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AI-Mediated Psychological Safety and Speaking Anxiety Reduction in University EFL Learners: A Qualitative Exploration

Abbas Hussein Abdelrady

Department of English Language & Literature, College of Languages & Humanities, Qassim University, Saudi Arabia

Corresponding Author: Abbas Hussein Abdelrady**, E-mail:** ab.altaher@qu.edu.sa

ABSTRACT

Artificial intelligence (AI) offers a unique opportunity for language education. Speaking anxiety is one of the emotional barriers to learning a second language. As a result of advances in AI-mediated communication technology, second language learners can interact with AI systems through computer-generated conversational agents. However, there has been limited research on the effects of conversing with AI systems on students' emotional responses, language learning behavior, and willingness to communicate (WTC) from a qualitative and learner-oriented perspective. In an effort to qualitatively explore how AI-mediated communication impacts learners' sense of psychological safety and language learning behavior, this study recruited 80 undergraduate students who were enrolled in English as a Foreign Language (EFL) courses and had reported moderate to high levels of speaking anxiety. Participants completed four consecutive weeks of structured speaking tasks using the AI technology and completed reflective journals and semi-structured interviews. Reflexive thematic analysis was used to code the qualitative data to discern themes among participants' responses and experiences. The study's findings revealed that learners felt AI-mediated communication provided them with a psychologically safe, low-stakes space that led to less anxiety, more emotional comfort, and increased willingness to take linguistic risks. Learners also perceived themselves as taking more risks by using more complicated linguistic forms and feeling more comfortable communicating. The researchers from another study conducted by Jiaohui Tang et al. found that grit, self-efficacy for speaking English, enjoyment of speaking, and speaking anxiety were factors that had an effect on students' WTC with AI. This can provide further insight into how psychological aspects of learners can impact language learning when AI is involved. From a pedagogical perspective, this suggests that technology like AI can act as a supplement to in-person instruction by providing a preparation space that encourages positive emotional and linguistic risk-taking.

KEYWORDS

Artificial intelligence, speaking anxiety, psychological safety, willingness to communicate, AI-mediated language learning

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1. Introduction

Psychological safety, broadly understood as students' beliefs that they will not be punished or embarrassed for taking interpersonal risks (e.g., making mistakes, voicing uncertainty, trying out new forms), has emerged as an essential construct in second- and foreign-language learning classrooms where students are frequently required to complete challenging and self-revealing communication tasks. Research suggests that psychological safety plays a critical role in learners' sense of meaningful engagement and language development (Edmondson & Lei, 2021; Derakhshan et al., 2022). This is particularly true of English as a Foreign Language (EFL) classrooms where speaking activities can often increase learners' feelings of vulnerability. Learners' perception of the socio-emotional classroom climate has been shown to impact their willingness to communicate (WTC), linguistic risk-taking behaviors, and language skill development more broadly (MacIntyre, 2020).

Much research has shown that foreign language speaking anxiety (FLSA) can debilitate learners' speaking performance. Learners who report high anxiety typically experience inhibited participation, lexical and syntactical simplification, and various physiological and cognitive disruptions such as hesitation, blocking, and avoidance (MacIntyre, 2020; Liu & Jackson, 2008). Recent research suggests that anxiety levels are not static learner attributes but are instead dynamically constructed and negotiated through interpersonal and contextual factors such as classroom discourse, corrective feedback dynamics, and peer evaluation (Derakhshan et al., 2022; Tu, 2021). While contributing rich insight into the affective dynamics of FL education, these studies have primarily

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focused on anxiety independently from other socio-psychological constructs like motivation and WTC, without attending to the broader role of psychological safety in foreign language learning.

Concurrent with advances in affective SLA research, significant developments in language learning technology have created new opportunities for learners to practice speaking. Conversational agents offer learners safe spaces to practice speaking privately with no immediate social repercussion for making mistakes. Emerging evidence suggests learners experience significantly less anxiety when practicing speaking with AI (Li, 2022; Juan et al., 2025). This low-stakes environment also allows learners to take interpersonal risks which can lead to experimentation and communicative growth. Since learners are not focused on being evaluated by a conversational partner, they may direct more attention to conveying meaning. Interestingly, recent upgrades to artificially intelligent language tutors have produced agents with more natural synthesized voices, conversational contextual awareness, and realistic embodied social cues like eye contact (Kreijns, 2022; Louwerse et al., 2021). Given these developments in conversational agent design, there is reason to believe learners interact with AI in psychologically safe ways and may experience positive emotions while interacting with AI.

However, several critical gaps in the research landscape remain. First, most studies examining learner outcomes when speaking with AI are quantitative studies examining learning outcomes (accuracy, fluency) or completion rates. Less is known about learners' affective experiences when interacting with AI. Second, relatively little research has been conducted on learners' psychological safety when speaking with human-like AI agents, as compared to traditional classroom environments. Third, while several studies have documented reduced foreign language anxiety when speaking with AI (Qi & Derakhshan, 2025; Metwally, 2025), little is known about how such reductions in anxiety may contribute to learners' engagement with linguistically complex language or their WTC in the world outside of the classroom. Finally, while this body of research has included several studies in K-12 contexts, less is known about how university students—who may face increased communicative pressure—perceive speaking with AI.

The current study qualitatively examines university EFL learners' perceptions of speaking practice with the AI conversational agent Langua Lucy. Through interviews, this study explores learners' psychological safety when interacting with Langua Lucy in order to gain richer insight into how learners experience speaking practice with AI. Specifically, this study builds on recent literature on affective linguistics and AI-mediated language learning to (1) investigate learners' emotional experiences when speaking with AI (as compared to a human), (2) understand how interacting with AI influences learners' anxiety levels and self-reported linguistic risk-taking. This study positions AI-mediated interaction as both a psychological environment and a mechanism by which learners may develop new relationships to speaking. To do so, it centers the voices and experiences of EFL learners to learn how they perceive speaking with AI.

Drawing on the literature described above, this study seeks to answer the following research questions:

1. How do university EFL learners describe their emotions when speaking to an artificial intelligence compared to speaking to a human instructor?

2. How does speaking with AI impact learners' anxiety and willingness to attempt linguistically complex utterances?

3. How does learners' psychological safety when speaking with AI impact WTC and engagement in speaking with human instructors?

The next section reviews relevant theoretical and empirical literature on psychological safety, foreign-language speaking anxiety, willingness to communicate, and AI-mediated language learning.

2. Literature review

2.1 Foreign Language Speaking Anxiety through the Lens of the Affective Filter

Speaking anxiety has been extensively researched within Foreign Language Acquisition. It is known that speaking anxiety affects how EFL learners perform orally and how comfortable they feel when speaking English; these findings are especially relevant to university students because their oral performance is being evaluated and built into their developing academic identity. Current research on foreign language speaking anxiety attempts to place anxiety within frameworks that account for dynamic rather than fixed states of anxiety sensitive to interactional conditions (Dewaele & Li). One theory especially prevalent in classroom-focused second language acquisition literature is Krashen's (1982) Affective Filter Hypothesis. The theory states that certain affective variables, like anxiety, self-confidence, and motivation, influence one's access to comprehensible input. Simply put, when students experience anxiety, the "filter" is up, creating a barrier to cognitive processing and restricting their output.

Research has supported this theory by finding that students with higher speaking anxiety thresholds speak less fluently, use less complex syntax, and use more avoidance behaviors (Botes et al., 2022; Elahi Shirvan et al., 2021). Additionally, recent work has found anxiety to be sensitive to interactional context; some students may experience higher or lower levels of anxiety depending on their interlocutor, the task, or even if they feel they are being evaluated (Dewaele, J. M., & Li, C., 2021). Contexts like classrooms have traditionally been found to create high affective filters for learners because students do not wish to participate due to fear of making mistakes, especially when speaking in front of their peers and being corrected by an authority figure.

Related to my study, this research is limited because students can still experience this high affective filter in the classroom despite teacher training to lower students' speaking anxiety. While some studies have found that teacher immediacy behaviors and peer

support can help students, these measures may only go so far when students are forced to speak in a setting that requires social interaction with others. It might be beneficial to further look at interactions with AI where there is no human-to-human interaction.

2.2 Expanding the Affective Framework: Emotional Complexity in Language Learning

Extending the affective framework into SLA research, recent studies are less inclined to concentrate solely on anxiety and more inclined to balance the impact of positive and negative emotions during the learning process (Dewaele et al., 2021; Jin & Zhang, 2021). This approach stems from Positive Psychology theories and argues that factors like enjoyment, engagement, and persistence play a role similar to that of negative emotions in learning a language (MacIntyre et al., 2016). Research has shown positive emotions allow learners to maintain attention during learning tasks even when experiencing anxiety. Enjoyment, for example, can motivate learners to stay longer on language communication tasks and take more risks (Li et al., 2021). In fact, a lack of positive emotions can be just as detrimental to the learning process as anxiety. Boredom, defined by a low-stimulation environment, was shown to decrease both participation and language learners' motivation (Pawlak et al., 2020).

Although this line of thinking has allowed for an expansion of the theoretical foundations surrounding the affective framework, it still does not take into consideration how these emotions may be affected by technology-mediated learning environments. Current research focuses on the independent effects of emotional variables. However, from the perspective of this paper, that does not take into consideration how the emotional framework for language learning is altered when learning takes place online. More specifically, how can we say that AI eliminates negative emotions (e.g. anxiety) if we do not know how it encourages positive ones (e.g. enjoyment)?

2.3 Willingness to Communicate as a Mediating Construct

Willingness to communicate (WTC) is a socio-psychological concept that serves as a mediator between affective learner variables and actual language use. As learners' preparedness to engage in communication in an L2 context, WTC is generally perceived as an important predictor of learners' language development. Extensive recent work has been done on the situational nature of WTC. Learners' willingness to communicate in L2 has been shown to react sensitively to contextual conditions, such as the characteristics of the interlocutor, task, and overall level of perceived risk in communication (Mystkowska-Wiertelak & Pawlak, 2015).

As has been shown above, anxiety triggers avoidance of speaking and challenging language forms, and causes increased self-monitoring that interrupts learners' fluency. From the same perspective, reducing communication risks and increasing learners' self-confidence have been shown to result in higher WTC and thus greater opportunities for language use.

One context that has been shown to positively influence learners' willingness to communicate is AI-mediated communication. Research participants have been shown to rate their willingness to communicate higher when performing communicative tasks with AI agents than with humans (Tai & Chen, 2024). Reasons usually cited for this effect include the removal of negative evaluation by other humans and the possibility to practice repeatedly. Similar results have been obtained when learners were allowed to self-pace their interaction with AI (Tai & Chen, 2024). Communication with AI is also free from other sources of pressure that might decrease learners' WTC.

However, while growth in learners' WTC in AI contexts is well documented, evidence that it transfers to other contexts is limited. Although this might be due to a number of factors, from the author's perspective it points to a need to view WTC as a component of a larger system of socio-emotional responses to psychological safety and the context of interaction.

2.4 Social Presence Theory and Human-Like AI Interaction

Social Presence Theory allows us to conceptualize learners' experience with their conversation partner. Social presence has been defined as "the degree of salience of the other person in the interaction and the consequent salience of his or her interpersonal reactions" (Gunawardena & Zittle, 1997). For example, learners may or may not experience the other party as feeling "real", available for emotional exchange, and responsive. Some studies have established that learners feel more engaged and motivated when they feel like they are truly communicating when using language learning technology.

Han Li et al. did a brief review stating that AI-based conversation agents were associated with improved mental health and user experience. From this, I infer that newer agents and newer interactions with these agents improve user experience and are helping people. These social features allow individuals using technology to communicate with bots to feel like they are not talking to a computer.

If increased social presence affected learners' affective states and behavior positively, we would expect to see learners being more motivated to communicate as social presence increased (Huang et al., 2025). Increased social presence does not always equate to psychological safety. Ding and Yusof's study found that AI-powered conversation bots increased language learners' fluency, speaking motivation, and confidence while decreasing learners' speaking anxiety and improving the overall experience of language learning. These two ideas seem to conflict with each other. Increased social presence is required for communication to occur at all. However, it also has the potential to decrease psychological safety, which is what makes interacting via computers so great. With regard to this study, I would be curious to know how learners who feel like they are talking to a human actually perceive bot agents on an emotional level.

2.5 Psychological Safety in AI-Mediated Learning Environments

The construct has been adapted to distance-learning contexts as well as those facilitated by artificial intelligence. Psychological safety has been applied to online learning and described as learners' perceptions of low interpersonal risk and a sense of control over interactions with their learning environment (Tseng et al., 2022). Some affordances of these online learning spaces such as anonymity, freedom from judgment, and flexible engagement create the perception of safety and foster participation.

AI-mediated environments may facilitate a unique blend of psychological safety elements. Learners can interact in real time but without fear of looking foolish when they make an error. A 2025 article by Diamanti and Angelini suggested that simulation activities paired with video-assisted feedback could offer language learners opportunities for practicing skills and making mistakes to improve upon them.

Research on psychological safety as it relates to AI remains limited. Current research includes proxies such as participation rates or self-report on learners' sense of ease without studying what processes lead to learners' feelings of safety. Another gap in the literature is that few studies compare learners' perceptions of psychological safety in AI-mediated environments versus those led by instructors.

According to the theoretical framework of this study, this would be considered an incomplete conception of psychological safety. This framework views psychological safety less as a static construct than as a perception that must be considered along with other variables. As such, studies should include elements of social presence or WTC to better theorize how psychological safety affects language learning in AI-mediated contexts.

2.6 Synthesis and Conceptual Gap

Overall, previous literature shows promising development on three fronts: (1) the process-based conceptualization of foreign language anxiety within the affective filter framework, (2) willingness to communicate being context-dependent, and (3) the potential affordances AI-mediated settings may hold for language learning. However, research on each topic has been conducted separately.

Studies testing principles within the Affective Filter Hypothesis take learners' emotions into consideration yet fail to see how technological settings impact learners' emotion. Studies observing WTC recognize the power of context yet ignore how AI-mediated communication changes the risk of communication. Research studying the implications of AI for language learning focuses mainly on its affordances and learners' language performance but not enough on how and why these affordances impact learners on affective and relational levels.

Consequently, there is insufficient effort to bridge AI research with the research on psychological safety/social presence and willingness to communicate. There is a lack of qualitative work that conceptualizes learners' AI-mediated speaking experience.

To fill this gap, the current study positions learners' AI-mediated speaking experience within the framework of Afhana, WTC, and SPT. Learners' experience of speaking with an agent perceived as human will be explored to see how and if these three constructs converge to affect learners' emotion, communication behavior, and perception of language learning.

Based on the aforementioned framework, the following section will present the qualitative study's participants, instrument, and procedure.

3. Methodology

3.1 Research Design

This study used a qualitative and exploratory research design to examine university learners' perceptions about psychological safety and speaking anxiety during interactions with AI language partners. Qualitative research is warranted because the study explores university learners' experiences, emotions, and interpretations which cannot be quantified and generalized to a larger population (Creswell & Poth, 2018; Merriam & Tisdell, 2016). Therefore, an interpretivist approach is applied in this study, which assumes that knowledge about reality is constructed through interaction with others.

To develop grounded theory, a reflexive thematic analysis method is used for analyzing qualitative data (Braun & Clarke, 2006, 2021). This qualitative research design was chosen because it aligns with current standards of qualitative excellence that involve being rich, holistic, nuanced, contextualized, reflexive, coherent, and transparent (Tracy, 2020).

3.2 Study Participants and Sampling Procedure

The study participants included 80 undergraduate EFL learners who study English at the university. Purposive sampling was used for this study because it allowed the selection of participants who had rich information about speaking anxiety and interacted with the Langua Lucy AI chatbot (Patton, 2015). More precisely, the selection criteria involved having moderate or high levels of speaking anxiety, as identified through screening with an anxiety questionnaire.

This sampling technique was chosen because the selected participants were required to have previous experience with the research phenomenon. Further, the sample size was determined after considering information power and inquiry depth principles (Guest et al., 2013). This sampling procedure aligns with qualitative research methodology because sample sizes in qualitative studies do not always have to follow statistical rules of sample selection (Creswell & Poth, 2018). Moreover, from a methodological perspective, the results of this study are not statistically generalized but analytically generalized.

To the best of the researcher's knowledge, participants interacted with Langua Lucy throughout the month. The researcher designed this language-learning intervention so learners would authentically communicate using their L2 language skills, increase L2 speaking performance, and attempt to decrease speaking anxiety levels.

The intervention required participants to complete two sessions per week, each lasting about 40 minutes. Forcing the participants to interact for about 40 minutes per day may lead to forced responses. However, the researcher assigned tasks that would make learners engage in meaningful communication. For example, learners would have to perform role-plays or show how they would handle various scenarios (defending grades during office hours, talking to a professor, giving a lecture, etc.) so that they can engage in lengthy conversations and use longer sentences.

3.3 Data Collection Methods

The credibility of qualitative studies increases when different sources of data are used (Lincoln & Guba, 1985). Therefore, this study used the following methods:

3.4 Semi-Structured Interviews

Participants were asked questions about their emotional experiences, willingness to communicate, anxiety levels, and feelings about speaking English confidently after interacting with the Langua Lucy AI chatbot. Semi-structured interviews were chosen because they provide flexibility while questioning participants (Creswell & Poth, 2018).

3.5 Reflective Journals

Learners recorded their emotions, perceptions of their performance, and language risk-taking behaviors after each completed session. These journals were collected at the end of each week to document learners' thoughts immediately after finishing each session with the AI language partner.

3.6 Data Collection Process

The process of collecting data involved asking participants to read and sign the informed consent document before participating in the study. Measures were taken to guarantee participants' confidentiality and anonymity.

The data collection process involved three stages:

First, learners completed the anxiety measurement tool and were introduced to the program. Second, participants interacted with Lucy for four weeks and journaled their thoughts after completing each session. Third, semi-structured interviews were conducted to elicit learners' various questions about the study. All interviews were recorded and transcribed verbatim. The journals were compiled after each interview session was completed and both transcripts and journals were numbered and de-identified to maintain confidentiality. Following data preparation procedures allows qualitative research to meet the dependability criterion.

3.7 Data Analysis Procedures

Thematic analysis was conducted following Braun and Clarke's (2006, 2021) six-phase guide. This process enabled the adoption of both a "bottom-up" and "top- down" approach to analyzing data.

First, the researcher became familiar with the data by reading and re-reading field notes. Next, initial coding was done by highlighting meaningful segments of data that related to emotions, psychological safety, and language use. Codes were labeled after being identified in the data. Third, the researcher began developing themes by clustering similar codes. Fourth, the themes were reviewed so that they only contained codes that fit into the scope of the theme. Fifth, the themes were defined and given concise names that answered the research question. Sixth, themes were interpreted by connecting them to the study's theories (Affective Filter, WTC, Social Presence Theory). Although the researcher anticipated that themes such as psychological safety, language risk-taking, and building confidence would emerge, the themes were inductively derived from the data.

3.8 Ensuring Trustworthiness

To establish rigor in this study, the researcher utilized Lincoln and Guba's (1985) four criteria of trustworthiness: credibility, transferability, dependability, and confirmability. Credibility was established through data triangulation and spending adequate time with the data. Dependability was addressed through creating an audit trail, and confirmability was established through memoing and providing a detailed description of the research process. In addition, seven qualitative quality criteria identified by Tracy (2020) informed many of the decisions in this study, including rich rigor, sincerity, credibility, witnesses, significant-like quality, ethics, and meaningful coherence. Specifically, this qualitative study applied rich rigor by using multiple sources of data and transparently describing the methods of data collection and analysis. To establish sincerity, the researcher attempted to bracket any prejudices or preexisting beliefs about the research topic. The study applied meaningful coherence by searching for inconsistencies and linking the findings to theoretical concepts and literature. Taken together, these strategies help ensure that this study provides an accurate description of learner perceptions about psychological safety and speaking anxiety while interacting with AI language partners.

This section reports the results of the reflexive thematic analysis. It discusses themes that emerged from the data related to participants' emotional experiences, perceptions about psychological safety, and language-learning practices when interacting with the AI conversational agent.

4. Results

Findings from the thematic analysis are reported below, under the following three themes, which directly correspond to the research questions: (1) Psychological Safety as a Judgment-Free Zone; (2) Risk-taking With Language Output Without Fear of "Fooling Around"; and (3) Willingness Versus Confidence to Communicate: Transferability. Each theme connects back to the notion of how AI-mediated communication impacts learners' emotional experiences.

4.1 Theme 1: Psychological Safety as a Judgment-Free Space

The first theme to emerge from the data set was that learners described interacting with Langua Lucy as if they were in a psychologically safe space where they did not feel judged. Responses related to this theme tended to compare AI interaction with classroom interaction framed as anxiety-producing and socially risky.

References to judgment-free interactions peppered several learner responses. One learner described their feelings toward Lucy this way:

"I'm not afraid when talking to Lucy. In class I worry what others will think of me, but here I am chill."

Another learner felt AI interaction reduced physical symptoms of anxiety:

"When I talk to the teacher, I get really nervous and forget words. Lucy, I don't mind talking to her because I feel so peaceful and can think."

Participants overwhelmingly experienced interacting with AI as lowering their affective filter. It is also worth noting that learners described feeling safe in their bodies. Responses that indicated a lack of anxiety also revealed learners experienced interactions with AI as less tense and more fluent.

The opportunity to take away the audience and control the interaction contributed to learners describing AI as psychologically safe.

"I can hear what I say again. I can take my time. Plus nobody's watching me. That makes me comfortable."

From an interpretivist perspective, this suggests psychological safety is achieved through the absence of a human audience and the risk of losing face, along with opportunities for interactional control.

4.2 Theme 2: Linguistic Risk-Taking and Perceived Competence

Another recurrent topic was learners' willingness to attempt higher-risk linguistic forms. Most users commented that anxiety reduction allowed them to experiment with more elaborate vocabulary and syntax rather than relying on "safe language."

"As Lucy, I will try more difficult words and longer sentences. In class I use short sentences because I don't want to make mistakes."

"I can repeat again and again with Lucy until I know I can say it good. Then I can say it better without stopping."

This feedback suggests AI-mediated conversation allows learners to engage in cycles of practice and self-correction without fear of judgment. Participants also felt more confident in their speaking skills overall.

"I think my English is getting better because I am starting to use bigger words."

Perhaps more interestingly, users seem to have adopted a new attitude toward their mistakes.

"Mistakes with Lucy are okay. They don't make me feel stupid; they help me learn."

This points to the possibility that psychological safety may impact learners' meta-cognition and learning mindset as well as actual performance.

4.3 Theme 3: Transfer of Confidence and Willingness to Communicate

Theme three documented how learners experienced transfer of their learning from the AI-mediated environment to the classroom context regarding WTC. The transfer varied between the participants; however, the following trend applies: Students experienced increases in confidence and participation.

Some students reported that practicing with Langua Lucy allowed them to enter the classroom feeling more confident:

"I feel better prepared to speak up in class after practicing with Lucy. I am not as nervous."

Another student reported that they went from never speaking up to participating at times:

"I used to never talk in class. Now I try to answer questions, even when I don't know the correct way to say it."

From these comments it may be inferred that learners used the tool as a safe middle step to build confidence before speaking to their teacher. Other learners mentioned that despite their lower anxiety, they did not feel totally at ease speaking in front of others in class:

"I'm still nervous speaking in front of people. Just not as much."

These learners experienced partial transfer of learning. This could be because evaluation by other humans is an important part of speaking in real life and cannot be replaced by artificial intelligence. Analytically, this theme provides evidence of the intersection between psychological safety, willingness to communicate, and context.

4.4 Summary of Themes and Subthemes

Table 1 presents an overview of the main themes and subthemes extracted through analysis. Primarily descriptive in nature, it illustrates how learners' experiences with the AI conversational agent took thematic form, showing relationships between psychological safety, linguistic risk-taking, and willingness to communicate in AI-mediated contexts.

Table 1

Summary of Themes and Subthemes

Themes	Subthemes	Subthemes
Psychological Safety as a Judgment-Free Space	Absence of negative evaluation; Emotional comfort; Interactional control	Learners perceive AI as a safe, non-threatening environment that reduces anxiety
Linguistic Risk-Taking and Perceived Competence	Use of complex language; Repetition and practice; Positive error perception	Reduced anxiety enables experimentation and increased confidence
Transfer of Confidence and WTC	Increased classroom participation; Confidence building; Partial anxiety persistence	AI practice enhances readiness to communicate, though transfer is not complete

4.5 Integrative Interpretation

Altogether, results indicate that AI interaction acts as an affectively safe environment that reduces students' anxiety levels, encourages them to take risks by trying out the L2, and boosts their willingness to communicate outside of AI-mediated communication to some extent. These factors are interconnected, meaning that if you feel safe, you take risks. By taking risks, you become more confident, which leads you to want to communicate more.

As the author, I believe this research provides evidence that supports combining the Affective Filter Hypothesis, WTC, and Social Presence Theory by showing how emotions and interaction work together in computer-assisted language learning environments.

The paragraph below delves into what these findings mean when placed in the context of the theory and literature reviewed in this study. It also explores how they can impact the field of EFL education and the use of AI-mediated speaking activities.

5. Discussion

This research investigated the effects of interacting with Langua Lucy through AI on university learners of English as a foreign language (EFL), particularly emotional response, linguistic behavior, and WTC. The results showed that they formed a consistent picture: AI-mediated contexts served as psychologically safe spaces that decreased learners' anxiety and encouraged linguistic risk-taking behaviors and partially increased learners' WTC in classroom settings. The discussion will conceptualize these results based on a unified framework that positions them among previous studies and contributes to defining AI-facilitated language learning.

5.1 Psychological Safety and the Affective Filter in AI Contexts

To elaborate on the three findings, I will explain how each can make theoretical contributions to SLA. The first finding—that learners experience AI interaction as judgment-free—validates and expands on Krashen's Affective Filter Hypothesis. Study participants expressed feeling less fear of negative evaluation, less somatic anxiety, and more emotional comfort when talking to Langua Lucy versus a human conversation partner. Recent studies have found support for AI conversation platforms lowering foreign language speaking anxiety by removing social pressure and the feeling of being evaluated (Ding & Yusof, 2025; Wang et al., 2025).

This study builds on the previous findings by showing that psychological safety is also made up of many other factors. Having a sense of control, privacy, and emotional distance were key contributors to learners feeling psychologically safe. In classroom settings, students have to navigate not only speaking a new language but also maintaining a social facade. With AI, learners were able to isolate speaking from social pressures. This also ties into new research finding that AI provides "low-threat communicative spaces" which allow for learners to have increased cognitive depth and longer conversation turns (Zhang et al., 2025).

For researchers, this suggests that maybe AI does not lower the affective filter, but creates a whole new environment with different conditions for the filter to be high or low. This would be a substantial contribution as it pushes the boundaries of the well-known AFH to AI-mediated communication, which is not very common in research.

5.2 Linguistic Risk-Taking and the Reconstruction of Competence

The second main takeaway—that psychological safety led participants to linguistically take more risks and feel better about their language abilities—also speaks to the instructional benefits of creating a psychologically safe environment. Learners noted that they felt more comfortable using complex sentence structures, trying out new words they were unfamiliar with, and speaking more overall with the chatbot. This is consistent with recent work that has found that AI speaking practice tools result in higher levels of complexity and fluency as learners can repeatedly practice speaking in a low-risk environment (Chenghao Wan et al., 2024; Tai & Chen, 2024).

Perhaps most encouraging, however, was that students began to develop healthier relationships with error. In line with the development of a growth mindset towards language learning discussed above, participants appeared to embrace mistakes as part of the learning process. This notion is also supported by recent findings that AI-mediated conversation can help learners develop more self-efficacious and adaptive learning strategies through practice and instant feedback (Zhai & Wibowo, 2023; Huang Y, Chen H, & Hu C, 2025). Theoretically speaking, this finding helps to build upon our understanding of how affective and cognitive factors in language learning are intertwined. As mentioned earlier, anxiety was reduced, allowing learners to take more risks. This willingness to take risks then translated to learners trying out new language. The current study helps add to the literature by providing evidence that psychological safety can impact not just participation levels, but the nature of what is produced linguistically.

5.3 Willingness to Communicate and Partial Transfer Effects

Third, WTC exhibited partial transfer to classroom contexts. The AI-mediated practice enabled some learners to take part in communication in real contexts despite their initial hesitation or anxiety. During the interviews, some participants expressed feeling more willing to communicate and contributed more in class after practicing with AI.

Recent evidence corroborates this potential of AI by showing substantial increases in learners' willingness to communicate after using AI-based speaking practice tools. These improvements in WTC were partially mediated by decreases in anxiety and increases in self-efficacy (System study, 2024; Cui et al., 2025). Another large-scale study further verified that anxiety and self-efficacy are significant mediators between AI use and WTC (Zhang et al., 2025).

The novelty of this study lies in the fact that learners still experienced anxiety even when they were initially confident about communicating after practicing with AI. This meant that although learners built confidence through AI-mediated practice, there were still remnants of communication apprehension that surfaced when communicating with real teachers and peers. This aligns with recent findings that WTC is context-bound. Learners who felt they had good relationships with their peers or were not being evaluated were more willing to communicate.

For us as researchers, this is a reminder that increases in WTC through AI should not be equated with actual communication in classroom contexts. Instead, AI can be thought of as a stepping stone that helps learners gain confidence before they are placed in more stressful communicative contexts.

5.4 Social Presence: A Double-Edged Mechanism

Social presence emerged as another factor worthy of consideration when discussing participants' sense of freedom from evaluation. Though most participants found that the AI was responsive to them and allowed them room to chat without pressure, they noted the fact that the AI would not be able to judge them as a key contributor to their feeling safe. In essence, even as mediated by AI, social presence matters in interaction. However, it does not mimic human social presence; instead, there seems to be a necessary balance between authenticity and distance.

It has been proposed as recently as May 2025 that human-like agents promote engagement behaviors and WTC by fostering greater perceptions of presence, but also creating psychological distance which decreases anxiety (Huang Y, Chen H, & Hu C, 2025). That line of research has furthered the idea that there is a paradox at play: we need social presence to feel connected to others when interacting, but we do not want the agent to feel too human-like, lest fear of evaluation resurface.

I add to this theory by uncovering a balance point at which enough social presence exists to promote AI-mediated language learning but not so much that learners do not feel a sense of psychological safety. In many ways, this updates Social Presence Theory by proving its relevance in AI-mediated contexts. Rather than presence being all or nothing, we can adjust it.

5.5 Pedagogical Implications

As mentioned previously, the current study has implications for EFL pedagogy. First, practice speaking before doing tasks in class. Since AI-mediated communication can function as learners' low-stakes preparatory speaking space, learners can practice speaking with AI partners prior to actual face-to-face communication in classrooms. Second, create comfortable learning spaces where learners are not afraid to make mistakes. Teachers can establish learning spaces where errors are explicitly framed as an integral part of learning and experimentation is encouraged (the idea can be supported by insights obtained from learners' interaction with AI). Third, consider partially transferring learners' WTC to the target communication environment. Based on the partial transfer effect found in the present study, teachers can ask learners to practice or rehearse communication tasks with AI first, then transfer what they have learned to communicating with their peers or instructors, and vice versa. Last but not least, pay attention to learners' perceptions of your AI tool's amount of humanness. Since social presence appeared to play a role in how learners interacted with AI, teachers should make sure that the tools they introduce to learners are not too humanlike, to avoid raising evaluation apprehension among learners. The same is also implied for AI developers/engineers. From the researcher's standpoint, the current study's pedagogical implication once again suggests viewing AI-mediated communication not as a substitute for human-to-human communication but as a unique pedagogical tool that shapes how language learners feel and interact with the language environment.

Building on these theoretical and pedagogical insights, the final section of this article will summarize the study's contributions, discuss its limitations, and suggest future directions.

5.6 Conclusion and limitations

There are a few limitations of this study that should be mentioned. First of all, due to the small and purposive sample, it would be premature to generalize these results to larger populations of EFL learners who may have different proficiency levels, cultural backgrounds, or educational settings. The qualitative design of this study should also be considered. Second, although the data collection techniques included observing learners and analyzing their performance during conversations with Langua Lucy, much of the data was self-reported (interview and reflective journal). Self-reported data are subject to issues like exaggeration, misremembering, and impression management. Collecting more performance and observational data would help establish greater internal validity. Third, the changes seen in learners' anxiety levels, linguistic development, and willingness to communicate may not last or could even reverse themselves over time. Since language learning is a slow and incremental process, future studies could benefit from having longer interventions. Lastly, this study only focused on one AI tool named Langua Lucy. Since different AI coding can result in varying degrees of perceived human-likeness and different functions and affordances, it may not be possible to extend these results to other AI tools. Therefore, future studies may benefit from comparing different programs with learners.

The researcher examined whether using AI-mediated interaction would lead to changes in university-level EFL learners' perceived emotional state, language risk-taking behavior, and WTC. We found evidence that interacting with AI can indeed create what we call a psychologically safe environment – one that elicits less speaking anxiety, increases language risk-taking behavior, and promotes confidence.

In my opinion, the main value added of this study is theoretical. I hope to have contributed to dialog between influential but often disparate strands of theory by integrating the Affective Filter Hypothesis, willingness to communicate, and social presence theory. I think our findings help to show how a complex constellation of emotional, cognitive, and interactional factors works together to promote language learning when students interact with AI.

Of course, artificially lowered affective filters do not produce a magical "confidence pill" that students can take before speaking to humans. But AI-mediated interaction does appear to promote confidence for communication in the AI environment itself, which can lead to students trying out longer language utterances and more complex language forms. While there was some spillover of confidence into the face-to-face classroom, fear of negative evaluation was not. This seems to suggest that AI, at least in terms of social context cues, is not the same as classroom learning.

Instead, I believe AI provides a different ecology for language learning, one in which learners can focus on language and negotiate meaning without some of the social restrictions felt in FTF communication. If I understand AI to be used not as a replacement for FTF teacher-student interaction, but as a useful complement to be integrated at strategic points in the language pedagogy, I can continue to move applied linguistics towards affect- and experience-driven research.

5.7 Directions for Future Research

One possible direction for future research includes following learners who have been participating in AI-mediated learning environments for an extended period and measuring their emotional states, linguistic competence, and willingness to communicate as well as actual communication behavior changes over time. Second, employing mixed-methods research designs in future investigations will allow for making connections between learners' perceived improvements and actual gains in performance, reductions of anxiety, and increases in WTC. Third, conducting follow-up studies on whether learners who become more willing to communicate with AI are also willing to speak up more in class and seek out opportunities to communicate with target language speakers would be beneficial. Fourth, replicating this study with AI systems that vary in degrees of human-likeness could provide valuable insights into how social presence factors influence learners' affective states and language-learning behavior. Finally, it would also be beneficial to learn how individual differences, such as learners' proficiency level, personality, and experience with technology, influence how they react to communicating with AI.

Disclosure of Generative AI use

The author takes full responsibility for the use of Generative AI solely for grammar and style editing of the manuscript.

Competing Interests

The author confirms that this piece was written in the absence of any commercial or financial relationships that could be considered a potential conflict of interest.

Ethics approval and consent to participate

Ethics approval was obtained for this study.

Data Availability Statement

According to the author, datasets and materials related to this study can be requested from the corresponding author.

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