



Motivational Profiles, Foreign Language Anxiety, and Willingness to Communicate among Thai Learners of Chinese: A Person-Centered Approach

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Abstract

Motivation is widely recognized as an important factor in second language (L2) learning. However, learners may differ not only in the strength of their motivation but also in how different motivational dimensions are combined within individuals. Given the predominance of variable-centered approaches in previous research and the limited use of person-centered approaches in Chinese as a foreign language (CFL) contexts, this study investigated motivational profiles among Thai CFL learners and examined profile differences in foreign language anxiety (FLA) and willingness to communicate (WTC). A total of 291 Thai undergraduate students majoring in Chinese participated in the study. Latent profile analysis (LPA) was conducted based on the three components of the L2 motivational self system (L2MSS): the ideal L2 self, ought-to L2 self, and L2 learning experience. The analysis identified a four-profile solution: low ideal L2 self-high ought-to L2 self-low L2 learning experience ($n = 57, 19.59\%$); high ideal L2 self-high ought-to L2 self-high L2 learning experience ($n = 16, 5.50\%$); moderate ideal L2 self-moderate ought-to L2 self-moderate L2 learning experience ($n = 140, 48.11\%$); and low ideal L2 self-low ought-to L2 self-low L2 learning experience ($n = 78, 26.80\%$). Significant profile differences were found in both FLA and WTC, with a substantially larger effect for WTC ($\eta^2 = .311$) than for FLA ($\eta^2 = .105$). The findings demonstrate motivational heterogeneity among Thai CFL learners and suggest that externally driven motivation may not promote favorable affective and communicative outcomes when accompanied by a weak ideal L2 self and an unfavorable learning experience.

Keywords: L2 Motivational Self System, Latent Profile Analysis, Foreign Language Anxiety, Willingness to Communicate, Chinese as a Foreign Language

Introduction

Motivation is widely recognized as a key factor influencing success in second language (L2) learning (Ushioda, 2012). The L2 motivational self system (L2MSS) (Dörnyei, 2005, 2009) is one of the most influential theories of L2 motivation. It includes three components: the ideal L2 self, the ought-to L2 self, and the L2 learning experience. The ideal L2 self represents learners' desired future selves, whereas the ought-to L2 self reflects externally imposed expectations and obligations. The L2 learning experience concerns learners' perceptions of their learning environment (Dörnyei, 2009, 2019). Previous research has linked the L2MSS to various language learning outcomes, including achievement, engagement, anxiety, and willingness to communicate (WTC) (e.g., Papi, 2010). However, most studies have focused on English learning contexts, with comparatively limited attention given to languages other than English (LOTE), particularly Chinese as a foreign language (CFL).

With China's increasing international influence, interest in Chinese language learning has grown in many contexts (Xu, 2023). In Thailand, closer cooperation between Thailand and China has increased the perceived academic and occupational value of Chinese. Thai students may choose Chinese majors because of employment opportunities, family expectations, scholarships, or the perceived value of Chinese proficiency examinations such as the HSK. These academic, familial, and career-related expectations may make externally regulated motivation particularly salient among Thai CFL learners. At the same time, learning Chinese can be challenging because of its tonal and writing systems (Chen, 2025). Previous research has shown that Thai learners often experience high levels of foreign language anxiety (FLA) when learning Chinese (Xu et al., 2022), while WTC is widely regarded as an important prerequisite for language development (Peng & Woodrow, 2010). Therefore, examining motivation, FLA, and WTC together is important for understanding the CFL learning process in Thailand.

Most previous studies have adopted variable-centered approaches, such as correlation analysis and structural equation modeling, to examine relationships between L2MSS components and other variables. Although these approaches have revealed overall relationships among variables, they often overlook motivational heterogeneity among learners. In contrast, person-centered approaches enable researchers to identify naturally occurring subgroups with distinct motivational patterns (Woo et al., 2024). Furthermore, the limited studies on motivational profiles have generally excluded the L2 learning experience, despite its being the most context-specific component of the L2MSS and a potentially important predictor of learners' FLA and WTC. Accordingly, the present study adopted a person-centered approach and employed latent profile analysis (LPA) to identify motivational profiles based

on the three L2MSS components among Thai CFL learners and to compare differences in FLA and WTC across the identified profiles.

Research objectives

1. To identify the motivational profiles of Thai CFL learners based on the components of the L2MSS.
2. To compare FLA and WTC across learners with different motivational profiles.

Literature review

The L2 Motivational Self System

The L2MSS, proposed by Dörnyei (2009), has become one of the most influential frameworks for understanding motivation in SLA. It consists of the ideal L2 self, the ought-to L2 self, and the L2 learning experience. The ideal L2 self refers to learners' desired future images as successful target-language users, whereas the ought-to L2 self concerns externally imposed expectations and obligations (Dörnyei, 2009; Teimouri, 2017). The L2 learning experience reflects learners' perceptions of their immediate learning environment, including classroom atmosphere, teachers, peers, and activities (Dörnyei, 2019). Its inclusion is important because omitting this context-sensitive component may obscure motivational configurations in which learners' future self-guides conflict with their actual classroom experiences. Previous research has linked the L2MSS to various learning outcomes. The ideal L2 self strongly predicts motivated behavior and communicative intention (Le-Thi et al., 2022), while positive learning experiences are associated with stronger motivation, greater classroom participation, and more favorable attitudes (Dörnyei, 2019). Findings concerning the ought-to L2 self are less consistent. Although the ideal L2 self often emerges as the stronger predictor (e.g., Lee et al., 2021), the ought-to L2 self may motivate learners under strong external expectations (Teimouri, 2017). Thus, the roles of these components may vary across educational and sociocultural contexts, warranting further research in CFL settings.

L2 Motivational Self System, Foreign Language Anxiety, and Willingness to Communicate

Foreign language anxiety (FLA) refers to nervousness, tension, and apprehension during language learning and communication (Horwitz, 2010), whereas willingness to communicate (WTC) refers to readiness to initiate target-language communication (MacIntyre et al., 1998). Previous studies have linked the L2MSS components to both constructs. The ideal L2 self positively predicts communicative intention and negatively predicts anxiety (Peng, 2015), as learners with clearer future goals tend to participate more readily and experience less communication anxiety. Positive L2 learning experiences are likewise

associated with greater WTC and lower anxiety (Salbaş & Ekmekci, 2025). Findings for the ought-to L2 self remain mixed. Some studies identify a positive relationship with WTC under strong academic expectations and examination pressure (e.g., Welesilassie & Nikolov, 2024), whereas others report weak or nonsignificant relationships (e.g., Peng, 2015; Teimouri, 2017). Externally regulated motivation has also been associated with increased FLA (Dong et al., 2022). However, previous research has mainly examined average linear relationships, giving less attention to motivational configurations associated with distinct emotional and communicative tendencies. A person-centered perspective may therefore offer a more nuanced account, although the resulting profiles should be viewed as context-sensitive patterns rather than fixed learner identities because FLA and WTC may vary across tasks, teachers, interlocutors, and interactional situations.

Motivational Profiles: A Person-Centered Perspective

There has been growing interest in examining motivation from a person-centered perspective. Rather than replacing variable-centered approaches, person-centered methods complement them by identifying subgroups of learners who share similar patterns across multiple variables (Woo et al., 2024). Latent profile analysis (LPA) is one of the most widely used person-centered approaches, classifying learners into distinct profiles based on their response patterns (Spurk et al., 2020). Previous studies have identified different motivational profiles among language learners. For example, Csizér and Dörnyei (2005) identified four motivational profiles among Hungarian language learners, whereas Papi and Teimouri (2014) reported five profiles among Iranian EFL learners based on the L2MSS components. More recently, Dunn and Iwaniec (2022) identified five motivation-proficiency profiles among Spanish learners of English, and Zhang et al. (2025) reported four future L2 self profiles among Chinese EFL learners. These findings suggest that motivational patterns vary across learning contexts. However, motivational profiling studies in CFL contexts remain limited, particularly among Thai learners, an important CFL learner population in Southeast Asia. Therefore, the present study adopted LPA to identify motivational profiles and examine differences in FLA and WTC among Thai CFL learners.

Methodology

Research Participants

The study was conducted at two private universities in Thailand using convenience sampling. Of the 309 questionnaires distributed, 291 valid responses were retained after excluding cases with obvious repetitive response patterns, yielding a valid response rate of 94.17%. The sample included 38 male and 253 female students, comprising 100 first-year, 101 second-year, 59 third-year, and 31 fourth-

year students. Regarding Chinese proficiency, 154 participants had not taken the HSK, while 20, 96, and 21 had attained HSK Levels 1-2, 3-4, and 5-6, respectively.

Research Instruments

The questionnaire consisted of four sections: demographic information, the L2MSS scale, the FLA scale, and the WTC scale. The original English-language instruments were translated into Chinese and Thai, and the Thai version was administered to the participants. The Chinese version was used to support adaptation to the CFL context and expert review. A back-translation procedure was conducted to ensure linguistic equivalence across the English, Chinese, and Thai versions. Five bilingual experts in language education subsequently evaluated the items using the Index of Item-Objective Congruence (IOC) procedure. All items met the required content-validity criterion and were retained after minor wording revisions.

L2MSS Scale

The L2MSS scale was adapted from Papi (2010) and consisted of 18 items, measuring learners' ideal L2 self (6 items), ought-to L2 self (6 items), and L2 learning experience (6 items). All items were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The three subscales demonstrated satisfactory internal consistency, with Cronbach's alpha coefficients ranging from .830 to .848.

FLA Scale

The FLA scale was adapted from Papi (2010) and consisted of 6 items measuring learners' anxiety in CFL learning contexts. All items were rated on the same five-point Likert scale. The scale demonstrated satisfactory internal consistency (Cronbach's alpha = .906).

WTC Scale

The WTC scale was adapted from Peng and Woodrow (2010) and consisted of 9 items assessing learners' WTC in Chinese classroom situations, such as asking questions, participating in discussions, and giving presentations. All items were rated on the same five-point Likert scale. The scale demonstrated satisfactory internal consistency (Cronbach's alpha = .896).

Data Collection

Data were collected online via Google Forms. Following regular classroom sessions, students were invited to complete the questionnaire voluntarily outside class. Participants were informed of the study purpose and assured of the anonymity and confidentiality of their responses. Ethical approval was obtained from the Institutional Review Board (IRB), and permission for data collection was granted by the participating institutions.

Data Analysis

Preliminary analyses were conducted using SPSS Statistics 29. The dataset was screened for missing values and outliers. Descriptive statistics, Cronbach's alpha coefficients, and Pearson correlations were calculated.

To address the first research question, latent profile analysis (LPA) was conducted in RStudio using the tidyLPA package based on the three standardized L2MSS components: the ideal L2 self, ought-to L2 self, and L2 learning experience. Model 1 was specified, with indicator variances constrained to be equal across profiles and covariances fixed at zero. All estimated models converged successfully without estimation warnings. Solutions containing one to five profiles were compared using the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), sample-size-adjusted BIC (aBIC), bootstrap likelihood ratio test (BLRT), and entropy. Lower AIC, BIC, and aBIC values indicate better model fit, whereas entropy values closer to 1.00 indicate clearer profile classification (Nylund et al., 2007; Spurk et al., 2020). The final solution was selected based on model fit, classification quality, profile size, and theoretical interpretability. Following Ferguson et al. (2020), each profile was required to contain at least 5% of the sample. To address the second research question, one-way ANOVA was conducted to examine differences in FLA and WTC across profiles. Homogeneity of variance was assessed using Levene's test. When this assumption was met, conventional one-way ANOVA followed by Tukey's HSD post hoc tests was used. When the assumption was violated, Welch's ANOVA followed by Games–Howell post hoc comparisons was applied. Eta-squared (η^2) was calculated to estimate effect sizes.

Research results

Descriptive Statistics and Correlation Analysis of the Variables

Table 1 presents the descriptive statistics and Pearson correlation coefficients for the study variables. Prior to the main analyses, the means, standard deviations, and correlations of the ideal L2 self, ought-to L2 self, L2 learning experience, FLA, and WTC were calculated. As shown in Table 1, the mean scores ranged from 1.77 to 2.99, and the standard deviations ranged from 0.55 to 1.00. The ought-to L2 self and FLA showed the highest mean scores, whereas the ideal L2 self, L2 learning experience, and WTC had comparatively lower mean scores. Pearson correlation analyses indicated that most variables were significantly correlated. The only non-significant correlations were those between the ideal L2 self and ought-to L2 self, and between the ought-to L2 self and WTC.

Table 1 Results of Descriptive Statistics and Correlation Analysis (N = 291).

	ILS	OLS	LLE	FLA	WTC
ILS	—				
OLS	.099	—			
LLE	.568**	.194**	—		
FLA	-.151**	.285**	-.157**	—	
WTC	.508**	-.057	.542**	-.406**	—
<i>M</i>	1.83	2.98	1.77	2.99	2.03
<i>SD</i>	0.58	0.92	0.55	1.00	0.57

Note. ILS = ideal L2 self; OLS = ought-to L2 self; LLE = L2 learning experience; FLA = foreign language anxiety; WTC = willingness to communicate. ** $p < .01$.

Motivational Profiles of Thai CFL Learners

As shown in Table 2, the model fit indices (AIC, BIC, and aBIC) generally decreased as the number of latent profiles increased. Compared with the 1-3 profile models, the 4-profile model showed substantially lower AIC (2331), BIC (2397), and aBIC (2340) values, indicating better model fit. Although the 5-profile model produced comparable fit indices, its BLRT was not significant ($p = .238$), whereas the 4-profile model showed a significant BLRT ($p = .010$). The 4-profile model also yielded an entropy value of .716, indicating acceptable classification accuracy. The average posterior probabilities for Profiles 1-4 were .768, .931, .889, and .797, respectively, with an overall classification error rate of .157. In addition, the smallest profile accounted for 5.50% of the total sample, meeting the recommended minimum class size. Based on model fit, BLRT, entropy, profile size, and interpretability, the 4-profile model was selected for subsequent analyses.

Table 2 Fit Indices for Motivational Profile Solutions.

Profiles	AIC	BIC	aBIC	Entropy	BLRT (p)	Class size (proportion)
1	2486	2509	2489	—	—	291 (1.000)
2	2400	2437	2405	.648	.010	79 (.271), 212 (.729)
3	2393	2445	2400	.589	.030	67 (.230), 86 (.296), 138 (.474)
4	2331	2397	2340	.716	.010	57 (.196), 16 (.055), 140 (.481), 78 (.268)
5	2332	2413	2343	.668	.238	69 (.237), 16 (.055), 79 (.271), 64 (.220), 63 (.216)

As shown in Table 2, Table 3, and Figure 1, the four-profile solution comprised four distinct motivational profiles with different class sizes and L2MSS patterns. Table 2 presents the class proportions, whereas Table 3 and Figure 1 illustrate the mean-score patterns of the three L2MSS components across profiles. Profile 1 ($n = 57$, 19.59%) was identified as the low ideal L2 self/high ought-to L2 self/low L2 learning experience profile. Profile 2 ($n = 16$, 5.50%) was identified as the high ideal L2 self/high ought-to L2 self/high L2 learning experience profile. Profile 3 ($n = 140$, 48.11%) was identified as the moderate ideal L2 self/moderate ought-to L2 self/moderate L2 learning experience profile. Profile 4 ($n = 78$, 26.80%) was identified as the low ideal L2 self/low ought-to L2 self/low L2 learning experience profile. As presented in Table 3, significant differences were observed across profiles in the ideal L2 self ($F = 110.31$, $p < .001$, $\eta^2 = .536$), ought-to L2 self ($F = 75.64$, $p < .001$, $\eta^2 = .442$), and L2 learning experience ($F = 254.87$, $p < .001$, $\eta^2 = .727$).

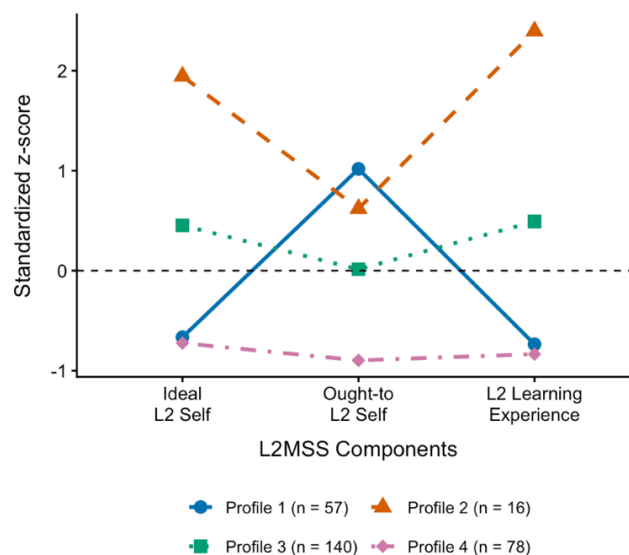


Figure 1 Latent Profiles of L2MSS Components

Profile 1 = Low ILS/High OLS/Low LLE; Profile 2 = High ILS/High OLS/High LLE; Profile 3 = Moderate ILS/Moderate OLS/Moderate LLE; Profile 4 = Low ILS/Low OLS/Low LLE.

The profile means shown in this figure are based on standardized z-scores, whereas Table 3 reports raw mean scores.

Differences in FLA and WTC Across Motivational Profiles

As shown in Table 3, significant between-profile differences were observed for both FLA and WTC. Because the homogeneity-of-variance assumption was violated for FLA, Welch's ANOVA was used

and indicated significant between-profile differences, Welch's $F(3, 60.27) = 10.61, p < .001$. For WTC, the homogeneity-of-variance assumption was met, and a conventional one-way ANOVA revealed significant between-profile differences, $F(3, 287) = 43.18, p < .001, \eta^2 = .311$. Games-Howell post hoc comparisons showed that Profile 1 reported significantly higher FLA than Profiles 2, 3, and 4, whereas no significant differences were found among Profiles 2, 3, and 4. Tukey's HSD comparisons indicated significant WTC differences between all profile pairs. Profile 1 reported the highest level of FLA ($M = 3.64, SD = 1.00$) and the lowest level of WTC ($M = 1.59, SD = 0.49$). In contrast, Profile 2 demonstrated the highest WTC ($M = 2.73, SD = 0.57$) together with comparatively lower levels of FLA ($M = 2.83, SD = 1.00$). Profile 3 showed moderate levels of both FLA ($M = 2.80, SD = 0.82$) and WTC ($M = 2.26, SD = 0.46$), whereas Profile 4 reported relatively low WTC ($M = 1.82, SD = 0.49$) and moderate levels of FLA ($M = 2.87, SD = 1.12$). Figure 2 illustrates the overall patterns of FLA and WTC across the four profiles.

Table 3 Comparisons of L2MSS Components, FLA, and WTC Across Motivational Profiles.

	Profile 1 M (SD)	Profile 2 M (SD)	Profile 3 M (SD)	Profile 4 M (SD)	Test statistic	η^2
ILS	1.44 (0.37)	2.96 (0.60)	2.09 (0.39)	1.41 (0.37)	$F = 110.31^{***}$	.536
OLS	3.92 (0.58)	3.55 (0.68)	2.99 (0.77)	2.15 (0.61)	$F = 75.64^{***}$	.442
LLE	1.37 (0.28)	3.07 (0.47)	2.03 (0.27)	1.31 (0.27)	$F = 254.87^{***}$	.727
FLA	3.64 (1.00)	2.83 (1.00)	2.80 (0.82)	2.87 (1.12)	Welch's $F(3, 60.27) = 10.61^{***}$	.105
WTC	1.59 (0.49)	2.73 (0.57)	2.26 (0.46)	1.82 (0.49)	$F = 43.18^{***}$	.311

Note. ILS = ideal L2 self; OLS = ought-to L2 self; LLE = L2 learning experience; FLA = foreign language anxiety; WTC = willingness to communicate. $^{***}p < .001$. FLA η^2 : conventional ANOVA.

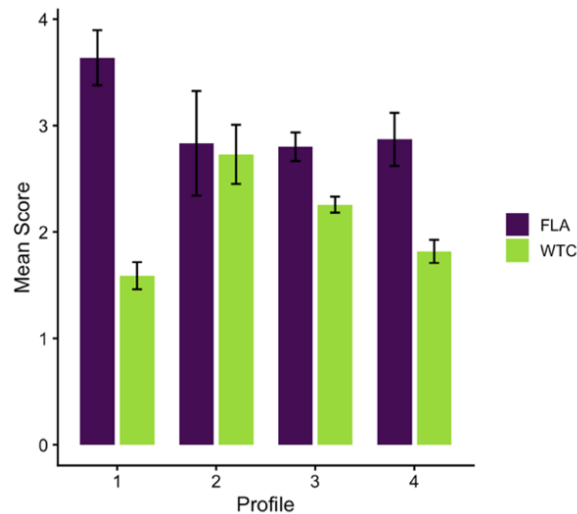


Figure 2 Mean Scores of FLA and WTC Across Motivational Profiles

Note. Error bars represent 95% confidence intervals.

Discussion

To address the first research question, four motivational profiles were identified among Thai CFL learners. The emergence of multiple profiles is consistent with previous person-centered studies showing that language learners differ not only in the strength of their motivation but also in the ways motivational dimensions are combined within individuals (Csizér & Dörnyei, 2005; Dunn & Iwaniec, 2022; Papi & Teimouri, 2014; Zhang et al., 2025). Similar to previous studies, profiles characterized by relatively low, moderate, and high levels of motivation were identified. However, in addition to these profiles, a distinct group characterized by low ideal L2 self, high ought-to L2 self, and low L2 learning experience emerged. This profile represented approximately one-fifth of the sample and differed from the generally parallel patterns reported in previous L2MSS profiling studies. The presence of this profile indicates that the ideal L2 self, ought-to L2 self, and L2 learning experience do not necessarily develop simultaneously among Thai CFL learners. Another notable feature was the dominance of the moderate motivational profile, with nearly half of the participants classified into this group and only a small proportion into the highly motivated profile. Given that the highly motivated profile included only 16 participants, conclusions concerning this group should be interpreted cautiously. Similar distributions have been reported in previous person-centered studies, where moderate motivational groups often represented the largest subgroup of learners (Zhang et al., 2025). This finding may reflect the current status of Chinese language learning in Thailand. Although Chinese is increasingly viewed as valuable for educational and

occupational opportunities, learners may differ considerably in the extent to which these perceived benefits are translated into personally meaningful future selves and positive learning experiences.

Differences in FLA and WTC Across Profiles

The four motivational profiles differed significantly in both FLA and WTC. However, the pattern observed across profiles was more complex than a simple distinction between high and low motivation. One noteworthy finding concerns FLA. The lowest level of anxiety was reported by learners in the moderate motivational profile rather than those in the highly motivated profile. However, the mean FLA scores of these two profiles were very similar and both were below the scale midpoint. Therefore, this small difference should not be overinterpreted, particularly because the highly motivated profile included only 16 participants. Similar observations have occasionally been reported in person-centered research (Zhang et al., 2025), suggesting that highly motivated learners may simultaneously experience stronger expectations regarding their language performance, which may intensify feelings of anxiety.

A different pattern emerged for WTC. Learners in the highly motivated profile reported the highest level of WTC, whereas those in the moderate profile demonstrated noticeably lower WTC despite reporting similarly low anxiety. This finding suggests that WTC may depend on a broader motivational configuration rather than anxiety alone. Nevertheless, conclusions concerning the highly motivated profile should be interpreted cautiously because of its small sample size. The most distinctive pattern was observed in the low ideal L2 self/high ought-to L2 self/low L2 learning experience profile. Despite reporting the highest level of ought-to L2 self, learners in this group exhibited the highest level of anxiety and the lowest WTC. This result is consistent with previous studies reporting positive associations between the ought-to L2 self and anxiety (Papi, 2010; Teimouri, 2017). One possible explanation is that learners whose motivation is primarily driven by external expectations may experience greater pressure to meet perceived obligations, increasing apprehension about making mistakes and discouraging spontaneous communication. In contrast, the absence of a strong ideal L2 self and positive learning experience may deprive learners of the intrinsic vision and enjoyment needed to sustain communicative engagement.

Interestingly, the two profiles with relatively high ought-to L2 selves showed contrasting outcomes. Learners with high ideal L2 selves and positive learning experiences reported the highest WTC, whereas those with low ideal L2 selves and poor learning experiences reported the lowest WTC and highest anxiety. This suggests that the effects of the ought-to L2 self depend on the broader motivational configuration (Teimouri, 2017). Overall, the mean scores for the ideal L2 self, L2 learning experience, and WTC were below the scale midpoint, possibly reflecting weak future self-images, limited

positive classroom experiences, few opportunities to use Chinese, examination-oriented learning, or spoken-interaction difficulties. Institutional context, year of study, proficiency, teaching style, course demands, HSK preparation, career expectations, and contact with Chinese speakers may also have shaped the profiles, although these explanations remain tentative because they were not directly examined.

Conclusion, Limitations, and Pedagogical Implications

This study identified four distinct motivational profiles among Thai learners of Chinese as a foreign language, demonstrating substantial motivational heterogeneity within this population. The findings highlight the importance of examining motivational configurations rather than treating the ideal L2 self, ought-to L2 self, and L2 learning experience as isolated dimensions. In particular, the combination of strong external pressure, a weak ideal L2 self, and an unfavorable learning experience was associated with the highest FLA and the lowest WTC. These results show that similar levels of a single motivational dimension may produce markedly different emotional and communicative outcomes depending on the broader motivational configuration in which it is embedded. A person-centered perspective therefore provides a more nuanced understanding of motivation in CFL learning contexts.

Several limitations should be acknowledged. First, the cross-sectional design precludes causal conclusions regarding motivational profiles, FLA, and WTC and does not capture changes in profile membership over time. Second, convenience sampling from only two private Thai universities limits generalizability and leaves possible institution-level effects unexamined. Third, one profile contained only 16 participants, and the moderate entropy value indicates some classification uncertainty; findings for this group should therefore be interpreted cautiously. Fourth, although the adapted scales showed satisfactory internal consistency and underwent translation, back-translation, and expert review, their construct validity was not examined through CFA, and possible wording, scoring, or translation effects cannot be ruled out. Fifth, comparisons based on most-likely profile assignment, including conventional and Welch ANOVAs, do not fully account for classification uncertainty, although appropriate post hoc comparisons were conducted. Future studies could apply three-step procedures. Finally, the gender imbalance and reliance on self-report data may have introduced bias. Future research should use more diverse samples, multiple data sources, and examine institutional context, year of study, Chinese proficiency, teaching style, course demands, HSK preparation, career expectations, and opportunities to interact with Chinese speakers.

From a pedagogical perspective, CFL teachers should recognize learners' motivational heterogeneity. Students with a low ideal L2 self, high ought-to L2 self, and low L2 learning experience may need particular support because they reported the highest anxiety and lowest WTC. Teachers could reduce excessive external pressure, strengthen learners' future self-images, foster positive learning experiences, and provide low-risk speaking opportunities. They should also monitor changes in motivation and anxiety, as similar levels of ought-to L2 self may produce different outcomes across motivational profiles.

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

AI Disclosure: This manuscript used ChatGPT (GPT-5.5; OpenAI) for language editing and improving the clarity of expression. All AI-generated outputs were carefully reviewed and verified by the authors, who take full responsibility for the final content.

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