety, strengthening communication competence, and evaluating the technical performance of systems (Bartyzel et al., 2025; Malik & Yu, 2025; Stamer et al., 2023; Zheng et al., 2025; Zou et al., 2023). Previous studies have also demonstrated that AI-based learning environments are capable of providing more adaptive, personalized, and objective feedback while enabling repeated practice that can enhance individuals' communication competence and self-confidence (Chan, 2025; Fourati et al., 2025; Higham & Yuan, 2025; Huang & Hwang, 2025).

Nevertheless, research that specifically examines how AI can support public speaking development among young professionals or individuals newly entering the workforce remains relatively limited, as the majority of studies continue to focus on students, language learners, or academic contexts rather than the transition into the world of work (Gorinelli et al., 2023; Kroczek & Mühlberger, 2023; Ochoa & Zhao, 2024). Furthermore, much of the existing research remains concentrated on prototype development, VR-based simulations, or short-term evaluations rather than examining how AI contributes to workforce readiness, professional self-confidence, employability skills, and communication performance in real professional contexts (Beckner & O'Hara, 2024; Forghani et al., 2025; Tiwari et al., 2025; Wang et al., 2025). Studies evaluating long-term impact, user experience, the sustainability of AI use, and the integration of public speaking competence, self-efficacy, anxiety reduction, and workforce readiness within a single cohesive research framework also remain relatively limited (Bachmann et al., 2023; Gorinelli et al., 2023; Ochoa & Zhao, 2024). Therefore, this study aims to: (1) describe the primary challenges faced by young professionals in public speaking; (2)

identify and classify relevant AI tools; and (3) develop an AI implementation framework that can be applied in practice.

2. METHOD

This study uses a systematic literature review (SLR) approach with thematic descriptive analysis. This approach was chosen because the study aims to identify, review, and synthesize findings from previous research in order to build a more comprehensive conceptual understanding regarding the utilization of artificial intelligence in developing public speaking and professional communication abilities among young professionals. This method does not involve primary data collection, but focuses on integrating empirical and conceptual evidence from various relevant literature sources.

The literature search process was conducted systematically through several academic databases, namely Google Scholar, Semantic Scholar, and Taylor & Francis Online. Searches were conducted using combinations of keywords in English and Indonesian, including artificial intelligence, public speaking, speech coaching, workplace communication, young professionals, communication anxiety, public speaking anxiety, AI-based communication training, and other keyword combinations relevant to the research focus. The publication year range was limited to the period 2010 to 2025, with priority given to articles published in the last five years (2020 to 2025) to ensure relevance to the dynamic developments in AI technology.

The literature selection stage was carried out through several steps, namely identification, screening, eligibility, and inclusion. At the identification stage, all articles obtained from the databases were collected and duplicate articles were removed. The screening stage was conducted through review of titles, abstracts, and keywords to ensure alignment with the research topic. Subsequently, the eligibility stage was conducted by reading articles in greater depth to evaluate the relevance of the content, source quality, and alignment with the research objectives. The inclusion stage produced a collection of articles used as the basis for analysis and synthesis in the study.

The inclusion criteria in this study include: (1) articles published in reputable scientific journals, indexed proceedings, or verifiable academic sources; (2) academic reference books relevant to the research topic; and (3) studies discussing one or more aspects of public speaking anxiety, communication skill development, utilization of artificial intelligence in learning or training, and the professional readiness of young professionals in the work environment. The exclusion criteria cover sources without clear author identity, opinion articles without empirical support, publications whose validity cannot be verified, and sources without direct relevance to the research focus.

The literature search yielded 352 documents obtained from Google Scholar, Semantic Scholar, and Taylor & Francis Online. Following the removal of 48 duplicate documents, 304 articles entered the screening stage. At this stage, articles were selected based on title, abstract, and keywords to ensure their alignment with the research focus. A total of 221 articles were eliminated for not addressing the utilization of artificial intelligence in the development of communication skills, public speaking, or professional

readiness. Subsequently, 83 articles were evaluated in full (full-text review) at the eligibility stage. After assessment of content relevance, methodological quality, and alignment with the research objectives, 31 articles were excluded. Accordingly, 26 articles met all criteria and were used in the thematic synthesis process.

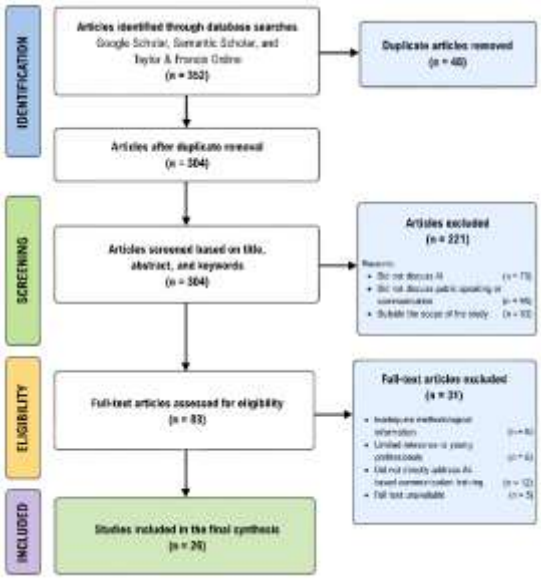

Figure 1. PRISMA Flowchart

Data analysis was conducted using a thematic approach by grouping the literature into several main themes, namely public speaking anxiety (PSA), self-efficacy, deliberate practice, classification of artificial intelligence tools, implementation of AI in communication training, and implications of AI use for the professional readiness of young professionals. Each theme was analyzed comparatively to identify patterns of findings, research gaps, and inter-concept relationships. The synthesis results were then used to develop research arguments and formulate integrated practical and conceptual recommendations.

To enhance the transparency and credibility of the review process, articles that passed the eligibility stage were further evaluated based on several aspects, namely relevance to the research objectives, clarity of research methodology, credibility of the publication source, and their contribution to the understanding of the utilization of artificial intelligence in the development of communication skills and public speaking. Articles that lacked adequate methodological information or demonstrated low relevance to the research focus were not included in the final synthesis.

3. RESULT AND DISCUSSION

Profile of Challenges Faced By Young Professionals in Public Speaking

The sub-theme regarding public speaking challenges among young professionals shows that the barriers faced are not only individual in nature, but are also influenced by the professional context, organizational environment, and cross-cultural communication dynamics. Based on the literature synthesis, these challenges can be understood through three main interconnected dimensions, namely the psychological-situational aspect, the

limitations of feedback-based learning mechanisms, and the complexity of communication in multicultural work environments.

In the psychological-situational context, the transition from an academic environment to the workforce produces a change in interaction structure that is more hierarchical, thereby increasing psychological pressure when individuals must speak in public. Unlike academic presentations that are generally delivered before peers, professional situations place young professionals in a more vulnerable position because they must interact with supervisors, clients, or decision-makers. This condition increases the intensity of Public Speaking Anxiety (PSA), even among individuals who previously had a relatively good level of confidence in educational settings. This finding is consistent with Bodie (2010) who explains that evaluative contexts and high social expectations are the main factors that amplify public speaking anxiety. Further, Ebrahimi et al. (2019) show that PSA in professional environments has different characteristics compared to general social anxiety as it is influenced by power relations, perceptions of competence, and career consequences. This condition explains why young professionals often regard every speaking opportunity as a direct representation of their professional capacity.

Beyond psychological factors, limited access to quality feedback also constitutes a barrier in the process of developing communication abilities. The real-time nature of oral communication means that errors or performance weaknesses are difficult to identify without systematic external evaluation. The literature shows that the work environment has not fully provided structured communication feedback mechanisms. Baker and Baker (2023) found that although feedback from business practitioners tends to be more applicable and specific, access to such input is relatively limited in everyday work practice. This situation is reinforced by the argument of Robles (2012) who states that most supervisors and colleagues do not have adequate evaluation frameworks to identify specific verbal communication aspects, so the advice given tends to be general and poorly supportive of continuous improvement processes. Thus, limited feedback not only hinders the improvement of technical speaking skills, but also slows the formation of professional confidence.

Another dimension that is increasingly relevant in the contemporary workplace is the linguistic and cultural challenge. Globalization and increasing exposure to multilingual work environments create the need for communication competencies that go beyond purely linguistic aspects. Young professionals are required to understand variations in communication norms, rhetorical styles, and interaction expectations that differ across cultures. Succi and Canovi (2020) affirm that cross-cultural communication competence has now shifted from being merely an added value to becoming a core competency in the modern labor market. In this context, AI-based technological developments are beginning to offer new approaches to overcome cross-cultural communication barriers. Dai et al. (2025) show that generative AI enables individuals to conduct more adaptive communication simulations through scenarios that can be tailored to specific cultural contexts. These findings indicate that the development of public speaking ability among young professionals no longer depends solely on practice

frequency, but also on the individual's ability to utilize technology and diverse communication exposure on an ongoing basis (Halawa et al., 2022).

Classification of AI Tools for Public Speaking Development

The findings from the literature review show that developments in AI-based technology have produced a variety of tools that can be utilized to support the development of professional speaking skills. Although they have different approaches and working mechanisms, these various tools can generally be grouped into four main functions, namely real-time speaking performance analysis, presentation simulation, adaptive conversation practice, and video recording-based evaluation. This diversity of functions shows that AI-based public speaking development no longer focuses on a single skill dimension, but encompasses verbal, nonverbal, reflective, and situational aspects simultaneously.

The first group consists of real-time speech analysis tools designed to monitor speaking performance directly by measuring indicators such as speech rate, filler word usage, volume variation, and pause patterns. The main contribution of this technology lies in its ability to transform communication habits that were previously implicit into data that can be observed and evaluated objectively. Zou et al. (2023) found that the use of AI-based speech evaluation systems significantly increased users' self-awareness of their own communication patterns, particularly in recognizing the frequency of filler word usage that was previously often unnoticed. These findings indicate that visualization of communication data can function as a more effective self-reflection mechanism compared to purely subjective evaluation.

Beyond direct analysis, AI developments have also driven the emergence of virtual presentation training platforms that simulate professional presentation situations and provide post-performance evaluations. This technology enables users to receive feedback on both verbal and nonverbal aspects within a more structured practice cycle. Platforms such as Microsoft Presenter Coach are widely used because they provide evaluation of speaking rhythm, filler word usage, and language choice, while more advanced systems are capable of analyzing eye contact, facial expressions, and intonation variation. The relevance of this approach is reinforced by the findings of Liu et al. (2016) who showed that systems based on automated nonverbal behavior analysis are capable of effectively improving individuals' communication awareness. Thus, AI-based presentation simulation not only functions as a practice medium, but also as a means of developing professional communication self-awareness.

The development of large language models (LLMs) has further expanded AI's functions through adaptive conversation practice platforms that enable dynamic interaction simulations. Unlike conventional presentations that are one-directional, this approach places users in more spontaneous communication situations, such as question-and-answer sessions, professional discussions, or client interactions. Yang et al. (2022) showed that AI-based chatbots serving as conversation partners are capable of increasing communicative engagement as well as speaking confidence. These findings are relevant to the professional context because spontaneous speaking ability is an

important competency in everyday work activities, including meetings, negotiations, and presenting ideas before stakeholders.

Meanwhile, the use of video recording-based tools offers a more comprehensive evaluation approach by enabling the simultaneous analysis of verbal and nonverbal aspects. Through this mechanism, users can record their speaking performance, obtain automated evaluations, and combine them with peer feedback. Isotalus et al. (2025) found that participants tended to rate AI feedback as more objective than peer evaluations, perceiving it as more consistent and less biased. Further, García-Monge et al. (2023) reported that interventions combining simulation and structured feedback proved effective in reducing speaking anxiety based on both physiological indicators and participants' subjective perceptions. These findings indicate that the integration of AI-based evaluation with systematic reflection mechanisms holds considerable potential for supporting the sustainable development of public speaking skills.

Although these findings demonstrate the considerable potential of AI-based tools in supporting public speaking development, the implementation of such technology warrants more critical examination beyond its functional advantages. Understanding the strengths and limitations of AI is important because communication competence in professional contexts involves not only technical performance, but also interpersonal, contextual, and ethical dimensions.

Notwithstanding the growing use of AI-based tools in communication training, the effectiveness of their implementation must be understood critically, particularly when applied to young professionals entering the workforce. One of the primary advantages of AI lies in its capacity to provide rapid, consistent, and flexible feedback, enabling users to engage in repeated practice without constraints of place or time. This capability is relevant to professional communication development as it enables autonomous and continuous learning beyond formal training environments (Harsh et al., 2025; Isotalus et al., 2025).

Nevertheless, the predominance of AI in evaluating technical aspects of speaking also reveals fundamental limitations. A number of studies indicate that AI systems tend to be more effective in evaluating measurable communication indicators than more complex interpersonal dimensions. AI-based evaluation generally focuses on vocal patterns, speech rate, volume, delivery structure, and nonverbal signals that can be processed computationally, but remains limited in its understanding of social context and relational meaning in communication (Long & Gutwin, 2019). This condition suggests that the quality of public speaking is not solely determined by technical performance, but also by an individual's ability to build rapport with the audience, read situations, and adapt communication styles to different professional contexts. Accordingly, the capacity of AI to evaluate public speaking remains stronger on the performative dimension than on the relational dimension of communication.

These limitations become more apparent when AI is used to evaluate aspects such as empathy, persuasion, cultural sensitivity, and audience engagement. Effective public speaking, particularly in workplace settings, requires the ability to build emotional connections, understand audience needs, and respond adaptively to interaction

dynamics. Prior research indicates that empathy is a multidimensional construct encompassing affective, social, and contextual aspects, making it difficult to represent fully through algorithmic models (Perry, 2023). Consequently, the use of AI as the sole evaluator risks producing assessments that are overly oriented toward measurable indicators while falling short in capturing the relational quality of communication.

From an ethical perspective, the implementation of AI in public speaking development also raises several challenges. Most AI platforms require access to voice recordings, facial expressions, and presentation videos to generate accurate evaluations, thereby heightening concerns regarding user data privacy and security (Coeckelbergh, 2019; Jobin et al., 2019). Furthermore, algorithmic bias may influence evaluation outcomes, as AI systems are often developed using datasets that do not fully represent the diversity of languages, cultures, and communication styles of users. Excessive reliance on automated evaluation also risks directing users toward optimizing technical indicators rather than developing adaptive and reflective communication abilities (DiChristofano et al., 2023; Goddard et al., 2012; Jobin et al., 2019; Parasuraman & Manzey, 2010). Accordingly, various studies recommend a hybrid approach that combines AI evaluation, self-reflection, peer feedback, and human evaluation to produce more comprehensive and contextual communication development.

Overall, the implementation of AI in public speaking development for young professionals should be positioned as a supporting tool rather than a substitute for human interaction. The integration of AI-based evaluation with real communication experience remains necessary to ensure that the communication competence developed is not only technically proficient, but also effective within dynamic, human interaction-oriented professional contexts.

From an ethical perspective, the implementation of AI in public speaking development raises challenges related to data privacy, algorithmic fairness, and dependence on automated systems. Most AI platforms require access to voice recordings, facial expressions, and presentation videos to generate accurate evaluations, thereby heightening concerns regarding user data privacy and security, particularly as AI systems rely on the collection and processing of personal data at scale to improve analytical accuracy and feedback personalization (Coeckelbergh, 2019). Furthermore, algorithmic bias may influence evaluation outcomes, as AI systems are often developed using datasets that do not fully represent the diversity of languages, cultures, accents, and communication styles of users. This condition risks producing evaluations that are less equitable toward individuals with particular communication characteristics, especially in systems based on voice recognition and automated communication analysis (Hofmann et al., 2024; Jobin et al., 2019). On the other hand, excessive reliance on automated evaluation also risks directing users toward optimizing technical indicators rather than developing adaptive and reflective communication abilities, as automation bias can reduce individuals' tendency to critically evaluate system recommendations (Hofmann et al., 2024; Manzey et al., 2012).

Beyond ethical concerns, the effectiveness of AI in evaluating public speaking is also constrained by its limitations in understanding the interpersonal, contextual, and

relational aspects of human communication. AI systems tend to excel in evaluating quantitatively measurable indicators such as speech rate, pitch variation, filler words, volume, and eye contact, compared to more abstract aspects such as empathy, persuasion, cultural sensitivity, and audience engagement. These limitations arise because human communication is shaped not only by measurable behavioral indicators, but also by social context, situational dynamics, and the emotional relationship between speaker and audience (Long & Gutwin, 2019; Perry, 2023). Consequently, the use of AI as a sole evaluator risks producing assessments that are overly oriented toward technical indicators and less capable of capturing the relational quality of communication.

Implementation Framework: The Preparation-Practice-Reflection (PPR) Model

Based on the synthesis of findings from the literature review, this study proposes a three-phase implementation framework referred to as the Preparation-Practice-Reflection (PPR) model. This framework is designed to be adopted independently by young professionals as well as applied institutionally by organizations and higher education institutions. The development of this model is grounded in the finding that improvements in AI-based public speaking skills are influenced not only by the availability of technology, but also by how that technology is integrated into a systematic, iterative, and reflective learning process. Therefore, the PPR model is designed as a learning cycle that connects initial diagnosis, continuous practice, and reflection to support the sustainable development of communication competence. This cyclical approach is important because the mastery of communication skills develops through ongoing processes of evaluation, improvement, and adaptation rather than through linear, unidirectional learning (Zimmerman, 2013).

Phase 1 - Preparation: Building a Baseline and Setting Goals

Goal-setting at this stage should follow the SMART principles (Specific, Measurable, Achievable, Relevant, Time-bound) to enable more systematic monitoring of progress. This approach is important because one of the greatest barriers to using AI for self-development is tool abandonment, a condition in which users discontinue platform use because they feel overwhelmed by the volume of feedback or perceive no clear progress (Fourati et al., 2025).

Furthermore, self-regulated learning theory explains that individuals who set clear goals and monitor their progress regularly tend to demonstrate greater learning persistence and better performance outcomes compared to individuals without structured learning objectives (Panadero, 2017; Zimmerman, 2013). Accordingly, the preparation phase functions not only as an initial stage, but also as a mechanism for establishing a more focused direction for communication development.

Phase 2 - Practice: Diverse and Consistent Deliberate Practice

The practice phase emphasizes the importance of consistent, repeated practice supported by immediate feedback. This phase adopts the principles of deliberate practice, which emphasizes structured training focused on specific weaknesses and

carried out repeatedly with clear evaluation mechanisms (Ericsson et al., 1993). In the context of AI-based public speaking, users not only engage in formal presentation practice, but also need to rehearse various communication situations such as job interviews, group discussions, professional meetings, and spontaneous responses to unexpected questions.

Variation in practice is important because professional communication contexts are dynamic in nature. Research indicates that AI-based conversational practice across diverse scenarios produces higher levels of communicative engagement compared to single-format practice (Yang et al., 2022). Moreover, many AI platforms are currently capable of providing immediate feedback on speech rate, filler words, pitch variation, eye contact, volume, and delivery structure, enabling users to identify weaknesses more quickly and make iterative improvements (Isotalus et al., 2025). Therefore, AI in this phase functions not only as an evaluation tool, but also as a facilitator of deliberate practice that enables learning to take place in a scalable and flexible manner.

Phase 3 - Reflection: Internalizing Feedback and Integration with Human Input

The reflection phase functions to transform performance data into meaningful learning experiences. In this phase, users evaluate their practice outcomes, identify patterns of development, and adjust their practice strategies based on the feedback obtained. According to experiential learning theory, the process of reflection is the primary mechanism through which practical experience is transformed into learning, as individuals not only undergo an activity but also interpret and make adjustments based on that experience (Kolb, 2014).

Although AI can provide objective and consistent evaluation, the reflection stage still requires human involvement. This is important because certain limitations of AI remain apparent in evaluating interpersonal aspects of communication such as empathy, persuasion, cultural sensitivity, and audience engagement (Feine et al., 2019; Perry, 2023). Therefore, the integration of peer feedback, mentor feedback, and supervisor evaluation remains necessary to provide context, nuance, and interpretation that cannot be fully replicated by automated systems. The combination of AI evaluation and human input enables the formation of a more comprehensive and contextual communication learning process (Isotalus et al., 2025).

Overall, the PPR model should be understood as a cyclical process rather than a linear sequence. Users may return to the preparation stage after obtaining reflection outcomes, repeat practice as needed, and make ongoing adjustments to their learning objectives. By integrating initial assessment, feedback-based practice, and systematic reflection, this framework positions AI as a learning support tool rather than a substitute for human interaction, thereby enabling more adaptive and sustainable public speaking skills development for young professionals entering the workforce.

Practical Recommendations for Organizations and Higher Education Institutions

Beyond individual factors, organizations and higher education institutions occupy a strategic position in building an AI-based communication competency development ecosystem for young professionals. Institutional support is needed so that

communication skill development does not rely solely on personal initiative, but is also integrated into the learning system and human resource development.

For organizations and human resource (HR) practitioners, there are several practical implications that can be considered. First, integrating AI-based speaking training tools into employee orientation or onboarding programs can serve as an initial strategy to strengthen communication competencies from the work adaptation phase. Succi and Canovi (2020) emphasize the importance of collaboration between the educational world and industry in reducing soft skills gaps. Second, organizations need to provide low-risk communication practice spaces, such as knowledge-sharing forums, internal presentations, or team update sessions, to give young professionals opportunities to apply skills developed independently. Third, strengthening managerial capacity to provide specific, constructive, and structured feedback is also important, particularly through the use of evaluation frameworks aligned with the AI technology being used (Baker & Baker, 2023).

In the context of higher education, integrating AI-based speaking practice into communication courses, professional development programs, or project-based learning can be viewed as a relatively efficient intervention with potentially broad impact. Fourati et al. (2025) and Isotalus et al. (2025) recommend a hybrid learning approach that combines AI utilization with face-to-face interaction to enhance the effectiveness of communication learning. Implementing assignments that require students to record, evaluate, and reflect on their speaking performance using AI platforms also has the potential to integrate elements of deliberate practice, digital literacy, and metacognitive development into a more comprehensive learning process.

4. CONCLUSION

This study indicates that public speaking skills remain a significant challenge for young professionals entering the workforce, particularly due to communication anxiety, limited access to structured feedback, and insufficient opportunities for repeated and consistent practice. The findings demonstrate that artificial intelligence (AI)-based tools hold considerable potential for supporting communication skills development through more accessible, data-driven, and consistent feedback mechanisms. Nevertheless, AI should be positioned as a supporting tool rather than a substitute for human interaction, real communication experience, or contextual evaluation processes.

The Preparation-Practice-Reflection (PPR) model proposed in this study offers practical implications for various stakeholders. For young professionals, this framework provides a more structured approach to developing communication skills independently through goal-setting, repeated practice, and systematic reflection. For higher education institutions, the integration of AI-based public speaking practice into career preparation programs, communication courses, and project-based learning has the potential to help reduce the gap between graduate competencies and workforce demands. For organizations and human resource (HR) practitioners, the integration of AI-based communication training into onboarding programs, mentoring, and employee development initiatives can serve as a strategy for enhancing workforce readiness and

communication confidence among early-career employees. Notwithstanding these contributions, this study has several limitations. First, the study employs a systematic literature review approach and descriptive thematic analysis, meaning the proposed framework has not yet been empirically tested. Second, the majority of the analyzed literature originates from educational contexts and student populations, which limits the generalizability of findings to professional contexts and workplace settings. Third, the rapid pace of AI development means that the relevance and capabilities of the tools discussed may change over time.

Future research is recommended to conduct empirical testing of the effectiveness of the PPR framework as well as specific AI tools in real-world contexts. Quasi-experimental, longitudinal, and mixed methods research designs can be employed to evaluate how AI-based public speaking interventions affect communication competence, self-efficacy, speaking anxiety reduction, and workforce readiness among young professionals. In addition, future studies may also examine the implementation of AI-based communication training within career development programs at higher education institutions, organizational onboarding training, and workplace training programs, in order to obtain a more contextual and applicable understanding of the effectiveness of AI use in professional communication development.

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