

## RESEARCH ARTICLE

# The role of cross-cultural adaptation in shaping career self-concept and development among Chinese ESP students in Thailand

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## ABSTRACT

This study investigates how cross-cultural adaptation shapes the formation of career self-concept and career development pathways among Chinese ESP (English for Specific Purposes) students in Thailand. Grounded in Super's career development theory and Kim's integrative theory of cross-cultural adaptation, the study examines how linguistic adjustment, academic integration, and sociocultural interaction contribute to transforming intercultural experiences into professional cognition and motivational resources. A sample of 511 Chinese ESP students in Thailand participated in a structured questionnaire survey. Data was analyzed using regression and mediation analyses. Findings reveal that cross-cultural adaptation significantly predicts both career self-concept and career development, with career self-concept serving as a partial mediator. Additionally, female students and those at higher educational levels demonstrated significantly greater career development outcomes, suggesting that demographic background plays a moderating role. This research underscores the importance of the co-development of linguistic and cultural adaptation in constructing career awareness and provides empirical evidence to support international education and career guidance in ESP contexts.

**Keywords:** ESP students, cross-cultural adaptation, career self-concept, career development, language-cultural co-development, Chinese international students in Thailand

## 1. Introduction

Amid the ongoing internationalization of global higher education, an increasing number of Chinese students are choosing to pursue English-medium higher education programs in Southeast Asian countries such as Thailand<sup>[1]</sup>. Within these linguistically and culturally diverse learning environments, students face not only academic challenges but also deeper processes of identity transformation and the reconstruction of career self-concept<sup>[2-3]</sup>. Such transformation is an ongoing "internal conversation" in which individuals reflexively reconcile social structures and personal projects<sup>[4]</sup>. As a core variable in international student research, cross-cultural adaptation influences individuals' life satisfaction, psychological well-being, and future career development intentions<sup>[5-6]</sup>. This adaptive process encompasses more than the acquisition of cultural knowledge or behavioral strategies; it also reflects one's capacity to establish social connections and

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a sense of belonging within the host culture<sup>[7]</sup>.

Meanwhile, career self-concept, as a central construct in vocational psychology, demonstrates marked dynamism and situational sensitivity in the context of cultural transitions <sup>[8-9]</sup>. It not only constitutes a core dimension of self-awareness but is also closely tied to one's behavioral strategies and career planning. Empirical research has highlighted that feedback mechanisms embedded within educational systems, alongside broader sociocultural contexts, significantly shape career identity formation. During periods of transition, learners often experiment with "provisional selves" to test and refine possible professional identities <sup>[10]</sup>. For international students, cross-cultural experiences often provoke a re-evaluation of their career cognition and a reconfiguration of their vocational identity, thereby influencing the development of career intentions <sup>[8,11,12]</sup>.

In the context of ESP (English for Specific Purposes) education, the connection between linguistic tasks and professional socialization has become increasingly salient. Genre-specific writing practices—such as project reporting and industry communication—are not merely tools for language skill development, but vital pathways for learners to participate in professional communities and construct vocational identities <sup>[13]</sup>. ESP instruction emphasizes task-based learning and situational authenticity, offering learners embedded linguistic practices through which they gain opportunities for "legitimate participation" and gradually accumulate "identity capital." Among international students, this triadic interplay between language, task, and identity provides the sociolinguistic scaffolding and expressive space necessary for envisioning and internalizing career trajectories <sup>[14]</sup>. Here, translanguaging practice enables learners to mobilize diverse linguistic resources to negotiate legitimacy and agency across contexts <sup>[15]</sup>, further linking language use to vocational identity. For Chinese international students in particular, the processes of self-naming, identity labeling, and cultural negotiation embedded within language learning reflect the dual complexity of language socialization—as both a mode of cultural adaptation and a mechanism for identity construction. These processes not only contribute to language proficiency but also generate agency and a sense of belonging in cross-cultural contexts <sup>[16]</sup>.

Although cross-cultural education, language socialization, and career development have increasingly become focal themes in international education research, existing studies often remain limited to analyzing discrete dimensions such as individual language proficiency or adaptive behaviors<sup>[17]</sup>. There is still a significant lack of systematic investigation into the interlinked mechanism between cross-cultural adaptation, vocational identity construction, and career development, particularly within the instructional context of English for Specific Purposes (ESP) programs<sup>[18]</sup>. Current scholarship tends to emphasize students' improvements in language expression or communication skills, while offering insufficient discussion of the implicit socializing functions embedded in language tasks as practices of career identity formation<sup>[19]</sup>.

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Beyond its theoretical contributions, this study is also situated within the evolving dynamics of China–Thailand educational mobility. As Lertpusit, Ge and Ho (2025)<sup>[20]</sup> note, the growing influx of Chinese

students into Thai universities is shaped by regional collaborations under the Belt and Road Initiative and Thailand's strategic efforts to address labor shortages and declining enrollments. These transnational dynamics provide important contextual foundations for understanding how Chinese ESP students navigate cultural adaptation and construct career identities in cross-border educational settings.

Accordingly, this study focuses on Chinese ESP students in Thailand and constructs a mediation model centered on the pathway of cross-cultural adaptation → career self-concept → career development. The analysis further incorporates gender and academic level as moderating variables to explore the psychological mechanisms through which individuals, within the process of language socialization, construct their vocational identity and shape their future career intentions. The research design builds upon and extends the “language–task–identity” interactive framework proposed by Darvin and Norton (2015)<sup>[21]</sup>, emphasizing that language learning is not merely a matter of skill acquisition, but also a career-oriented process of identity formation. In the context of ESP education, this study expands the framework by applying it to vocational identity development, highlighting how language tasks serve as a medium for students to accumulate career identity capital and construct social belonging through situated practices.

The core innovations of this study are threefold. First, it is the first to explicitly conceptualize ESP language tasks as situated environments for vocational identity internalization, thereby bridging language education and professional socialization. Second, it develops an integrated mediation–moderation model linking cross-cultural adaptation, career self-concept, and career development, offering a process-oriented explanation for cross-cultural education outcomes. Third, based on quantitative data from 511 Chinese ESP students in Thailand, the study empirically validates the proposed pathways through regression analyses, addressing theoretical and empirical gaps in research on vocational socialization within this context. The findings offer valuable theoretical and practical implications for ESP curriculum design, international student support systems, and cross-cultural career guidance in higher education settings.

## **2. Literature review & theoretical framework**

### **2.1. Cross-Cultural adaptation**

Cross-cultural adaptation refers to the dynamic process through which individuals undergo cognitive, emotional, and behavioral adjustments in response to unfamiliar cultural environments, with the aim of achieving both functional integration and psychological coherence within the host culture <sup>[22-23]</sup>. This process involves not only the acquisition of language, values, and social norms but also the development of psychological strategies to cope with challenges arising from cultural differences.

According to Kim's (2001)<sup>[24]</sup> Integrative Theory of Cross-Cultural Adaptation, adaptation follows a stress–adaptation–growth spiral model, in which individuals continuously regulate their internal states in response to cultural dissonance. Through repeated cycles of dissonance and adjustment, individuals eventually achieve personal growth and transformation in the new cultural environment.

For international students, cross-cultural adaptation is not only vital to their social integration and academic performance but also profoundly shapes their construction of career identity and developmental potential. Yeh and Inose (2003)<sup>[25]</sup> found that English language proficiency and satisfaction with social support significantly predicted levels of acculturative stress, which in turn influenced students' self-efficacy regarding their career goals. In a systematic review of cross-cultural adjustment among international students in the United States, Zhang and Goodson (2011)<sup>[26]</sup> concluded that strong adaptive capacities are associated with a heightened sense of career agency, clearer vocational planning, and stronger self-concept clarity, all of which contribute to enhanced career development motivation. Additionally, Smith and Khawaja (2011)<sup>[6]</sup>

emphasized that differences in cultural adaptation capabilities significantly influence coping strategies and psychological resilience during career exploration processes.

Taken together, cross-cultural adaptation is not merely a survival strategy in foreign environments; it may serve as an intrinsic driver and source of social capital in the pursuit of career development. Therefore, this study proposes the following hypothesis:

H1: The level of cross-cultural adaptation among Chinese ESP students in Thailand significantly and positively predicts their career development.

## **2.2. Career self-concept and career intention**

Cross-cultural adaptation is not only a foundational competence for international students to survive and study abroad, but also plays a critical role in shaping their psychological identity and career cognition. In their meta-analysis, Nguyen and Benet-Martínez (2013)<sup>[27]</sup> demonstrated that successful cross-cultural adaptation significantly enhances individuals' identity integration, social engagement, and future planning capacity, positioning it as a vital motivational driver for career development. High levels of adaptation not only help maintain a stable career identity in complex environments, but also provide a strong psychological basis for long-term career growth<sup>[28]</sup>.

In cross-cultural contexts, international students must continuously negotiate their role positioning and self-perception across multiple cultural frameworks, a process that deeply affects the formation of their career self-concept. According to Nguyen and Benet-Martínez (2013)<sup>[27]</sup>, individuals who effectively integrate aspects of both heritage and host cultures tend to exhibit greater psychological adjustment and self-concept clarity—factors that are conducive to the stabilization and internalization of career identity.

Further, Yeh and Inose (2003)<sup>[25]</sup> noted that international students with higher levels of cross-cultural competence demonstrate stronger self-efficacy and greater alignment between personal and professional role expectations. Drawing on Savickas' (2002)<sup>[29]</sup> Career Construction Theory, self-concept functions as a mediating mechanism between environmental factors such as cultural adaptation and developmental outcomes such as career progression.

Based on the aforementioned theoretical and empirical evidence, the following hypotheses are proposed:

H2: Cross-cultural adaptation significantly and positively predicts the career self-concept of Chinese ESP students in Thailand.

H3: Career self-concept significantly and positively predicts career development among Chinese ESP students in Thailand.

H4: Career self-concept plays a significant mediating role in the relationship between cross-cultural adaptation and career development among Chinese ESP students in Thailand.

## **2.3. Differences in career development by demographic variables**

Gender and educational level, as essential demographic variables, demonstrate structural differences in the career development trajectories of international students. Prior research has consistently identified gender as a salient predictor of career development outcomes among globally mobile learners. Female students tend to exhibit stronger goal orientation, heightened career self-awareness, and greater willingness to seek out developmental resources<sup>[30]</sup>. As noted by Pliogou, Tromara, Hajisoteriou and Angelides (2025)<sup>[31]</sup>, women in cross-cultural educational contexts are more likely to proactively engage with career-building resources, articulate personal growth needs, and demonstrate higher levels of career participation and role responsibility.

These traits not only enhance academic engagement but also contribute to well-defined career identities and future-oriented planning.

In addition, women generally display greater self-awareness in perceiving career success and a stronger capacity to mobilize resources—traits which make them more adaptive in uncertain cross-cultural employment environments. Collectively, these studies emphasize the unique role of gender—particularly the proactive career orientation of female students—as a positive factor in overcoming intercultural career challenges and advancing their career development. Accordingly, this study proposes the following hypothesis:

H5: Gender significantly influences the career development of Chinese ESP students in Thailand.

Educational attainment is widely recognized as a critical factor influencing both career development awareness and behavior. Graduate-level students—those pursuing master's and doctoral degrees—typically demonstrate more developed career self-concepts and clearer visions for their career development pathways. Studies have shown that postgraduate education often entails systematic training, intensive practical mentorship, and increased access to developmental resources, all of which contribute to the formation of a mature professional identity<sup>[32]</sup>.

Moreover, individuals with higher academic qualifications tend to exhibit stronger career control and goal-directed behavior. They are more adept at identifying personal strengths and crafting strategic career plans, particularly within diverse or intercultural contexts<sup>[33-34]</sup>. Educational advancement not only reflects enhanced knowledge structures but also implies greater access to career-relevant resources and more robust pathway clarity<sup>[35]</sup>.

Taken together, academic level demonstrates both theoretical and empirical significance in shaping career development outcomes. Based on this, the current study proposes the following hypothesis:

H6: Educational level significantly differentiates the career development outcomes of Chinese ESP students in Thailand.

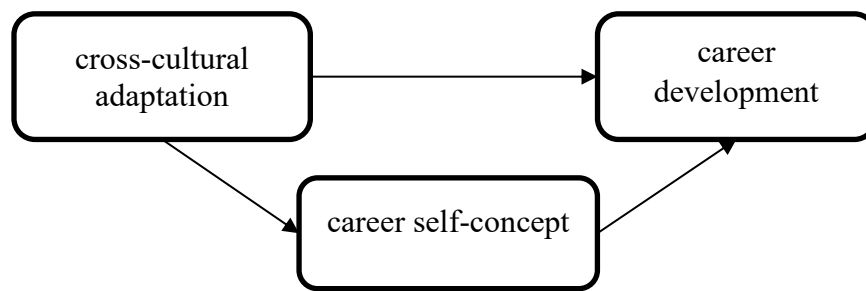
### **3. Methodology**

#### **3.1. Study design**

This study adopted a quantitative research design to examine the structural relationship among cross-cultural adaptation, career self-concept, and career development among Chinese ESP students in Thailand. Situated within the context of ESP education, the study emphasizes the dynamic interplay between language socialization, cultural adaptation, and the construction of professional identity.

As illustrated in Figure 1, the hypothesized model posits cross-cultural adaptation as the independent variable, career development as the dependent variable, and career self-concept as the mediating variable. To test the hypothesized pathways and mediating effects, PROCESS macro (Model 4) in SPSS was employed. The bias-corrected bootstrapping method with 5,000 resamples was used to estimate the indirect effects with a 95% confidence interval.

The overall research process encompassed four key phases: questionnaire development, sample survey, data preprocessing, and statistical modeling. Drawing on a dataset of 511 valid responses, the study offers empirical insights into the structural relationship between intercultural adaptation and professional identity development among ESP learners in transnational contexts.



**Figure 1.** Theoretical framework

### 3.2. Participants

The participants of this study were Chinese students currently enrolled in English for Specific Purposes (ESP) programs at international colleges in eight universities across Thailand. These ESP courses were delivered in English as the medium of instruction and were highly integrated with students' disciplinary tasks and career-related competencies, reflecting the essential characteristics of ESP pedagogy.

Data collection took place between October 2024 and May 2025 using a mixed-mode approach that included both online and paper-based distribution methods. A total of 520 questionnaires were distributed, and after excluding incomplete or invalid responses, 511 valid responses were retained for analysis, yielding an effective response rate of 98.27%. All participants provided informed consent prior to the survey and were assured of the anonymity, voluntariness, and independence of their participation.

A total of 511 valid respondents participated in this study. Among them, 187 were undergraduate students (36.6%), 229 were master's students (44.8%), and 95 were doctoral students (18.6%). Regarding the length of study in Thailand, 101 participants (19.8%) had studied for one year or less, 230 participants (45.0%) for two years, and 180 participants (35.2%) for three years or more. The average duration of study in Thailand was approximately 1.91 years. Most participants reported intermediate to advanced English proficiency, enabling them to complete coursework taught in English and actively engage in both academic and professional communication tasks.

Overall, the sample is considered highly representative of the Chinese ESP student population in Thailand, effectively capturing the linguistic, academic, and career socialization context of this group. This aligns well with the study's objectives and the requirements of the proposed modeling analysis.

### 3.3. Research instruments

A structured questionnaire was utilized to collect data covering three core variables: cross-cultural adaptation, career self-concept, and career development. The measurement scales were adapted from validated instruments in previous research and modified to fit the context of Chinese ESP students in Thailand. All items were rated on a five-point Likert scale (1=strongly disagree to 5=strongly agree), with higher scores indicating stronger levels in each respective dimension.

The measurement of cross-cultural adaptation was based on the Difficulty of Sociocultural Adjustment (DSA) scale, originally developed from the Sociocultural Adaptation Scale (SAS) by Chen, Wang, You, Chen and Chew (2020)<sup>[36]</sup>. This scale assesses two primary dimensions: academic adaptation and daily life adjustment, with 26 items and a reported reliability range from .710 to .910. In the present study, an additional dimension—intercultural communication competence—was integrated based on the PRICA framework, resulting in a three-factor scale comprising 40 items in total.

Career self-concept was measured using a revised six-item scale based on the theoretical framework of Super (1980)<sup>[9]</sup>. Items assessed individuals' perceptions of their occupational roles, abilities, and future career direction. The scale yielded a Cronbach's alpha of .836 in this study. The theoretical foundation draws from Super's (1980)<sup>[9]</sup> distinction between the psychological (career choice and adjustment) and social (role identification and structural evaluation) dimensions, as well as the conceptual contributions from Villa and Calvete (2001)<sup>[37]</sup>.

Career development was assessed using a self-developed 16-item scale with two subscales: "Willingness to Participate in Career Development" and "Practical Engagement in Developmental Behaviors." The structure was informed by McMahon and Patton's (2005)<sup>[38]</sup> adaptation of the Career Development Inventory (CDI), as well as motivational constructs outlined by Zunker (2006)<sup>[39]</sup>. Cronbach's alpha values were .856 and .877, respectively. To enhance cultural appropriateness, the scale was reviewed and revised by three domain experts in career psychology and educational measurement.

Prior to the full-scale implementation, all instruments were reviewed by three experts in language education and cross-cultural research. A pilot test was conducted with 30 Chinese ESP students in Thailand to examine item clarity, cultural relevance, and content alignment. Feedback confirmed the reliability and structural validity of the instruments for large-scale quantitative analysis.

### 3.4. Data analysis

Data analysis was conducted using IBM SPSS Statistics 26.0 and the PROCESS macro (Model 4). Descriptive statistics, reliability tests, Pearson correlation, independent samples *t*-tests, one-way ANOVA with Tamhane's T2, hierarchical regression, and mediation analysis were performed. The indirect effect was tested using bootstrap resampling with 5,000 iterations and 95% confidence intervals. Harman's single-factor test was used to assess common method bias. A significance level of  $p < .05$  was applied throughout.

## 4. Results

### 4.1. Descriptive statistics and reliability/validity assessment

Descriptive statistics and psychometric properties of the main variables are summarized in Table 1. The mean score for cross-cultural adaptation was 3.81 ( $SD=0.56$ ), for career self-concept 3.92 ( $SD=0.61$ ), and for career development 4.01( $SD=0.53$ ). All three constructs demonstrated strong internal consistency, with Cronbach's alpha values of .861, .879, and .884 respectively—each exceeding the commonly accepted threshold of .800. Moreover, composite reliability (CR) values were .82, .85, and .86 for each construct, and the average variance extracted (AVE) values were all above .50, indicating acceptable levels of convergent validity and structural integrity.

**Table 1.** Descriptive statistics and reliability/validity of key variables

Construct	<i>M</i>	<i>SD</i>	Cronbach's $\alpha$	CR	AVE
Cross-Cultural Adaptation	3.81	0.56	.861	.82	.58
Career Self-Concept	3.92	0.61	.879	.85	.61
Career Development	4.01	0.53	.884	.86	.63

### 4.2. Common method bias test

To evaluate the potential impact of common method bias (CMB), this study employed Harman's single-factor test. All items from the structured questionnaire were subjected to unrotated exploratory factor analysis. A total of 62 factors were extracted, with six factors having eigenvalues greater than 1. Notably, the

first factor accounted for only 31.58% of the total variance, which is below the conventional threshold of 40% [40].

Moreover, the extracted factor structure exhibited clear multidimensionality, indicating that no single factor dominated the variance among items. These results suggest that common method bias is unlikely to pose a significant threat to the validity of the findings in this study.

### 4.3. Gender and educational background differences in career development

To examine gender differences in career development, an independent samples *t*-test was conducted. As shown in Table 2, female students reported significantly higher career development scores ( $M=2.94$ ,  $SD=0.74$ ) than their male counterparts ( $M=2.54$ ,  $SD=0.63$ ). Welch's *t*-test, which does not assume equal variances, yielded a statistically significant result:  $t(504.392)=-9.613$ ,  $p<.001$ . The mean difference was  $-0.584$ , with a 95% confidence interval of  $[-0.703, -0.464]$ .

The effect size, measured by Cohen's *d*, was 0.69, indicating a moderate to large effect. These findings support Hypothesis H5: Gender plays a significant role in shaping career development among Chinese ESP students studying in Thailand.

**Table 2.** Gender differences in career development scores

Group	M	SD	t	df	p	Mean Difference	95% Confidence Interval
Male	2.54	0.63					
Female	2.94	0.74	-9.613	504.392	<.001	-0.584	[-0.703;0.464]

To examine the impact of educational level on career development, a one-way analysis of variance (ANOVA) was conducted. Participants were categorized into three educational groups: undergraduate ( $N=187$ ), master's ( $N=229$ ), and doctoral students ( $N=95$ ). The mean scores of career development for these groups were 2.36 ( $SD=0.59$ ), 2.73 ( $SD=0.75$ ), and 3.06 ( $SD=0.80$ ), respectively, indicating an upward trend in career development as the level of education increased.

The test of homogeneity of variance using Levene's statistic indicated a violation of the assumption,  $F=6.025$ ,  $p=.003$ . Therefore, a robust post-hoc analysis using Tamhane's T2 was applied. The ANOVA results revealed a significant effect of educational level on career development,  $F(2, 508)=33.448$ ,  $p<.001$ . The effect size,  $\eta^2=.116$ , reflects a moderate practical significance, suggesting that educational level has a substantive influence on career development.

Further comparisons using Tamhane's T2 showed that doctoral students reported significantly higher scores than both master's students ( $M$  difference=0.33,  $p<.01$ ) and undergraduates ( $M$  difference=0.70,  $p<.001$ ). Additionally, master's students scored significantly higher than undergraduates ( $M$  difference=0.373,  $p<.001$ ). All differences were further validated through bootstrapping procedures, confirming the robustness of the results (see Table 3). These findings support Hypothesis H6: significant differences in career development exist among Chinese ESP students in Thailand at different educational levels.



**Table 3.** Differences in career development scores across educational levels

Items	N	M	SD	F	p	cf.	Mean Difference	p	95% CI
1	187	2.36	0.59	33.448	<.001	1 vs 2	-0.373	<.001	[-0.544, -0.203]
2	229	2.73	0.75			1 vs 3	-0.700	<.001	[-0.916, -0.481]
3	95	3.06	0.80			2 vs 3	-0.330	<.001	[-0.536, -0.114]

*Note.* 1= Undergraduate, 2=Master's, 3=Doctoral. cf. = compare

#### 4.4. Correlation analysis

To examine the relationships among the core variables, this study conducted Pearson correlation analyses. The results revealed that cross-cultural adaptation was significantly and positively correlated with career self-concept ( $r=.332, p<.001$ ) and moderately correlated with career development ( $r=.557, p<.001$ ). In addition, a significant positive correlation was observed between career self-concept and career development ( $r=.321, p<.001$ ). All correlation coefficients reached statistical significance at the 0.01 level (two-tailed).

Furthermore, the 95% confidence interval for the correlation between cross-cultural adaptation and career development was [.494, .614], indicating a robust and statistically meaningful linear relationship between the two variables. Given that all values are reported in-text, the correlation matrix table has been omitted for brevity.

#### 4.5. Regression analysis

To examine the direct relationships among the primary variables, a series of hierarchical linear regression analyses were conducted based on the hypothesized model. These analyses included: (1) the predictive effect of Cross-Cultural Adaptation on Career Self-Concept (Path 1); (2) the effect of Career Self-Concept on Career Development (Path 2); and (3) the direct effect of Cross-Cultural Adaptation on Career Development (Path 3). The regression results are presented in Table 5.

For Path 1, with Career Self-Concept as the dependent variable and Cross-Cultural Adaptation as the independent variable, the model showed a significant positive predictive effect:  $B=.276, SE=.035, \beta=.332, t=7.941, p<.001$ . The coefficient of determination was  $R^2 = .110$ , indicating that Cross-Cultural Adaptation explained 11% of the variance in Career Self-Concept. These results support Hypothesis H2: Cross-Cultural Adaptation significantly and positively predicts Career Self-Concept among Chinese ESP students in Thailand.

In Path 2, with career development as the dependent variable and career self-concept as the predictor, results indicated a significant positive predictive effect of career self-concept on career development ( $B=.570, SE=.074, \beta=.321, t=7.646, p<.001$ ). The model explained 10.3% of the variance in career development ( $R^2=.103$ ). This finding supports Hypothesis H3: Career self-concept significantly and positively predicts career development among Chinese ESP students in Thailand.

In Path3, cross-cultural adaptation was used to predict career development. The regression coefficient was found to be significant ( $B=.823, SE=.054, \beta=.557, t=15.133, p<.001$ ), with the model accounting for 31.0% of the variance in career development ( $R^2=.310$ ), which is notably higher than that of the previous two models. This finding supports Hypothesis H1: Cross-cultural adaptation significantly and positively predicts career development among Chinese ESP students in Thailand.

**Table 4.** Path relationships between cross-cultural adaptation, career self-concept, and career development

Model	Variables		<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	<i>R</i> <sup>2</sup>	<i>F</i>
1	CSC	CCA	.276	.035	.332	7.941	< .001	.110	62.999
2	CD	CSC	.570	.074	.321	7.646	< .001	.103	58.478
3	CD	CCA	.823	.054	.557	15.133	< .001	.310	228.998

*Note:* *B*=Unstandardized regression coefficient; *SE*=Standard error;  $\beta$ =Standardized regression coefficient; *R*<sup>2</sup>=Coefficient of determination; *p*<.001 indicates statistical significance; *CSC*=Career-Self Concept, *CD*=Career Development, *CCA*=Cross-Cultural Adaptation

All three paths were statistically significant, suggesting that cross-cultural adaptation exerts a direct influence on career development and may also indirectly affect it through the mediating role of career self-concept. These results provide both theoretical and statistical justification for conducting further mediation analysis (see Table 4).

#### 4.6. Mediation analysis

To further examine the mediating role of career self-concept in the relationship between cross-cultural adaptation and career development, this study employed Model 4 of the PROCESS macro version 3.5. A bootstrap resampling method with 5,000 iterations was used to estimate the significance of the indirect effect and its confidence interval.

The results indicated that the total effect of cross-cultural adaptation on career development was .823, with a 95% confidence interval of [0.716, 0.930], which was statistically significant (*p*<.001). After controlling for the mediator (career self-concept), the direct effect remained significant at .748, with a 95% confidence interval of [0.636, 0.860]. The indirect effect—calculated as the difference between the total and direct effects—was 0.075 (*SE*=.020), with a bootstrap confidence interval of [.037, .117], not including zero, indicating a statistically significant mediation (See Table 5).

Furthermore, the completely standardized indirect effect was 0.051 (*BootSE*=.013, 95% *CI*=[.025, .078]), suggesting a small-to-moderate but theoretically meaningful mediation effect. These results provide empirical support for Hypothesis H4: Career self-concept plays a significant mediating role in the relationship between cross-cultural adaptation and career development among Chinese ESP students in Thailand.

In summary, career self-concept functions as a partial mediator, suggesting that the development of career-related self-perceptions among Chinese students studying abroad may help transform their cross-cultural adaptation experiences into meaningful professional growth and direction.

**Table 5.** Mediation analysis: The mediating role of career self-concept between cross-cultural adaptation and career development

Effect Path	Effect Type	Effect Size	Standard Error (SE)	Boot LLCI	Boot ULCI	<i>p</i>
X→Y	Total Effect	.823	.054	.716	.930	<.001
X→Y	Direct Effect	.748	.057	.636	.860	<.001
X→M→Y	Indirect Effect	.075	.020	.037	.117	.001
X→M→Y	Completely Standardized Indirect Effect	.051	.013	.025	.078	.001

*Note:* Indirect effects were estimated using the Bootstrap method with 5,000 resamples. *CI* = Confidence Interval; completely standardized coefficients reflect effect magnitude.

## **5. Discussion**

### **5.1. The influence of cross-cultural adaptation on career self-concept**

The present study found that cross-cultural adaptation significantly and positively predicts career self-concept among Chinese ESP students in Thailand ( $\beta=.332, p<.001$ ). This suggests that students who exhibit more effective adaptation to the Thai cultural context tend to possess a clearer and more stable perception of their career roles and capabilities. This finding aligns with the theoretical framework proposed by Nguyen and Benet-Martínez (2013)<sup>[27]</sup>, which emphasizes that bicultural competence enhances psychological integration and facilitates the internal construction and affirmation of one's professional identity.

Furthermore, existing research indicates that successful cross-cultural adaptation contributes to heightened self-efficacy, improved social interaction quality, and a stronger sense of occupational identity security among international students. Positive cognitive appraisals arising from the adaptation process may serve as a crucial psychosocial foundation for the development of career self-concept. Therefore, cross-cultural adaptation should not only be viewed as an index of social integration but also as a valuable psychosocial resource that supports the transformation and construction of vocational self-understanding.

### **5.2. The influence of career self-concept on career development**

This study further confirms that career self-concept significantly and positively predicts career development ( $\beta=.321, p<.001$ ). This finding indicates that, within a cross-cultural context, individuals who possess a clearer understanding of their career roles, goals, and competencies are better equipped to engage in effective career planning and development. The result is consistent with Super's (1980)<sup>[9]</sup> theory of career self-concept, which posits that occupational behavior is a manifestation of one's self-perception extended into the world of work.

Among international students, career self-concept not only shapes expectations for future career trajectories but also influences their willingness to engage in career-preparation activities. These findings align with theories of vocational identity, which suggest that a well-defined career self-concept enables individuals to demonstrate stronger goal orientation and behavioral execution, especially when navigating uncertain or competitive career environments.

### **5.3. The mediating role of career self-concept**

Using a PROCESS mediation model, this study revealed that career self-concept partially mediates the relationship between cross-cultural adaptation and career development (indirect effect=.075, 95% CI [.037, .117]).

Although the effect size is modest, the result is statistically significant, suggesting a potential pathway through which cultural adjustment may influence career development via changes in self-concept.

These findings are consistent with Savickas's (2002)<sup>[29]</sup> career construction theory, which views career development as a meaning-making process in which the self-concept plays an organizing and empowering role.

Within the process of cultural adaptation, individuals may engage in self-regulation and reflection that help clarify their capabilities and social roles. While further research is needed to confirm this mechanism, the current results offer preliminary empirical support for this theoretical link.

### **5.4. The impact of background variables on career development**

This study further examined the effects of two demographic background variables—gender and academic level—on the career development of Chinese ESP students in Thailand. The results revealed

statistically significant differences for both variables. Specifically, female students scored significantly higher in career development than their male counterparts, supporting Hypothesis H5. This finding aligns with Gbadamosi et al. (2015)<sup>[41]</sup>, who reported that female students tend to exhibit greater self-efficacy and career aspirations, particularly in proactively seeking career resources and engaging in preparatory activities. Such proactivity may be a critical factor contributing to their stronger perceived career development in cross-cultural environments.

In addition, significant differences were also found across academic levels. Graduate students (both master's and doctoral) reported significantly higher career development scores than undergraduate students, lending support to Hypothesis H6. This result echoes findings by Weng and McElroy (2012)<sup>[42]</sup>, who demonstrated that individuals with higher levels of education often possess greater access to career advancement opportunities, clearer career trajectories, and more robust experiences of organizational career growth. These factors contribute to higher levels of career commitment and development.

These differences may be attributed to varying levels of access to educational resources, maturity in cross-cultural adjustment, and stages of self-awareness among international students<sup>[43]</sup>. Female and high-level academic students tend to demonstrate greater agency and integration capabilities in sociocultural adaptation, which may stabilize their sense of career self-efficacy and goal orientation, ultimately translating into more favorable career development outcomes.

## **6. Conclusion**

### **6.1. Limitations and recommendations**

Despite its theoretical and practical contributions, this study has several limitations. First, the use of a cross-sectional design limits the ability to make causal inferences. While the PROCESS mediation model clarifies the directional relationships among variables, future studies should adopt longitudinal or experimental designs to strengthen causal claims. Second, the sample was restricted to Chinese ESP students studying in Thailand, which may limit the generalizability of the findings across different cultural and regional contexts. Future research should include more diverse, multicultural populations to enhance external validity.

Additionally, although this study focused on the mediating role of career self-concept, other psychological constructs—such as self-efficacy, perceived employability, and goal clarity—may also play important roles in shaping career development. Future studies are encouraged to construct more comprehensive models that incorporate multiple mediators or moderators to further uncover the underlying mechanisms of career development in cross-cultural contexts.

### **6.2. Conclusion**

This study explored the influence of cross-cultural adaptation on career development among Chinese ESP students in Thailand, with particular attention to the mediating role of career self-concept. Drawing upon 511 valid responses, the findings offered strong empirical support for the proposed hypotheses.

Cross-cultural adaptation was found to significantly and positively predict career self-concept, indicating that students who adapt well to the host cultural environment tend to develop a clearer and more confident career identity. In turn, career self-concept significantly predicted career development outcomes, suggesting that internalized clarity and confidence serve as important facilitators of professional growth. Furthermore, the results confirmed that career self-concept partially mediated the relationship between cross-cultural adaptation and career development, providing empirical validation for integrating cultural adaptation and career construction theories.

Additionally, gender and educational background were shown to influence career development. Female students and those enrolled in postgraduate programs (Master's and doctoral levels) reported significantly higher levels of career development. These findings underscore the importance of fostering cross-cultural competencies and career cognition to enhance the professional development of ESP learners in international educational contexts.

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## Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## Conflict of interest

The authors declare no conflict of interest

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