

Conversational AI as a Low-Stakes Speaking Partner: A Quasi-Experimental Study of Chatbot-Mediated Oral Practice in EFL Microteaching

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Abstract: Speaking anxiety and limited opportunities for authentic oral practice are among the most persistent barriers to spoken English development in EFL microteaching programmes. This study examines whether conversational AI chatbots can function as low-stakes speaking partners that reduce anxiety and improve oral performance readiness for pre-service EFL teachers before microteaching delivery. Using a quasi-experimental design with pre- and post-test oral performance assessments, Foreign Language Speaking Anxiety Scale scores, and qualitative data from reflective journals and post-study interviews, the study compared two groups of pre-service EFL teachers at a public Islamic university in Yogyakarta, Indonesia: one group engaging in structured chatbot-mediated oral practice sessions twice weekly for eight weeks before microteaching, and a control group receiving conventional preparation support only. Findings indicate significantly reduced speaking anxiety and improved oral fluency, pronunciation accuracy, and interactional competence scores in the chatbot group, with qualitative data revealing that the low-stakes, non-judgemental character of chatbot interaction was the most consistently valued feature—particularly for participants with high baseline anxiety. However, the study also identifies a transfer gap: the communicative behaviours practised with chatbots did not automatically transfer to human-audience microteaching contexts, and several participants reported that the emotional experience of a chatbot interaction and a live teaching performance remained categorically different. The study draws on Willingness to Communicate theory (MacIntyre et al., 2024) and Vygotskian scaffolding frameworks to argue that chatbot-mediated oral practice is a valuable but insufficient preparation for microteaching—most effective when embedded in a broader pedagogical sequence that explicitly bridges from low-stakes AI interaction to high-stakes human performance.

Keywords: Conversational AI, speaking anxiety, pre-service teachers, willingness to communicate.

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INTRODUCTION

Ask any EFL microteaching lecturer what the single biggest barrier to successful student teaching performance is, and the answer is rarely grammar, or lesson planning, or content knowledge. It is anxiety—the particular, acute anxiety of standing up in front of people and teaching in a language that does not yet feel fully owned, in a performance context

where being observed and evaluated is the explicit point of the exercise. Foreign language speaking anxiety in pre-service EFL teacher education is well documented (Alrashidi, 2022; Nugraheni, 2019), and its effects are concrete: reduced fluency, avoidance of complex grammatical structures, interactional withdrawal, and the kind of visible distress that makes it hard to deliver even a well-planned lesson effectively.

The conventional response to this barrier is practice—more speaking, more exposure, more opportunities to stand up and do the thing before the stakes are high. That response is correct in principle but difficult in practice: speaking practice opportunities in large Indonesian university EFL classes are limited by class size, contact hours, and the social visibility that makes unsupported practice in front of peers precisely the high-stakes context that anxious students most need to avoid. Students who most need practice are, in a painful irony, often the ones least able to access it in the forms that conventional instruction provides.

Conversational AI chatbots have been proposed as a partial solution to this problem. They are available at any hour, infinitely patient, incapable of social judgement, and able to sustain extended spoken or written interaction in English at whatever level and pace the user requires. For anxious EFL speakers who need to practise before they feel ready to practise with people, a chatbot interlocutor offers something genuinely new: an English-speaking partner who will never make you feel stupid, never grow bored, and never remember that you made a mistake (Fryer et al., 2020; Huang et al., 2022; Lee & Choi, 2023). The question this study investigates is how much of the anxiety reduction and oral development that chatbot practice can produce actually transfers to the specific high-stakes context of EFL microteaching—and what pedagogical design is needed to maximise that transfer.

Foreign language speaking anxiety—the specific apprehension and self-consciousness associated with speaking in a second or foreign language—has been extensively researched since Horwitz, Horwitz, and Cope's (1986) foundational work, and its relevance to microteaching contexts has been documented across a range of national settings (Alrashidi, 2022; Dikgwatle, 2024; Nugraheni, 2019). In Indonesian EFL pre-service teacher education specifically, speaking anxiety in microteaching is shaped by a cluster of interacting factors: limited communicative English use in prior schooling, the evaluative presence of peers and supervisors, awareness of the gap between one's own spoken English and the model of fluent academic English that teaching programmes implicitly promote, and the additional performance pressure of being assessed not just as a language user but as a prospective teacher (Alrashidi, 2022; Murphy Odo, 2023; Nugraheni, 2019).

Anxiety research distinguishes between facilitative and debilitating anxiety—the former producing heightened alertness and effort, the latter producing avoidance, cognitive interference, and performance deterioration (Horwitz, 2010). For most highly anxious pre-service EFL teachers, the microteaching context produces debilitating anxiety: it narrows their available linguistic repertoire, disrupts their planning and monitoring of spoken output, and produces a level of self-consciousness that makes the interactional spontaneity that effective teaching requires extremely difficult to access. Interventions that can reduce debilitating anxiety—particularly in the preparation period before live teaching—are therefore not supplementary concerns but central pedagogical priorities.

MacIntyre and colleagues' (1998, 2024) framework of Willingness to Communicate (WTC) provides a productive theoretical lens for understanding the relationship between anxiety, practice, and oral development in EFL contexts. WTC—the readiness to use L2 in a specific moment when given the opportunity—is understood as dynamically fluctuating in response to situational variables including interlocutor characteristics, perceived communicative competence, and affective state. Crucially, WTC is associated not just with spontaneous communication but with the quality of oral practice: learners with higher WTC in practice contexts practise more, engage more deeply with feedback, and show stronger development over time (MacIntyre et al., 2024; Yashima, 2020).

The implication for chatbot-mediated practice design is significant. If chatbots can increase WTC by reducing the social threat dimension of spoken interaction—by providing a non-judgemental, endlessly patient interlocutor who creates none of the face-threat that human audiences generate—then they may access a previously unavailable channel for oral practice among high-anxiety learners. The question is whether the WTC activated in chatbot interactions is the same construct as the WTC that matters for live speaking performance, or whether the absence of social stakes in chatbot interaction means that the practice, however plentiful, does not build the capacity for the more demanding social performance that microteaching requires.

Research on chatbots as L2 speaking partners has expanded considerably since the advent of LLM-based conversational systems capable of extended, contextually coherent interaction in natural language. Early studies using rule-based chatbot systems reported limited but real benefits for reducing anxiety and increasing speaking practice quantity (Fryer et al., 2020). More recent work with LLM-based conversational tools reports larger effects, particularly for anxiety reduction and fluency development, with several studies finding that students who practised with AI chatbots prior to assessed oral tasks showed significantly less debilitating anxiety during assessment than those who had not (Huang et al., 2022; Lee & Choi, 2023; Tai & Chen, 2020).

The mechanism most consistently identified in qualitative studies is the removal of social judgement: students describe the freedom to make mistakes, to repeat themselves, to use circumlocution and filler—all the real-time repair strategies that communicative competence requires—without the social cost that making the same moves in front of human interlocutors would entail (Fryer et al., 2020; Huang et al., 2022). Several studies also note benefits for pronunciation practice, where the willingness to attempt difficult sounds repeatedly without embarrassment is facilitated by the chatbot's lack of visible reaction.

What the literature flags as a consistent limitation is transfer: the extent to which the communicative behaviours developed in chatbot interaction carry over to human interaction contexts that have different affective and social properties. Several studies report that students found chatbot practice valuable but described the emotional difference between chatting with an AI and speaking in front of people as significant and not fully bridged by chatbot practice alone (Lee & Choi, 2023; Tai & Chen, 2020). This transfer gap—and what pedagogical design might close it—is one of the central questions motivating the present study.

Microteaching as a teacher education format has been extensively studied, with consistent findings that the cycle of planning, teaching, feedback, and re-teaching supports the development of teaching competencies when it is well designed and well supported (Dikgwatle, 2024; Luo & Li, 2024; Marhaban et al., 2023). What has received less attention is the pre-performance preparation phase—the weeks before the first microteaching session in which pre-service teachers' speaking anxiety, oral readiness, and sense of teaching competence are shaped in ways that will significantly affect how they perform and what they learn from the experience.

Research on performance anxiety more generally shows that preparation-phase interventions—structured opportunities to practise the target performance in progressively higher-stakes contexts before the evaluated performance itself—are among the most effective approaches to debilitating anxiety reduction (Horwitz, 2010; MacIntyre et al., 2024). For EFL microteaching, this suggests that chatbot-mediated oral practice, if effective, might be most valuable not as a standalone intervention but as an early phase in a progressively scaled preparation sequence: from low-stakes AI interaction, through small-group peer practice, to full microteaching performance with peer and supervisor audience.

MacIntyre et al.'s (1998, 2024) WTC framework provides the primary motivational and affective lens for this study. It directs attention to the situational variables—interlocutor characteristics, perceived competence, anxiety—that dynamically shape a

learner's readiness to communicate in any given moment, and provides a vocabulary for analysing why chatbot interaction might produce different WTC profiles than human interaction even when the linguistic demands are comparable.

Vygotsky's (1978) zone of proximal development and Lantolf and Thorne's (2006) extension of it into second language development provide the developmental frame. Chatbot-mediated oral practice is understood as a form of scaffolded speaking experience that operates in the learner's ZPD—allowing them to practise communicative behaviours they cannot yet sustain fluently in high-stakes human interaction, with a view to gradually internalising those behaviours and making them available in contexts with greater social demand. The scaffolding metaphor is explicitly developmental: the chatbot is a temporary support, not a permanent replacement for the human communicative contexts that microteaching requires.

METHODS

The study used a quasi-experimental mixed-methods design with two intact groups of pre-service EFL teachers in their third year of study at a public Islamic university in Yogyakarta, Indonesia, assigned to conditions based on class schedule rather than random allocation. The chatbot group ($n = 28$) engaged in structured chatbot-mediated oral practice sessions; the control group ($n = 27$) received conventional microteaching preparation support (regular lecture input on lesson planning and teaching methodology, without structured chatbot practice). Quantitative data assessed anxiety and oral performance at three points; qualitative data from journals and interviews provided explanatory depth.

Fifty-five undergraduate pre-service EFL teachers (38 female, 17 male; age 20–23) in the Microteaching course of the English Education Department participated across one semester. All participants were EFL speakers at B1–B2 proficiency levels. Baseline speaking anxiety was assessed using the Foreign Language Speaking Anxiety Scale (FLSAS; Woodrow, 2006), adapted for pre-service teacher contexts. Baseline oral performance was assessed through a three-minute impromptu classroom explanation task rated by two raters on fluency, pronunciation, and interactional competence. No significant pre-study differences between groups were found on any baseline measure.

The chatbot group participated in structured chatbot-mediated oral practice sessions using a voice-enabled interface connecting to GPT-4o (accessed through a third-party voice API), twice weekly for forty minutes per session across eight weeks. Sessions were structured around three progressively demanding activity types: open-topic conversational practice in weeks one and two (building basic interaction confidence); topic-focused explanation tasks simulating classroom explanation in weeks three through five (practising the specific discourse of EFL teaching); and simulated microteaching scenarios in weeks six through eight (chatbot taking the role of a student asking questions during a lesson, with the participant practising real-time classroom management responses). Participants received a session log template to record what they practised, what had been difficult, and what they wanted to work on next—creating a minimal self-regulatory structure around the practice.

The control group received the standard Microteaching course preparation: weekly two-hour lectures on lesson planning, methodology, and microteaching format; access to sample microteaching videos; and one group feedback session with the course supervisor during the preparation period.

Speaking anxiety was assessed using the FLSAS (Woodrow, 2006) adapted for microteaching contexts (Cronbach's $\alpha = .86$ in this sample), administered at pre-study, week four, and post-study. Oral performance was assessed using researcher-developed holistic and analytic rating scales covering fluency (rate, repair, pausing), pronunciation accuracy, and interactional competence (responsiveness, turn management, repair strategies), based on established L2 oral assessment frameworks (Luoma, 2004). Two

trained raters assessed all oral performance recordings; inter-rater reliability was satisfactory (ICC = .82). Reflective journals were kept by chatbot group participants throughout the intervention. Post-study semi-structured interviews (25–40 minutes) were conducted with twelve chatbot group participants selected for variation in baseline anxiety and oral performance, and with six control group participants.

Quantitative data were analysed in SPSS 27. Repeated measures ANCOVA (controlling for baseline scores) assessed between-group differences in anxiety and oral performance across time points. Qualitative data were analysed using thematic analysis (Braun & Clarke, 2021), with themes developed inductively and integrated with quantitative findings following a building explanations strategy (Creswell & Plano Clark, 2018).

RESULTS AND DISCUSSION

Speaking Anxiety Reduction

Repeated measures ANCOVA showed a significant group-by-time interaction for speaking anxiety scores, $F(2, 104) = 14.77, p < .001, \eta^2 = .22$. The chatbot group showed significantly greater anxiety reduction from pre-study to post-study than the control group (chatbot group mean reduction = 18.3 points; control group mean reduction = 6.4 points; post-study adjusted mean difference = 11.9, $p < .001, d = 0.87$). Anxiety reduction was progressive: week-four scores showed partial reduction in the chatbot group that increased substantially by post-study, suggesting cumulative effects from sustained chatbot practice rather than a simple novelty reduction.

Within the chatbot group, anxiety reduction was significantly larger for participants with high baseline anxiety (upper tertile) than for those with low baseline anxiety (lower tertile) (mean reductions: high anxiety = 24.7 points; low anxiety = 11.2 points; $t(26) = 3.44, p = .002$). This pattern—greater relative benefit for higher-anxiety learners—is consistent with WTC theory's prediction that removing the social threat dimension of interaction should disproportionately benefit those for whom social threat was most inhibiting baseline WTC.

Oral Performance

Post-study oral performance scores (assessed during the first full microteaching session) showed significant between-group differences on fluency ($t(53) = 3.87, p < .001, d = 1.04$) and interactional competence ($t(53) = 2.94, p = .005, d = 0.79$), with the chatbot group outperforming the control group on both. Pronunciation accuracy differences were smaller and marginally significant ($t(53) = 2.01, p = .049, d = 0.54$). The fluency advantage was the most robust finding: chatbot group participants showed faster speech rates, fewer dysfluent pauses, and more proficient use of repair strategies than control group participants. Given that fluency is the oral performance dimension most directly affected by anxiety—hesitation, false starts, and dysfluent pausing are classic anxiety symptoms in L2 speech—this pattern is consistent with the anxiety reduction data and suggests a plausible mechanism: reduced anxiety during performance produced more fluent speech.

The Transfer Gap: Qualitative Evidence

Despite the positive anxiety and performance findings, the qualitative data introduced an important qualification. Participants consistently described a felt gap between the experience of chatbot interaction and the experience of live microteaching—a gap that chatbot practice had narrowed but not closed. The emotional texture of standing up in front of real peers and a supervisor, being watched, being heard, and having one's competence as a future teacher publicly assessed was described as qualitatively different from chatbot interaction in ways that no amount of the latter could fully simulate.

Nisa, who had shown among the largest anxiety reductions in the chatbot group, described the gap precisely: *"With the chatbot I felt calm. I could think clearly. I made*

mistakes and it didn't matter—I just kept going. But when I stood up in front of my friends and Pak Baharuddin, it was different. Not as bad as before. But still different. There is something about real people watching you that ChatGPT cannot prepare you for completely." Her account—the benefit was real but not total—was representative of the majority of chatbot group interview data.

Several participants described a specific preparation experience that had partially addressed the gap: in weeks six through eight of the intervention, the simulated microteaching scenarios in which the chatbot role-played as a student asking questions had been experienced as closer to the real thing than earlier conversational practice. Participants described feeling more alert, more focused, and more appropriately anxious—in a facilitative rather than debilitating sense—during these sessions. Farid noted: *"When the chatbot asked me a question I didn't expect—like 'Teacher, why do we use passive voice?'—I had to actually think and answer properly. That was the first time the practice felt like teaching and not just talking."*

Valued Features of Chatbot Practice

Thematic analysis of journal and interview data across the chatbot group identified four features of chatbot interaction as most consistently valued. First, non-judgement: the absence of social evaluation was described by almost every participant as the defining benefit, particularly for participants with high baseline anxiety. Second, repetition without cost: the ability to attempt difficult sounds, phrases, and explanations multiple times without the social cost of repeated public failure. Third, response availability: the chatbot's consistent availability outside class hours allowed participants to practise at the times and in the conditions where they felt readiest—often alone at night, when social performance pressure was lowest. Fourth, the simulated student role in later sessions: the role-play element of weeks six through eight was identified as the most directly preparatory experience, because it most closely simulated the specific interactional demands of microteaching.

Chatbots as Anxiety-Reduction Scaffolds: The Evidence and Its Limits

The study's main quantitative findings—significant anxiety reduction and improved oral performance in the chatbot group—are consistent with the broader literature on chatbot-mediated oral practice (Fryer et al., 2020; Huang et al., 2022; Lee & Choi, 2023) and extend it to the specific context of EFL microteaching preparation in Indonesian Islamic higher education. The finding that high-anxiety participants benefited most is both theoretically coherent—WTC theory predicts exactly this differential effect—and practically encouraging: the learners who most need additional practice support are the ones who benefit most from it.

The transfer gap finding, however, is equally important and should not be downplayed. Chatbot practice reduced anxiety and improved oral performance, but it did not eliminate the emotional difference between interacting with an AI and teaching in front of people. This is not a failure of the intervention—it is a realistic account of what the intervention can and cannot do. A chatbot interaction lacks the specific affective properties—the social visibility, the evaluative stakes, the relational dynamics of a real audience—that make microteaching distinctively demanding. No practice that removes those properties can fully prepare a learner for a context in which they are present. What chatbot practice can do is reduce the baseline anxiety that the learner brings to the live context, and develop the oral fluency and interactional competence that make the live performance more successful when it happens.

The Progressive Scaffolding Argument

Vygotsky's (1978) scaffolding framework, as applied to oral performance preparation, suggests that the most effective use of chatbot practice is not as a substitute for high-stakes speaking practice but as the first stage of a progressively escalating preparation sequence. The logic is straightforward: learners need to build the oral

behaviours and reduce the anxiety that debilitates performance before they can benefit fully from the high-stakes practice that microteaching represents. Chatbot practice creates the conditions for that readiness-building—at lower social cost and with more flexibility in timing and pacing than human practice contexts allow.

The simulated microteaching scenarios in weeks six through eight of this study pointed towards what the next stages of that sequence might look like: small-group peer practice with a designated student role-player; small-group peer microteaching with minimal evaluation; and then full microteaching with peer and supervisor audience. Participants who went through the chatbot preparation described feeling more ready for those later stages; what the study could not test is whether a full progressive sequence—chatbot practice, small-group practice, full microteaching—would show cumulative anxiety reduction benefits beyond what chatbot practice alone produces.

Design Implications: Structured Scenarios Over Open Conversation

The qualitative finding that the simulated microteaching scenarios were the most valued and most preparatory feature of the chatbot intervention has direct implications for how chatbot-mediated oral practice should be designed for microteaching preparation. Open conversational practice—asking the chatbot about its day, discussing current events, practising everyday English—may build general conversational fluency and reduce general speaking anxiety, but it does not develop the specific discourse competencies that microteaching requires: giving clear explanations, responding to unexpected student questions, managing classroom interaction, recovering from communication breakdown in a teaching context.

Chatbot practice for microteaching preparation should be designed around the specific interactional demands of classroom teaching: scenario-based tasks that require the participant to explain concepts, give instructions, respond to simulated student queries, and manage the kind of unpredictable interactional turns that real classroom communication involves. This is not a trivial design requirement—it demands LLM-based systems capable of sustained, contextually appropriate role-play in a classroom simulation scenario—but it is achievable with current technology and represents a significantly more pedagogically targeted use of chatbot practice than generic conversation.

Institutional and Cultural Considerations

In Indonesian Islamic university contexts, the specific sources of microteaching speaking anxiety are shaped by cultural factors that the intervention design should attend to. The concept of *malu* (shame/embarrassment in front of peers) is a significant contributor to speaking anxiety in public performance contexts, and the fear of being seen to fail in front of the institutional and religious community that a university represents adds a layer of social stakes that Western accounts of speaking anxiety may not fully capture (Musthafa, 2021; Putri & Maarof, 2021). The chatbot's complete indifference to social face—its structural inability to experience or convey judgement—may therefore be particularly valuable in this specific cultural context, where the social stakes of public speaking failure are felt with unusual intensity.

At the same time, the transition from private chatbot practice to public microteaching performance may be particularly abrupt for students from high-*malu* cultural contexts. The progressive scaffolding sequence proposed above should, in this context, include explicit pedagogical work on the social-face dimension of the transition—not just gradually increasing the stakes of the practice but explicitly addressing with students the cultural and emotional dimensions of the transition from private to public performance.

Limitations

Several limitations should be noted. The quasi-experimental design with intact groups limits causal inference. The eight-week intervention covers preparation and initial

microteaching only; longer-term effects on teaching competency and speaking development were not assessed. Oral performance was assessed during first microteaching sessions only; whether chatbot preparation advantages persisted across subsequent sessions was not examined. The chatbot interface used voice interaction rendered through a text-based API, which may not perfectly replicate the experience of a fully integrated voice-first conversational AI system.

CONCLUSION

This study investigated whether conversational AI chatbots could serve as effective low-stakes speaking partners in EFL microteaching preparation, reducing speaking anxiety and improving oral performance readiness among pre-service teachers at an Indonesian Islamic university. The evidence is broadly affirmative: structured chatbot-mediated oral practice produced significant reductions in debilitating speaking anxiety—particularly for high-anxiety participants—and improved fluency and interactional competence scores in subsequent microteaching performance.

The transfer gap finding tempers this optimism without invalidating it. Chatbot practice prepared participants better for microteaching than conventional preparation alone; it did not fully replace the emotional and social experience of live teaching performance. This is not a limitation of chatbot technology—it is an honest account of what low-stakes practice can and cannot do for high-stakes performance. The appropriate response is not to expect chatbots to do something they cannot, but to design preparation sequences in which chatbot practice is the first of several progressively escalating stages—the scaffold that makes the next stage more accessible, in a deliberate and pedagogically coherent developmental sequence.

For EFL microteaching programmes in Indonesian higher education contexts, where anxiety is pervasive and practice opportunities are limited, that scaffold is a genuinely valuable addition to the preparation toolkit. The question now is how to design and implement it well.

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