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Beyond communicative competence: Investigating the impact of grit and classroom enjoyment on willingness to communicate

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ABSTRACT

Willingness to Communicate (WTC) plays a central role in second language acquisition. However, it remains underdeveloped in exam-driven English as a Foreign Language (EFL) contexts, such as China, where classroom instruction prioritizes linguistic competence over communicative readiness. Drawing on Control-Value Theory (CVT), this study examines the relationship between two learner-related factors—grit and classroom enjoyment (CRE)—and students' WTC. Grit is operationalized through two dimensions: perseverance of effort (G-POE) and consistency of interest (G-COI), reflecting sustained motivation and long-term goal orientation. CRE is conceptualized as a positive achievement emotion linked to perceived control and task value in classroom communication. A cross-sectional survey was administered to 306 Chinese university EFL learners using validated questionnaires. Structural Equation Modeling was used to test associations among grit, CRE, and WTC. Results showed that students reported high levels of CRE, moderate WTC, and relatively low G-POE. Both G-POE and CRE were positively associated with WTC, together accounting for 24.4 % of its variance. G-COI showed no significant effect. These findings support a CVT-informed interpretation in which sustained effort and positive emotion function as appraisal-linked resources shaping learners' communicative readiness.

1. Introduction

Language acquisition, particularly in second or foreign language (L2 or FL) contexts, requires more than just linguistic proficiency; it demands active engagement in meaningful communication. Central to this engagement is willingness to communicate (WTC), a psychological construct that reflects a learner's readiness to initiate communication in the target language (MacIntyre et al., 1998). Unlike linguistic competence, which assesses what learners can do, WTC captures what they are willing to do, making it a crucial determinant of L2 communication success (Khajavy et al., 2018; Kun et al., 2020). However, in exam-oriented English as a foreign language (EFL) contexts such as China, fostering WTC remains a significant challenge. Despite policy-level reforms promoting communicative competence, classroom practices continue to emphasize test preparation and rote learning at the expense of authentic language use (Zhao, 2012). This leads to a well-documented phenomenon known as “mute English”, where students excel in written assessments yet lack functional oral competence (Liu, 2016). While communicative competence is often assessed through

observable behaviors in structured classroom tasks, such measures do not necessarily translate into real-world communicative readiness (Zhang et al., 2023). This discrepancy reflects more than shallow participation; it reveals a deeper absence of psychological readiness—the willingness to initiate, sustain, and emotionally commit to communication. Yue's (2016) “Fake WTC” highlighted how learners may appear engaged while merely complying with classroom expectations, lacking authentic investment. This distinction is evident in empirical studies: Peng (2020) observed a complete absence of student-initiated whole-class talk despite active group work, and King (2013) recorded self-initiated speech in only .24 % of Japanese EFL class time. As Yashima et al. (2018, p. 6) affirmed, “using the L2 in real life contexts and learning to initiate communication is a critical issue.” As MacIntyre et al. (1998) similarly argued, communicative competence alone does not guarantee real-world language use; learners may perform in structured settings yet still lack the agency to communicate spontaneously—revealing that the root issue lies not in ability but in readiness.

WTC has traditionally been explored from multiple perspectives, including personality traits (McCroskey & Baer, 1985), situational

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influences (Kang, 2005), sociocultural factors (Wen & Clément, 2003), ecological frameworks (Peng, 2014), and complex dynamic systems (MacIntyre & Legatto, 2011). While much research has focused on anxiety as a barrier to WTC (e.g., Dewaele & MacIntyre, 2014; Hejazi et al., 2023), recent studies—shaped by the positive psychology (PosPsy) movement in second language acquisition (SLA)—have shifted attention to learners' internal resources, such as motivational dispositions (e.g., grit, autonomy) and positive emotions (e.g., enjoyment), that may proactively support engagement and communicative readiness (Dewaele & MacIntyre, 2016; Li et al., 2022; MacIntyre & Khajavy, 2021). One such emotion, classroom enjoyment (CRE), is central to Control-Value Theory (CVT; Pekrun, 2006), which posits that achievement emotions arise from learners' appraisals of their perceived control over tasks and the value attributed to them. Enjoyment is likely to emerge when learners feel capable of succeeding in communication tasks and consider them meaningful and worthwhile, thereby promoting intrinsic motivation, reducing anxiety, and fostering classroom engagement (Dewaele & MacIntyre, 2014). Recent research has shown that enjoyment predicts both engagement and WTC, especially in English-medium instruction (EMI) settings that demand a high level of learner autonomy and emotional regulation (Wang et al., 2024). These findings reinforce CVT's emphasis on activating emotions—grounded in perceived agency and value—as key contributors to sustained communicative behavior.

While enjoyment can spark communicative engagement, perseverance enables its continuation in the face of difficulty. Grit, particularly the perseverance of effort (G-POE) dimension, reflects learners' sustained motivation to pursue long-term goals despite challenges such as linguistic difficulty, hesitation, or performance anxiety (Duckworth et al., 2007; Teimouri et al., 2022). Compared to motivation, which is context-sensitive and potentially transient, grit is theorized to represent a more enduring form of goal-directed engagement—particularly relevant in test-driven academic contexts where sustained effort is often required under emotional pressure. Emerging perspectives suggest that grit should not be viewed as a fixed trait but as a dynamic, agentic belief system shaped by emotional experiences, motivational orientations, and situational affordances (MacIntyre & Khajavy, 2021). Informed by this view, the present study conceptualizes grit as an antecedent to learners' control-value appraisals. Learners with higher grit are more likely to perceive language learning tasks as controllable and aligned with meaningful goals, which, in turn, facilitates the formation of positive achievement emotions such as enjoyment and contributes to WTC. This conceptualization aligns with extensions of CVT that recognize individual belief systems—such as persistence orientations—as important upstream inputs in the appraisal–emotion–behavior sequence (Pekrun et al., 2007). Lou and Noels' (2019) Language Mindset Meaning System (LMMS) similarly proposes that belief-driven appraisals mediate the link between personal goals and emotional responses. Positioning grit within this belief–appraisal–emotion pathway allows the present study to reconceptualize enjoyment not merely as a reactive state but as an outcome shaped by learners' self-regulatory dispositions. Grit reinforces learners' emotional resilience, enhances their ability to re-engage after setbacks, and contributes to a more stable willingness to communicate over time. As Martin (2002) observed, motivation alone does not ensure continuous progress; without perseverance, students may struggle to sustain their academic gains when facing stress, pressure, or failure. Teimouri et al. (2022) provided empirical evidence on grit's role in L2 learning, showing that gritty learners maintain engagement, view effort as key to growth, and experience less anxiety with greater enjoyment, highlighting grit's dual role in sustaining motivation and fostering emotional resilience.

By integrating grit and enjoyment into the CVT framework, this study investigates how emotional engagement and motivational perseverance jointly relate to Chinese EFL learners' WTC in high-stakes educational settings. Moving beyond traditional accounts focused on linguistic proficiency or contextual supports (e.g., teacher scaffolding,

peer collaboration), this research foregrounds self-regulatory beliefs and appraisal dynamics as key correlates of communication readiness. Specifically, it examines the associations between grit and emotional experiences such as enjoyment and how these variables relate to learners' willingness to participate in classroom communication.

To this end, the study addresses the following research questions:

RQ1: What are the profiles of Chinese L2 learners regarding their levels of grit, CRE and WTC?

RQ2: What is the relationship between grit, CRE, and WTC among Chinese L2 learners in the classroom context?

RQ3: To what extent do grit and CRE serve as predictors of WTC among Chinese L2 learners in the classroom context?

2. Literature review

2.1. Theoretical foundations of WTC

WTC, initially conceptualized in first language (L1) research as a trait-like predisposition to initiate communication when free to do so (McCroskey & Baer, 1985), has evolved into a dynamic and context-sensitive construct in SLA. MacIntyre et al. (1998) redefined WTC in L2 contexts as “a readiness to enter into discourse at a particular time with a specific person or persons, using a L2” (p. 547), emphasizing its fluid nature shaped by cognitive, affective, and situational factors. Their heuristic pyramid model positioned WTC within a hierarchical structure: trait-like characteristics (e.g., personality, intergroup attitudes) form the base, while situational variables (e.g., state anxiety, topic interest) influence momentary communication at the apex. This framework highlights how enduring dispositions and situational triggers interact to shape communicative behavior in real time. Kang (2005) advanced this understanding by introducing the notion of situational L2 WTC, demonstrating how psychological conditions—such as excitement, security, and responsibility—shift dynamically during interaction in response to contextual cues. In a complementary study, Cao and Philp (2006) showed that WTC varies across classroom settings, influenced by factors such as topic familiarity, group composition, and task type, and further highlighted the gap between learners' self-reported WTC and their actual communicative behavior.

Expanding beyond individual psychological factors, sociocultural perspectives frame WTC as a socially mediated construct shaped by interaction, cultural norms, and classroom dynamics. Wen and Clément (2003) highlighted how collectivist values, particularly in Confucian-heritage societies, may suppress overt communication due to face concerns and hierarchical structures. However, sociocultural norms do not inherently constrain WTC; teacher mediation, task design, and culturally responsive pedagogy can facilitate structured engagement (Al-Murtadha & Feryok, 2017). The temporal dimension of WTC also warrants attention. Sociohistorical influences, such as educational traditions and institutional norms, interact with immediate classroom conditions to shape learners' WTC across timescales (ibid), underscoring its dual sensitivity to momentary triggers and long-term cultural legacies.

Building on this view, the ecological approach, informed by Bronfenbrenner's (1979, 1993) theory, frames WTC as an emergent phenomenon shaped by nested environmental systems. The microsystem, including classroom interactions, teacher support, and peer collaboration, directly influences learners' communicative intentions (Peng, 2012). At the mesosystem level, school–family relations and institutional expectations modulate classroom behavior (Shirvan & Taherian, 2016). The exosystem—comprising educational policies and assessment regimes—shapes how fluency is prioritized, while the macrosystem reflects sociopolitical ideologies and global influences on learners' access to and perception of English (Van Huy & Ngoc, 2024). Although this ecological lens captures the complexity of social systems, it often overlooks the real-time fluctuations that characterize learners'

moment-to-moment communicative engagement.

To address this, Complex Dynamic Systems Theory (CDST) (Larsen-Freeman & Cameron, 2008) offers a dynamic view of WTC as a self-organizing, emergent phenomenon shaped by nonlinear interactions among linguistic, social, cognitive and emotional systems (MacIntyre & Legatto, 2011). Unlike ecological models that describe context through nested layers, CDST captures micro-timescale fluctuations in WTC and explains how repeated state-level enactments stabilize into attractor states. It is grounded in four key properties: sensitivity to initial conditions, complete interconnectedness of subsystems, inter- and intra-individual variation, and the emergence of attractor and repeller states (ibid), offering a powerful lens for modeling the temporal and systemic complexity of communication. However, despite its valuable insights into system-level dynamics, CDST has been critiqued for over-emphasizing the role of interacting variables while underrepresenting learners' agentic capacity to self-regulate their own WTC (Karimi-Aghdam, 2016; Syed et al., 2022).

In response, CVT (Pekrun, 2006) provides a complementary perspective by focusing on how learners' emotional experiences emerge from their appraisals of control and value. Learners who perceive themselves as capable (*control appraisal*) and who attach personal value to the communicative task (*value appraisal*) are more likely to experience enjoyment—an achievement emotion that promotes L2 WTC. This appraisal-emotion-behavior pathway has been empirically validated in the L2 context by Li et al. (2025). While CVT traditionally emphasizes the role of environmental antecedents in shaping appraisals, subsequent work has shown that individual belief systems—such as attributional style and growth mindset—also critically influence how learners evaluate control and value (Lou & Noels, 2019; Pekrun et al., 2007). Recent studies have linked CVT to broader motivational constructs, including grit and growth mindset, which support the emotional resilience needed to sustain communication over time (Hejazi et al., 2023; Teimouri et al., 2022). Building on this extended CVT framework, the present study conceptualizes grit as a distal motivational trait that shapes learners' control-value appraisals of classroom communication; these appraisals then give rise to positive achievement emotions—particularly enjoyment—which in turn promote sustained willingness to communicate across exam-oriented EFL contexts.

2.2. Classroom enjoyment and its role in WTC

Foreign Language Enjoyment (FLE), introduced by Dewaele and MacIntyre (2014), refers to the positive emotions that learners experience during language learning. It comprises three dimensions: personal enjoyment (e.g., pride in achievements and creativity), social enjoyment (e.g., peer interactions and shared humor), and teacher appreciation (e.g., supportive and encouraging teachers). Unlike stable personality traits, FLE is dynamic, shaped by classroom climate, instructional practices, and individual emotional traits (Wang & Wang, 2024). Recent research increasingly highlights that FLE is not merely an affective byproduct but an essential driver of engagement and communicative behaviors in EFL contexts (Dai & Wang, 2024).

Among the various forms of FLE, CRE is the most immediate and structured, reflecting the positive emotions learners derive from classroom interactions—such as peer collaboration, teacher support, and engaging tasks. Given the inherent challenges and substantial effort required in language learning, CRE plays a crucial role in sustaining motivation and facilitating acquisition, particularly in EFL contexts where learners primarily rely on classroom environments for language exposure (Wang & Wang, 2024). Beyond fostering a supportive atmosphere that enhances engagement and WTC, CRE interacts with motivational constructs such as grit, reinforcing both immediate communicative participation and long-term persistence (Teimouri et al., 2022).

CVT (Pekrun, 2006) provides a valuable lens for understanding the emotional mechanisms underlying CRE. According to CVT, enjoyment

arises when learners appraise learning tasks as both controllable and personally meaningful. These appraisals give rise to positive achievement emotions, which in turn foster engagement, buffer anxiety, and facilitate willingness to communicate (Khajavy et al., 2018). Empirical research consistently supports this claim. For example, Li et al. (2022) found that classroom enjoyment exerted a stronger mediating effect on WTC than negative emotions such as anxiety or boredom. Similarly, Dewaele and MacIntyre (2016) demonstrated that learners with high enjoyment levels experienced lower anxiety and higher communicative confidence—key ingredients for classroom-based WTC.

To capture this affective construct, the present study employs the 7-item FLE-Atmosphere subscale, adapted from the 11-item scale by Li et al. (2018) and the original 14-item scale developed by Dewaele and MacIntyre (2014). This subscale measures enjoyment derived from classroom group activities, aligning with the study's emphasis on CRE as the most immediate and impactful emotional factor influencing WTC. By prioritizing classroom-specific emotional influences, this research aims to isolate the proximal affective factors essential for understanding WTC in EFL contexts, where learners rely heavily on structured environments for communicative opportunities.

While CRE enhances emotional readiness for communication, it does not operate in isolation. Recent studies suggest that emotional and motivational factors often work in tandem to shape learners' WTC over time (Lee, 2022; Teimouri et al., 2022). In the next section, we turn to grit—an enduring motivational disposition—to examine how long-term perseverance complements short-term enjoyment in sustaining learners' communicative engagement.

2.3. Grit: sustaining effort and engagement

Grit, defined as perseverance and passion for long-term goals (Duckworth et al., 2007), has emerged as a crucial motivational construct in SLA. It comprises two dimensions: perseverance of effort (G-POE), reflecting learners' capacity to persist through challenges, and consistency of interest (G-COI), denoting stable commitment to long-term goals (Teimouri et al., 2022).

In SLA contexts, grit—particularly G-POE—has been consistently associated with learners' WTC, as it reinforces resilience and fosters intrinsic motivation (MacIntyre & Khajavy, 2021). Learners high in G-POE are more likely to overcome communication-related anxiety and maintain active participation, even under cognitively or socially demanding conditions. For instance, Khajavy and Aghaee (2024) found that G-POE significantly predicted WTC by strengthening learners' confidence and communicative persistence. In contrast, G-COI has shown weaker and less consistent effects, possibly due to its limited resonance with the immediate, situational nature of classroom communication (Lee, 2022).

The significance of grit in SLA is further underscored by its adaptability across diverse educational and sociocultural contexts. For example, in Korean EFL contexts, Lee (2022) found that G-POE significantly predicted WTC across high school, middle school, and university learners, suggesting its relevance at various educational stages. In a cross-cultural comparison, Bensalem et al. (2025) reported that grit had a stronger predictive effect on WTC among Moroccan learners than their Saudi counterparts—an effect attributed to Morocco's richer multilingual environment and greater economic incentives tied to language proficiency. Reinforcing these findings, Freiermuth et al. (2021), through qualitative interviews with learners from Taiwan, Malaysia, Thailand, and Japan, showed that high-grit students consistently reported enjoyment, low anxiety, and strong WTC regardless of national context. Together, these cross-level and cross-contextual findings highlight grit as a flexible, context-responsive predictor of WTC. By enabling learners to persist through challenges and sustain long-term effort, grit acts as a motivational anchor that reinforces communicative engagement, particularly in EFL classrooms marked by linguistic distance, limited input, and high-stakes evaluation.

2.4. Integrating CRE and grit in EFL contexts

The integration of grit and CRE offers a dynamic lens for understanding WTC in EFL contexts. CRE reflects learners' emotional readiness at the moment, while grit sustains effort over time. Framed within an extended CVT, grit shapes control-value appraisals, which in turn spark positive emotions, such as enjoyment, thereby supporting learners' capacity to sustain communicative intention in classroom settings.

Recent studies support this pathway. Resnik et al. (2021) found that L2-specific grit correlated positively with enjoyment and trait emotional intelligence among European EFL learners, suggesting that grit enhances emotional adaptability. Similarly, Li and Dewaele (2021) reported that Chinese secondary students with higher general grit perceived the classroom more positively and experienced lower anxiety, indicating grit's role in shaping emotional appraisal. These findings underscore grit's distal influence on classroom emotion through control-value processes. Further evidence links this mechanism to WTC. Lee (2022) found that G-POE significantly predicted both CRE and WTC across Korean middle school, high school, and university learners, suggesting that sustained motivation may fuel positive emotion, which in turn facilitates communication. In a cross-cultural study, Bensalem et al. (2025) showed that grit and enjoyment jointly predicted WTC, with Moroccan learners displaying stronger effects—likely due to multilingual exposure and clearer instrumental goals. Ebn-Abbasi and Nushi (2022) further confirmed that only G-POE and CRE—rather than G-POI—predicted WTC among Iranian learners, particularly in private institutes where supportive climates enhanced emotional and motivational alignment. Together, these findings validate a grit-appraisal-emotion path to WTC across diverse EFL settings.

These insights converge in Lu's (2025) dynamic systems model of emotional configurations, which reframes WTC as an emergent, experience-sensitive state shaped through recursive interactions of motivation, emotion, and communicative behavior. Taken together, this line of research affirms that the synergy between grit and CRE not only sparks but sustains WTC—particularly in exam-driven EFL classrooms where psychological pressure and limited authentic interaction often erode learners' communicative intent.

3. Method

3.1. Participants

The participants were 313 Chinese EFL learners (93.29 % females and 6.7 % males) aged between 17 and 23 years ($M = 19.68$, $SD = 1.18$). They were selected using simple random sampling from an undergraduate population at a university in Huanggang, Hubei Province, P. R. China, during the fall semester (August 30th to September 13th, 2023). Participants were required to be native Chinese speakers enrolled in undergraduate English-related programs (e.g., English, Business English, Translation, or English Education), have studied EFL for at least six years, be actively taking English courses at the time of data collection, and have no diagnosed cognitive or language impairments that might affect survey comprehension and response accuracy.

This study was conducted in accordance with the ethical guidelines of the Scientific Research Committee of the University, which serves as the Research Ethical Committee for such studies. According to institutional policies, formal ethical approval was not required, as the research involved minimal risk and only anonymous survey data collection. However, all procedures complied with the Declaration of Helsinki, and informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity were strictly maintained throughout the study.

Undergraduate students were briefed on the research objectives and assured that participation was entirely voluntary, with the option to withdraw at any time without consequences. After data collection,

responses were screened for validity, with invalid answers, missing data, and outliers removed. A total of 306 valid questionnaires remained, comprising 20 males (6.54 %) and 286 females (93.46 %), with an average age of 19.68 years ($SD = 1.19$).

3.2. Instruments

3.2.1. Grit scale

Grit was measured using a 9-item scale adapted from Duckworth et al. (2007), assessing G-POE and G-COI. Items were adapted to align with the English learning context, with responses rated on a 5-point Likert scale (1 = "not like me at all" to 5 = "very much like me"). Sample items include "I have overcome setbacks to conquer an important challenge" (G-POE) and "I often set a goal but later choose to pursue a different one" (G-COI, reverse-coded).

All G-COI items were excluded due to model inappropriateness or insignificant path effects (Wu, 2009). Higher scores reflected greater grit levels. The scale demonstrated strong reliability and validity in prior studies (Lee & Drajati, 2019), confirmed here with Cronbach's $\alpha = .78$ for G-POE. Exploratory Factor Analysis (EFA) supported its use ($KMO = .82$, $p < .001$), with cumulative explained variance of 53.76 % for G-POE, meeting the thresholds recommended by Hair et al. (2019). Model fit was established using Hu and Bentler's (1999) benchmarks ($\chi^2/df < 3$, $TLI > .90$, $CFI > .90$, $RMSEA < .06$, $SRMR < .08$), with results indicating good reliability and validity ($\chi^2/df = 1.371$, $TLI = .990$, $CFI = .995$, $RMSEA = .035$, $SRMR = .023$).

3.2.2. CRE scale

Classroom enjoyment was measured using a 7-item FLE-Atmosphere subscale, part of the Foreign Language Enjoyment (FLE) scale by Li et al. (2018), based on Dewaele and MacIntyre (2014). This subscale assesses enjoyment derived from classroom group activities, aligning with the study's emphasis on classroom-specific emotional dynamics. Responses were rated on a 5-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"). Sample items include "There is a good atmosphere in English class" and "I feel comfortable and relaxed in my English class".

CRE1 was excluded due to its cross loading (.819) more than .5 (Costello & Osborne, 2005). The scale showed strong internal reliability and validity in prior studies (e.g., Li, 2020). In this study, results of EFA ($KMO = .836$, $p < .001$) and CFA confirmed its psychometric properties (Cronbach's $\alpha = .87$), with a cumulative explained variance of 61.31 % and robust fit indices ($\chi^2/df = 2.366$, $TLI = .979$, $CFI = .992$, $RMSEA = .067$, $SRMR = .025$).

3.2.3. L2 WTC scale

L2 WTC was measured using five items adapted from Lee et al. (2021). Participants rated their willingness to communicate on a 5-point Likert scale (1 = "definitely not willing" to 5 = "definitely willing"). Sample items include "How willing are you to communicate in English when you have a chance to make a presentation in front of a large group" and "How willing are you to start a conversation in English with a classmate you don't know very well". The scale has demonstrated strong reliability and validity in previous studies (e.g., Lee, 2022). In this study, EFA confirmed its suitability ($KMO = .86$, $p < .001$), with a cumulative explained variance of 71.58 %, and CFA results indicated excellent model fit ($\chi^2/df = 2.497$, $TLI = .984$, $CFI = .995$, $RMSEA = .070$, $SRMR = .014$).

3.3. Data collection and analysis

The study employed an online questionnaire administered via WeChat Work using Wenjuanxing (<https://www.wjx.cn/>). Participants completed the survey after class to minimize distractions and enhance response quality. They were instructed to answer the questions in a quiet environment, and response times were monitored to identify inattentive responses. Data collection spanned two weeks, and only fully completed

questionnaires were retained for analysis.

3.3.1. Data screening and assumptions testing

To ensure data integrity, missing data were examined, and no incomplete responses were identified. Outliers were assessed using standardized z-scores ($|z| > 3.29$, Tabachnick & Fidell, 2013) and Mahalanobis distance ($p < .001$, Byrne, 2013), with 7 extreme cases (univariate outlier: case 58, 78, 99, 168, 183, 184, 282; multivariate outliers: case 168, 183, 282) detected.

Univariate and multivariate normality were evaluated based on skewness and kurtosis values, which fell within the acceptable range of -2 to $+2$ (Bryman & Cramer, 2002). However, Mardia's kurtosis (81.36) and its critical ratio (29.65) exceeded conventional thresholds (Mardia, 1970), suggesting slight deviations from multivariate normality. Given that maximum likelihood (ML) estimation remains robust in large samples (Hau & Marsh, 2004), ML was deemed appropriate for further analyses.

Common method variance (CMV) was assessed using Harman's single-factor test, which indicated that the first eigenvalue accounted for 37.88 % of the variance, below the 50 % threshold (Hair et al., 2010), suggesting no serious CMV concerns. A latent CMV factor test was also conducted for further verification (Podsakoff et al., 2003). These steps confirmed that the dataset met the necessary statistical assumptions for subsequent analysis.

3.3.2. Statistical analyses

Data analysis was performed using SPSS 29.0 and AMOS 23.0. EFA was conducted to examine the underlying factor structure, followed by CFA to validate the measurement model. Model fit was assessed based on established benchmarks ($\chi^2/df < 3$, CFI $> .90$, TLI $> .90$, RMSEA $< .06$, SRMR $< .08$; Hu & Bentler, 1999). Composite reliability (CR) and average variance extracted (AVE) were examined to confirm internal consistency and convergent validity (Fornell & Larcker, 1981).

Descriptive statistics and Pearson correlation analyses were conducted to summarize variable distributions and relationships. Multicollinearity was assessed using variance inflation factors (VIF), with values below 5 indicating no severe collinearity (Field, 2024). To test the predictive power of G-POE and CRE on L2 WTC, hierarchical multiple regression analysis was performed.

SEM was employed to examine the direct and indirect relationships between variables, with bootstrapping (5000 resamples) used to test the mediation effect of CRE between G-POE and L2 WTC, providing bias-corrected confidence intervals (Preacher & Hayes, 2008). Effect sizes were calculated using Cohen's f^2 (1988), where values of .02, .15, and .35 were interpreted as small, medium, and large effects, respectively.

4. Results

4.1. Preliminary analysis

The scale showed acceptable reliability across all three constructs (see Table 1), with CR values above .79 and AVE exceeding .40 (Fornell & Larcker, 1981). All item loadings were above .50, and HTMT values remained below the .85 threshold, indicating satisfactory discriminant validity (ibid).

Descriptive statistics revealed that learners reported moderate levels of G-POE ($M = 3.10$, $SD = .40$) and L2 WTC ($M = 3.32$, $SD = .75$), but a

high level of CRE ($M = 3.70$, $SD = .50$), suggesting that while students generally enjoy classroom interaction, their sustained willingness to communicate in English remains moderate. All skewness and kurtosis values were within the ± 2 range, indicating normality.

Correlation analysis showed significant positive associations among G-POE, CRE, and L2 WTC (see Table 1), consistent with findings in Korean (Lee, 2022) and Iranian (Ebn-Abbasi & Nushi, 2022) EFL contexts.

4.2. Predictive relationships and structural modeling

To address RQ3, hierarchical multiple regression was conducted. Prior to analysis, multicollinearity was assessed: all VIF values were below 5, and the Durbin-Watson statistic (1.99) indicated no autocorrelation (Field, 2024). The model explained 24.4 % of the variance in L2 WTC ($R^2 = .244$, $F(2, 303) = 48.90$, $p < .001$). Both G-POE ($\beta = .32$, $t = 6.08$, $p < .001$) and CRE ($\beta = .30$, $t = 5.84$, $p < .001$) emerged as significant predictors.

To further examine the structural relationships among G-POE, CRE, and L2 WTC, structural equation modeling (SEM) was conducted using AMOS 23.0 with maximum likelihood estimation. Among the three models tested, the proposed mediation model yielded acceptable fit indices ($\chi^2/df = 1.732$, CFI = .971, TLI = .964, RMSEA = .049, SRMR = .063; see Table 2), supporting the hypothesized structure.

4.3. Mediation effect and effect sizes

Effect sizes were calculated using Cohen's f^2 (1992), where .02, .15, and .35 indicate small, medium, and large effects, respectively. In the SEM model, the standardized path from G-POE to L2 WTC yielded an R^2 of .159 and $f^2 = .189$, indicating a medium effect. In contrast, the path from CRE to L2 WTC accounted for $R^2 = .085$, with $f^2 = .093$, representing a small effect. These findings suggest that G-POE contributes more substantially to the explanation of L2 WTC than CRE, consistent with findings from Bensalem et al. (2025) and Ebn-Abbasi and Nushi (2022).

Bootstrapping analysis confirmed a significant total effect of G-POE on L2 WTC ($\beta = .743$, $z = 7.579$, 95 % CI [.5505, .936], $p < .001$), a significant direct effect ($\beta = .588$, $z = 6.080$, 95 % CI [.398, .779], $p < .001$), and a significant indirect effect via CRE ($\beta = .083$, 95 % CI [.035, .145]). These findings support the partial mediating role of CRE between G-POE and L2 WTC.

5. Discussion

This study examined the role of grit—specifically the G-POE dimension—and CRE in relation to learners' WTC within the Chinese

Table 2
Three alternative structural equation models.

Measures	χ^2/df	CFI	TLI	RMSEA	SRMR
	< 3	$> .90$	$> .90$	$< .06$	$< .08$
G-POE=>L2 WTC	1.300	.993	.990	.031	.038
CRE=>L2 WTC	2.207	.977	.966	.063	.059
G-POE => CRE=>L2 WTC	1.732	.971	.964	.049	.063

Table 1
Descriptive statistics, correlations, and psychometric properties of variables.

	Mean\Std. D	VIF \ Tolerance	Skewness\Kurtosis	AVE\CR	G-POE	CRE	L2WTC
G-POE	3.10\ .40	1.081\ .925	.247\ .881	.42\ .79	1		
CRE	3.70\ .50	1.081\ .925	-.185\ 1.747	.51\ .86	.27**	1	
L2 WTC	3.32\ .75	-	-.089\ .298	.67\ .91	.40**	.39**	1

Note: ** $p < .01$; VIF, variance expansion coefficient.

EFL context. Although grit comprises both G-POE and G-COI, only the former showed a significant association with WTC and was therefore retained in the final analysis. Descriptive findings indicated that learners reported high levels of CRE, moderate levels of WTC, and relatively low levels of G-POE. This distribution may reflect a tendency among students to enjoy classroom interaction while simultaneously reporting lower levels of sustained motivational effort during spontaneous communicative activities. These findings reflect a broader trend in the Chinese EFL context, where learners—conditioned by a performance-oriented secondary education system—often struggle to sustain autonomous communicative persistence in the relatively unstructured university environment (Liu, 2016; Zhao, 2012). Yue (2016) further identified the phenomenon of “fake WTC,” in which Chinese students engage in surface-level speaking behaviors in the class to fulfill external requirements rather than with genuine communicative intent—highlighting a disconnect between emotional positivity and motivational readiness. From a broader theoretical standpoint, grit is not merely a personal trait but a context-sensitive disposition that requires sustained environmental support. In high-stakes, exam-centric systems that prioritize short-term achievement and suppress learner autonomy, the development of perseverance and long-term interest is often inhibited (MacIntyre & Khajavy, 2021; Teimouri et al., 2022). Cross-cultural comparisons reinforce this view, showing that Chinese learners tend to report lower grit levels than their Korean (Lee, 2022), Saudi and Moroccan (Bensalem et al., 2025), and Thai counterparts (Gyamfi & Lai, 2020), likely due to systemic differences in motivational orientation and educational socialization.

Correlation analyses showed significant positive associations among G-POE, CRE, and WTC, consistent with findings from the Korean (Lee, 2022) and Iranian (Ebn-Abbasi & Nushi, 2022) EFL contexts. Hierarchical regression further confirmed that both G-POE and CRE significantly predicted WTC, jointly accounting for 24.4 % of its variance. From the perspective of CVT (Pekrun, 2006), these findings suggest that learners’ appraisals of perceived control and task value—reinforced through both emotional and motivational engagement—play a decisive role in shaping their communicative readiness. Within this dynamic, G-POE may serve as a cognitive–motivational anchor, enabling learners to sustain their communicative intent in the face of linguistic difficulty, performance pressure, or social inhibition. In contrast, CRE functions as an emotional facilitator, reducing anxiety while enhancing the affective climate for engagement (Khajavy et al., 2018). The differential roles of G-POE and CRE reflect the broader synergy between effort-based persistence and emotional readiness in the co-construction of willingness to communicate. As posited in positive psychology-oriented models of SLA, learners are more likely to engage in meaningful communicative action when emotional and motivational systems operate in tandem (Dewaele & MacIntyre, 2014; Teimouri et al., 2022). Thus, the present findings underscore that fostering durable WTC in EFL contexts requires not only cultivating enjoyment but also nurturing the perseverance to persist through communicative adversity.

SEM provided further empirical support for the differential contributions of G-POE and CRE to WTC. While both variables significantly predicted learners’ communicative readiness, the effect of perseverance was more pronounced than that of emotional enjoyment. This aligns with Credé et al. (2017), who emphasized the predictive power of grit—particularly its perseverance dimension—in effort-intensive domains such as productive language use. Building on this, Teimouri et al. (2022) proposed a dual-factor model of grit, conceptualizing perseverance of effort as the active motivational engine and consistency of interest as its long-term stabilizer, a distinction that may explain why only G-POE emerged as a significant predictor in the current model. Although CRE significantly enhanced WTC, its comparatively weaker effect underscores that positive emotions alone may not sustain communication—especially in contexts characterized by performance pressure, low self-efficacy, or limited authentic interaction.

Overall, WTC is best conceptualized as a dynamic and experience-

sensitive construct shaped by the recursive interplay of motivation, emotion, and learner agency within contextually embedded language learning environments (Farrokhi et al., 2023). As Lu (2025) highlighted, it arises from fluid emotional configurations shaped by learners’ situational appraisals. The present findings extend this view by suggesting that sustaining WTC requires not only momentary emotional uplift but also motivational perseverance to withstand performance pressure and limited opportunities for interaction.

6. Conclusion

Guided by CVT, this study investigated the interplay among grit, CRE, and WTC in Chinese EFL learners. The findings indicate that G-POE is positively associated with WTC, both directly and indirectly, through the mediating role of enjoyment. While CRE also demonstrates a positive relationship with WTC, its relatively weaker predictive strength suggests that emotional engagement alone may not suffice to sustain long-term communicative readiness. In contrast, G-COI was not significantly related to WTC, indicating that long-term interest does not necessarily translate into momentary or situational willingness to engage in communication tasks.

These findings underscore the importance of fostering both motivational and emotional resources in language learning. Notably, WTC emerged as a more critical driver of authentic communication than linguistic competence alone, highlighting the need for instructional strategies that integrate sustained effort with affective engagement. Although perseverance is traditionally emphasized in the Chinese educational context, the results suggest that when combined with enjoyment, it may yield stronger communicative outcomes. This calls for a pedagogical recalibration that cultivates both motivational resilience and emotional positivity in the EFL classroom. To support such development, structured instructional models offer practical value. For example, the Think-Pair-Share (TPS) model (Zohrabi & Jafari, 2020) enhances learners’ perceived control by breaking communication into scaffolded steps—encouraging individual reflection, peer exchange, and group interaction. Similarly, the Facilitate-Listen-Engage (FLE) model (Fard et al., 2024) promotes inclusivity and communicative authenticity by fostering interactive classroom environments where teachers facilitate discourse, listen attentively, and promote learner engagement through open-ended tasks. These models provide opportunities to strengthen perseverance while reinforcing the emotional value of classroom interaction. Integrating such frameworks into EFL curricula may support a more balanced, agency-sensitive approach to fostering WTC.

Despite these contributions, several limitations should be acknowledged. First, the sample was limited to Chinese English majors at a single teacher-training university, which may restrict the generalizability of the findings. While the gender imbalance reflects the actual demographics of such programs—thereby enhancing the study’s ecological validity—it may nonetheless limit the applicability of the results to more gender-balanced EFL populations. Future research should involve more diverse learner profiles across institutions, disciplines, and cultural contexts to strengthen external validity. Second, the reliance on self-reported data may have introduced social desirability bias. Employing complementary methods—such as classroom observations, discourse analysis, or peer assessments—could provide a more comprehensive understanding of learners’ communicative behaviors. Furthermore, the non-significant role of G-COI raises concerns about construct overlap with related traits, such as conscientiousness (Credé et al., 2017). Refining the grit scale or adopting mixed-method designs may yield clearer insights into how learners maintain long-term interest in L2 communication.

Future studies could extend this research by adopting longitudinal or mixed-method designs to capture the evolving nature of WTC over time. Such approaches may shed light on how learners develop agentic strategies to overcome contextual constraints and sustain communication

across varying classroom demands. Investigating personalized goal-setting practices and their interaction with learner agency could offer deeper insight into how motivational and emotional trajectories unfold in dynamic EFL environments.

In sum, this study contributes to a growing body of research that reconceptualizes WTC as a dynamic outcome of learners' motivational and emotional experiences. By integrating perseverance-building strategies with emotionally supportive instruction, educators can more effectively nurture stable, authentic, and agentic communication in EFL classrooms. The challenge moving forward is to design environments that not only prepare learners to speak but also empower them to want to do so.

CRedit authorship contribution statement

Tingting Huang: Writing – review & editing, Writing – original draft. **Hazlina Abdul Halim:** Supervision. **Ilyana Binti Jalaluddin:** Supervision. **Songtao Liu:** Formal analysis, Data curation.

Data availability statement

The dataset generated during the current study is available from the corresponding author on reasonable request.

Ethical considerations

This study adheres to ethical principles regarding confidentiality, participant protection, and data security. All participants provided informed consent (namely, completing and then submitting the questionnaire), ensuring their voluntary participation with a clear understanding of the study's purpose, procedures, potential risks, and right to withdraw without penalty. Data were anonymized, securely stored, and will be destroyed after a specified period (three years) to protect participants' privacy. The study does not pose any physical or psychological harm to participants. This study received ethical approval from the School of Foreign Languages at Huanggang Normal University.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this manuscript, the authors used ChatGPT to enhance clarity and improve readability. Grammarly was also used for language refinement. All AI-generated suggestions were carefully reviewed and edited by the authors, who take full responsibility for the final content. The completed manuscript was subsequently copyedited by a human before submission.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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