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Modeling L2 Motivational Self-System, Foreign Language Anxiety, and Willingness to Communicate in Second Language Learning: Evidence from Thai Undergraduates

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Article information	
Abstract	The present study employed structural equation modeling (SEM) to examine the relationships among the L2 motivational self-system (L2MSS), foreign language anxiety (FLA), and willingness to communicate (WTC) in a second language learning context among Thai undergraduates. Data were collected from 301 students at two private universities using a questionnaire that measured the ideal L2 self, ought-to L2 self, L2 learning experience, FLA, and WTC. The results showed that the ideal L2 self and L2 learning experience significantly predicted WTC. As for FLA, the ought-to L2 self positively predicted FLA, whereas the ideal L2 self was not a significant predictor; in addition, L2 learning experience negatively predicted FLA, although the effect was relatively modest. FLA, in turn, negatively predicted WTC and functioned as an inconsistent mediator (suppression effect) in the relationship between L2MSS and WTC. These findings suggest that motivational and affective factors jointly shape Thai learners' WTC and provide important pedagogical implications for L2 teachers, underscoring the need to foster learners' ideal L2 selves and positive learning experiences, while creating supportive classroom environments to alleviate anxiety.
Keywords	L2 Motivational Self-System (L2MSS), Foreign Language Anxiety (FLA), Willingness to Communicate (WTC), Thai learners, structural equation modeling (SEM)
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1. Introduction

Language learning is, in some sense, a process of effective communication (Imsa-ard, 2025). On this point, oral communication is often viewed as a prominent predictor of second language learning (L2) (Lin, 2022). However, learners' willingness to speak may vary across classroom contexts and situations (Aubrey et al., 2022). These differences have prompted increased attention into the psychological processes influencing classroom interaction and oral output. Among these, willingness to communicate (WTC) has been identified as a foundational

construct for understanding learners' readiness to engage in communication (MacIntyre, 2007). WTC is considered a key determinant of learners' actual communication behavior and plays an important role in their oral language development (Alemi et al., 2011). Recent theoretical developments have further reconceptualized WTC as a more complex and dynamic system, making it particularly fluid and sensitive within the framework of the dynamic systems theory (Pawlak & Mystkowska-Wiertelak, 2015). Within this larger scope, students' motivational states, emotional experiences, and classroom environment have been described as psychological domains that influence communicative behavior (Cao, 2014; Li et al., 2025).

Motivation is one of the psychological bases for explaining learners' involvement and willingness to use the target language (Li et al., 2022). Dörnyei (2005, 2009) developed the L2 motivational self-system (L2MSS), which emphasizes the role of future self-guides, external expectations, and past learning experiences. This model provides a theoretically robust picture of how learners engage in goal-directed behavior, and what keeps them engaged with language learning. It has been used as a model for L2 motivational research over the past decade (Csizér, 2019). Although a variety of publications have supported a positive relationship between L2 motivation and WTC, the specific contributions of the L2MSS components have not been consistently demonstrated. For instance, the ideal L2 self is widely considered to be a major factor in learners' WTC (Lan et al., 2021; Zhang et al., 2024). Conversely, the predictive effects of the ought-to L2 self have often been weakened, unstable, or even negative (Peng, 2015; Lee & Lee, 2020). Therefore, the various motivational self-guides may affect learners' WTC through psychological mechanisms, and exactly how these mechanisms function requires further conceptual and empirical research. Nonetheless, while previous studies have extensively examined the predictive role of the ideal L2 self (Sak, 2020; Fathi et al., 2023) or the ideal L2 self and the ought-to L2 self on WTC (Lee & Lu, 2023; Ebn-Abbasi et al., 2022), L2 learning experiences themselves have often been neglected. As the most contextually receptive component of the L2MSS, the L2 learning experience is an aggregation of learners' subjective perceptions about the classroom environment, instructional practice, interaction quality, and their own participation (Dörnyei, 2019; Li, 2025). Overlooking this component may prevent a thorough understanding of how motivational self-guides interact with L2 WTC.

Emotional experiences are also foundational to second language acquisition (SLA) (Plonsky et al., 2022). With growing interest in affective factors in SLA, research has emphasized the formative role of students' emotional responses to language use in shaping their communicative behavior and determining their interactional choices (Bielak & Mystkowska-Wiertelak, 2024). Foreign language anxiety (FLA), described as a situation-specific type of anxiety related to the unique demands of language learning (Horwitz et al., 1986), is one of the most extensively studied negative affective variables in SLA. Numerous studies have shown that FLA negatively affects learners' confidence by triggering tension, fear of failure and mistakes, and concerns about negative assessment (Teimouri et al., 2019; Chen, 2025). These affective responses, in turn, greatly limit students' oral engagement (Tsang & Dewaele, 2024). Although previous research in foreign language learning contexts has shown that WTC emerges from the combined influence of motivational, emotional, and contextual factors, and that its development is complex and dynamic, it remains underexplored whether such factors have similar effects along similar paths across diverse L2 learning contexts.

Against this backdrop, the present study examines the associations among L2MSS, FLA, and WTC in an L2 learning context among Thai undergraduate students. First, the

increasing communicative demands of Thai higher education have drawn growing attention to learners' WTC and the affective factors that shape it (Thiangtham & Chusanachoti, 2024). But consistent with this trend, evidence suggests that Thai learners experience high levels of FLA (Pan et al., 2025), which inhibit processing, interfere with oral performance, and reduce WTC. Thus, expanding this line of research on the antecedents of FLA is necessary to design the instructional practices that can help students in high-anxiety settings improve their WTC. Second, undergraduate students have a more concentrated motivational structure and much richer emotional experiences (Dörnyei & Ushioda, 2021), which makes this population especially relevant for understanding the psychological mechanisms involved. Third, different components of L2MSS may have different effects on FLA and WTC. This potential chain of effects still warrants further empirical investigation. More importantly, motivational dispositions may not necessarily translate directly into communicative willingness, when negative emotional factors interfere with the communication process. Therefore, examining FLA as a mediating mechanism may provide a more integrated explanation of how different dimensions of the L2MSS shape learners' communicative behaviors. To address these issues, the present study proposes and tests an SEM model linking L2MSS, FLA, and WTC. The proposed model predicts that the ideal L2 self, the ought-to L2 self, and the L2 learning experience are directly related to FLA, which in turn affects WTC. FLA is conceptualized as a mediating mechanism underlying learners' WTC. The model further predicts that the ideal L2 self and the ought-to L2 self will affect the L2 learning experience, and that there is a mutual relationship between the ideal L2 self and the ought-to L2 self. The results of this research are expected to provide insights into the affective-motivational processes underlying Thai undergraduate students' L2 communicative behaviors.

2. Literature Review

2.1 Willingness to Communicate (WTC)

McCroskey and Baer (1985) developed the concept of willingness to communicate (WTC) as a predisposition to initiate communication voluntarily. But, later studies suggested that learners' communicative behavior varies with context, and is mediated by context, rather than a fixed personality trait (MacIntyre et al., 1998). This view substantially changed the application of WTC to SLA. From this, MacIntyre et al. (1998) proposed a multidimensional pyramid model in which L2 WTC arises from interrelated language, psychosocial, and social variables. In this model, motivational constructs (e.g., L2 motivation) operate at intermediate levels, while broader contextual factors and situational self-confidence also contribute to WTC.

Previous studies have further supported this multidimensional view of WTC. Yashima (2002) found that students who have a stronger international profile tend to have higher WTC in English. Pawlak and Mystkowska-Wiertelak (2015), based on classroom observations, showed that L2 WTC varies frequently across tasks, group size, and subject knowledge. Lee and Liu (2024) also reported moment-to-moment variations of WTC in the online class. On top of that, L2 proficiency has been found to increase WTC as learners with stronger linguistic resources are more confident when engaging in communication (Darasawang & Reinders, 2021). These results support the view that WTC is a socially and cognitively mediated readiness to communicate, which is driven by both personal dispositions and situational conditions (Yashima et al., 2018).

2.2 L2 Motivational Self-System (L2MSS)

Dörnyei (2005, 2009) proposed the L2 motivational self-system (L2MSS) as a major reconceptualization of L2 motivation. The L2MSS focuses on learners' own constructed self-guides and experiences within their own learning environment. The L2MSS is composed of three overlapping components: the ideal L2 self, the ought-to L2 self, and the L2 learning experience. The ideal L2 self refers to learners' aspirations to become competent L2 users in the future. The ought-to L2 self captures the impressions of the qualities the learners perceive they should possess, in order to meet external expectations, or avoid negative consequences (Dörnyei, 2009). Since the ought-to L2 self is closely tied to instrumental and extrinsic motivation, it may function differently across sociocultural settings (Kim, 2009; Ushioda, 2014). The L2 learning experience focuses on the contextual and situational facets of motivation relevant to the immediate learning environment. These three components provide a theoretical framework for assessing how future self-guides and contextual experiences affect learners' motivational behaviors.

Although a substantial body of research has supported associations between L2MSS components and WTC, findings across studies remain inconsistent. Previous studies have generally identified the ideal L2 self as a positive predictor of WTC, although the strength of this relationship appears to vary across contexts (e.g., Fathi et al., 2023; Khomejani Farahan et al., 2023; Lee & Lu, 2023; Zhang et al., 2024), possibly because future self-guides are shaped differently by learners' sociocultural and educational experiences. In contrast, findings concerning the ought-to L2 self have been more mixed, with studies reporting positive, negative, and non-significant relationships with WTC (e.g., Khajavy et al., 2019; Lee et al., 2021; Öz & Bursalı, 2018; Welesilassie & Nikolov, 2024). This inconsistency may reflect the dual nature of the ought-to L2 self, which may involve both externally driven pressure and motivational support. Similarly, although L2 learning experience has frequently been identified as an important predictor of WTC, some studies have suggested that its effects may operate indirectly, through mediating variables, such as international posture (e.g., Peng, 2015; Welesilassie & Nikolov, 2024; Zhou, 2022), suggesting that classroom experiences may influence WTC through broader motivational and contextual processes. Existing research has primarily focused on the direct effects of the L2MSS components on WTC, while the interrelationships among these motivational dimensions remain underexplored, particularly regarding the relationships among self-guides and L2 learning experience (e.g., Lee & Lee, 2020; Zhou, 2022).

2.3 Foreign Language Anxiety (FLA)

Foreign language anxiety (FLA) is generally conceptualized as a situation-specific affective construct. Horwitz et al. (1986) defined FLA as a collection of individual perceptions, beliefs, and behaviors associated with the unique demands of language learning. FLA is commonly associated with communication apprehension, test anxiety, and fear of negative evaluation. Anxiety may interfere with language processing and reduce learners' communicative effectiveness and WTC (Luo, 2025; Wei & Xu, 2022; Zhou et al., 2023).

Increasing empirical research has identified FLA as a mediator between L2MSS and WTC. Papi (2010) was among the first to examine the relationships between L2MSS components and affective variables, reporting that the ideal L2 self and L2 learning experience were negatively associated with FLA, whereas the ought-to L2 self was positively associated

with FLA. Recent studies have further examined the mediating role of anxiety in the relationship between L2MSS and WTC. For example, Sadoughi and Hejazi (2024) reported that L2 anxiety mediated the effects of the ideal L2 self, ought-to L2 self, and L2 learning experience on WTC among EFL learners. Similarly, Fan and Wang (2025) found that anxiety mediated the relationships between L2MSS components and L2 WTC among Chinese EFL learners. However, it remains unclear whether these findings can be generalized across different L2 learning contexts, including Thai higher education.

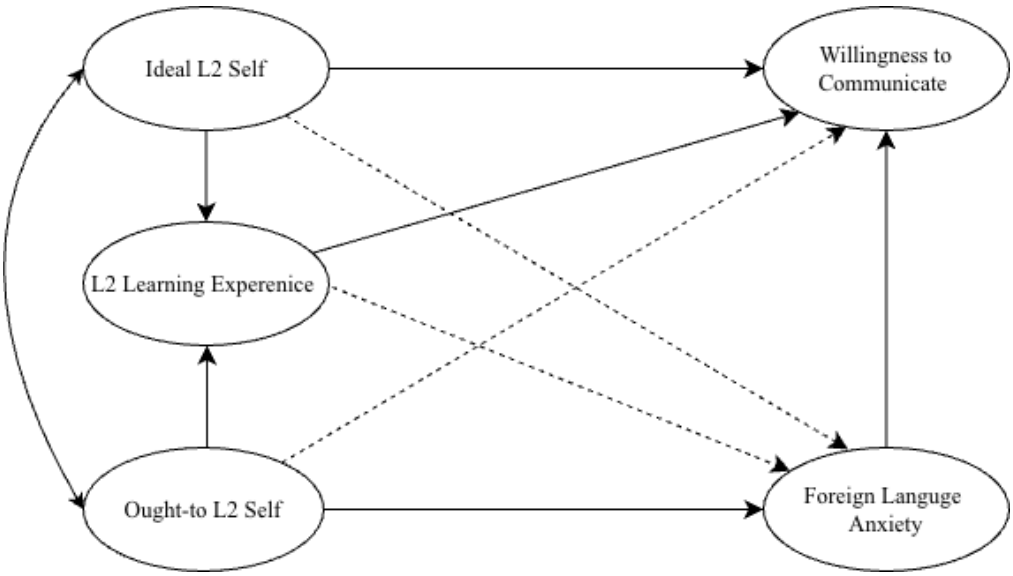
2.4 This Study

To address the research gap identified above, this study developed a hypothetical SEM model to examine the relationships among the three components of the L2MSS, FLA, and WTC. Based on previous research, the study proposed that the components of L2MSS may exert direct effects on WTC, with the ideal L2 self and L2 learning experience expected to be positively related to WTC, whereas the ought-to L2 self may be negatively associated with WTC. In addition, FLA was hypothesized to relate negatively to WTC.

The proposed model also examined the potential interrelationships among L2MSS components. Although the ideal L2 self and ought-to L2 self are conceptually distinct, previous studies have suggested that these self-guides may coexist and interact within particular sociocultural and educational contexts (e.g., Papi, 2010). Rather than functioning as entirely independent constructs, learners' personal aspirations and externally shaped expectations may mutually reinforce one another in some educational settings. In contexts where expectations from teachers, parents, and institutions are emphasized, externally imposed obligations may gradually become integrated into learners' future self-concepts. In addition, future-oriented self-guides may shape how learners perceive and engage with their immediate learning environment. Learners with clearer motivational self-images may participate more actively in classroom activities and evaluate their language learning experiences more positively. Therefore, the model further proposed that the ideal L2 self and ought-to L2 self may be associated with L2 learning experience, and that the two self-guides may also be positively related.

Since motivational self-guides and anxiety may exert different influences on communicative behavior, motivational factors and anxiety may contribute to WTC through different pathways. In particular, externally driven motivational orientations may increase anxiety and indirectly reduce learners' WTC. Therefore, the present study further examined the mediating role of FLA in the relationship between L2MSS and WTC.

Figure 1
The Hypothesized Model



Note: Dotted lines indicate relationships not yet consistently supported by empirical research.

3. Methodology

3.1 Participants

The present study employed a convenience sampling procedure to recruit 309 Thai undergraduate students from two private universities. The two universities were selected because both institutions offered Chinese language programs with sufficient student enrollment and regular classroom interaction, which facilitated participant recruitment and the investigation of learners' motivation, anxiety, and WTC. Participants from different year levels were invited to participate through classroom-based questionnaire distribution at the two selected universities. First, classes from different year levels were approached to ensure representation across the undergraduate program. Questionnaires were then distributed to available students during regular class sessions on a voluntary basis. This procedure allowed participants from different academic levels and classes to be included in the study. After excluding cases with missing or aberrant data, the final sample comprised 301 students, including 258 females (85.71%) and 43 males (14.29%). Specifically, 33.89% of the participants were first-year students (n = 102), 34.55% were second-year students (n = 104), 20.93% were third-year students (n = 63), and 10.63% were fourth-year students (n = 32). Additionally, participants' L2 learning duration ranged from 0.5 to 13 years, with 16.61% (n = 50) indicating more than four years of L2 learning experience.

3.2 Instruments

This study used a questionnaire with two parts. The first part collected participants' basic demographic information. The second part comprised three major subscales, adapted from widely used instruments in previous research: (1) L2MSS scale, (2) FLA scale, and (3) WTC scale. All items in these subscales were measured on a 5-point Likert scale, ranging from "strongly disagree" (coded as 1) to "strongly agree" (coded as 5). The L2MSS scale consisted of 18 items, including the ideal L2 self (ILS1–6), the ought-to L2 self (OLS1–6), and the L2 learning experience (LLE1–6), and was adapted from Papi's (2010) scale. The FLA scale

(FLA1–6) comprised six items adapted from the scale developed by Papi (2010) and Ryan (2009). The WTC scale (WTC1–9) included nine items adapted from the scales developed by Peng and Woodrow (2010) and Lan et al. (2021).

To enhance the questionnaire's comprehensibility, localized versions were provided to participants. Since the original scales were developed in English, a back-translation procedure was employed when translating the adapted scales into the participants' first language. The back-translation process followed the revised version of Brislin's translation model proposed by Jones et al. (2001), through which the final translated versions were produced. Additionally, the researcher invited five bilingual experts in language education to evaluate each item using the Index of Item Objective Congruence procedure to enhance content validity. Based on their feedback, several item wordings were revised accordingly.

3.3 Data Collection Procedure and Analysis

The researcher applied for approval from the ethics committee prior to data collection. Once approved, permission was also granted by the department heads at the two universities. At the end of L2 classes, the researcher and the department heads introduced the study's purpose to the students during a Zoom meeting and assured them that their responses would remain confidential. Students accessed the voluntary participation form through their email accounts. When the students began filling out the questionnaires using a Google Form, the department heads left the Zoom call to ensure the independence and validity of responses.

After collecting the data, the researcher first checked for missing values, input errors, and outliers. Demographic information was then compiled into descriptive statistics. Next, an exploratory factor analysis (EFA) was performed in SPSS 28, and a confirmatory factor analysis (CFA) was conducted in AMOS 28 to test the instruments' reliability and construct validity. Finally, SEM was employed to examine the associations between L2MSS components, FLA, and WTC. The bootstrapping procedure was also used to assess FLA's mediating role in the association between L2MSS and WTC.

4. Results

4.1 Reliability and Validity of the Scales

First, the scale's internal consistency reliability was examined. Table 1 shows that the Cronbach's alpha coefficients for all factors exceeded the widely accepted threshold of 0.80, indicating high internal consistency among the items. EFA was also conducted, in order to further assess the construct validity of the scale. First, the dataset's suitability for factor analysis was examined. The KMO measure of sampling adequacy (.84) revealed that the correlations between items were sufficiently compact, and Bartlett's test for sphericity was significant ($\chi^2 = 2671.51$, df = 528, $p < .001$), suggesting that the correlation matrix was not an identity matrix. Next, an EFA was conducted, with factors extracted using principal component analysis and rotated using the Promax method. Items with low loadings were likewise identified from the rotated component matrix. Those with loadings lower than .50, or cross-loadings higher than .40, were flagged for removal, according to the retention criteria (Hair et al., 2018). Therefore, items 7, 8, and 9 of the WTC scale were eliminated prior to the final factor solution because they failed to meet the predefined factor-loading criteria and were excluded to improve the construct validity of the measurement model. The final EFA yielded a five-factor structure

that accounted for 62.49% of the total variance, consistent with the five theoretically expected constructs (see Table 1).

Table 1

Results of EFA, Reliability, and Descriptive Statistics

Factors & Items	Loading	Communality	Cumulative % (Rotated)	α	Descriptive statistics	
					M	*SD*
ILS			11.91	.846	1.83	.59
I1	.80	.68				
I2	.77	.69				
I3	.64	.57				
I4	.60	.48				
I5	.76	.63				
I6	.59	.46				
OLS			11.54	.843	2.99	.95
O1	.68	.49				
O2	.61	.52				
O3	.72	.54				
O4	.82	.69				
O5	.82	.70				
O6	.71	.56				
LLE			11.85	.857	1.77	.56
L1	.76	.65				
L2	.74	.65				
L3	.66	.57				
L4	.73	.66				
L5	.60	.50				
L6	.64	.61				
FLA			14.45	.913	2.94	1.02

Factors & Items	Loading	Communality	Cumulative % (Rotated)	α	Descriptive statistics	
					M	*SD*
F1	.81	.71				
F2	.81	.69				
F3	.82	.72				
F4	.86	.76				
F5	.83	.73				
F6	.79	.64				
WTC			12.74	.881	2.13	.64
W1	.75	.67				
W2	.77	.68				
W3	.78	.73				
W4	.80	.70				
W5	.71	.65				
W6	.53	.43				

Note: ILS = ideal L2 self; OLS = ought-to L2 self; LLE = L2 learning experience.

CFA was also used for examining construct validity. The average variance extracted (AVE), and composite reliability (CR) were used for assessing the convergent validity. Table 2 shows that the CR values for all constructs ranged from .85 to .91, exceeding the recommended threshold of .70. Although the AVE values for ILS (.49) and OLS (.48) were slightly less than the standard cutoff (>.50), these high CR values indicate a satisfactory level of convergent validity, as suggested by Fornell and Larcker (1981). Likewise, discriminant validity was assessed by comparing the square root of AVE to the inter-construct correlations. The diagonals (√AVE = .70–.80) were consistently greater than the correlations among constructs, suggesting adequate discriminant validity.

The overall fit of the measurement model was further examined using multiple goodness-of-fit indices, including χ^2/df, CFI, TLI, RMSEA, and SRMR, to provide a comprehensive assessment of the model's alignment with the observed data. As shown in Table 3, because the CFI and TLI values did not meet the criteria for an acceptable model fit, the initial model exhibited a suboptimal fit. Following the recommendations of Collier (2020), modification indices (MIs) greater than 50 were examined, and three pairs of error terms (W3–W4, I1–I2, and F5–F6) were allowed to correlate. These correlated residuals were introduced based on both modification indices and conceptual similarity among items.

Table 2

Results of Convergent Validity and Discriminant Validity

Constructs	Convergent Validity		Discriminant Validity				
	CR	AVE	ILS	OLS	LLE	FLA	WTC
ILS	.85	.49	**.70**				
OLS	.85	.48	.14	**.70**			
LLE	.86	.51	.60	.22	**.72**		
FLA	.91	.64	-.10	.34	-.11	**.80**	
WTC	.90	.51	.54	.01	.57	-.32	**.72**

Note: CR = composite reliability; AVE = average variance extracted; Diagonal values represent the square roots of AVE.

Table 3

Model Fitting Index

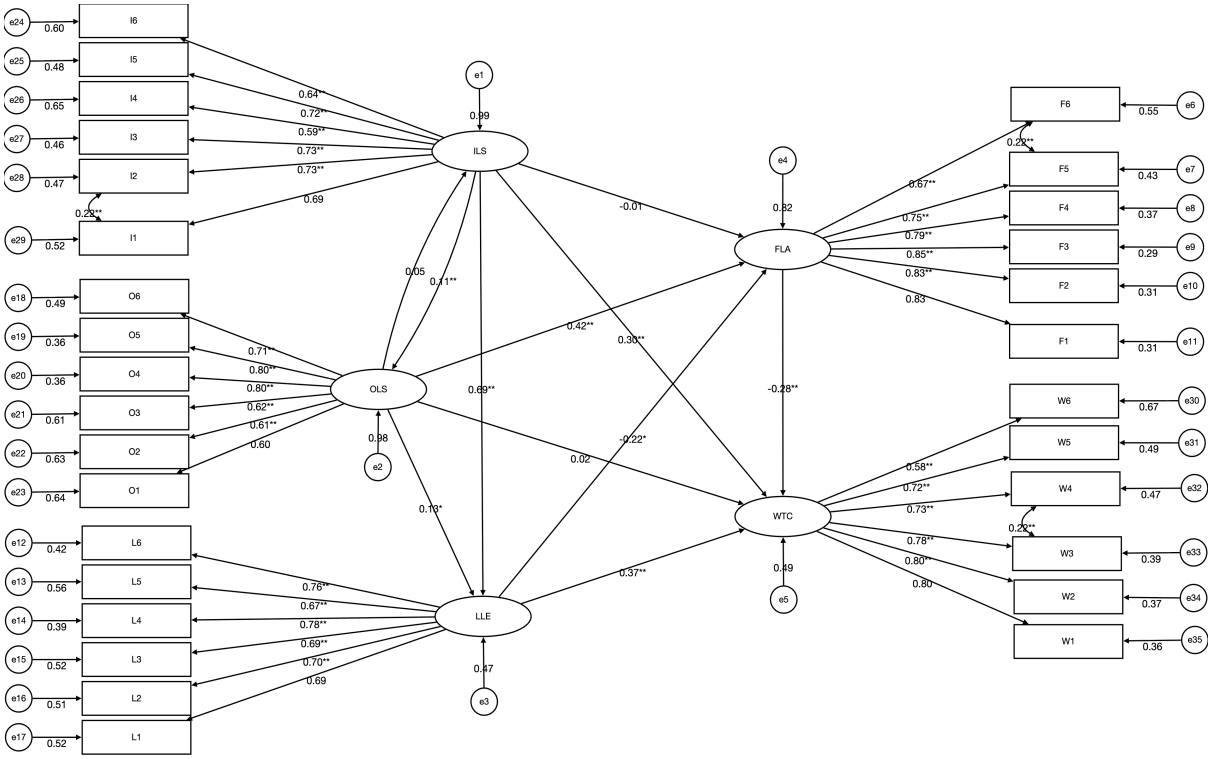
	χ^2/df	RMSEA	CFI	TLI	SRMR
Criteria of acceptance (Kline, 2023; Hu & Bentler, 1999)	<3	<.10	>.9	>.9	<.1
The original model	2.39	.07	.89	.88	.06
The adjusted model	2.02	.06	.92	.91	.05
The final structural model	2.03	.06	.92	.91	.05

4.2 Full Structural Model and Path Analysis

To further examine the mechanisms through which the L2MSS components influence FLA and WTC, SEM was estimated to assess the relationships among the five latent variables. The results indicated an overall acceptable model fit (see Table 3). Although the chi-square statistic was significant, this is not unusual with moderately large samples. As the other key fit indices were within acceptable ranges, the model's overall fit remained adequate. Figure 2 illustrates the final model in this study.

Figure 2

The Final Model



Note: ** $p < .01$, * $p < .05$.

The results of the path analysis in Table 4 revealed eight significant structural paths among the latent variables. The ideal L2 self significantly predicted L2 learning experience (β = .69, t = 8.50, p < .001) and WTC (β = .30, t = 3.39, p = .001), while its effect on FLA was nonsignificant (β = –.01, t = –.12, p = .908). The ideal L2 self also had a small but significant effect on the ought-to L2 self (β = .11, t = 4.96, p < .001). The ought-to L2 self significantly predicted L2 learning experience (β = .13, t = 2.32, p = .020) and FLA (β = .42, t = 5.68, p < .001), whereas its effects on the ideal L2 self and WTC were nonsignificant. L2 learning experience negatively predicted FLA (β = –.22, t = –2.17, p = .034) and positively predicted WTC (β = .37, t = 4.09, p < .001). Finally, FLA significantly predicted WTC (β = –.28, t = –4.74, p < .001).

Based on the R^2 benchmarks proposed by Plonsky and Ghanbar (2018) (which approximate .07 for a small effect, .21 for a medium effect, and .49 for a large effect), the present model accounted for a relatively small proportion of variance in the ideal L2 self (R^2 = .01) and the ought-to L2 self (R^2 = .02). The model explained 18% of the variance in FLA (R^2 = .18), which fell between the small and medium effect size benchmarks. In contrast, the model demonstrated substantial explanatory power for L2 learning experience (R^2 = .53) and WTC (R^2 = .51), both of which exceeded the benchmark for a large effect.

Table 4

Results of Path Analysis

	β	SE	*t*	*p*
ILS→OLS	.11	.03	4.96	.000
ILS→LLE	.69	.06	8.50	.000
ILS→FLA	-.01	.15	-.12	.908
ILS→WTC	.30	.09	3.39	.001
OLS→ILS	.05	.04	1.12	.262
OLS→LLE	.13	.03	2.32	.020
OLS→FLA	.42	.09	5.68	.000
OLS→WTC	.02	.05	.27	.784
LLE→FLA	-.22	.20	-2.17	.034
LLE→WTC	.37	.13	4.09	.000
FLA→WTC	-.28	.04	-4.74	.000

Note: R^2 values: ILS = 0.01, OLS = 0.02, LLE = 0.53, FLA = 0.18, WTC = 0.51.

4.3 Mediating Effect

To elucidate the underlying mechanisms through which the L2MSS influences WTC, the present study incorporated FLA as a potential mediator and tested the indirect effect using the percentile bootstrap method. As shown in Table 5, L2MSS had a significant positive total effect on WTC (c = .482, p < .01). L2MSS was significantly associated with FLA (a = .269, p < .05), while FLA exerted a significant negative effect on WTC (b = −.220, p < .01). The indirect effect was negative and statistically significant (a × b = −.059, Boot SE = .025, z = −2.343, p = .019, 95% CI [−.102, −.003]). After controlling for FLA, the direct effect of L2MSS on WTC remained significant (c′ = .541, p < .01). The indirect effect operated in the opposite direction to the direct effect, indicating that FLA functioned as an inconsistent mediator (suppression effect) in the relationship between L2MSS and WTC.

Table 5

Mediation Analysis Results

Path	Total Effect (c)	a	b	Indirect Effect (a*b)	Boot SE	*z*	*p*	95% Boot CI	Direct Effect (c′)	Result
L2MSS →FLA →WTC	.48**	.27*	-.22**	-.06	.03	-2.34	.019	-.10 ~ -.00	.54**	Inconsistent mediator

Path	Total Effect (c)	a	b	Indirect Effect (a*b)	Boot SE	*z*	*p*	95% Boot CI	Direct Effect (c′)	Result
										(suppression effect)

Note: ** $p < .01$, * $p < .05$.

5. Discussion

5.1 Relationship between L2MSS and WTC

The results showed that the ideal L2 self and L2 learning experience had significant direct effects on learners' WTC, whereas the effect of the ought-to L2 self was not significant. In particular, the ideal L2 self emerged as a positive predictor of WTC. This finding is consistent with previous studies, suggesting that future self-guides may play an important role in learners' communicative behavior and motivational engagement (e.g., Peng & Woodrow, 2010; Papi & Khajavy, 2021). Learners who maintain a clearer self-image as future L2 users may demonstrate greater WTC (Dörnyei & Chan, 2013). In the current educational context, L2 proficiency may also be perceived as important for academic development, future employment, and intercultural communication (Yang & Chanyoo, 2022), thereby strengthening the motivational role of the ideal L2 self.

L2 learning experience was also positively associated with WTC, highlighting the role of immediate learning experiences in shaping communicative behavior. This finding is consistent with Welesilassie and Nikolov (2024), who suggested that classroom-related experiences may exert a relatively strong influence on WTC. When learners perceive classroom activities as meaningful, receive supportive feedback, and engage in positive peer interaction, they may become more willing to initiate communication (Xu & Rahim, 2025). Taken together, these findings suggest that both future-oriented self-guides and immediate learning experiences may contribute to learners' WTC.

In contrast, the ought-to L2 self did not significantly predict WTC, which is consistent with previous studies reporting inconsistent relationships between this construct and communicative behavior (e.g., Taguchi et al., 2009; Al-Hoorie, 2018). This non-significant relationship may be related to the mixed nature of the ought-to L2 self, which may include both supportive elements (e.g., responsibility and obligation) and inhibiting elements (e.g., pressure and fear of negative evaluation) (Wang & Zeng, 2026). When these different influences coexist, the overall relationship between the ought-to L2 self and WTC may become relatively weak or nonsignificant.

5.2 Relationship between L2MSS and FLA

Concerning the ideal L2 self, the present study did not find a significant negative relationship with FLA. This finding differs from some previous studies suggesting that a stronger future self-image may help reduce anxiety-related responses (Papi & Teimouri, 2012; Sadoughi & Hejazi, 2024). One possible explanation is that the ideal L2 self may relate more strongly to engagement-related outcomes, such as effort and WTC, than to anxiety-related experiences (Khomejani Farahan et al., 2023). Another possible explanation concerns

differences in how FLA has been conceptualized across studies, as some studies have focused more on learning- or performance-related anxiety than on communication-related anxiety.

In contrast to studies reporting stronger effects of contextual variables on anxiety reduction, the L2 learning experience in the present study showed a statistically significant, but relatively modest, negative relationship with FLA. This finding may suggest that positive classroom experiences can help reduce anxiety, to some extent. At the same time, the relatively small effect may reflect the complex nature of FLA, which can also be influenced by factors such as task difficulty, self-evaluation, and contextual pressure that may not be fully offset by supportive learning environments alone (Panayiotou & Vrana, 2004).

The ought-to L2 self, however, was positively associated with FLA, which is consistent with previous studies suggesting that externally imposed expectations may contribute to anxiety-related responses (e.g., Papi, 2010). Learners who are primarily motivated by perceived obligations, or the desire to avoid negative consequences, may experience greater pressure during language learning, which may, in turn, increase anxiety.

5.3 Relationship between FLA and WTC

The results indicate that FLA was significantly negatively associated with WTC, and strengthen the contention that anxiety is a major affective barrier to L2 communication. The more anxious learners are, the less likely they are to take risks in social interactions, because anxiety may interfere with cognitive processing and emotional readiness. This inhibitory pattern is consistent across learning environments (e.g., Wang et al., 2025; Zhou et al., 2023). The findings also suggest that FLA functioned as an inconsistent mediator (suppression effect) in the relationship between L2MSS and WTC. Although learners with stronger motivational orientations and more positive learning experiences may demonstrate higher WTC, elevated anxiety levels may weaken this positive tendency. In this sense, anxiety may function as an affective factor that constrains the extent to which motivational resources are translated into communicative behavior (see also Lin et al., 2015). These findings suggest that strong motivational dispositions alone may not necessarily lead to greater WTC, when learners experience elevated levels of anxiety. However, given the relatively modest magnitude of the indirect effect, this relationship should be interpreted cautiously.

5.4 Internal Relationships within L2MSS

The results regarding the internal structure and function of the L2MSS further clarify the relative roles of these components. The ideal L2 self emerged as a stronger predictor of the ought-to L2 self, whereas the reverse relationship between the ought-to L2 self and the ideal L2 self was not supported. This unidirectional relationship may suggest that learners with a clearer ideal L2 self also tend to report somewhat stronger ought-to L2 self orientations (Huang et al., 2025). The directional paths were specified based on the theoretical assumption that learners' ideal L2 self may shape external expectations and vice versa. Future studies may examine alternative specifications of this relationship. External expectations alone may not strongly promote intrinsic motivational orientations. This finding is consistent with previous studies, showing that the ought-to L2 self is relatively context-sensitive and unstable across learning environments (Al-Hoorie, 2018; Thompson, 2017). Within the present educational context, learners' future aspirations, such as academic or professional goals, may play a stronger role in shaping motivation than external expectations alone (Rofiah et al., 2024). In

addition, both self-guides (the ideal and ought-to L2 selves) positively predicted L2 learning experience. However, the relationship was substantially stronger for the ideal L2 self. The strong relationship between the ideal L2 self and L2 learning experience may indicate that future self-guides are related to how learners perceive their immediate learning environment (Li, 2025). Learners with a stronger ideal L2 self may be more likely to perceive classroom experiences and feedback positively, which may increase motivational engagement.

6. Limitations and Recommendations

This study still has several limitations. First, the study relied entirely on self-report questionnaires. Since WTC and FLA are dynamic and context-sensitive constructs, self-reported responses may not fully capture fluctuations in learners' communicative behavior and emotional experiences across different situations. In addition, the absence of qualitative data, such as interviews and classroom observations, limited deeper interpretations of how motivational and affective processes develop during language learning. The present study primarily examined the structural relationships among L2MSS, FLA, and WTC using SEM across a relatively large sample. Nevertheless, qualitative or mixed-method research may provide richer insights into how learners experience motivation, anxiety, and communication in different classroom contexts. Future research may, therefore, employ interviews, classroom observations, or longitudinal designs to provide a more comprehensive understanding of these relationships and their development over time. Several measurement-related considerations should also be acknowledged. Although the overall measurement model demonstrated acceptable fit, the AVE values for the ideal L2 self and ought-to L2 self constructs were slightly below the recommended .50 threshold. In addition, three WTC items were removed following EFA, and several correlated residuals were introduced during CFA to improve model fit. Although these modifications were theoretically justifiable, they may reflect some shared variance among items and potential conceptual proximity between related constructs. Furthermore, because EFA and CFA were conducted on the same sample, future studies should cross-validate the measurement model using an independent sample. Therefore, the measurement model should be interpreted with caution, consistent with recent discussions of construct validity in L2MSS research (Al-Hoorie et al., 2024; McClelland & Larson-Hall, 2025). Second, the sample was predominantly female, which may also limit the generalizability of the findings. Previous studies have suggested that gender may be related to differences in motivational orientations, anxiety levels, and WTC in L2 learning (e.g., MacIntyre et al., 2003). Therefore, caution should be exercised when generalizing the findings to other settings. Future research could further examine whether the structural relationships identified in the present study differ across more gender-balanced samples and across different learning contexts.

The results of this study also have pedagogical value for Thai L2 teachers. First, the dominant role of the ideal L2 self suggests that teachers should help students to construct clear, realistic, and personally meaningful future self-images as L2 users. This can be accomplished by encouraging students to set language learning objectives related to academic development or career planning, and by linking the tasks at hand to practical goals for future use that improve the ideal L2 self. Second, creating a supportive classroom environment is an important consideration. Teachers can develop communicative activities that take place in students' real lives, such as case discussions, situational conversations, group presentations, and role-playing, to give students meaningful exposure to the L2. Encouraging peer collaboration and giving

timely, specific feedback may also enhance the quality of student interaction and participation. Finally, due to FLA's strong inhibitory effect on WTC, teachers should alleviate student anxiety by clarifying the task's purpose, providing step-by-step scaffolding, creating a learning environment that accepts mistakes, and reducing the difficulty of speaking tasks. These techniques can also help Thai students gain L2 confidence and be more willing to communicate in L2.

7. Conclusion

This study examined the relationships among L2MSS, FLA, and WTC in Thai undergraduate L2 learners. Findings indicated that both the ideal L2 self and the L2 learning experience were positive predictors of WTC, whereas the ought-to L2 self did not significantly predict WTC, highlighting the importance of internalized motivation over externally imposed expectations and obligations. Instead, the ought-to L2 self emerged as a strong positive predictor of FLA, whereas the ideal L2 self did not show a significant effect and the L2 learning experience exhibited a significant negative effect. In addition, FLA significantly and negatively predicted WTC and functioned as an inconsistent mediator (suppression effect) in the relationship between L2MSS and WTC. These findings suggest that strong motivational dispositions alone may not necessarily lead to greater WTC when learners experience high levels of anxiety. The findings therefore highlight the importance of considering motivational and affective factors together when examining learners' WTC.

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9. Declaration of AI Use

The authors declare that AI tools (ChatGPT 5.5) were used in preparation of the manuscript only (checking spelling and grammar correction). All interpretations, analyses, and conclusions presented in the manuscript were developed and reviewed by the authors. The authors take full responsibility for the content.

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