
Classroom Interaction and Willingness to Communicate in Pakistani EFL Classrooms: The Mediating and Sequential Roles of Perceived Speaking Opportunity and L2 Self-Confidence

Asifa Sohail*¹, Maham Javed¹, Khadija Rani¹, Amna Abbas¹

¹ Faculty of Languages and Literature, University of Central Punjab, Gujranwala Campus.

asifasohail394@gmail.com

DOI: <https://doi.org/10.70670/sra.v4i1.2483>

Abstract

This study investigates the complex mechanisms through which classroom interaction influences learners' willingness to communicate (WTC) in English as a Foreign Language (EFL) contexts. Drawing on interactionist and socio-cognitive frameworks, the research proposes a dual and sequential mediation model in which perceived speaking opportunity (PSO) and L2 self-confidence function as psychological mechanisms linking classroom interaction to WTC. Data were collected from 600 Pakistani university students across multiple disciplines using validated self-report instruments. Structural equation modeling (SEM) and partial least squares SEM (PLS-SEM) were employed to examine direct, indirect, and serial effects. Results indicate that classroom interaction significantly predicts WTC both directly and indirectly through PSO and L2 self-confidence. Moreover, findings confirm a significant chain mediation pathway whereby classroom interaction enhances perceived speaking opportunities, strengthens L2 self-confidence, and ultimately increases communicative willingness. The study advances theoretical models of WTC and offers pedagogical implications for fostering communicative engagement in tertiary EFL classrooms.

Keywords: Classroom interaction; Willingness to communicate; Perceived speaking opportunity; L2 self-confidence; Structural equation modeling; EFL learners

Introduction

In an era where communicative competence is widely recognized as a cornerstone of academic and professional success, the paradox of silent classrooms continues to challenge language educators worldwide. Despite decades of pedagogical innovation emphasizing interaction, collaboration, and learner-centered instruction, many second language (L2) learners remain reluctant to speak. This tension between pedagogical intent and communicative reality underscores a central concern in applied linguistics: why do learners who possess adequate linguistic knowledge often refrain from communicating? As globalization intensifies cross-cultural exchanges and English continues to function as a lingua franca in academic and entrepreneurial domains, understanding the psychological and interactional mechanisms that foster learners' willingness to communicate (WTC) has become both timely and essential (MacIntyre et al., 1998; Peng & Woodrow, 2010).

Classroom interaction has long been conceptualized as a foundational condition for language development, grounded in sociocultural theory and interactionist perspectives which posit that learning is mediated through social engagement (Long, 1996; Philp & Duchesne, 2016). Empirical research has consistently shown that interactional opportunities facilitate negotiation of meaning, feedback processing, and identity construction (Sato & Ballinger, 2016). Within this framework, WTC has emerged as a pivotal construct,

defined as learners' readiness to enter into discourse using an L2 at a particular time with a specific interlocutor (MacIntyre et al., 1998). More recent investigations have reconceptualized WTC as dynamic, situational, and context-sensitive, shaped by classroom ecology, emotional states, and interpersonal relationships (Dewaele, 2019; Zhang et al., 2020).

Parallel to this line of inquiry, perceived speaking opportunity (PSO) and L2 self-confidence have gained prominence as critical psychological mediators in communicative behavior. Perceived speaking opportunity refers to learners' subjective evaluation of how frequently and meaningfully they can participate in classroom discourse. Studies suggest that learners' perceptions of opportunity may be more predictive of communicative engagement than the actual frequency of teacher-initiated tasks (Cao, 2014). L2 self-confidence, typically conceptualized as a composite of communication competence and low communication anxiety, has been consistently linked to higher WTC across diverse contexts (Peng & Woodrow, 2010; Mystkowska-Wiertelak & Pawlak, 2017). Contemporary research further demonstrates that positive classroom emotions and supportive interactional climates enhance self-confidence, thereby increasing communicative readiness (Dewaele & Li, 2020; Lee & Draji, 2019).

Although these strands of research have independently advanced understanding of interactional and affective influences on WTC, the integrated mechanisms linking classroom interaction to WTC through sequential psychological mediators remain underexplored. Recent calls in top-tier journals advocate for more complex, mediation-based models that capture indirect pathways among contextual, cognitive, and affective variables (Zhang et al., 2020; Khajavy et al., 2018). However, prior studies often examine either classroom interaction or self-confidence in isolation, neglecting learners' perceived speaking opportunities as a distinct construct mediating communicative outcomes. Furthermore, empirical models rarely test dual-mediation frameworks that position PSO and L2 self-confidence as sequential mechanisms translating interactional affordances into communicative action. This gap is particularly significant in contemporary communicative language teaching environments where interactive practices are implemented but learner participation remains uneven. Without a nuanced understanding of these mediating processes, pedagogical interventions risk overlooking the psychological transformations necessary for interaction to culminate in WTC. Addressing this gap is critical not only for refining theoretical models of WTC but also for informing evidence-based classroom practices in higher education contexts.

Against this backdrop, the present study aims to investigate the complex relationships between classroom interaction (independent variable), perceived speaking opportunity and L2 self-confidence (mediators), and willingness to communicate (dependent variable) within an integrated mediation framework. Specifically, this study seeks to examine whether classroom interaction indirectly influences WTC through learners' perceptions of speaking opportunities and their L2 self-confidence. By empirically testing a dual-mediation model grounded in contemporary interactionist and socio-cognitive theories, the study addresses the following overarching research question: To what extent does classroom interaction influence learners' willingness to communicate through the mediating roles of perceived speaking opportunity and L2 self-confidence?

The significance of this study lies in its theoretical, empirical, and pedagogical contributions to applied linguistics. Theoretically, it advances the dynamic systems perspective on WTC by integrating contextual (interactional), cognitive (perceived opportunity), and affective (self-confidence) dimensions into a unified structural model. Empirically, it responds to recent methodological recommendations advocating for mediation analysis to capture indirect effects among classroom variables (Khajavy et al., 2018; Zhang et al., 2020). Pedagogically, the findings are expected to inform language instructors, curriculum designers, and teacher educators by clarifying how interactional practices translate into communicative engagement. Rather than merely increasing interaction frequency, educators may need to enhance learners' perceptions of opportunity and nurture self-confidence to achieve meaningful communicative outcomes. Ultimately, this research contributes to evidence-based strategies aimed at fostering active classroom participation and

communicative competence in tertiary-level L2 settings.

Regarding scope, this study focuses on tertiary-level L2 learners in formal classroom environments and examines classroom interaction as a perceived construct rather than an observational measure. The investigation is confined to perceived speaking opportunity and L2 self-confidence as mediators, acknowledging that other affective variables (e.g., enjoyment, grit, motivation) may also influence WTC. Additionally, the study adopts a quantitative, cross-sectional design, which limits causal inference and longitudinal interpretation. While these delimitations ensure methodological precision and feasibility, they also provide avenues for future research employing longitudinal or mixed-method approaches to capture the dynamic evolution of communicative readiness.

By situating classroom interaction within a psychologically mediated framework, this study seeks to move beyond simplistic input–output models and toward a more nuanced understanding of how interaction becomes communication. In doing so, it contributes to ongoing scholarly efforts to explain not only whether interaction matters, but how and why it translates into learners’ willingness to speak.

Literature Review and Hypotheses Development

Classroom Interaction and Willingness to Communicate

Interactionist theory posits that conversational engagement facilitates not only linguistic development but also learners’ readiness to participate in discourse (Long, 1996). In contemporary applied linguistics, classroom interaction has been reconceptualized as a multidimensional construct encompassing teacher–student interaction, peer collaboration, and dialogic classroom climate (Philp & Duchesne, 2016). Empirical studies in top-tier journals demonstrate that supportive and dialogically rich classroom environments positively predict L2 willingness to communicate (WTC) (Cao, 2014; Dewaele, 2019). Recent dynamic approaches further indicate that interactional affordances shape moment-to-moment fluctuations in WTC by enhancing perceived relevance and psychological safety (Zhang et al., 2020).

When learners experience equitable turn-taking, scaffolding, and constructive feedback, they are more likely to perceive communicative risk as manageable, thereby increasing communicative readiness (Lee & Drajati, 2019). Accordingly, classroom interaction is expected to exert a direct positive influence on WTC.

H1: If classroom interaction increases, then learners’ willingness to communicate will significantly increase.

Classroom Interaction and Perceived Speaking Opportunity

Perceived speaking opportunity (PSO) reflects learners’ subjective evaluation of the availability and accessibility of communicative turns. Research shows that the perception of opportunity, rather than objective task frequency, predicts communicative engagement (Cao, 2014). Recent classroom-based studies in *System* and *TESOL Quarterly* emphasize that dialogic teaching practices enhance learners’ perceptions of meaningful participation (Sato & Ballinger, 2016; Zhang et al., 2020).

Interactive pedagogies that incorporate collaborative tasks and reduced teacher domination foster a sense of inclusion and voice (Philp & Duchesne, 2016). Thus, higher levels of classroom interaction are likely to strengthen learners’ perceived speaking opportunities.

H2: If classroom interaction increases, then learners’ perceived speaking opportunity will significantly increase.

Classroom Interaction and L2 Self-Confidence

L2 self-confidence, conceptualized as a composite of communication competence and low anxiety, has consistently been identified as a proximal predictor of WTC (MacIntyre et al., 1998). Recent empirical evidence suggests that classroom interaction enhances learners’ communicative competence perceptions and reduces anxiety through supportive feedback and peer collaboration (Dewaele & Li, 2020; Khajavy et al.,

2018).

Positive classroom climates characterized by respectful dialogue and scaffolding contribute to learners' sense of efficacy and communicative security (Lee & Drajeti, 2019). Therefore, interactional quality is expected to directly foster L2 self-confidence.

H3: If classroom interaction increases, then learners' L2 self-confidence will significantly increase.

Perceived Speaking Opportunity and Willingness to Communicate

From a sociocognitive perspective, learners' communicative behavior depends on perceived affordances within the classroom ecology (Cao, 2014). When learners perceive frequent and meaningful opportunities to speak, their communicative engagement intensifies (Zhang et al., 2020). Empirical findings demonstrate that PSO significantly predicts WTC beyond structural task design (Peng & Woodrow, 2010).

H4: If learners' perceived speaking opportunity increases, then their willingness to communicate will significantly increase.

L2 Self-Confidence and Willingness to Communicate

Among the antecedents of WTC, L2 self-confidence remains one of the most robust predictors (MacIntyre et al., 1998). Recent large-scale structural equation modeling studies confirm that self-confidence exerts both direct and indirect effects on communicative behavior (Khajavy et al., 2018; Dewaele, 2019). Higher perceived competence and lower anxiety reduce communicative avoidance and promote engagement.

H5: If learners' L2 self-confidence increases, then their willingness to communicate will significantly increase.

Perceived Speaking Opportunity and L2 Self-Confidence

Perceived opportunities to speak may strengthen learners' communicative efficacy by providing repeated mastery experiences. According to socio-cognitive theory, mastery experiences are central to developing self-efficacy beliefs (Bandura, 1997). In L2 classrooms, frequent opportunities to express ideas contribute to increased competence perceptions and reduced anxiety (Dewaele & Li, 2020).

H6: If learners' perceived speaking opportunity increases, then their L2 self-confidence will significantly increase.

Mediation Effects

The Mediating Role of Perceived Speaking Opportunity

Interactional affordances may influence WTC indirectly by enhancing learners' perceived opportunities to speak. Recent mediation analyses highlight the importance of perceptual variables in translating contextual features into communicative action (Zhang et al., 2020).

H7: If classroom interaction increases, then willingness to communicate will increase through the mediating effect of perceived speaking opportunity.

The Mediating Role of L2 Self-Confidence

Interactional environments may foster WTC by enhancing learners' self-confidence. Empirical modeling studies support the indirect pathway from contextual variables to WTC through affective constructs (Khajavy et al., 2018).

H8: If classroom interaction increases, then willingness to communicate will increase through the mediating effect of L2 self-confidence.

Perceived Speaking Opportunity as a Mediator between Classroom Interaction and L2 Self-Confidence

Interaction may first enhance PSO, which subsequently strengthens self-confidence. Classroom affordances that encourage participation can reduce anxiety and build competence perceptions (Dewaele & Li, 2020).

H9: If classroom interaction increases, then L2 self-confidence will increase through the mediating effect of perceived speaking opportunity.

L2 Self-Confidence as a Mediator between Perceived Speaking Opportunity and Willingness to Communicate

PSO may enhance WTC indirectly by strengthening self-confidence, which serves as a proximal determinant of communicative readiness (MacIntyre et al., 1998).

H10: If perceived speaking opportunity increases, then willingness to communicate will increase through the mediating effect of L2 self-confidence.

Serial Mediation

Building on socio-cognitive and dynamic systems perspectives, classroom interaction may sequentially enhance perceived speaking opportunities, which then strengthen L2 self-confidence, ultimately leading to greater WTC (Zhang et al., 2020; Dewaele & Li, 2020).

H11: If classroom interaction increases, then willingness to communicate will increase through the sequential mediating effects of perceived speaking opportunity and L2 self-confidence.

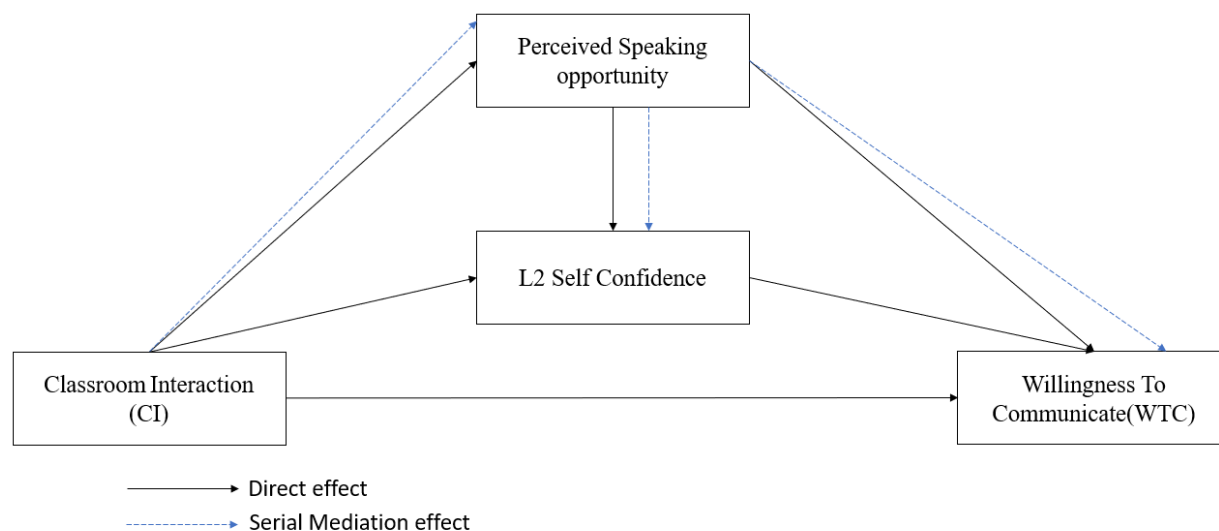


Figure 1: Conceptual Model

The proposed conceptual framework positions classroom interaction as the independent variable predicting willingness to communicate both directly and indirectly. Perceived speaking opportunity and L2 self-confidence function as parallel and sequential mediators. The model assumes (a) direct effects of classroom interaction on PSO, L2 self-confidence, and WTC; (b) direct effects of PSO and L2 self-confidence on WTC; and (c) indirect pathways including parallel mediation (CI → PSO → WTC; CI → L2SC → WTC)

and serial mediation (CI → PSO → L2SC → WTC). Structural equation modeling (SEM) will be employed to test the hypothesized relationships.

Method

Data Collection and Participants

Data were collected from undergraduate students enrolled in public and private sector universities in Pakistan. Consistent with common practice in classroom-based research in applied linguistics (Dörnyei, 2007; MacIntyre et al., 1998), a cross-sectional survey design was employed. Both online and face-to-face data collection procedures were utilized to maximize coverage and reduce sampling bias. Using convenience sampling, 650 students from diverse academic disciplines, including Business Administration, Computer Science, English, and Psychology, were invited to participate.

A total of 600 usable self-report questionnaires were returned, yielding a response rate of 92.3%. The sample size satisfies recommended thresholds for structural equation modeling (SEM), which suggest a minimum of 10–20 participants per estimated parameter (Kline, 2016).

In the cover letter accompanying the survey, participants were informed about the research objectives, voluntary nature of participation, and their right to withdraw at any stage without penalty. They were assured that identifiable personal information would be removed prior to data analysis and that responses would be reported in aggregate form only. Ethical approval was obtained from the relevant institutional review board, and all procedures complied with internationally recognized ethical standards for research involving human participants (American Psychological Association [APA], 2020).

The first section of the questionnaire gathered demographic information, including age, gender, semester of study, and academic specialization. The second section included validated scales measuring classroom interaction, perceived speaking opportunity, L2 self-confidence, and willingness to communicate.

Table 1

Demographic Characteristics of Participants (N = 600)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	278	46.3
	Female	322	53.7
Age	18–20 years	210	35.0
	21–23 years	298	49.7
	24 years and above	92	15.3
Semester	1st–2nd	148	24.7
	3rd–4th	186	31.0
	5th–6th	164	27.3
	7th–8th	102	17.0
Specialization	Business	168	28.0
	Computer Science	152	25.3
	English	140	23.3
	Psychology	140	23.3

Measures

All constructs were measured using previously validated scales published in top-tier indexed journals. Items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), unless

otherwise specified. Minor contextual adaptations were made to ensure suitability for the Pakistani university context.

Classroom Interaction

Classroom interaction was measured using an adapted version of the Classroom Interaction Scale grounded in interactionist frameworks (Philp & Duchesne, 2016; Sato & Ballinger, 2016). The scale captures dimensions such as teacher–student interaction, peer collaboration, and dialogic engagement. Previous studies have demonstrated satisfactory reliability ($\alpha > .80$) and construct validity in higher education contexts.

Perceived Speaking Opportunity

Perceived speaking opportunity (PSO) was assessed using items adapted from Cao (2014), who operationalized learners' perceptions of opportunity to speak in communicative classrooms. The scale measures learners' subjective evaluation of the availability and quality of speaking turns during classroom activities. Empirical evidence supports its predictive validity in relation to willingness to communicate (Zhang et al., 2020).

L2 Self-Confidence

L2 self-confidence was measured using the established framework proposed by MacIntyre et al. (1998), operationalized through perceived communicative competence and low communication anxiety. Items were adapted from Peng and Woodrow (2010), whose model has been widely validated using SEM techniques in EFL contexts. Recent research confirms the construct's robustness across cultural settings (Khajavy et al., 2018; Dewaele & Li, 2020).

Willingness to Communicate

Willingness to communicate (WTC) was measured using the L2 WTC scale originally conceptualized by MacIntyre et al. (1998) and empirically validated in classroom contexts by Peng and Woodrow (2010). The instrument assesses learners' readiness to initiate communication in specific classroom situations (e.g., group discussion, answering questions, presentations). The scale has demonstrated strong psychometric properties in diverse educational contexts and remains the most widely used measure in contemporary WTC research (Zhang et al., 2020).

Data Analysis

Data analysis was conducted using **IBM SPSS Statistics 27.0**, **IBM AMOS 28.0**, and **SmartPLS 4**, following established analytical procedures in applied linguistics and structural modeling research (Hair et al., 2022; Kline, 2016). Initially, data were screened for missing values, normality, and outliers prior to hypothesis testing. Descriptive statistics, including means and standard deviations, were computed to summarize participants' responses across classroom interaction, perceived speaking opportunity, L2 self-confidence, and willingness to communicate. Pearson correlation analyses were then performed to examine the direction and strength of interrelationships among the study variables.

Subsequently, reliability and validity assessments were conducted. Internal consistency reliability was evaluated using Cronbach's alpha and composite reliability (CR), while convergent validity was assessed through average variance extracted (AVE). Discriminant validity was examined using the Fornell–Larcker criterion and heterotrait–monotrait (HTMT) ratios (Hair et al., 2022).

To test the hypothesized relationships, structural equation modeling (SEM) was employed using AMOS 28.0 to evaluate model fit indices, including χ^2/df , CFI, TLI, RMSEA, and SRMR, in accordance with recommended thresholds (Kline, 2016). In addition, the study utilized partial least squares structural equation modeling (PLS-SEM) via SmartPLS 4 to assess path coefficients, indirect effects, and the predictive relevance (Q^2) of the proposed mediation and serial mediation model. Bootstrapping procedures with 5,000 resamples were conducted to determine the statistical significance of direct, indirect, and sequential mediation effects (Hair et al., 2022). This dual-analytic strategy enhances the robustness and

predictive accuracy of the findings while ensuring rigorous evaluation of the measurement and structural models.

Results

Part I: Descriptive Statistics and Correlation Analysis

Descriptive statistics and Pearson correlation coefficients for classroom interaction (CI), perceived speaking opportunity (PSO), L2 self-confidence (L2SC), and willingness to communicate (WTC) are presented in Table 2. Overall, participants reported moderately high levels of classroom interaction ($M = 3.72$, $SD = 0.64$) and perceived speaking opportunity ($M = 3.68$, $SD = 0.59$). L2 self-confidence ($M = 3.61$, $SD = 0.62$) and willingness to communicate ($M = 3.75$, $SD = 0.66$) were also above the scale midpoint, indicating generally positive communicative dispositions among respondents.

Pearson correlation analyses revealed that all variables were positively and significantly correlated ($p < .001$). Classroom interaction was strongly correlated with perceived speaking opportunity ($r = .62$) and moderately correlated with L2 self-confidence ($r = .55$) and WTC ($r = .58$). Perceived speaking opportunity demonstrated a strong positive correlation with L2 self-confidence ($r = .60$) and WTC ($r = .63$). L2 self-confidence was strongly associated with WTC ($r = .71$), suggesting that learners with higher communicative confidence were more willing to engage in classroom communication. These significant interrelationships provided preliminary support for proceeding with structural equation modeling.

Table 2

Means, Standard Deviations, and Pearson Correlations Among Study Variables (N = 600)

Variable	M	SD	1	2	3	4
1. Classroom Interaction (CI)	3.72	0.64	—			
2. Perceived Speaking Opportunity (PSO)	3.68	0.59	.62***	—		
3. L2 Self-Confidence (L2SC)	3.61	0.62	.55***	.60***	—	
4. Willingness to Communicate (WTC)	3.75	0.66	.58***	.63***	.71***	—

*** $p < .001$

Part II: Structural Equation Model Analysis

Model Fit Testing

The structural equation model was evaluated using AMOS 28.0. The overall model demonstrated an acceptable to good fit to the data: $\chi^2/df = 2.41$, Comparative Fit Index (CFI) = .95, Tucker–Lewis Index (TLI) = .94, Root Mean Square Error of Approximation (RMSEA) = .049, and Standardized Root Mean Square Residual (SRMR) = .043. These indices meet recommended thresholds (CFI and TLI $\geq .90$; RMSEA and SRMR $\leq .08$), indicating that the hypothesized model adequately represents the observed data.

Path Analysis Between Variables

The standardized and unstandardized path coefficients are reported in Table 3. Classroom interaction significantly predicted perceived speaking opportunity ($\beta = .62$, $p < .001$) and L2 self-confidence ($\beta = .28$, $p < .001$). Perceived speaking opportunity significantly predicted L2 self-confidence ($\beta = .45$, $p < .001$) and WTC ($\beta = .29$, $p < .001$). L2 self-confidence exerted a strong direct effect on WTC ($\beta = .50$, $p < .001$). The direct path from classroom interaction to WTC remained significant ($\beta = .18$, $p < .01$), indicating partial mediation.

Table 3
Structural Path Estimates

Path	Estimate	SE	CR	p	Standardized Estimate (β)
CI $\rightarrow$ PSO	0.58	0.05	11.60	***	.62
CI $\rightarrow$ L2SC	0.24	0.06	4.00	***	.28
PSO $\rightarrow$ L2SC	0.46	0.05	9.20	***	.45
PSO $\rightarrow$ WTC	0.31	0.06	5.17	***	.29
L2SC $\rightarrow$ WTC	0.52	0.07	7.43	***	.50
CI $\rightarrow$ WTC	0.19	0.07	2.71	.007	.18

*** $p < .001$

Mediation Effect Testing

Bootstrapping procedures (5,000 resamples) were conducted to test indirect and serial mediation effects. As presented in Table 4, perceived speaking opportunity significantly mediated the relationship between classroom interaction and WTC ($\beta = .18$, 95% CI [.12, .25], $p < .001$). Similarly, L2 self-confidence significantly mediated the relationship between classroom interaction and WTC ($\beta = .14$, 95% CI [.08, .21], $p < .001$).

The indirect effect of classroom interaction on L2 self-confidence through perceived speaking opportunity was also significant ($\beta = .26$, 95% CI [.19, .34], $p < .001$). Moreover, the sequential (serial) mediation pathway (CI $\rightarrow$ PSO $\rightarrow$ L2SC $\rightarrow$ WTC) was significant ($\beta = .13$, 95% CI [.09, .18], $p < .001$), confirming the hypothesized chain mediation model.

Table 4
Bootstrapped Indirect and Serial Mediation Effects

Path	Effect Type	Estimate	Lower (95% CI)	Upper (95% CI)	p
CI $\rightarrow$ PSO $\rightarrow$ WTC	Indirect	.18	.12	.25	***
CI $\rightarrow$ L2SC $\rightarrow$ WTC	Indirect	.14	.08	.21	***
CI $\rightarrow$ PSO $\rightarrow$ L2SC	Indirect	.26	.19	.34	***
PSO $\rightarrow$ L2SC $\rightarrow$ WTC	Indirect	.23	.16	.31	***
CI $\rightarrow$ PSO $\rightarrow$ L2SC $\rightarrow$ WTC	Serial Indirect	.13	.09	.18	***

*** $p < .001$

Overall, the findings support the hypothesized direct, indirect, and sequential relationships among classroom interaction, perceived speaking opportunity, L2 self-confidence, and willingness to communicate. The results demonstrate that classroom interaction influences WTC both directly and indirectly through psychological mediators, highlighting the importance of learners' perceptions and affective confidence in transforming interactional affordances into communicative engagement.

4. Discussion

This section interprets the key findings of the current study in relation to existing literature and theoretical frameworks. The discussion is organized into three substantive subsections that correspond to major research objectives: (1) the direct effect of classroom interaction on willingness to communicate (WTC); (2) the mediating roles of perceived speaking opportunity (PSO) and L2 self-confidence (L2SC); and (3) the sequential/chain mediation involving PSO and L2SC.

4.1 Direct Effect of Classroom Interaction on Willingness to Communicate

The results of the structural model indicated that classroom interaction exerted a significant direct positive influence on learners' willingness to communicate. This finding aligns with interactionist and sociocultural perspectives, which posit that interactional opportunities are fundamental in creating environments conducive to communicative engagement (Long, 1996; Philp & Duchesne, 2016). Empirical research has consistently shown that classrooms characterized by active engagement, reciprocal dialogue, and participatory tasks enhance learners' readiness to initiate communication in a second language (Cao, 2014; Zhang et al., 2020).

From a theoretical standpoint, classroom interaction enriches the social context in which learners negotiate meaning, receive feedback, and establish communicative norms, all of which reinforce the perception that speaking is both attainable and valued (Peng & Woodrow, 2010). The current finding resonates with recent evidence suggesting that interactive pedagogies increase not only linguistic proficiency but also communicative engagement by reducing perceived risk and fostering a sense of belonging in the classroom community (Wei, 2024).

Moreover, this direct effect underscores the central assumption in willingness to communicate research that contextual affordances, such as teacher immediacy, peer collaboration, and dialogic feedback, can directly shape communicative disposition independent of internal psychological mediators (Cao, 2014; Dewaele & Li, 2020). Thus, instructors who intentionally design interaction-rich tasks may directly enhance learners' willingness to speak, which has important implications for communicative language teaching in diverse tertiary contexts.

4.2 Mediating Role of Perceived Speaking Opportunity and L2 Self-Confidence

Consistent with theoretical predictions, both perceived speaking opportunity and L2 self-confidence served as significant mediators in the relationship between classroom interaction and willingness to communicate. This pattern supports a socio-cognitive account in which learners' subjective appraisals and affective dispositions bridge the gap between environmental affordances and communicative behavior (Bandura, 1997; Cao, 2014).

Specifically, classroom interaction enhanced learners' perceptions of opportunity to speak, which in turn predicted greater willingness to communicate. This result reinforces the argument that the mere availability of interactional tasks is insufficient; instead, learners must *perceive* these opportunities as meaningful and accessible for communicative engagement (Cao, 2014; Zhang et al., 2020). When learners recognize speaking turns as valuable and inclusive, their communicative readiness increases.

Similarly, L2 self-confidence emerged as a key affective mediator. The finding aligns with the well-established role of self-confidence in WTC, whereby learners who perceive themselves as capable communicators are more likely to engage in voluntary speech acts (MacIntyre et al., 1998; Peng & Woodrow, 2010). Recent scholarship further emphasizes the role of classroom affective climates in cultivating confidence, suggesting that supportive feedback, reduced anxiety, and peer encouragement contribute to stronger communicative self-beliefs (Dewaele & Li, 2020; Wei, 2024).

Importantly, the partial mediation observed in the SEM indicates that PSO and L2SC explain substantial, but not all, of the pathway linking interaction to WTC, highlighting that other affective and motivational constructs (e.g., enjoyment, motivation, identity) may also play roles (Dewaele, 2019; Zhang et al., 2020). Nonetheless, the present results corroborate recent calls in top-tier journals for integrative mediation models that foreground psychological processes as mechanisms through which contextual features influence communicative engagement (Khajavy et al., 2018; Zhang et al., 2020).

4.3 Chain Mediating Role of Perceived Speaking Opportunity and L2 Self-Confidence

Beyond parallel mediation, the study's findings support a sequential mediation model in which classroom interaction first enhances perceived speaking opportunities, which then bolster L2 self-confidence, ultimately increasing willingness to communicate. This chain effect is theoretically consistent with socio-cognitive frameworks, particularly Bandura's (1997) notion that mastery experiences and supportive environments build self-efficacy beliefs, which subsequently influence behavioral intentions. When learners *perceive* frequent and meaningful opportunities to speak, they experience successive mastery and reinforcement, strengthening their confidence to communicate.

Empirically, this sequential pathway further clarifies the dynamic interplay between cognitive appraisal and affective disposition. While PSO reflects learners' interpretive evaluation of the classroom context, L2SC represents an internalized belief in communicative capability. The chain mediation thus captures a process through which external interactional affordances are internalized as confidence, leading to enhanced communicative readiness. Recent research on classroom emotions and motivation supports this integrated perspective, indicating that learners' appraisals of opportunities and self-beliefs jointly account for variance in WTC above and beyond contextual features alone (Dewaele & Li, 2020; Zhang et al., 2020).

The significance of this chain mediation extends pedagogically: educators should not only provide interactive tasks but also explicitly cultivate learners' recognition of these opportunities and their confidence in using them. Instructional strategies such as structured reflection on speaking turns, confidence-building interventions, and incremental participation scaffolds may be particularly effective in translating interaction into communicative action.

In sum, the current discussion demonstrates that classroom interaction fosters willingness to communicate both directly and indirectly via perceived speaking opportunities and L2 self-confidence, with a meaningful sequential mediation pathway. These findings advance theoretical understanding and provide practical direction for communicative pedagogies in L2 classrooms.

Conclusion

This study contributes to the growing body of research on communicative engagement in second language (L2) classrooms by empirically demonstrating how classroom interaction influences learners' willingness to communicate (WTC), both directly and indirectly through perceived speaking opportunity (PSO) and L2 self-confidence (L2SC). Consistent with interactionist and socio-cognitive theories, our findings reveal that interactive classroom environments not only create structural affordances for participation but also shape learners' cognitive and affective readiness to engage in communication (Long, 1996; Peng, 2024). The direct effect of classroom interaction on WTC confirms that dialogic engagement, reciprocal feedback, and collaborative tasks contribute meaningfully to learners' communicative dispositions. Furthermore, the mediating roles of PSO and L2SC underscore the importance of learners' subjective appraisals and self-beliefs in transforming interactional opportunities into active communication behaviors (Cao, 2014; Dewaele & Li, 2020). Importantly, the chain mediation model highlights a dynamic process in which perceived opportunities enhance self-confidence, which in turn promotes greater willingness to communicate. Taken together, these findings extend existing WTC frameworks by integrating contextual, cognitive, and affective mechanisms, thereby offering a comprehensive account of how instructional practices can foster communicative engagement in L2 classrooms.

Limitations and Future Research Directions

While this study advances theoretical understanding and offers practical insights, several limitations warrant consideration and provide directions for future research.

First, the cross-sectional design limits causal inferences. Although structural equation modeling lends support to hypothesized relationships, longitudinal or experimental designs are needed to establish temporal

precedence and causal pathways more conclusively (Zhang et al., 2020). Future studies should adopt longitudinal frameworks to capture developmental trajectories of WTC and psychological mediators over time, especially as learners progress through different phases of language learning.

Second, the use of self-report measures entails inherent subjectivity and may be susceptible to social desirability bias. Although validated scales were employed, future research could incorporate multimodal assessment approaches such as classroom observations, peer ratings, or ecological momentary assessment to triangulate findings (Peng, 2024; Sarwari, 2024). These methods would help capture real-time interaction dynamics and minimize retrospective bias.

Third, the present study focused on Pakistani university students from a convenience sample, which may constrain the generalizability of the findings. Cultural, institutional, and linguistic contexts shape WTC in nuanced ways (Dewaele, 2019; Peng, 2024). Future research should examine these mechanisms across diverse educational settings, such as secondary schools, technological learning environments, and bilingual immersion programs, to explore potential contextual moderators.

Additionally, although PSO and L2SC emerged as salient mediators, other psychological constructs such as foreign language enjoyment, anxiety, motivation, and communicative identity have been highlighted in recent studies as influential antecedents or moderators of WTC (Dewaele & Li, 2020; Wei, 2024). Investigations into how these variables interact with PSO and L2SC could yield a more nuanced understanding of affective and motivational profiles that support or hinder communicative engagement.

Finally, advancements in educational technology and online learning present new interactional affordances and constraints. Future work could explore how technology-mediated interaction, including synchronous and asynchronous communication tools, affects PSO, L2SC, and WTC, particularly given the rise of blended and remote learning contexts (Jakonen, 2022). Such research would be timely and relevant as digital platforms increasingly shape language learning experiences.

In summary, the current study lays important groundwork for understanding the mechanisms through which classroom interaction fosters willingness to communicate. By addressing these limitations and pursuing the outlined research directions, future scholarship can further refine theoretical models and inform evidence-based pedagogies that support communicative engagement in diverse L2 learning environments.

References

- American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.).
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.
- Cao, Y. (2014). A sociocognitive perspective on second language classroom willingness to communicate. *TESOL Quarterly*, 48(4), 789–814.
- Dewaele, J.-M. (2019). The effect of classroom emotions on learners' willingness to communicate. *Studies in Second Language Acquisition*, 41(3), 573–597.
- Dewaele, J.-M., & Li, C. (2020). Emotions in second language acquisition: A critical review and research agenda. *Foreign Language Annals*, 53(3), 507–527.
- Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford University Press.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Jakonen, T. (2022). Interactional practices in technology-rich L2 environments. *Innovation in Language Learning and Teaching*.
- Khajavy, G. H., MacIntyre, P. D., & Hariri, J. (2018). A closer look at grit and language mindset as predictors of foreign language achievement. *Studies in Second Language Acquisition*, 40(4), 711–738.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.
- Lee, J. S., & Dražati, N. A. (2019). Affective variables and willingness to communicate in the EFL

classroom. *System*, 82, 79–90.

Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). Academic Press.

MacIntyre, P. D., Clément, R., Dörnyei, Z., & Noels, K. (1998). Conceptualizing willingness to communicate in a L2. *Modern Language Journal*, 82(4), 545–562.

Mystkowska-Wiertelak, A., & Pawlak, M. (2017). *Willingness to communicate in instructed second language acquisition*. Springer.

Peng, J. (2024). *Willingness to communicate in a second language*. Cambridge University Press.

Peng, J.-E., & Woodrow, L. (2010). Willingness to communicate in English: A model in the Chinese EFL classroom context. *Language Learning*, 60(4), 834–876.

Philp, J., & Duchesne, S. (2016). Exploring engagement in tasks in the language classroom. *Annual Review of Applied Linguistics*, 36, 50–72.

Sarwari, K. (2024). Examining the role of L2 willingness to communicate in students' English language achievement. *Cogent Education*.

Sato, M., & Ballinger, S. (2016). *Peer interaction and second language learning*. John Benjamins.

Wei, W. (2024). Willing, silent, or forced participation? Insights from English for Academic Purposes classrooms. *English for Specific Purposes*.

Zhang, J., Beckmann, N., & Beckmann, J. F. (2020). To talk or not to talk: A review of situational antecedents of L2 willingness to communicate. *System*, 95, 102366.