A Structural Model of Chinese Idiom Competence among Second Language Learners

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Abstract

This article aimed to study 1) the reliability and validity of the measurement scales of perceived semantic transparency, intercultural sensitivity, learning engagement, cognitive strategy use, and perceived idiomatic competence; 2) the differences in these variables across demographic characteristics; and 3) the structural relationships among these variables in second language learning. The sample consisted of 205 international students learning Chinese as a second language, selected through convenience sampling in university contexts. The instrument used for collecting data was a structured questionnaire. Data were analyzed using descriptive statistics, reliability and validity testing, exploratory and confirmatory factor analysis, and structural equation modeling (SEM). The research results were as follows: 1) All measurement scales demonstrated strong reliability and validity; the constructs of perceived semantic transparency, intercultural sensitivity, learning engagement, cognitive strategy use, and perceived idiom competence were measured consistently and accurately. 2) Gender differences were observed in intercultural sensitivity, with male learners scoring higher, and students from non-Chinese majors reporting higher levels of learning engagement. 3) SEM results revealed a structured mechanism in which perceived semantic transparency significantly influenced learning engagement and cognitive strategy use, learning engagement further promoted cognitive strategy use, and cognitive strategy use directly predicted perceived idiom competence. Intercultural sensitivity also showed both indirect effects through engagement and strategy use and a direct

effect on perceived idiom competence. These findings contribute to second language acquisition research by demonstrating that idiom competence develops through an integrated process in which cultural awareness and linguistic perception are transformed into competence via engagement and strategic processing.

Keywords: Cognitive Strategy Use; Perceived Semantic Transparency; Idiom Competence

Introduction

Idiomatic expressions are a key part of the ability to communicate in a second language; idiomatic expression not only reflects linguistic conventions, but also contains cultural connotations. Researchers mentioned that we need to know grammar and understand the meaning of figures in culture to learn a language successfully. Second Language Acquisition studies show that idioms can be understood by different things like semantic transparency, cognitive processing strategies, and cultural awareness (Hubers et al., 2020; Soto–Sierra & Ferreira, 2024) Cong – Lem (2025) pointed out that intercultural competence is a necessary part of understanding language that is full of culture and creating connections between different languages. But most of them take idioms as a type of figure of speech in general, without much regard for the specifics of the language and especially so when it comes to Chinese idioms which are structure–fixed and usually consist of 4 characters, they're also embedded within history and culture. Thus, these characteristics make the Chinese idioms more condensed and fuller of culture than a lot of other sorts of figurative speech, which also creates problems for second language learners. Although there has been some progress, the gaps are still there not only because it does not have an integrated model but also due to the lack of explaining why cultural competences and linguistic perceptions interact in idioms. Although some research has studied the semantic transparency and intercultural competence individually, there is no clarification of what the two mean together. From a cognitive – culture point of view, intercultural sensitivity maybe come first and make learners feeling about how idiom is transparent or not due to whether they can find out those cultural meanings and metaphorical relation from different countries.

In the area of second language education, idioms are a special problem for language students as they usually refer to metaphorical meanings and so cannot be guessed out of the literal meanings of their words. Students usually have difficulty comprehending idioms because they don't know much about culture and haven't been exposed to figurative language in actual situations. According to previous studies, learners' perception of the semantical transparency,

learner's engagement on activity and strategy used for processing language all could have big impact towards how good a person can understand idiom (Hiver et al., 2024) But they tend to be considered separately from one another and there is a weak link as regards what is culturally aware, linguistically perceptive, motivated ally engaged and strategically behavioral. These kinds of elements have very infrequently been looked at all together in one large model which takes into account the contextual element of being interculturally sensitive.

This study is to focus on just Chinese idioms which are perhaps even harder and more deeply rooted in culture than figure of speech like metaphor and provide a better context when it comes to studying how cultural and cognitive factors come into play during second language acquisition. This research also intends to look into how reliable and valid each construct is as measured by this scale, see if there are any differences based on different demographic characteristics, and examine the structure relationship between major variable using SEM. These goals were taken straight from those researched blanks in order to make it clear what the structure between these variables are and the reason behind how a person gets better at knowing idioms.

Research Objectives

1. To examine the reliability and validity of the scales measuring perceived semantic transparency, intercultural sensitivity, learning engagement, cognitive strategy use, and perceived idiom competence.

2. To examine the difference of perceived semantic transparency, intercultural sensitivity, learning engagement, cognitive strategy use, and perceived idiom competence between different demographic characteristics.

3. To analyze the relationships among perceived semantic transparency, intercultural sensitivity, learning engagement, cognitive strategy use, and perceived idiom competence.

Literature Review

In second language learning, it is acknowledged that having intercultural sensitivity plays a part when there's a close bond between language and culture. According to research, it helps learners understand the meaning of different cultures in language and communicate better with others from other countries (Cong – Lem, 2025): Understanding figurative language like idiomatic statements from the perspective of cognition, we have to know cultural metaphor and culturally

based concepts (Soto –Sierra&Ferreira,2024). Learners who are more sensitive to interculturality will thus perhaps be able to identify better the sort of conceptual motivation which idioms convey, and this might affect how transparent they find the semantics. In the case of Chinese idiom it's especially relevant because they are very compressed (Liu & Su, 2021).

Intercultural sensitivity is also related to learner participation in language learning activities. Research shows that people with an intercultural consciousness tend to be more involved when it comes to learning languages (Weda et al. 2022) And also it may influence the way that learner uses cognitive strategy. Inference, context, etc. are all methods necessary for understanding figurative language, and it seems that students also use these same strategies when confronted with idiomatic expressions (Liu, 2017) From the perspective of theory, it can be said that this is an intersection point where Engage Theory and Language Learning Strategy Theory come together; Intercultural Sensitivity becomes a kind of condition for engagement to occur (Solodka et al., 2021).

Idiom Competence is the competence that one can comprehend and use idiomatic expressions properly when communicating. In previous research we see that how idiom comprehension can depend on something like a fact, the sematic tranparency, learning engagement and the usage of your own cognitive strategies (Hubers et.al., 2020) The semantic transparency makes it possible for idiom comprehension as learners can figure out figurative meaning by using the literal meanings of part of component words (Soto–Sierra andFerreira,2024). It's also true for a relationship where successful learning of language leads to you being more active with the activity, so if someone isn't engaged then they're going to be processing less of that second language input (Hiver et al. 2024): And cognitive strategies are also very important as well because it is common for the learners to use context clues and semantics in order to interpret idioms (Liu, 2017).

As for the previous research findings show that learning of idioms is affected by various factors acting together, such as Interculturality, Semantic transparent, Learning engagement, Strategy use (Senkbeil, 2020). All of these help the learners to be able to comprehend and use idiomatic expression in their second language. Recently, there are certain advances on both fronts of digital learning environments as well as AI enhanced language learning (Aldawsari et al., 2025), which gives us a bit more of an idea of where our students may run into those idioms as well as how significant it is towards engagement with strategy used. And it shows we also need a bigger framework including culture, cognitive, and behavioral factors in idiom learning.

Conceptual Framework

This research is a study that examines the mechanisms underlying learners' development of idiom competence in a second language context. The researcher defines the research conceptual framework based on theories of figurative language processing and intercultural communication, together with engagement theory and language learning strategy theory. From the perspective of psycholinguistics and second language acquisition, idiom comprehension is influenced not only by linguistic features such as semantic transparency but also by learners' cultural awareness, motivational involvement in learning activities, and the strategies they employ when processing language input. Therefore, the present study integrates perceived semantic transparency, intercultural sensitivity, learning engagement, cognitive strategy use, and perceived idiom competence into a unified conceptual model in order to explain how these cognitive, cultural, and behavioral factors interact to shape learners' idiom competence. The details of the conceptual framework are presented in Figure 1.

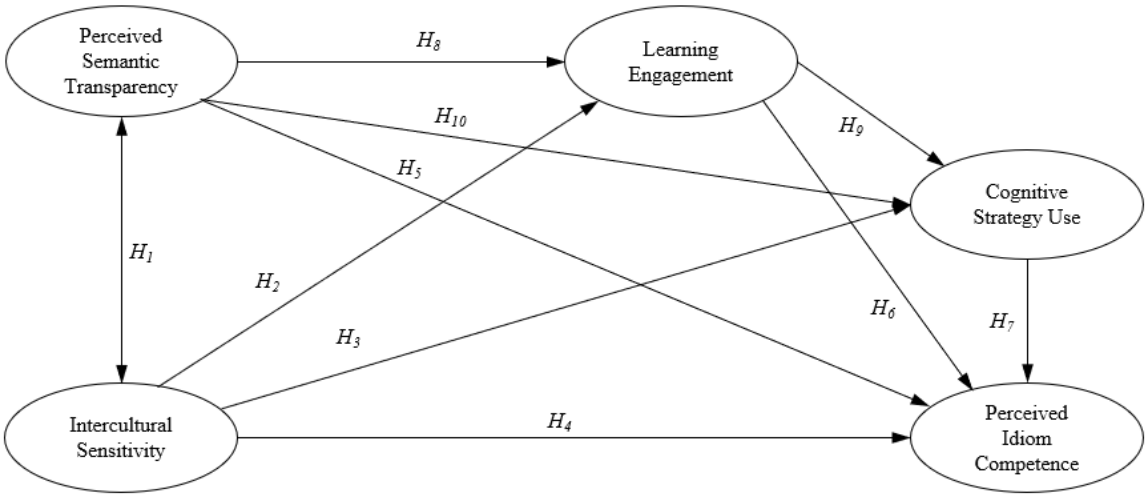


Figure 1 Conceptual Framework

Research Methodology

Research Sample

The population of this study consisted of international students learning Chinese as a second language in higher education institutions. This study employed convenience sampling to select participants, primarily based on the feasibility of research implementation and the practical conditions of sample access. Considering that the sample in this study mainly consisted of learners with intermediate to advanced Chinese proficiency (HSK levels 4–6), who differ from beginners in

that they have relatively rich experience in learning Chinese, especially idioms, which are generally not introduced at the beginner level, questionnaires were distributed in a centralized manner in universities offering Chinese language courses or using Chinese as the medium of instruction in order to improve response efficiency and data quality. In terms of the participants' backgrounds, it was made up of students studying for different subjects, including both Chinese-related majors and non-Chinese majors. The distribution across gender, years of study, and Chinese language proficiency was relatively balanced. Such a sample structure contributes to improving the explanatory power of the findings across different learner groups.

Table 1 Overview of the Research Participants

Category	Description
Total Participants	205 students
Gender	Male (50.2%), Female (49.8%)
Major	Chinese related major (51.8%), Non-Chinese major (48.2%)
Chinese Language Proficiency	HSK4 (34.3%), HSK5 (34%), HSK6 (31.6%)
Years of Study	1-2 years (32.5%), 3-5 years (33.8%), ≥ 6 years (33.8%)
Formally Studied Chinese Idioms	Yes (50.5%), No (49.5%)

In this study (table1), we have 205 international students take class of Chinese as a second language and do the survey by questionnaire. In terms of gender, 50.2% were males and 49.8% were females which can be considered as having an equal amount of both genders. With respect to their academic background, about 51.8% of them were majoring in Chinese and the other 48.2 % were from different kinds of non-Chinese majors. Regarding their Chinese level, 34.3% selected HSK 4, 34.0% picked HSK 5, and 31.6% chose HSK 6, which means most people have a certain level of Chinese proficiency. As for the aspect of learning experience, there were 32.5% who studied Chinese for around 1-2 years, 33.8% who studied for 3-5 years, and 33.8% who studied for over 6 years. Also, when asked if they have been taught how to learn Chinese idioms in school, 50.5 % said yes but 49.5% haven't.

Research Instruments

The measurement instruments used in this study were adapted from established scales to ensure content validity and theoretical alignment. All items retained the original number and basic structure of the source scales, with no deletion or reconstruction of items. Minor contextual adjustments were made to certain expressions to fit the research context. For example, the term "general language learning" and "foreign language learning", etc., were changed to "Chinese

language learning", and some words and phrases were adjusted to be more closely related to Chinese idioms. Kept the main meaning of all scales unchanged, just made some very minor changes in wording so as to make it clear that these were suitable for our participants. All the items were measured on a 5 –point Likert scale: 1 = Strongly Disagree to 5 = Strongly Agree.

Perceived Semantic Transparency was used to measure learners' perceptions of the extent to which the literal components of an idiom help infer its overall meaning. The construct was developed based on the semantic transparency norming paradigm widely used in psycholinguistic research (Vivas et al., 2017). The scale consisted of four items assessing learners' perceptions of the semantic relationship between the literal elements and the figurative meaning of idioms. Higher scores indicate a stronger perception that idioms are semantically transparent and easier to interpret through their component words; Intercultural Sensitivity was measured using an adapted version of the Intercultural Sensitivity Scale developed by Chen and Starosta (2000). This was a total of 24 things in five different categories; interaction engagement, respect for cultural differences, interaction confidence, interaction enjoyment, and interaction attentiveness; Learning Engagement. Learning Engagement used the Utrecht Work–Engagement scale student form created by Schaufeli et al., (2002). It has 17 items, it consists of three parts of vigor, dedication, and absorption. These are what has been altered according to what the students were engaging in with their idiom learning, and Cognitive Strategy Use is being measured through use of a cognitive strategy subscale from the SILL created by Oxford(1990). Strategy refers to the learners' strategy in terms of their analysis of linguistic structures, pattern recognition and practice of language form. The perceived idiom competence is based on the self–perceived communicative competence scale which was proposed by McCroskey and McCroskey (1988) Scale measured the learners' perception of how well they can understand and use Chinese idiom correctly. The higher the score, the more the learner perceives himself as competent with idioms.

Data Analysis

Data analysis was conducted in several stages using SPSS and AMOS. We have conducted descriptive statistics for samples, and we also did cronbachs alpha to see whether there is any consistency between their answers or not. Exploratory factor analysis is carried out in order to find the latent factors of the measurement scale. Kaiser–Meyer–Olkin measure, Bartlett's test of sphericity was carried out to check. Confirmatory factor analysis was done for checking out the measurement model. To evaluate model fit, We used the following: χ^2/df, RMSEA GFI,NFI,TLI, CFI We further looked at the convergent and composite reliability. I used the independent samples

t – test and one – way ANOVA to look at different demographics. Structural equation model was used to assess the supposed relationship between different variables. The path coefficients and the signification were looked at.

Research Results

Objective 1. Reliability analysis was conducted using Cronbach's alpha coefficient to examine the internal consistency of each scale and its dimensions. The result showed all the variables have a good reliable. More precisely, the perceived semantic transparency Cronbach's alpha was α=0.804. Intercultural sensitivity showed an overall reliability of α=0.830 with the reliabilities of its 5 dimension ranged from α = 0.797 to α = 0.859. Learning engagement showed an overall reliability of α = 0.870, and the three dimensions of learning engagement had Cronbach's alpha values of α = 0.886, α = 0.844, and α = 0.857, respectively. Cognitive strategy use demonstrated a very high reliability coefficient of α = 0.937. In addition, perceived idiom competence showed an overall reliability of α = 0.873, while its two dimensions had Cronbach's alpha values of α = 0.855 and α = 0.858. All Cronbach's alpha values were higher than the acceptable threshold of 0.70, indicating that the measurement instruments used in this study have good internal consistency and reliability.

Exploratory factor analysis was conducted to examine the construct validity of the measurement scales used in this study. The Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity indicated that the data were suitable for factor analysis. KMO for the perceived semantic transparency is 0.799 and Bartlett's test is χ^2 = 844.099 df = 6, p < .001: The KMO values for intercultural sensitivity and learning engagement were both greater than 0.8: For Intercultural sensitivity, the KMO was 0.853 (χ^2=6196.817, p<0.001). For Learning engagement, the KMO was 0.903 (χ^2=5156.726, p<0.001). In addition, the KMO values for cognitive strategy use and perceived idiom competence were 0.973 (χ^2 = 5315.321, df = 91, p < 0.001) and 0.910 (χ^2 = 3394.875, p < 0.001), respectively. All KMO values exceeded the recommended threshold of 0.70 and the Bartlett's tests were significant, indicating that the correlation matrices were appropriate for exploratory factor analysis.

By means of PCA we could see what our measurement instrument factors were: The perceived semantic transparency extracted 1 factor with a 2.519 for the eigenvalue which explains the variable % of variance = 62.978 and loadings ranging between 0.779–0.821. Intercultural

sensitivity extracted 5 factors with eigenvalues being 4.923 , 2.757, 2.496, 2.449 and 2.088 which explained the variance proportion of 0.61307. Factor loading was between 0.710 – 0.816. Learning engagement got three components with eigen values of 5.557,2.626 and 2.223,accounted for 61.209%of the variance ranging from 0.720 to 0.817: Use cognitive strategy extract one factor with an eigenvalue of 7.717, which explains 55.118% of the variance and loadings are between 0.716 – 0.776: The perceived idiomatic competence was two with eigenvalues of 5.011 and 2.002 and accounted for 58.443% of the variance in scores on the factor loading ranging from .650 to .795 In general, the factor loadings were greater than the threshold of 0.50 for construct validity and the amount of variance explained by each scale was more than the often accepted value of roughly between 50–60%. This means that all the scales showed good construct validity.

Table 2 Results of Exploratory Factor Analysis and Reliability Analysis

VAR		No. of items	Loading Factors	Communality	% of Variance	Cronbach α
PST		4	0.7790.821	0.6060.674	62.978	0.804
IS	IS1	5	0.7480.816	0.5770.680	61.307	0.830
	IS2	5	0.7570.801	0.5900.678		
	IS3	5	0.7200.809	0.5420.671		
	IS4	5	0.7100.778	0.5180.612		
	IS5	4	0.7610.809	0.6000.670		
LE	LE1	6	0.7380.817	0.5690.709	61.209	0.870
	LE2	6	0.7200.748	0.5530.573		
	LE3	5	0.7600.801	0.6160.671		
CSU		14	0.7160.776	0.5130.603	55.118	0.937
PIC	PIC1	6	0.6500.793	0.4400.652	58.443	0.873
	PIC2	6	0.7070.795	0.5510.650		

Note: PST= Perceived Semantic Transparency, IS= Intercultural Sensitivity, LE= Learning Engagement, CSU= Cognitive Strategy Use, PIC= Perceived Idiom Competence.

The confirmatory factor analysis was conducted using the maximum likelihood estimation method to examine the measurement model. The overall model fit indices indicated a satisfactory fit between the proposed model and the observed data. Specifically, χ^2/df was 1.616, which is below the recommended threshold of 3, the RMSEA value was 0.030, which is lower than the recommended cutoff value of 0.08. And the other goodness fit indexes were GFI = 0.948, NFI = 0.929, TLI = 0.969, and CFI= 0.972, all above the suggested level of 0.90. According to the

parsimony adjusted fit index values were acceptable PNFI=0.836 and PGFI=0.794 which indicated that measurement model was adequately balanced with respect to model fit and simple of the model.

Standardized factor loadings of all the indicators are statistically significant (p<.001) indicating that there is strong association between the observed variable and its corresponding latent construct. Composite reliabilty value is between 0.603 and 0.938 and Average variance extracted values are within the range of 0.413 – 0.519 According to the results of the confirmatory factor analysis, we can see that the measuring model is valid.

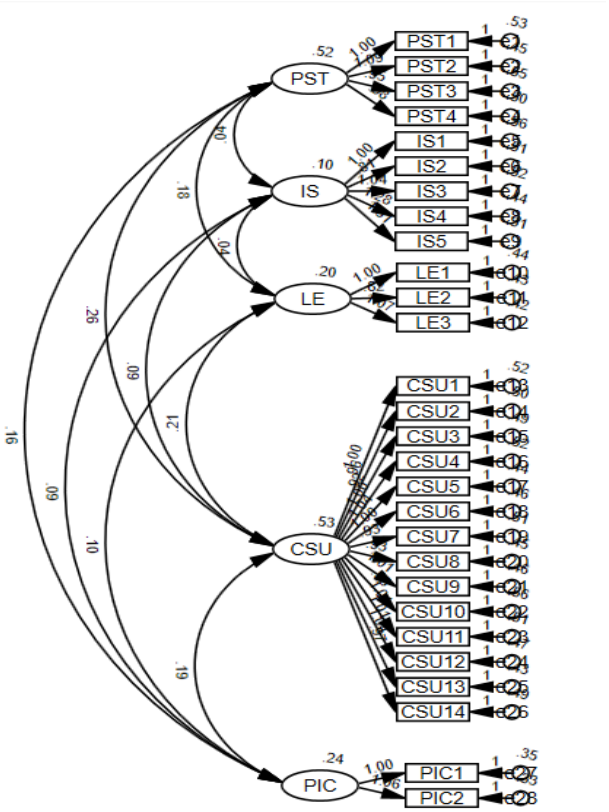


Figure 2 Confirmatory Factor Analysis Results

Objective 2. To further examine differences across demographic characteristics, independent sample t-tests and one way analysis of variance were conducted to analyze gender, academic major, formal learning experience, Chinese language proficiency, and years of Chinese study. Regarding gender differences, the independent sample t-test results indicated that gender showed significant differences in several variables. Specifically, males scored significantly higher than females in intercultural sensitivity ($t = 4.561$, $p < 0.001$), with mean scores of 3.039 ($SD = 0.437$) for males and 2.885 ($SD = 0.458$) for females. Significant differences were also

observed in several dimensions of intercultural sensitivity, including interaction engagement ($t = 2.511$, $p = 0.012$), respect for cultural differences ($t = 2.587$, $p = 0.010$), interaction confidence ($t = 4.715$, $p < 0.001$), and interaction attentiveness ($t = 2.439$, $p = 0.015$), while no significant difference was found in interaction enjoyment. In terms of idiom competence, only the comprehension dimension showed a significant gender difference ($t = 2.251$, $p = 0.025$), whereas the overall idiom competence score and idiom usage dimension were not significant. Perceived semantic transparency, learning engagement, and cognitive strategy use did not show significant gender differences ($p > 0.05$).

With regard to academic major, the results indicated that most variables did not show significant differences between Chinese related majors and non Chinese related majors. Perceived semantic transparency ($t = 0.304$, $p = 0.761$), intercultural sensitivity ($t = 0.803$, $p = 0.422$), cognitive strategy use ($t = 0.496$, $p = 0.620$), and idiom competence ($t = 0.775$, $p = 0.438$) all showed nonsignificant results. However, learning engagement showed a significant difference ($t = 2.491$, $p = 0.013$), with non Chinese related majors reporting higher engagement ($M = 3.038$, $SD = 0.604$) than Chinese related majors ($M = 2.931$, $SD = 0.539$). Further analysis revealed that vigor ($t = 2.070$, $p = 0.039$) and absorption ($t = 2.172$, $p = 0.030$) were also significantly higher among non Chinese related majors, while dedication did not differ significantly ($t = 1.216$, $p = 0.224$).

Regarding formal learning experience, significant differences were observed in several variables. Participants who had formal learning experience scored significantly higher in perceived semantic transparency ($t = 2.554$, $p = 0.011$), with mean scores of 3.077 ($SD = 0.806$) compared with 2.923 ($SD = 0.801$) for those without such experience. Intercultural sensitivity also differed significantly ($t = 2.769$, $p = 0.006$), particularly in the dimensions of interaction engagement ($t = 2.822$, $p = 0.005$) and interaction enjoyment ($t = 1.962$, $p = 0.050$). Cognitive strategy use showed a significant difference ($t = 3.280$, $p = 0.001$), with participants with formal learning experience scoring higher ($M = 3.080$, $SD = 0.740$) than those without ($M = 2.897$, $SD = 0.739$). Idiom competence was significantly higher among those with formal learning experience ($t = 3.950$, $p < 0.001$), including both idiom comprehension ($t = 3.012$, $p = 0.003$) and idiom usage ($t = 3.648$, $p < 0.001$). Learning engagement did not show significant differences between the two groups ($p > 0.05$).

Table 3 Results of Difference Analysis

VAR	PST	IS	LE	CSU	PIC
	M±SD	M±SD	M±SD	M±SD	M±SD
Male	3.04±0.80	3.04±0.44	2.98±0.59	3.03±0.73	3.06±0.65
Female	2.97±0.81	2.89±0.46	2.99±0.56	2.95±0.76	2.97±0.66
	t=1.121	t=4.561***	t=0.255	t=1.487	t=1.850
Chinese related Major	2.99±0.78	2.95±0.47	2.93±0.54	2.98±0.73	3.03±0.66
Non-Chinese related Major	3.01±0.84	2.98±0.44	3.04±0.60	3.00±0.77	2.99±0.65
	t=0.304	t=0.803	t=2.491*	t=0.496	t=0.775
HSK4	2.96±0.80	2.95±0.44	2.93±0.58	2.91±0.75	2.90±0.71
HSK5	3.02±0.83	2.99±0.46	2.99±0.56	3.05±0.77	3.10±0.67
HSK6	3.03±0.78	2.95±0.46	3.03±0.58	3.01±0.71	3.05±0.54
	F=0.600	F=0.580	F=1.950	F=2.270	F=6.150**
12Years	2.99±0.80	2.97±0.45	2.95±0.55	2.95±0.73	3.04±0.56
35Years	3.08±0.81	2.99±0.44	3.08±0.58	3.15±0.72	3.12±0.65
≥6Years	2.94±0.81	2.93±0.47	2.92±0.58	2.86±0.75	2.88±0.71
	F=1.790	F=1.020	F=5.170**	F=9.530***	F=8.130***
Yes	3.08±0.81	3.01±0.44	2.99±0.59	3.08±0.74	3.11±0.66
No	2.92±0.80	2.92±0.46	2.98±0.55	2.90±0.74	2.92±0.64
	t=2.554*	t=2.769**	t=0.190	t=3.280**	t=3.950***

Note: *p<0.05, **p<0.01, ***p<0.001; PST= Perceived Semantic Transparency, IS= Intercultural Sensitivity, LE= Learning Engagement, CSU= Cognitive Strategy Use, PIC= Perceived Idiom Competence.

One way analysis of variance was conducted to examine the effects of Chinese language proficiency and years of Chinese study. Chinese language proficiency did not significantly influence perceived semantic transparency ($F = 0.60$, $p = 0.547$), intercultural sensitivity ($F = 0.58$, $p = 0.560$), learning engagement ($F = 1.95$, $p = 0.143$), or cognitive strategy use ($F = 2.27$, $p = 0.104$). A significant difference was found in idiom competence ($F = 6.15$, $p = 0.002$). Post hoc comparisons showed that students at proficiency level four ($M = 2.897$, $SD = 0.714$) scored significantly lower than those at HSK five ($M = 3.097$, $SD = 0.669$) and HSK six ($M = 3.046$, $SD = 0.543$). Years of Chinese study had significant effects on several variables. Learning engagement differed significantly across groups ($F = 5.17$, $p = 0.006$), with the highest score observed among students with three to five years of study ($M = 3.078$, $SD = 0.575$). Cognitive strategy use also showed significant differences ($F = 9.53$, $p < 0.001$), with the highest mean among the three to five years group ($M = 3.152$, $SD = 0.722$). Idiom competence showed a similar pattern ($F = 8.13$, $p < 0.001$).

Objective 3. Pearson correlation analysis was conducted to examine the relationships among the main variables. The results showed that perceived semantic transparency was significantly positively correlated with learning engagement, cognitive strategy use, and perceived idiom competence, with correlation coefficients generally ranging from approximately 0.30 to 0.36 ($p < 0.01$). This indicates that learners who perceive idioms as more semantically transparent tend to report higher levels of engagement in learning activities, more frequent use of cognitive strategies, and stronger idiom competence. Intercultural sensitivity also showed significant positive correlations with learning engagement, cognitive strategy use, and perceived idiom competence, with correlation coefficients generally below 0.40 ($p < 0.01$), suggesting moderate associations among these constructs. The three indicators of learning engagement were strongly correlated with the overall construct, while the two indicators of perceived idiom competence showed very strong correlations with the overall variable, both exceeding 0.80 ($p < 0.001$).

Table 4 Results of Correlation Analysis

VAR	PST	IS	LE	CSU	PIC
PST	1				
IS	0.122**	1			
LE	0.374**	0.134**	1		
CSU	0.427**	0.303**	0.460**	1	
PIC	0.312**	0.365**	0.252**	0.391**	1

Note: **p<0.01; PST= Perceived Semantic Transparency, IS= Intercultural Sensitivity, LE= Learning Engagement, CSU= Cognitive Strategy Use, PIC= Perceived Idiom Competence.

Structural equation modeling was conducted using AMOS to examine the hypothesized relationships among perceived semantic transparency, intercultural sensitivity, learning engagement, cognitive strategy use, and perceived idiom competence. The results indicated that the structural model demonstrated a satisfactory fit to the data. Specifically, $\chi^2/df = 1.613$, RMSEA = 0.030. GFI = 0.948, NFI = 0.929, TLI = 0.969, CFI = 0.972, PNFI = 0.836 and PGFI = 0.794. These results indicate that the proposed structural model achieved a good overall fit.

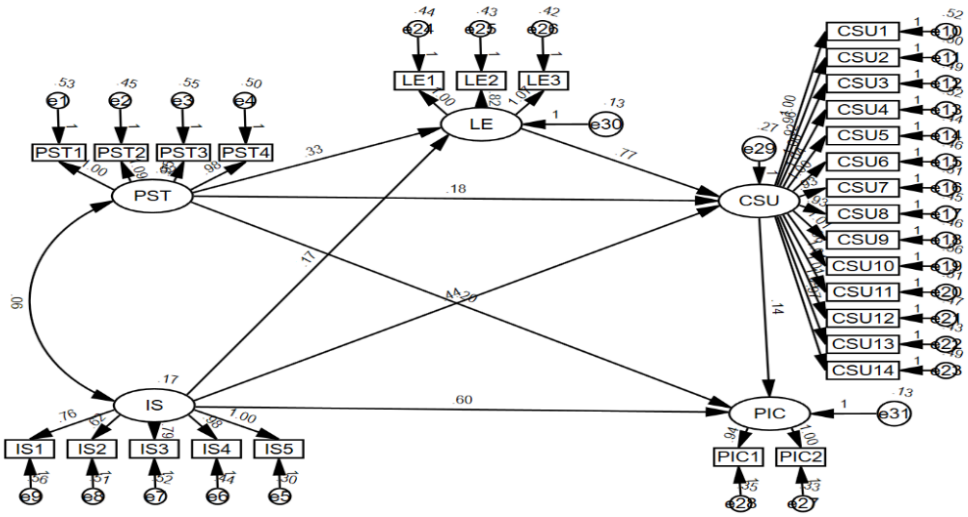


Figure 3 Structural Equation Modeling Results

The path analysis results (Table 5) revealed several significant relationships among the variables. Perceived semantic transparency had a significant positive effect on learning engagement (β = 0.532, p < 0.001) and cognitive strategy use (β = 0.179, p = 0.001). Intercultural sensitivity significantly influenced learning engagement (β = 0.160, p = 0.011) and cognitive strategy use (β = 0.248, p < 0.001). Learning engagement further showed a significant positive effect on cognitive strategy use (β = 0.470, p < 0.001). Cognitive strategy use had a significant positive effect on perceived idiom competence (β = 0.198, p = 0.001). In addition, perceived semantic transparency (β = 0.271, p < 0.001) and intercultural sensitivity (β = 0.470, p < 0.001) both had significant direct effects on perceived idiom competence.

Table 5 Standardized Path Coefficients for the Structural Model

Path	B	β	S.E.	C.R.	P
LE <– PST	0.330	0.532	0.041	8.068	***
LE <– IS	0.175	0.160	0.069	2.546	0.011
CSU <– LE	0.768	0.470	0.124	6.170	***
CSU <– IS	0.444	0.248	0.091	4.883	***
CSU<– PST	0.182	0.179	0.057	3.210	0.001
PIC <– CSU	0.141	0.198	0.044	3.183	0.001
PIC <– PST	0.197	0.271	0.043	4.545	***
PIC <– IS	0.600	0.470	0.099	6.085	***
IS<–>PST	0.056	0.192	0.017	3.365	***

Note: ***p<0.001; PST= Perceived Semantic Transparency, IS= Intercultural Sensitivity, LE= Learning Engagement, CSU= Cognitive Strategy Use, PIC= Perceived Idiom Competence.

Discussions

Under objective 1, since all the measurement items are consistent in their wording, we can say that each scale is capturing what could be a relatively coherent underlying latent construct, supporting the theoretical notion that the perception of semantical transparency, interculturality, engagement with learning tasks, use of cognitive strategies, and perceived idiom competencies are different, although somewhat related, aspects of second–language learning. Theoretically, it is because of the fact that there is multi–dimensionality of language acquisition process involving the cognitive aspect, the cultural dimension as well as motivation and strategy. Hiver et al. (2024) pointed out: For students with different cultures from China who are learning to study Chinese in an international environment, it has special meaning because they need to understand unfamiliar language form and cultural content at the same time.

Objective 2: There is a difference between genders on Intercultural Sensitivity, Men have higher scores then Women. Though there is much that's mixed from past studies, some claim gender has an effect on communication confidence as well (Peng et al. 2015). When people report on their own intercultural sensitivity, there can also be a response bias that leads to an overestimation like the Dunning–Kruger effect. With regard to the international students studying Chinese, the culture expectation and communicating style influenced by home cultures can affect whether or not males and females would assess their cross–cultural competence correctly. And some might feel like they can do it confidently even though actually, it's still developing.

From the analysis of academic major, we found out that non–Chinese majors had more learning engagement. Novelty and seeing things as culturally valuable mean more engagement (Wilczewski et al. 2023): But the "new thing" effect will probably wear off soon. For foreign students, Chinese idioms contain a lot of rich but unfamiliar sayings, so at first, it could excite them a little, mainly for people who aren't specialists. But with increased exposure, that novelty factor would probably wear off over time so it's more about the learners being able to actively work through and make sense out of all those idiomatic meanings, not just from initial interest.

Formal Learning Experience has had considerable influence on numerous variables; therefore, it can be concluded that formal learning experiences foster strategic processing. And it fits in with work pointing out the importance of guidance for figuring out figurative language (Boers & Lindstromberg, 2012): Formal Chinese language education can give learners an explanation for what the meaning of an idiom is, references to culture, and context where it would be used, things that might not be easily understood even if they were given.

In objective 3 we can see that it was associated with positive learning engagement, and cognitive strategies to use. Semantically transparent idioms help with understanding due to the fact that learners are able to make sense of things by breaking down each word (Carroll & Conklin, 2020, Siyanova–Chanturia & Spina, 2020). As for learners who are taking Chinese as their second language, it is even more significant since there are many Chinese idiomatic expressions which contain much compression and cultural ties; hence hard to understand when the literal parts can not be connected with its figurative meaning. If such links are seen then the students will be more active and use their mind.

Also on the structure model we can see that Learning engage would predict cognitive strategy usages. Engagement Theory said If one is Engaged then it means the person will get involved with these type of deep process techniques (Fredicks et.al, 2004) For intercultural earning situations engagement maybe as much a matter of learners to tolerate unfamiliarity with a culture as it is a matter of being motivated. It also could motivate learners to think about the idioms, compare different meaning across culture and inference. As we can see from the findings here cognitive strategies as well as intercultural sensitivity contribute quite a lot to idiom competence. Idioms are culturally contained phrases, learners with more cross–cultural sensitivity will probably be able to understand the meaning of idioms. In the learning of Chinese idiom, the sensitivity to different culture would enable learner to understand the underlying cultural metaphor, whereas the cognitive strategy can help him/her deal with the language form and context. These things work together to help learners cross the line from just plain meaning to cultural embedding.

New Knowledge from Research

The knowledge generated from this study lies in identifying a structured mechanism through which idiom competence develops in second language learning. In Figure 4, Intercultural sensitivity and perceived semantic transparency function as two foundational inputs, representing learners' cultural awareness and their perception of linguistic form meaning relationships. These inputs do not act independently. And they jointly influence learners' engagement in learning activities and their use of cognitive strategies. Learning engagement serves as an activation condition that encourages deeper involvement, while cognitive strategy use reflects the actual processing of idiomatic expressions. Through this process, idiom competence is gradually developed as an outcome of coordinated cultural, cognitive, and behavioral factors.

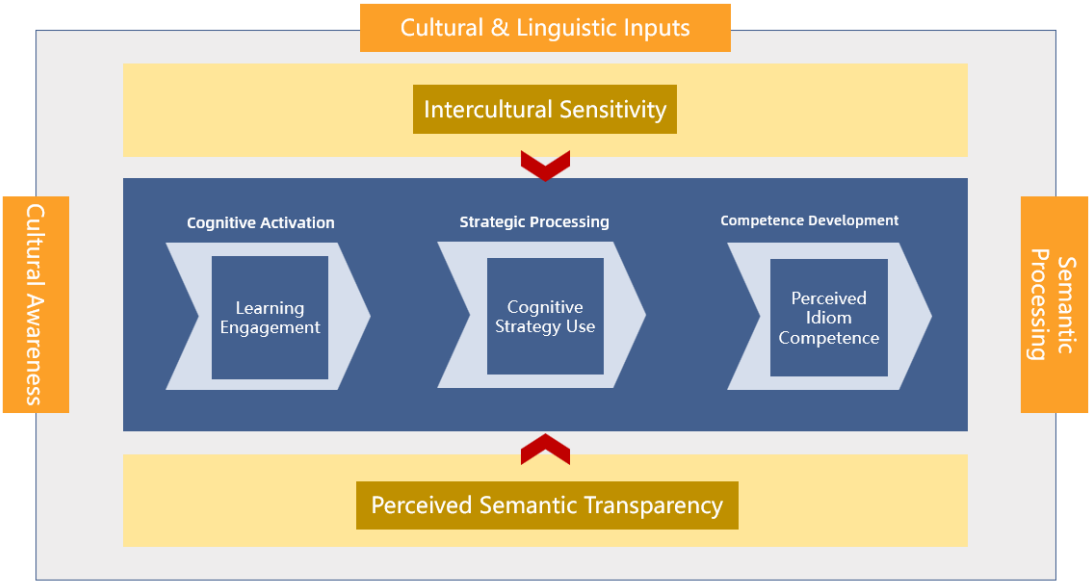


Figure 4 An Integrated Knowledge Structure of Idiom Competence Development

Conclusion

Consistent with Research Objectives, the above results show us that there are two inputs which are Intercultural Sensitivity and Perceived Semantic Transparency; then two intermediary processes which lead to Idiom Competence are Learning Engagement and Cognitive Strategy Use. The research shows that idiom competence comes from where culture meets language and we learn to use it. Culturally sensitive individual's will be aided by this sort of knowledge as well as assisting in helping those students that have noticed some of the semantically transparent language, to understand figures of speech. Learning engagement, Cognitive strategy use functions are important in helping learner process the idiomatic language.

In this respect, this research suggest we can develop idiomatic competence through a structure method where: Cultural + Linguistic input = Idiomatic competence via Engagement with Strategy. The idiom learning is no longer about the effect of isolated factors. From the result, we can see that idiom development is not only due to language, but also related to culture and cognition.

Language instructions should also attach more importance to the culture background knowledge of idiomatic expression so that the learners could have a better sense of different culture and understand the culture contained meanings. To incorporate culture explanations and authentic communication context in instructional materials can help students to understand why there are some idiomatic expressions. In practice, teachers can use some instructional methods such as etymology of idioms, corpus study and interpretive tasks to make students more aware of

the degree of transparency in semantics. Educators need to create some activity so that students can actively participate in the language learning process like discussion, interpret in context, and solve problems collaboratively. Teaching strategies must foster the development of cognitive strategies, like contextual inference and semantics, so students are better able to make sense of unfamiliar idiom. Digital tools and multimedia resources can also give more context to help with understanding the meaning of an idiom.

In our research we use the self–reported measure of what they feel is their perceived competence. This may not reflect how well a learner actually performs when using idioms. We may also be looking towards doing some sort of a performance based eval, experimental designs, or even doing it over time to see how that person has really done improvement on their idiom skills and testing the generalizability of the model.

References

Aldawsari, M. M., Alenezi, A. D., & Liontas, J. I. (2025). AI and Idioms: Enhancing Idiomatic Competence in EFL through ChatGPT. *The Reading Matrix: An International Online Journal, 25*(1). Retrieved from https://eric.ed.gov/?id=EJ1472571

Boers, F., & Lindstromberg, S. (2012). Experimental and intervention studies on formulaic sequences in a second language. *Annual Review of Applied Linguistics, 32,* 83–110. https://doi.org/10.1017/S0267190512000050

Carrol, G., & Conklin, K. (2020). Is all formulaic language created equal? Unpacking the processing advantage for different types of formulaic sequences. *Language and Speech, 63*(1), 95–122. https://doi.org/10.1177/0023830918823230

Chen, G. M., & Starosta, W. J. (2000). The development and validation of the intercultural sensitivity scale. *Human Communication, (3).* Retrieved from https://eric.ed.gov/?id=ED447525

Cong–Lem, N. (2025). Intercultural communication in second/foreign language education over 67 years: A bibliometric review. *Journal of Intercultural Communication Research, 54.* https://doi.org/10.1080/17475759.2025.2456265

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59–109. https://doi.org/10.3102/00346543074001059

Hiver, P., Al-Hoorie, A. H., Vitta, J. P., & Wu, J. (2024). Engagement in language learning: A systematic review of 20 years of research methods and definitions. *Language Teaching Research, 28*(1), 201–230. https://doi.org/10.1177/13621688211001289

Hubers, F., Cucchiarini, C., & Strik, H. (2020). Second language learner intuitions of idiom properties: What do they tell us about L2 idiom knowledge and acquisition?. *Lingua, 246,* 102940. https://doi.org/10.1016/j.lingua.2020.102940

Liu, D. (2017). Idioms: Description, comprehension, acquisition, and pedagogy. London: Routledge.

Liu, T. H., & Su, L. I. W. (2021). Chinese idioms as constructions: Frequency, semantic transparency and their processing. *Language and Linguistics, 22*(4), 558–592. https://doi.org/10.1075/lali.00091.liu

McCroskey, J. C., & McCroskey, L. L. (1988). Self-report as an approach to measuring communication competence. *Communication Research Reports, 5*(2), 108–113. https://doi.org/10.1080/08824098809359810

Oxford, R. L. (1990). *Language learning strategies: What every teacher should know.* Boston: Heinle & Heinle Publishers.

Peng, A. C., Van Dyne, L., & Oh, K. (2015). The influence of motivational cultural intelligence on cultural effectiveness based on study abroad: The moderating role of participant's cultural identity. *Journal of Management Education, 39*(5), 572–596. https://doi.org/10.1177/1052562914555717

Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology, 33*(5), 464–481. https://doi.org/10.1177/0022022102033005003

Senkbeil, K. (2020). Idioms in intercultural communication: A cognitive and pragmatic perspective. *International Journal of Language and Culture, 7*(1), 38–62. https://doi.org/10.1075/ijolc.00026.sen

Solodka, A., Filatova, O., Hinkevych, O., & Spanatiy, O. (2021). Cross-Cultural Language Learning: Interpretative Engagement. *Arab World English Journal, 12*(3), 82–96. https://doi.org/10.24093/awej/vol12no3.6

Soto-Sierra, V., & Ferreira, R. A. (2024). The influence of cross-language similarity and transparency on idiom knowledge in non-immersed L2 speakers. *System, 122,* 103287. https://doi.org/10.1016/j.system.2024.103287

Vivas, J., Vivas, L., Comesaña, A., García Coni, A., & Vorano, A. (2017). Spanish semantic feature production norms for 400 concrete concepts. *Behavior Research Methods, 49*(3), 1095–1106. https://doi.org/10.3758/s13428-016-0777-2

Weda, S., Atmowardoyo, H., Samad, I. A., Fitriani, S. S., & Sakti, A. E. F. (2022). Measuring intercultural sensitivity of English language students at a higher education institution in Indonesia. *TRANS-KATA: Journal of Language, Literature, Culture and Education, 2*(2), 158–168. https://doi.org/10.54923/transkata.v2i2.74

Wilczewski, M., Wang, R., Du, J., Søderberg, A. M., Giuri, P., Mughan, T., ... & Jacob, M. J. (2023). Cultural novelty and international students' experience: A five-country study. *Higher Education, 86*(5), 1107–1128. https://doi.org/10.1007/s10734-022-00964-z