

L2 Grit and Classroom Willingness to Communicate: The Moderating Role of Anxiety

Xuanzhao Ye* and Jingxu Liu

Wenzhou University School of Foreign Studies, Wenzhou 325000, Zhejiang, China

*Corresponding author: Xuanzhao Ye.

Abstract

Developing oral proficiency has long been a goal of college English education in China, yet many non-English major undergraduates remain reluctant to speak English in class. This reluctance may reflect not only linguistic limitations but also affective and situational barriers. The present study examined whether L2 grit is positively associated with classroom speaking willingness to communicate (WTC) among non-English major undergraduates and whether this association varies across levels of English classroom anxiety. An explanatory sequential mixed-methods design was employed. Quantitative data were collected from 504 non-English major undergraduates through questionnaires measuring L2 grit, English classroom anxiety, and classroom speaking WTC. Follow-up semi-structured interviews were conducted with 12 purposively sampled participants representing four grit-anxiety profiles. Quantitative results supported both hypotheses: higher L2 grit was associated with stronger WTC, and this association weakened as anxiety increased, though it remained significant across the anxiety levels examined. Qualitative findings revealed that sustained effort provided communicative resources but did not guarantee voluntary speaking; perceived evaluative risk and classroom conditions shaped whether readiness translated into participation. The findings suggest that L2 grit matters for communicative readiness, but its expression in classroom speaking depends on anxiety and the immediate speaking situation.

Keywords

L2 grit, willingness to communicate, English classroom anxiety, non-English major undergraduates, mixed methods

1. Introduction

Sustained English study does not necessarily lead to a willingness to speak in class. For Chinese non-English major undergraduates, an important question is whether continued engagement with English extends to voluntary classroom communication. Willingness to communicate (WTC) refers to readiness to enter discourse with particular people at a particular time [1]. It is distinct from actual speaking, which also depends on opportunities and participation requirements. Examining classroom speaking WTC therefore requires attention to learners' engagement with English and their experiences of using it in class.

L2 grit encompasses perseverance of effort and consistency of interest in language learning [2]. Sustained effort and interest may encourage learners to prepare for communication and remain engaged despite difficulties. Evidence of a positive relationship with WTC already exists: for example, a positive correlation

among Chinese non-English major undergraduates has been reported [3]. However, this association does not establish whether grit is equally relevant to WTC across different levels of classroom anxiety. Students may maintain their commitment to English through examination preparation, written coursework, or private study while remaining reluctant to speak publicly. The question is therefore not simply whether grit relates to WTC, but whether the strength of that relationship varies with learners' anxiety.

English classroom anxiety provides a reason to examine this variation. Research has generally found a negative association between L2 anxiety and WTC, although its strength differs across populations and settings [4]. Such evidence does not, by itself, imply that anxiety moderates the grit–WTC relationship. The proposed moderation instead concerns whether sustained effort and interest are less closely associated with speaking willingness when learners experience greater apprehension about classroom communication. If public evaluation makes learners hesitant to attempt communication despite their continued commitment to English, the positive grit–WTC association may be weaker at higher anxiety levels. This is a hypothesis about differences in the strength of an association, rather than a necessary consequence of anxiety being negatively related to WTC.

The present study examines the association between overall L2 grit and classroom speaking WTC among Chinese non-English major undergraduates and tests whether this association weakens as English classroom anxiety increases. An explanatory sequential mixed-methods design combines questionnaire data with follow-up interviews involving students with contrasting grit–anxiety profiles. The interviews explore participants' accounts of sustained learning, speaking-related anxiety, and willingness or reluctance to contribute in class. Integrating these accounts with the quantitative findings allows the study to assess variation in the grit–WTC association and examine how learners describe the classroom circumstances surrounding their willingness to speak.

2. Literature Review

2.1 Classroom Speaking WTC and L2 Grit

Classroom speaking WTC concerns learners' readiness to use the target language in classroom interaction. A situational model distinguishes relatively enduring influences from more immediate antecedents of WTC, including the desire to communicate with a particular person and state communicative self-confidence. Further research showed that classroom environment was associated with WTC, communication confidence, motivation, and learner beliefs among Chinese university EFL learners [5]. These perspectives suggest that an enduring orientation toward language learning may be relevant to speaking willingness without being sufficient to explain it.

L2 grit comprises perseverance of effort and consistency of interest in language learning. Evidence links both grit dimensions and overall scores to WTC. Li reported positive correlations between both dimensions and WTC among Chinese junior high school students [6]. Liu and Zhao found a positive overall grit–WTC correlation among non-English major undergraduates. Bai and Hu likewise reported a positive bivariate association in this population, but grit was not a significant predictor in a model including foreign language enjoyment and academic buoyancy [7].

These findings support an association between grit and WTC, but dimension-level correlations and adjusted associations involving overall scores answer different questions. They do not establish a uniform contribution across populations or model specifications. The present study focuses on overall L2 grit, examining sustained effort and interest jointly while leaving their distinct contributions unresolved. The measurement and scoring approach is described in the methodology.

2.2 English Classroom Anxiety and WTC

Foreign language classroom anxiety refers to anxiety associated specifically with language learning and use in instructional settings. Horwitz et al. distinguished it from general anxiety and discussed its relationship with communication apprehension, fear of negative evaluation, and test anxiety [8]. Concern about errors and others' judgments is particularly relevant to classroom speaking, where learners' language use is open to evaluation by teachers and peers.

Lou et al. conducted a meta-analysis of 50 independent studies and found a moderate negative association between L2 anxiety and WTC, with variation across countries, target languages, and anxiety types. The overall pattern supports the relevance of anxiety to speaking willingness, while the variation cautions against assuming an identical association across settings.

Whether anxiety also changes the strength of the grit–WTC association is a separate question. The present study examines this possibility through differences between learners in reported classroom anxiety and WTC, rather than through within-person fluctuations during individual speaking events.

2.3 Rationale for the Moderation Hypothesis

Anxiety has been examined as a potential mediator between grit and WTC [9]. Li, for example, found no significant anxiety-mediated association for either grit dimension. Such findings concern indirect associations; they neither establish nor exclude moderation. The question here is whether greater grit corresponds to a similar difference in WTC at different anxiety levels.

The distinction between enduring influences and immediate communicative confidence provides a starting point for considering this question. Applying that distinction to grit suggests that sustained commitment to learning and readiness for public communication need not coincide. This application extends the framework to the present research question; the original model does not specify a grit-by-anxiety interaction.

The proposed negative interaction rests on the distinction between commitment to language learning and willingness to engage in publicly evaluated communication. Sustained effort and interest may support preparation and continued engagement with English, but they do not necessarily entail willingness to speak before others. At relatively low anxiety levels, differences in learning commitment may therefore be more closely reflected in differences in speaking willingness. At higher anxiety levels, reluctance to speak publicly may persist even among strongly committed learners. If this evaluative concern limits the additional willingness associated with greater grit, the positive grit–WTC association would be weaker among more anxious learners.

Other patterns remain possible. The positive association might remain equally strong across anxiety levels, or become stronger if sustained effort and interest are particularly relevant to maintaining willingness under greater anxiety. Importantly, a positive grit–WTC association at high anxiety is compatible with attenuation; attenuation concerns a weaker association, not its disappearance. On the proposed account of evaluative constraint, the study tests a negative interaction while leaving its direction and magnitude to empirical examination.

2.4 The Present Study

The studies reviewed support the relevance of grit and anxiety to WTC but do not directly resolve whether classroom anxiety conditions the overall grit–WTC association among non-English major undergraduates. The quantitative phase therefore tests two hypotheses:

H1. Overall L2 grit is positively associated with classroom speaking WTC.

H2. English classroom anxiety moderates the association between overall L2 grit and classroom speaking WTC, such that the positive association is weaker at higher anxiety levels.

A follow-up qualitative phase explores how students with contrasting grit–anxiety profiles describe the classroom experiences surrounding their willingness to speak:

RQ1. How do non-English major undergraduates with differing levels of L2 grit and English classroom anxiety explain their willingness or reluctance to speak in class?

Cross-profile comparison allows the interviews to elaborate the statistical findings and identify experiences that do not fit the expected pattern. Particular attention is given to participants' accounts of learning commitment, evaluative concerns, and speaking opportunities, while distinguishing reported willingness from reported participation.

3. Methodology

3.1 Research Design

This explanatory sequential mixed-methods study used questionnaire data to estimate the grit–WTC association and the grit-by-anxiety interaction. Follow-up interviews explored classroom speaking willingness among students with contrasting grit–anxiety profiles.

Questionnaire responses informed interview sampling, and quantitative findings guided the interview protocol. Integration compared statistical patterns with qualitative themes, including discrepant accounts. Questionnaire findings were interpreted as cross-sectional associations; interviews provided contextual interpretations of participants' reported experiences.

3.2 Quantitative Phase

3.2.1 Participants and Data Screening

Non-English major undergraduates were recruited by convenience sampling through an online questionnaire distributed across several universities in China. Eligibility required current or previous participation in university English courses.

Of 651 responses, 147 were excluded following screening for eligibility, completeness, and response quality. The screening criteria covered incomplete focal measures, inconsistent demographic information, unusually short completion times, repetitive response patterns, and restricted item-response variation. The final sample comprised 504 students aged 18–23 years (Table 1). Additional background questions covered academic discipline, years of English learning, and sense of belonging associated with English use.

Table 1: Demographic and Learning Background Characteristics

Characteristic	Distribution, n (%) unless stated
Age	M = 20.27; SD = 1.53
Gender	Male: 265 (52.6); female: 239 (47.4)
Undergraduate year	First: 126 (25.0); second: 139 (27.6); third: 129 (25.6); fourth: 110 (21.8)
Overseas residence > 3 months	Yes: 50 (9.9); no: 454 (90.1)
Self-rated English learning ability	Low: 72 (14.3); moderate: 86 (17.1); high: 346 (68.7)
Self-rated overall English proficiency	Low: 77 (15.3); moderate: 96 (19.0); high: 331 (65.7)
Frequency of English use	Low: 70 (13.9); moderate: 107 (21.2); high: 327 (64.9)

3.2.2 Instruments

The questionnaire contained background questions and three focal scales, administered using previously published Chinese versions. No new translation, back-translation, or substantive item adaptation was undertaken. Internal consistency estimates for the present sample are reported in the results.

L2 grit. The Chinese version comprised eight items: five assessing perseverance of effort and three assessing consistency of interest [10]. Responses ranged from 1 (strongly disagree) to 5 (strongly agree). After reverse-coding the consistency-of-interest items, all eight items were averaged. This item-level mean gave equal weight to each item, rather than equal weight to the two subscales; higher scores indicated greater overall L2 grit.

English classroom anxiety. An eight-item Chinese measure, based on the shortened scale and the original Foreign Language Classroom Anxiety Scale, assessed nervousness, lack of confidence, and physical manifestations of classroom anxiety [11]. Responses ranged from 1 (strongly disagree) to 5 (strongly agree). Item scores were averaged, with higher scale scores representing greater anxiety.

Classroom speaking WTC. A 10-item Chinese measure, based on two previously reported classroom WTC scales, assessed willingness to speak in meaning-focused and form-focused classroom activities [12]. Responses ranged from 1 (very unwilling) to 6 (very willing). An item mean represented overall classroom speaking WTC, with higher scores indicating greater willingness.

3.2.3 Quantitative Analysis

Analyses used IBM SPSS Statistics 27 and the PROCESS macro. Descriptive statistics included means, standard deviations, skewness, and kurtosis. Cronbach's alpha assessed internal consistency, and principal component analysis provided a preliminary description of item structure. Harman's single-factor test described the variance attributable to a single factor; it was not treated as sufficient evidence to rule out common method bias.

Pearson correlations described the bivariate associations among the focal variables. Simple linear regression estimated the unadjusted grit–WTC association. PROCESS Model 1 then estimated an adjusted model containing grit, anxiety, their interaction, and eight covariates: gender, age, undergraduate year, overseas residence experience, self-rated English learning ability, self-rated overall English proficiency, frequency of English use, and sense of belonging associated with English use. WTC was the outcome.

Grit and anxiety were mean-centered before their product term was constructed. Moderation was evaluated using the interaction coefficient and the increase in explained variance relative to the model containing the same covariates and both focal main effects. Conditional grit–WTC associations were estimated at the 16th, 50th, and 84th percentiles of anxiety. These percentile values were used to probe the continuous interaction, not to divide the quantitative sample into groups. Tests were two-tailed, with a significance threshold of .05; regression estimates were reported with 95% confidence intervals.

3.3 Qualitative Phase

3.3.1 Participant Selection

Interviewees were purposively selected from questionnaire respondents who had volunteered for follow-up contact. Selection sought contrasting combinations of relatively high or low grit and anxiety scores. WTC served as a secondary criterion to include cases that reflected or complicated the quantitative pattern.

Twelve students were interviewed, with three in each profile: high grit–low anxiety (HG–LA1, HG–LA2, HG–LA3), high grit–high anxiety (HG–HA1, HG–HA2, HG–HA3), low grit–low anxiety (LG–LA1, LG–LA2, LG–LA3), and low grit–high anxiety (LG–HA1, LG–HA2, LG–HA3). Profiles supported purposive comparison rather than defining fixed learner categories. Students were not informed of their scores or profile classifications before or during interviews. Profile-based codes were used in reporting.

3.3.2 Interview Procedure

Individual semi-structured interviews were conducted in Mandarin Chinese and lasted approximately 35–45 minutes. The protocol addressed classroom speaking experiences, sustained English-learning effort, speaking-related anxiety, preparation, perceived competence, teacher and peer responses, and occasions of willingness or reluctance to communicate.

Students from the researchers' institution were interviewed face to face in a quiet, private setting; those from other institutions were interviewed through Tencent Meeting. Interviews were audio-recorded with consent, and brief field notes documented contextual information and initial analytic observations.

Recordings were transcribed verbatim in Chinese and checked against the audio. Identifying information was removed or replaced with general descriptors. Analysis was conducted on the Chinese transcripts. Quotations selected for publication were translated into English and checked against the original transcripts to preserve their meaning.

3.3.3 Qualitative Analysis

Thematic analysis combined case-based coding with cross-profile comparison. Repeated transcript reading and individual case summaries supported familiarization. Initial coding combined deductive attention to grit, anxiety, WTC, preparation, perceived competence, and classroom conditions with inductive coding of participants' descriptions.

Codes were grouped into broader categories through within-case, within-profile, and cross-profile comparisons. Analysis distinguished willingness, perceived speaking ability, reported participation, and the circumstances surrounding speaking or silence. Candidate themes were checked against coded extracts and

case summaries. Analytic notes recorded coding decisions and developing interpretations. Discrepant cases were examined to refine themes and the interpretation of the quantitative findings.

3.4 Ethical Considerations

Participation in both phases was voluntary. Students received information about the study purpose, procedures, confidentiality, and intended use of the data before providing informed consent. Interviewees provided additional consent for the qualitative phase. Participants were informed that they could withdraw or decline questions without penalty.

The quantitative analytic dataset contained no direct personal identifiers. Contact information was stored separately and used for interview recruitment and scheduling. Transcripts were de-identified, and only anonymized quotations were reported. Research files were password-protected and accessible only to the research team.

4. Results

4.1 Quantitative Results

4.1.1 Preliminary Analyses and Bivariate Associations

The three scales showed high internal consistency, with Cronbach's alpha ranging from .924 to .942 (Table 2). Preliminary principal component analysis yielded a KMO value of .958 and a significant Bartlett's test, $\chi^2(325) = 8976.293$, $p < .001$. Three retained components accounted for 66.564% of the variance. The first unrotated component accounted for 34.359% of the variance in the single-factor diagnostic; this finding does not exclude common method bias.

Overall L2 grit was positively correlated with WTC ($r = .431$, $p < .001$). Anxiety also showed a positive, although smaller, correlation with WTC ($r = .174$, $p < .001$), and a weak positive correlation with grit ($r = .105$, $p = .018$).

Table 2: Reliability, Descriptive Statistics, and Correlations

Variable	M	SD	α	1	2	3
1. L2 grit	3.345	0.984	.924	—		
2. Classroom anxiety	3.240	1.029	.933	.105*	—	
3. Classroom speaking WTC	4.166	1.092	.942	.431***	.174***	—

Note. $N = 504$. M = mean; SD = standard deviation; α = Cronbach's alpha. Grit and anxiety used 5-point scales; WTC used a 6-point scale. Correlations are Pearson coefficients. * $p < .05$. *** $p < .001$.

4.1.2 Grit–WTC Association and Moderation

The unadjusted regression supported H1: greater grit was associated with higher WTC, $B = 0.478$, $SE = 0.045$, $\beta = .431$, $t = 10.697$, $p < .001$. The model explained 18.6% of WTC variance, $F(1, 502) = 114.424$, $p < .001$.

The adjusted moderation model explained 31.8% of the variance, $F(11, 492) = 20.808$, $p < .001$ (Table 3). At mean anxiety, the grit coefficient was positive ($B = 0.322$, $p < .001$). At mean grit, the anxiety coefficient was also positive ($B = 0.125$, $p = .002$).

The grit-by-anxiety interaction was negative, $B = -0.104$, $SE = 0.040$, $t = -2.591$, $p = .010$, 95% CI $[-0.183, -0.025]$. Adding the interaction increased explained variance by .009, $F(1, 492) = 6.715$, $p = .010$. The negative interaction supported H2: the positive grit–WTC association was weaker at higher anxiety levels, although the interaction accounted for only an additional 0.9% of the variance.

Table 3: Adjusted Moderation Model Predicting Classroom Speaking WTC

Predictor	B	SE	t	p	95% CI
Constant	5.715	0.688	8.305	< .001	[4.363, 7.067]
Gender	0.039	0.082	0.471	.638	[-0.122, 0.199]
Age	-0.045	0.030	-1.479	.140	[-0.104, 0.015]
Undergraduate year	-0.039	0.042	-0.927	.354	[-0.123, 0.044]
Overseas residence experience	-0.804	0.143	-5.617	< .001	[-1.086, -0.523]

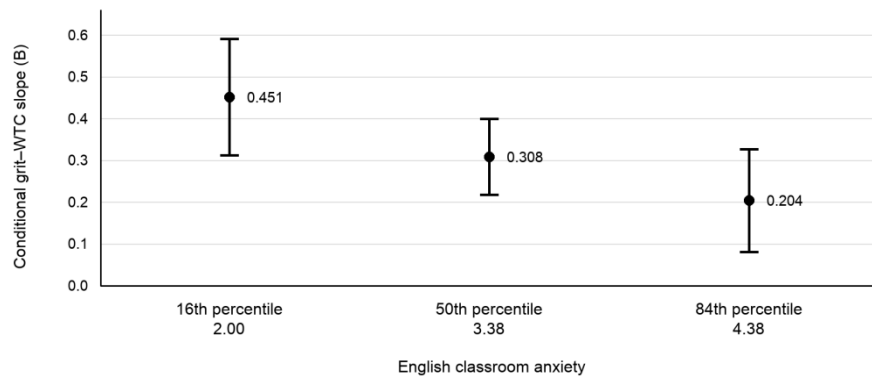
Predictor	B	SE	t	p	95% CI
Self-rated English learning ability	0.115	0.047	2.461	.014	[0.023, 0.208]
Self-rated overall English proficiency	0.046	0.042	1.098	.273	[-0.036, 0.128]
Frequency of English use	0.064	0.043	1.484	.139	[-0.021, 0.148]
Sense of belonging in English use	-0.039	0.040	-0.972	.332	[-0.116, 0.039]
L2 grit	0.322	0.046	6.945	< .001	[0.231, 0.413]
English classroom anxiety	0.125	0.041	3.049	.002	[0.045, 0.206]
Grit × anxiety	-0.104	0.040	-2.591	.010	[-0.183, -0.025]

Note. $N = 504$. B = unstandardized coefficient; SE = standard error; CI = confidence interval. Grit and anxiety were mean-centered. Overseas residence experience was coded 1 = yes and 2 = no. $R^2 = .318$; interaction $\Delta R^2 = .009$.

4.1.3 Conditional Associations

At the 16th percentile of anxiety, the grit–WTC slope was 0.451 ($SE = 0.071$, 95% CI [0.312, 0.590], $p < .001$). The corresponding slopes were 0.308 at the median ($SE = 0.046$, 95% CI [0.217, 0.399], $p < .001$) and 0.204 at the 84th percentile ($SE = 0.062$, 95% CI [0.081, 0.326], $p = .001$). All three estimates were positive, with smaller slopes at higher anxiety levels (Figure 1).

Figure 1: Conditional Grit–WTC Associations at Three Anxiety Levels



Note. Points show conditional unstandardized slopes from the adjusted moderation model; bars show 95% confidence intervals. Anxiety values are rounded to two decimals.

4.2 Qualitative Results

The findings are organized around learning investment, evaluative concerns, and classroom participation conditions, with comparisons across grit–anxiety profiles within each theme.

4.2.1 Learning Investment and Available Language

Participants linked sustained English learning with expressions and topic knowledge they could draw on when speaking. HG–LA1 explained: “When I have something in my mind, I can just open my mouth and speak. I will not hold it back simply because I am afraid of losing face.” The participant distinguished sustained learning, described as “building up underlying strength,” from preparation for a particular task. HG–LA3 similarly described regular engagement with English-language technology materials as helpful in discussions of artificial intelligence and online learning, without having to “translate from Chinese on the spot.”

In contrast, LG–LA2 emphasized the limits of intermittent study: “If I do not touch English for half a month, there is nothing in my mind. Even if I am not afraid of speaking, I have nothing to say.” LG–LA1 and LG–LA3 also described reliance on recently prepared vocabulary, phrases, or notes. These accounts connected speaking readiness to the availability of language, even when fear of speaking was limited.

Preparation did not invariably accompany willingness. HG–LA1 reported losing the desire to participate when a prepared presentation was changed to include unexpected improvised interaction. This episode contrasted with the same participant’s account of sustained learning as a source of readiness to speak.

4.2.2 Evaluative Concerns Despite Preparation

In high-grit, high-anxiety accounts, preparation and relevant knowledge coexisted with reluctance to volunteer. HG–HA2 had prepared a script, checked words and pronunciation, and rehearsed a group presentation, but did not volunteer to address the class: “Even though I had memorized it very well, I became extremely nervous when I thought of the whole class looking at me, forgetting words, or mispronouncing something.”

HG–HA3 described studying financial English and foreign trade reports and wanting to contribute to a related discussion. Speaking before classmates and an invited external teacher nevertheless heightened concern about mistakes: “Long-term learning does make me want to share, but once I think of speaking in public, anxiety stops me.” The participant also linked sustained effort with expectations of performing well.

HG–HA1 worried about “speaking in a stumbling way” and creating embarrassment despite having ideas to express. For LG–HA1, however, anxiety accompanied limited preparation: when nominated by the teacher, the participant “did not know what to say” after completing the learning task superficially. Thus, evaluative concerns appeared alongside both available ideas and uncertainty about how to formulate a response.

4.2.3 Classroom Conditions and Reported Participation

Paired and small-group activities featured in accounts of less uncomfortable speaking experiences. HG–HA2 described a prepared, ungraded paired dialogue as smoother and less embarrassing than presenting publicly. HG–HA3 reported greater fluency in a four-person discussion with “no whole-class audience.” These accounts concerned perceived performance and discomfort in different activities, rather than directly measuring changes in WTC.

LG–LA2 described being able to “follow others’ points” in group discussion without sustaining an extended contribution independently. LG–LA3 reported willingness to speak actively in a paired role-play using a few prepared words and valued permission to bring handwritten keywords. These examples showed how participants with low grit described willingness in activities supported by recent preparation or contributions from others.

Feedback and peer responses also mattered. LG–LA1 preferred a teacher who “gave comments after everyone had finished” to one who interrupted individuals publicly. HG–HA2 reported withholding even a simple answer when classmates remained silent, because volunteering might appear conspicuous or self-promoting. Reluctance in this episode concerned the social meaning of volunteering as well as linguistic difficulty.

Required participation sometimes resulted in reported speech despite reluctance. HG–HA3 completed a three-minute individual presentation worth 20% of the course assessment despite not wanting to perform it. LG–HA1 described teacher nomination as a situation in which “the decision of life and death was in the teacher’s hands.” However, some low-grit, low-anxiety participants attached little value to small participation bonuses and described them as insufficient reasons to speak. Assessment requirements therefore featured differently in accounts of compulsory presentations and opportunities to earn participation points.

5. Discussion

Overall L2 grit was positively associated with classroom speaking WTC among Chinese non-English major undergraduates, with a weaker association at higher anxiety levels. The interviews linked sustained learning to available language and ideas, while showing how public evaluation and participation requirements featured in particular speaking experiences. These findings connect learner-level associations with situational accounts without assuming that an overall disposition determines willingness in every classroom activity.

5.1 L2 Grit and Speaking Readiness

The positive association is consistent with Li’s findings for perseverance of effort and consistency of interest among Chinese junior high school students. The present analysis concerns an overall L2 grit score, so it cannot distinguish the contributions of these dimensions. Its focus on moderation also addresses a different

question from Li's examination of anxiety as a mediator: whether the grit–WTC association varies with anxiety, rather than whether anxiety provides an indirect link between grit and WTC.

The interviews offer an interpretation through perceived access to language and ideas. Participants associated sustained learning with expressions and topic knowledge, whereas intermittent study could leave little to say despite limited fear of speaking. This is compatible with the role of perceived competence in the WTC model, although resource accumulation and perceived competence were not tested as mediators. Importantly, these accounts primarily illuminate sustained effort; they provide less insight into consistency of interest. The qualitative interpretation therefore covers only part of the overall construct represented in the regression.

HG–LA1's contrasting accounts further qualify this interpretation. Sustained learning was described as supporting readiness, yet the participant reported no longer wanting to participate when a prepared presentation included unexpected improvisation. The contrast suggests that having prepared resources and wanting to use them are distinct considerations. It also indicates why the association between overall grit and WTC need not describe a learner's response to every task.

5.2 Anxiety and the Strength of the Association

The negative interaction supported the hypothesized attenuation of the grit–WTC association at higher anxiety levels. All three probed slopes remained positive and significant, but the interaction added only 0.9 percentage points to explained WTC variance beyond the main effects and covariates. Its incremental explanatory power was therefore limited. Accounts from high-grit, high-anxiety participants contextualize this pattern: preparation and relevant knowledge coexisted with reluctance to volunteer when mistakes and audience judgments felt consequential.

The positive anxiety–WTC correlation presents a separate issue. Unlike the negative association reported by Li, it was positive both before adjustment and, at mean grit, in the adjusted model. A negative interaction does not explain this difference, because the interaction and anxiety coefficient concern different features of the relationship. Nor do accounts of compulsory speech explain it: completing a presentation reluctantly is evidence about participation, not increased willingness. The reason for the positive association remains unresolved by the present evidence and warrants examination of measurement and sampling differences before a substantive explanation is advanced.

5.3 Integrating Learner Profiles and Speaking Situations

The two strands contribute at different levels. Questionnaire scores describe differences between learners, whereas interviews reconstruct selected speaking experiences. Their convergence concerns the plausibility of resource-related and evaluative interpretations, rather than verification of a causal sequence. The interviews also extend the analysis by identifying circumstances in which profile-based expectations were insufficient: low-grit participants described willingness after brief preparation, while a high-grit, low-anxiety participant rejected a particular task.

These findings fit Cao's ecological account of WTC as arising through individual, linguistic, and classroom conditions [13]. Here, the contribution is to locate such conditions within accounts from contrasting grit–anxiety profiles. The profiles help organize comparisons, but the task-specific differences show why they should not become fixed descriptions of learners.

The interviews also illustrate the distinction between willingness and communication behavior in the WTC framework. HG–HA3 described wanting to share ideas while hesitating to speak publicly, and elsewhere completing a graded presentation despite reluctance. These accounts distinguish desire to contribute from both silence and required speech. They extend interpretation beyond questionnaire WTC, while leaving the positive anxiety–WTC correlation unexplained. This incomplete convergence is part of the mixed-methods finding, rather than a discrepancy to resolve through assumptions about beneficial anxiety.

5.4 Pedagogical Implications

The accounts suggest differentiating support according to students' reasons for reluctance. Planning time and keyword notes may help learners who lack accessible expressions; paired rehearsal may offer a more

manageable starting point for those concerned about public evaluation. Feedback preferences also suggest discussing correction timing with students. These practices follow from reported experiences and require evaluation in the classroom.

Teachers could complement participation records with brief questions about when students wanted to contribute and what prevented them. This would help distinguish completion of required tasks from opportunities taken voluntarily, and identify whether language resources, evaluation, or task demands need attention. Changes in participation and expressed willingness could then be considered together when evaluating instructional adjustments.

5.5 Limitations and Future Research

The cross-sectional, self-report design limits causal interpretation and is vulnerable to shared response tendencies. Covariate adjustment does not establish temporal order. In addition, the overall grit analysis leaves dimension-specific associations unresolved. Replication should examine these associations and assess the stability of both the modest interaction and the positive anxiety–WTC correlation.

The 12 retrospective interviews cannot establish how willingness changed during classroom events. Differences in evidence available across participants also constrain profile-level generalization. Classroom observation combined with immediate reports of willingness could distinguish voluntary turns, compulsory speech, and occasions when learners wanted to speak but remained silent. Repeated measurements would help separate between-learner associations from within-learner changes.

Finally, the recruitment context and focus on Chinese non-English major undergraduates restrict generalization. Replication across institutions and learner populations would clarify the scope of the findings, while longitudinal or task-based designs could test the proposed roles of language resources and evaluative conditions.

6. Conclusion

This explanatory sequential mixed-methods study found that overall L2 grit was positively associated with classroom speaking WTC among Chinese non-English major undergraduates. The association was weaker at higher levels of English classroom anxiety but remained positive and significant at the anxiety levels examined. The interaction added modest explanatory power, while the positive anxiety–WTC association warrants further investigation.

The interviews provided accounts of how sustained learning, public evaluation, and task preparation featured in speaking experiences. Participants linked sustained learning with available language and ideas, yet described reluctance to speak publicly despite preparation. Others reported willingness after preparing for particular tasks. Accounts of wanting to contribute without speaking, and completing required tasks despite reluctance, further distinguished having something to say, wanting to contribute, and actually speaking.

Together, the findings connect the overall grit–WTC association with learners' accounts of specific classroom situations. The cross-sectional questionnaire data and retrospective interviews limit causal inference, and classroom participation was not directly observed. Within these limits, the study indicates that a positive association between overall L2 grit and self-reported WTC does not justify assuming voluntary participation in particular speaking activities. Learners' reported reasons for speaking or remaining silent remain essential to interpreting that participation.

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Conflicts of Interest

The authors declare no conflict of interest.

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