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A Study on the Intercultural Communicative Competence of Students in Sino-Foreign Cooperative Education Institutions: Evidence from the Joint Institute of Management and Science University at Henan University of Chinese Medicine

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Abstract

Drawing on Bennett's Developmental Model of Intercultural Sensitivity (DMIS) and Self-Determination Theory (SDT), this study aimed to examine the influences of Sino-Malaysian cooperative education program factors on ICC among undergraduates within a Sino-Malaysian cooperative education program. A quantitative, cross-sectional survey design was employed, using stratified random sampling to recruit 207 students from a population of 982 undergraduates. Data were collected online and analyzed using SPSS and AMOS. The measurement model was validated through confirmatory factor analysis, and structural equation modeling (SEM) was conducted to test the hypothesized relationships.The results indicate that language proficiency (LP) is the strongest predictor of ICC, exerting both direct effects and indirect effects through intrinsic motivation (IM). Intercultural contact (IC) also shows significant dual pathways, enhancing ICC through practical exposure as well as motivational reinforcement. Cultural sensitivity (CS), while exerting a relatively weaker direct effect on ICC, demonstrates its main influence through its capacity to elevate students' intrinsic motivation. Across all variables, IM emerges as a consistent partial mediator, highlighting the importance of motivational processes in the development of ICC. These findings underscore the need to integrate language development, cultural awareness, and authentic intercultural experiences into program design. The study's cross-sectional nature, reliance on self-reported data, and sampling from a single institution suggest that future research should adopt longitudinal designs and examine more diverse student populations to strengthen generalizability.

Keywords: *Intercultural Communicative Competence, Intrinsic Motivation, Language Proficiency, Cultural Sensitivity, Intercultural Contact, Sino-foreign Cooperative Education.*

Introduction

Globalization means university graduates need more than just technical skills, they must be able to communicate and collaborate across cultures. Sino-foreign cooperative education has become China's answer to this challenge, a central part of its push to internationalize higher education (Beribe, 2023). These programs build in bilingual instruction, joint curricula, and student mobility. Following key regulations in 2003 and 2004, such programs have grown and diversified, creating unique spaces where Eastern and Western educational traditions meet. These programs make intercultural competence a high priority, aiming to graduate professionals who are both rooted in their Chinese background and prepared for the global stage (Wang & Wang, 2012).

Intercultural Communicative Competence (ICC) isn't just one thing. It's a complex mix of skills and attitudes, covering language, knowledge, feelings, and behavior. It includes language skills, cultural know-how, sensitivity, and the ability to navigate conversations in new cultural settings (Deardorff, 2006). Language proficiency is essential and foundational for intercultural communication; however, fluency alone does not ensure appropriate or effective interaction across cultural contexts. Competent intercultural communicators must also possess intercultural sensitivity and relevant cultural knowledge;

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without these, even the most proficient language users risk miscommunication or offense, embodying the so-called “fluent fool.” Thus, research and pedagogy in this field must move beyond linguistic skills to systematically consider attitudes, experiences, and situational factors that contribute to the authentic development of intercultural competence.

The problem is that even the most accepted ICC frameworks have serious gaps. The dominant models, like Byram’s five-part framework or Deardorff’s process model, were created and tested primarily in the West. They are based on Western, individualistic ways of communicating, where being explicit and direct is often valued. But when you try to apply these models in high-context, collectivist societies, they don't always fit. They risk missing or misinterpreting uniquely Eastern communicative skills, like maintaining relational harmony, showing deference to hierarchy, or relying on subtle contextual cues (Qin, 2011). As scholars from Eastern contexts have argued, simply copying these Western models can lead us to misunderstand the actual competence of learners socialized in a different cultural logic.

In China, many related studies often focus on the language level, especially proficiency in English, regarding it as an important condition for intercultural success. However, merely emphasizing the perspective of language can easily overlook other key factors, such as intercultural sensitivity, the frequency of intercultural contact, personal motivation, and the role of the learning environment (Yang, 2024).

Students in Sino-foreign cooperative institutions have very different experiences. Some get to study abroad, immersed in a new culture every day. Others remain on Chinese campuses but take their courses in English from foreign teachers (Lai & Jung, 2025). These different paths offer different kinds of exposure and practice, yet there are very little comparative, quantitative research examining how these specific environments shape ICC development.

This is where the Joint Institute of Management and Science University at Henan University of Chinese Medicine provides a perfect empirical context. The institute uses blended models. For example, its Traditional Chinese Medicine students follow a “0.5+3+1.5” dual-campus pathway by years of study, while Pharmacy and Pharmaceutical Engineering students are in a “4+0” arrangement. This variety in program design naturally creates different levels of language exposure, contact, and teaching experiences (Zhang, 2023). It gives us a great opportunity to conduct a controlled study, comparing how full immersion abroad stacks up against domestic English-taught instruction and how each model influences the cognitive, affective, and behavioural parts of ICC.

Therefore, this study will use a quantitative approach to examine ICC among students at the HUCM–MSU Joint Institute. We want to move past monolithic theories or single-variable explanations. Instead, we will test how language proficiency, cultural sensitivity, and contact all work together to mediate the relationship between the learning environment and ICC outcomes.

The goal is to provide solid, data-driven insights that can help recalibrate ICC theory for Eastern educational settings and, just as importantly, inform teaching strategies in Sino-foreign cooperative institution. By rooting this study in a real-world, comparative context, we hope to bridge the gap between theory and practice and offer actionable advice for curriculum design, faculty development, and student learning pathways.

Literature Review

Definition of Communicative Competence (ICC)

Intercultural communicative competence (ICC) refers to an individual's ability, in the context of globalization, to understand and respect cultural differences, actively embrace the challenges of intercultural interactions, and effectively manage misunderstandings and conflicts in intercultural communication. It encompasses skills, emotions, cognition, and behaviors, including language proficiency in both verbal and non-verbal communication to adapt to various communicative contexts; comprehension of the differences between one's own culture and others, with the capacity to interpret and analyze behaviors and values across cultures; and the ability to empathize with others by understanding their perspectives, emotions, and cultural backgrounds. Moreover, individuals with intercultural communicative competence demonstrate respect and tolerance for cultural diversity, adjusting their communicative behaviors flexibly to achieve appropriate and effective communication beyond ethnocentrism and appreciating multiculturalism in diverse environments (Iswandari & Ardi, 2022).

Definition of Intrinsic Motivation (IM)

Intrinsic motivation refers to an individual's internal drive to engage in a behavior for the inherent satisfaction and enjoyment derived from the activity itself, rather than for external rewards or pressures. According to Self-Determination Theory (SDT), intrinsic motivation arises when three basic psychological needs are fulfilled: autonomy (the feeling that one's actions are self-chosen), competence (the sense of effectively mastering tasks), and relatedness (the feeling of connection and belonging with others). When these needs are met, individuals exhibit stronger internal motivation, leading to greater initiative, persistence, creativity, and overall well-being. SDT emphasizes that intrinsic motivation promotes more autonomous, meaningful, and sustained engagement in activities, resulting in better learning and performance outcomes (Fishbach & Woolley, 2022).

Definition of Language Proficiency(LP)

Language proficiency refers to an individual's demonstrated ability to master and use a language effectively in real-life communication. It emphasizes fluency, accuracy, and the capacity to adapt to various communicative contexts. Language proficiency encompasses vocabulary range, grammatical knowledge, and the integrated skills of listening, speaking, reading, and writing. It reflects the level at which an individual can use language to communicate efficiently and appropriately, and it is dynamic and context-dependent, improving progressively through learning and practice. language proficiency is a comprehensive indicator of how well a person can apply their language ability in authentic communication settings, representing the practical manifestation of language competence (Yasunaga et al., 2022).

Definition of Cultural Sensitivity (CS)

Cultural sensitivity refers to the awareness, understanding, and respect for cultural differences and practices of individuals from diverse backgrounds. It involves recognizing and appreciating the values, norms, and beliefs of cultures other than one's own, showing empathy and openness to cultural diversity, and adapting one's behavior appropriately in intercultural interactions. Cultural sensitivity helps reduce misunderstandings and conflicts, fosters effective communication, and promotes harmonious relationships in multicultural contexts. It is a key component of intercultural communicative competence and is essential for successful collaboration and social cohesion in diverse societies (McIntosh et al., 2023).

Definition of Intercultural Contact (IC)

Intercultural contact refers to the process in which individuals from different cultural backgrounds meet, interact, and engage with each other within certain social, economic, or geographical environments. This contact can be direct contact, involving face-to-face communication between people from different countries or cultural groups, or indirect contact, facilitated through media such as online platforms, correspondence, or other indirect means. intercultural contact forms the foundation of intercultural communication, providing opportunities for people to understand, experience, and adapt to diverse cultures, thus promoting cultural understanding, exchange, and integration. It is characterized by diversity and complexity, involving cognitive awareness of cultural differences, emotional responses, and behavioral adjustments, making it a crucial practical component in the development of ICC (Efron, 2023).

The Relationships Between LP, CS, IC and Intercultural Communicative Competence (ICC)

Intercultural communicative competence (ICC) encompasses a set of linguistic, cognitive, emotional, and behavioral abilities that enable individuals to communicate both effectively and appropriately across cultural boundaries. Among the many factors that influence the formation of ICC, language proficiency (LP), cultural sensitivity (CS), and intercultural contact (IC) are widely recognized as three central contributors. Each of these plays a distinct role, while at the same time interacting with one another in shaping how individuals perceive, interpret, and respond to cultural differences (Iswandari & Ardi, 2022).

To begin with, language proficiency (LP) forms the basic linguistic support for ICC. Communicating across cultures is not merely a matter of knowing grammar or vocabulary; it also involves the ability to use language in ways that fit different social contexts, such as adjusting tone, understanding implied meanings, and interpreting non-verbal cues. When learners possess higher levels of LP, they are more capable of handling the complex demands of intercultural exchanges (Lysiuchenko et al., 2021). They

can express themselves more clearly, understand others more accurately, and manage misunderstandings more effectively. In this sense, LP strengthens both the effectiveness and the appropriateness of communication, which lie at the heart of ICC.

Meanwhile, cultural sensitivity (CS) offers the cognitive and emotional grounding that supports ICC. If language enables communication, cultural sensitivity determines the quality of that communication. CS involves recognizing cultural differences without judgment, being open to unfamiliar perspectives, and understanding the values and behaviors of people from other cultural backgrounds. Learners with stronger CS are more willing to engage with cultural diversity and more capable of interpreting others' actions in context (Hapsari, 2021). This helps reduce unnecessary conflict, encourages positive attitudes toward intercultural encounters, and ultimately supports the development of more nuanced and adaptable communicative behaviors.

In addition, intercultural contact (IC) provides the practical experiences through which ICC grows. Whether through face-to-face interactions or indirect exposure via digital platforms, meaningful intercultural contact creates opportunities to apply language skills, test cultural assumptions, and develop strategies for navigating unfamiliar situations. Frequent and sustained contact with people from different cultures helps learners broaden their worldview, build confidence, and become more flexible in their behavior (Zhou & Burhanudeen, 2023). Over time, these experiences serve as the bridge that turns cultural awareness and linguistic knowledge into real communicative competence.

Importantly, LP, CS, and IC do not operate in isolation. They are deeply interconnected. Intercultural contact, for instance, gives learners real-world opportunities to sharpen their language proficiency, while strong LP allows them to engage more fully in intercultural encounters. Likewise, cultural sensitivity shapes how learners perceive these encounters; those with higher CS are more likely to view intercultural contact as an opportunity rather than a challenge. When combined, these three elements reinforce one another, creating a supportive environment in which ICC can develop more naturally and more effectively.

The Relationships Between LP, CS, IC and Intrinsic Motivation (IM)

Intrinsic motivation (IM) plays a central role in shaping how learner approach and sustain their engagement in intercultural communication. Unlike external incentives, intrinsic motivation grows from personal interest, curiosity, and the satisfaction individuals gain from learning and interacting across cultures (Liu et al., 2023). In the development of intercultural abilities, language proficiency (LP), cultural sensitivity (CS), and intercultural contact (IC) all influence IM in different but complementary ways.

To begin with, language proficiency often lays the groundwork for intrinsic motivation in intercultural learning. When learners feel capable of expressing themselves and understanding others, they are more willing to initiate communication and explore unfamiliar cultural settings. Improved LP reduces anxiety, builds a sense of competence, and increases the enjoyment derived from using the language in authentic situations (Bagheri Nevisi & Farhani, 2022). In this way, LP not only supports communication but also fuels the internal drive that sustains intercultural engagement.

Cultural sensitivity (CS) contributes to intrinsic motivation through a different mechanism. Individuals who are open to cultural differences, who enjoy learning about new perspectives, and who can empathize with others tend to experience intercultural interactions as meaningful rather than threatening. This openness encourages curiosity and deepens the sense of personal relevance during intercultural encounters (Liu & Zhang, 2023). As a result, CS helps learners develop a natural interest in intercultural communication, gradually strengthening their intrinsic motivation.

Meanwhile, intercultural contact (IC) provides the lived experiences that reinforce and expand intrinsic motivation. Frequent and meaningful interactions with people from other cultures allow learners to discover enjoyment and personal growth in these encounters. Positive experiences, such as successful communication, forming friendships, or overcoming misunderstandings, create a reinforcing cycle in which contact increases motivation, and heightened motivation leads to more active contact. Through this process, IC connects abstract interest with concrete personal experiences, making intrinsic motivation more enduring (Aubrey & Philpott, 2021).

Furthermore, the three factors often operate together rather than separately. Strong LP enables learners to participate more confidently in intercultural contact; meaningful contact, in turn, enhances cultural sensitivity by exposing individuals to diverse ways of thinking; and heightened CS strengthens the desire to communicate, which feeds back into IM. Over time, LP, CS, and IC form a mutually

supporting system that nurtures intrinsic motivation, enabling learners to develop deeper and more sustained engagement with intercultural communication.

Theoretical Foundation

The conceptual framework of this study is built upon two complementary theories that explain how intercultural competence develops and why learners differ in their levels of engagement in intercultural communication. Bennett's Developmental Model of Intercultural Sensitivity (DMIS) provides the process perspective for understanding how individuals gradually move from ethnocentric orientations toward more adaptive, ethnorelative ways of interpreting cultural differences (Bennett, 2025). Self-Determination Theory (SDT), proposed by Deci and Ryan, offers the motivational explanation that accounts for why some learners actively pursue intercultural experiences while others remain passive or resistant (Xia et al., 2022). Together, these two theories form the backbone for examining how language proficiency (LP), cultural sensitivity (CS), and intercultural contact (IC) contribute to the development of intercultural communicative competence (ICC), and how intrinsic motivation (IM) serves as the psychological mechanism that links these antecedent variables to intercultural outcomes.

Bennett's Developmental Model of Intercultural Sensitivity (DMIS)

Bennett's DMIS conceptualizes intercultural learning as a developmental progression through six stages, ranging from denial of difference to full integration of multicultural perspectives. The model highlights that cognitive openness, emotional readiness, and behavioral flexibility increase as individuals advance along this continuum. In the context of Sino-foreign cooperative education, students encounter contrasting cultural norms, communication styles, and value systems. These experiences provide opportunities that push them along Bennett's developmental path (Bennett, 2025).

Language proficiency (LP), cultural sensitivity (CS), and intercultural contact (IC) align naturally with the requirements of DMIS. Students with higher LP can more easily access cultural meanings embedded in language use, which supports movement from surface-level awareness toward deeper cultural understanding. Cultural sensitivity reflects the attitudinal shift emphasized in the model, marking the transition from ethnocentric interpretations to relativistic and adaptive responses. Likewise, sustained intercultural contact provides the experiential foundation for advancing through the DMIS stages, as real interaction exposes learners to unfamiliar perspectives and requires them to negotiate meaning in diverse contexts.

Thus, DMIS justifies the inclusion of LP, CS, and IC as core predictors of ICC and underscores why these variables are theoretically positioned as the direct drivers of intercultural competence.

Self-Determination Theory

DMIS describes how intercultural competence develops, it does not fully explain why students engage in that developmental process or what motivates them to seek intercultural experiences. Self-Determination Theory (SDT) fills this gap by emphasizing the role of intrinsic motivation (IM) in sustaining meaningful learning and adaptive behavior. According to SDT, intrinsic motivation is fostered when the needs for autonomy, competence, and relatedness are satisfied (Deci & Ryan, 2012). These psychological needs are particularly relevant in intercultural contexts, where communication requires initiative, confidence, and emotional connection.

LP, CS, and IC all contribute directly to the fulfillment of these psychological needs. High language proficiency strengthens the sense of competence, reducing anxiety and encouraging students to participate in intercultural exchanges. Cultural sensitivity facilitates emotional openness and interpersonal connection, supporting the need for relatedness. Intercultural contact offers authentic opportunities for autonomy, as students must independently navigate unfamiliar environments and cultural cues (Ryan & Deci, 2020). When these needs are met, learners are more likely to experience curiosity, enjoyment, and satisfaction in intercultural learning, thus strengthening their intrinsic motivation.

SDT therefore provides a clear rationale for positioning IM as the mediating variable between LP, CS, IC and ICC. It explains how linguistic ability, cultural attitudes, and real-world experiences translate into sustained engagement in intercultural communication, which ultimately results in the development of higher-level ICC.

Integrated Framework

By combining DMIS and SDT, this study constructs a conceptual framework that captures both the developmental pathway and the motivational engine behind intercultural competence. DMIS explains the gradual transformation of cognition, emotions, and behaviors as students gain intercultural experience. SDT explains the internal drive that sustains this process. Together, these theories justify the structural model in which LP, CS, and IC exert direct influences on ICC while simultaneously shaping intrinsic motivation, which further promotes ICC.

The framework also allows for the examination of differing language-learning environments in Sino-foreign cooperative programs, as authentic intercultural exposure may amplify or weaken the motivational and developmental effects described above.

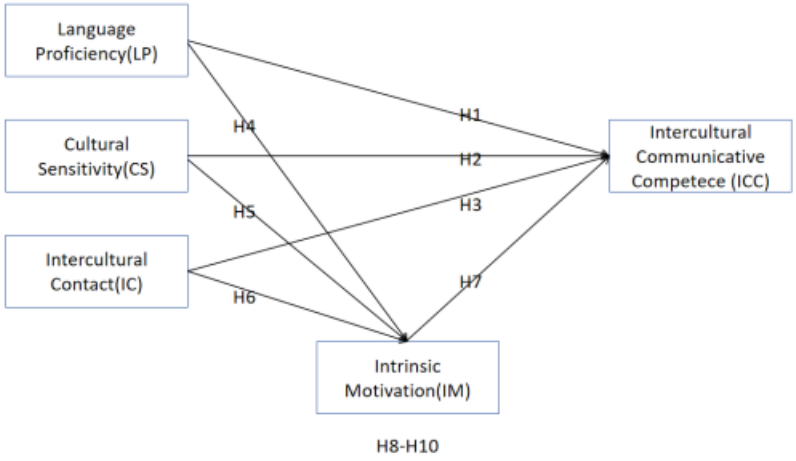

Figure 1 : Conceptual Framework

Hypotheses:

H1: Language proficiency (LP) has a significant positive effect on intercultural communicative competence (ICC).

H2: Cultural sensitivity (CS) has a significant positive effect on intercultural communicative competence (ICC).

H3: Intercultural contact (IC) has a positive effect on intercultural communicative competence (ICC).

H4: Language proficiency (LP) significantly positively influences learners' intrinsic motivation (IM).

H5: Cultural sensitivity (CS) significantly positively influences learners' intrinsic motivation (IM).

H6: Intercultural contact (IC) significantly positively influences learners' intrinsic motivation (IM).

H7: Intrinsic motivation (IM) has a significant positive effect on intercultural communicative competence (ICC).

H8: Intrinsic motivation significantly mediates the relationship between language proficiency (LP) and intercultural communicative competence (ICC).

H9: Intrinsic motivation significantly mediates the relationship between cultural sensitivity (CS) and intercultural communicative competence (ICC).

H10: Intrinsic motivation significantly mediates the relationship between intercultural contact (IC) and intercultural communicative competence (ICC).

Methods

This study employed a quantitative, cross-sectional survey design. The target population consisted of all 834 undergraduate students enrolled at a Sino-Malaysian joint educational institution. A stratified random sampling technique was applied, with campus location and year of study serving as stratification

criteria. Data collection was conducted online via the Wenjuanxing platform over a four-week period. To ensure a standardized environment, the questionnaire link was distributed uniformly by the researchers during class sessions. After excluding invalid responses, a total of 207 valid questionnaires were obtained. All participants provided informed consent, and the study was approved by the university's Institutional Review Board (IRB).

Data analysis was conducted using SPSS 27.0 and AMOS 26.0. Preliminary analyses included demographic characteristics, descriptive statistics, tests of normality, and Pearson correlations. Subsequently, a two-stage structural equation modeling (SEM) approach was employed. Confirmatory factor analysis (CFA) was used to test the measurement model, evaluate model fit, and establish convergent validity (AVE > 0.50, CR > 0.70) and discriminant validity. Finally, the structural model was tested to examine the hypothesized relationships among latent variables.

The measurement instruments were adapted from established English-language scales, with all items rated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). Intercultural Communication Competence (ICC) was measured using items adapted from the Cultural Intelligence (CQS) framework (Ang et al., 2007). Language proficiency and cultural sensitivity were adapted from relevant self-efficacy literature (Bandura, 1997). Intercultural contact was assessed to capture the frequency and depth of interactions.

This study designed a questionnaire named "Assessment of Intercultural Communication Skills of Students in Sino-Foreign Cooperative Education Institutions". The reliability analysis indicates that all five constructs demonstrate strong internal consistency. Language Proficiency, Intercultural Contact, and Intercultural Communicative Competence each record Cronbach's alpha values of 0.845 or higher, showing stable measurement across their items. Cultural Sensitivity presents the highest reliability (α = 0.902), reflecting excellent coherence among its nine items. Intrinsic Motivation also meets accepted reliability standards with an alpha of 0.832. As all coefficients exceed the commonly accepted threshold of 0.70, the scales employed in this study can be regarded as statistically reliable and appropriate for subsequent confirmatory factor analysis and structural equation modeling.

Table 1: Reliability Analysis (Cronbach's Alpha)

Construct	Cronbach's Alpha	Number of Items
LP	0.845	4
IC	0.846	7
CS	0.902	9
IM	0.832	5
ICC	0.845	4

Note: LP-Language Proficiency, IC-Intercultural contact, CS-Cultural Sensitivity, IM-Intrinsic Motivation, ICC-Intercultural Communicative Competence.

Results

The demographic profile of the 207 respondents shows that the sample is predominantly female (72.5%), which aligns with the general gender distribution in many education-related and cultural competence studies, where female students tend to participate more actively in survey-based research. Most respondents are 18 years old (61.8%), consistent with the age structure of first-year university students enrolled in Sino-foreign cooperative programs, the target population of this study.

In terms of place of residence, participants come from diverse backgrounds. Students from counties (26.6%) and provincial capitals (25.6%) constitute the largest groups, indicating a relatively balanced representation between urban and semi-urban areas. This diversity helps ensure that the findings on intercultural communication competence (ICC) and related constructs are not confined to a single socio-economic context.

Regarding ethnicity, the sample is overwhelmingly Han Chinese (97.6%), which is expected given the demographic composition of most higher education institutions in China. Although minority representation is small (2.4%), it still provides a minimal level of ethnic diversity for analyzing ICC variations across different cultural backgrounds. Overall, the demographic characteristics reflect a sample structure that is typical, stable, and suitable for examining the intercultural communicative competence of students in Sino-foreign cooperative education programs.

Table 2: Demographic Characteristics

Variable	Category	Frequency (n)	Percent (%)
Gender	Male	57	27.5
	Female	150	72.5
Age	Under 18 years old	26	12.6
	18 years old	128	61.8
	Over 18 years old	53	25.6
Residence	Provincial capital	53	25.6
	Prefecture-level city	49	23.7
	County	55	26.6
	Towns	10	4.8
	Village	40	19.3
Nation	Ethnic Han	202	97.6
	Minority	5	2.4

The descriptive results indicate that all items across the five variables (Intercultural Contact, Intrinsic Motivation, Cultural Sensitivity, Language Proficiency, and Intercultural Communicative Competence) fall within a moderately high mean range of 3.47 to 3.86. Intrinsic Motivation shows the highest mean values, suggesting that students generally report a strong internal drive in intercultural learning. Cultural Sensitivity and Language Proficiency present stable mid-high ratings, while Intercultural Contact and Intercultural Communicative Competence also reflect positive but slightly more varied responses.

The standard deviations, ranging from 0.99 to 1.31, demonstrate acceptable variation within the sample and indicate that perceptions differ to some extent across the five constructs. All skewness values are negative, pointing to a tendency toward agreement among respondents. Most kurtosis values fall between –1 and +1, showing that the distributions approximate normality and satisfy the assumptions required for confirmatory factor analysis and subsequent structural equation modeling. Taken together, the descriptive findings provide a solid basis for further measurement validation.

The correlation results align well with the proposed conceptual framework. Language proficiency (LP), cultural sensitivity (CS), and intercultural contact (IC) show significant positive correlations with intrinsic motivation (IM) and intercultural communicative competence (ICC). This pattern indicates that stronger linguistic ability, greater cultural awareness, and more frequent intercultural experiences are associated with higher motivation and better intercultural communication outcomes. IM also demonstrates a strong positive correlation with ICC, supporting its role as a key psychological mechanism linking the three antecedent variables to students' actual communicative performance. Overall, these correlations provide initial empirical support for the direct and indirect pathways proposed in the hypotheses.

Table 3：Correlation Matrix

Variable	IC	IM	CS	LP	ICC
IC	1	.427**	.465**	.373**	.519**
IM	.427**	1	.411**	.490**	.570**
CS	.465**	.411**	1	.391**	.444**
LP	.373**	.490**	.391**	1	.575**
ICC	.519**	.570**	.444**	.575**	1

Note. p < .05, p < .01 (two-tailed). LP-Language Proficiency, IC-Intercultural contact, CS-Cultural Sensitivity, IM-Intrinsic Motivation, ICC-Intercultural Communicative Competence.*

Measurement Model

Based on the figure 2 and table 5, the model demonstrates excellent fit. Unlike the previous results, all key indices now meet the recommended thresholds. The incremental fit indices, CFI (0.952) and TLI (0.961), both exceed the stringent criterion of ≥ 0.95, showing highly satisfactory performance. Residual-based indices are also strong: RMSEA (0.058) falls within the acceptable level of ≤ 0.06, and SRMR (0.037) is well below the ≤ 0.08 benchmark. In addition, the parsimony index ($\chi^2/df = 2.494$) and the GFI/AGFI values indicate good fit. Overall, the measurement model demonstrates robust structural validity, providing a solid foundation for subsequent testing of the structural model.

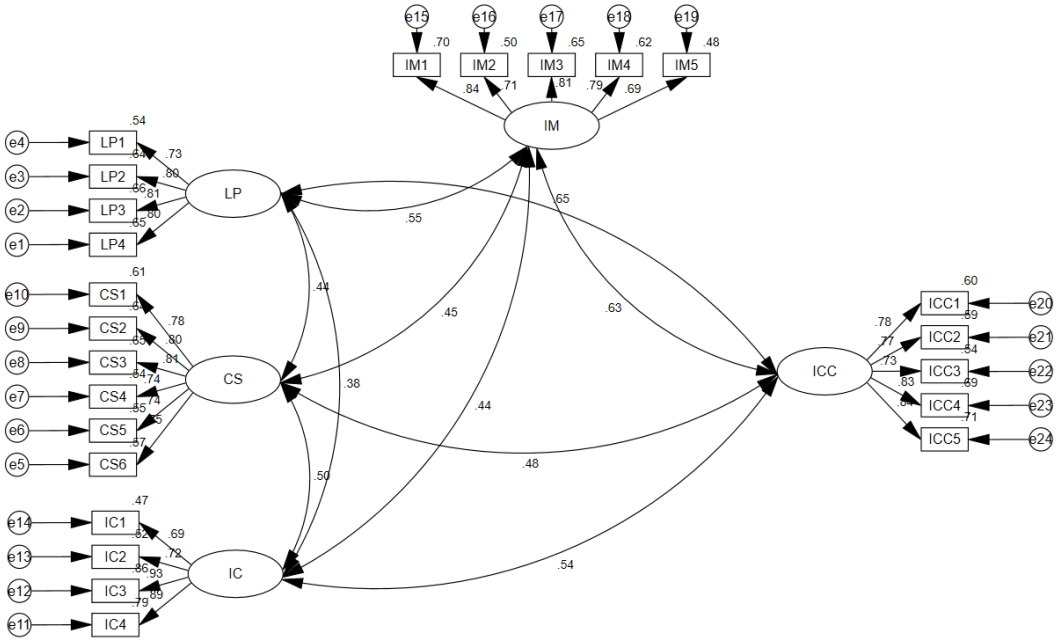

Figure 2: Measurement Model

Table 4: CFA model fit

Fit Index	Recommended Threshold	Sample Value	Meets Standard
χ^2/df	< 3	2.494	Yes
CFI	≥ 0.95	0.952	Yes
TLI	≥ 0.95	0.961	Yes
RMSEA	≤ 0.06	0.058	Yes
SRMR	≤ 0.08	0.037	Yes
GFI	≥ 0.90	0.952	Yes
AGFI	≥ 0.90	0.910	Yes

Note: CFI–Comparative Fit Index, TLI–Tucker Lewis Index, RMSEA–Root Mean Square Error of Approximation, SRMR–Standardized Root Mean Square Residual, GFI–Goodness-of-Fit Index, AGFI–Adjusted Goodness-of-Fit Index.

Based on the factor loadings, the combined reliability (CR) of each latent variable was calculated to be above 0.70, indicating good internal consistency. The average variance extraction (AVE) values of most latent variables were higher than 0.50, except for IC, whose AVE was 0.48, slightly below the recommended threshold. However, considering that its CR met the standard, the factor loadings were significant, and the discriminant validity was good, the overall measurement model can still be considered to meet the requirements of reliability and validity.

Structural Model

Based on the direct effect path testing results (Table 6), all seven hypothesized paths reached statistical significance (p-values either < .001 or .009). This confirms that each of the proposed relationships is supported by the data. In the first part of the model, which examines predictors of intrinsic motivation (IM), language proficiency (LP) shows the strongest influence (β = 0.428). This effect is nearly twice the size of intercultural contact (IC, β = 0.236) and cultural sensitivity (CS, β = 0.207). The findings highlight that a solid foundation in language proficiency is the primary driver of students' motivation to engage in intercultural learning.

In the second part of the model, which focuses on predictors of intercultural communicative competence (ICC), language proficiency again emerges as the most important direct contributor (β = 0.397), surpassing even the effect of motivation itself. Intrinsic motivation (IM, β = 0.303) and

intercultural contact (IC, β = 0.267) follow closely, together forming a combination that explains how ICC develops. These results suggest that students' ICC is built upon language proficiency as a core skill, strengthened by personal motivation, and consolidated through practical intercultural experiences.

A particularly noteworthy finding concerns cultural sensitivity (CS). Its direct effect on ICC is the weakest among all paths (β = 0.116). However, CS exerts a stronger influence on intrinsic motivation (β = 0.207). This indicates that the main value of cultural sensitivity may not lie in directly enhancing communicative competence, but rather in stimulating students' interest and motivation. Through motivation as a mediating factor, CS indirectly contributes to the broader development of ICC.

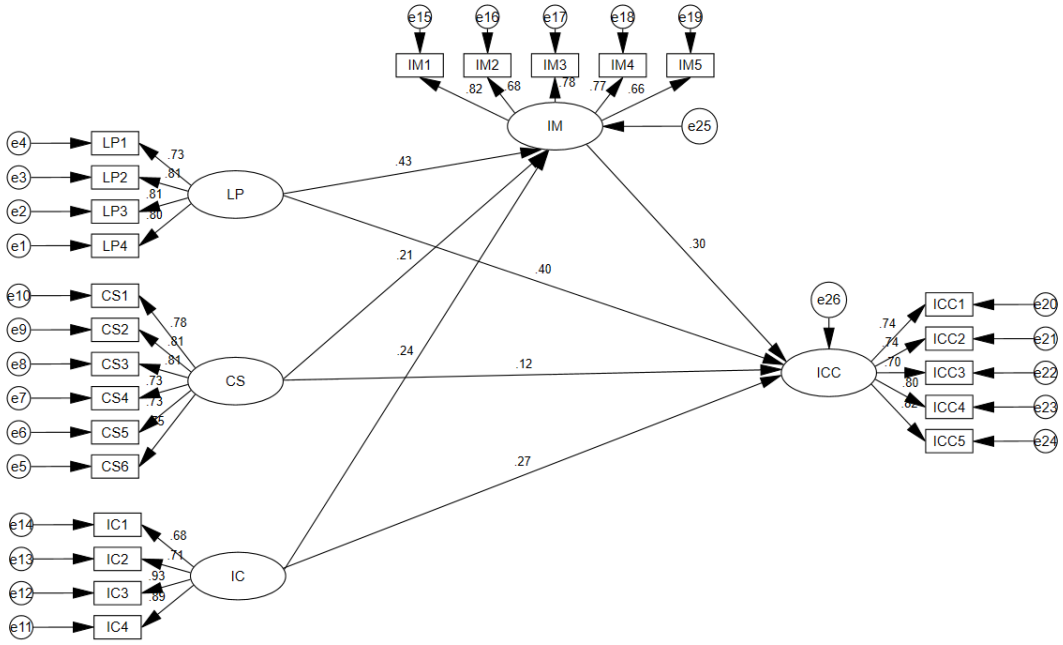

Figure 3: Structural Model

Table 5: Linear Regression for Direct Path Analysis

Path Relationship	Unstd. Est.	S.E.	C.R.	p	B
IM ← LP	0.365	0.045	8.112	***	0.428
IM ← CS	0.190	0.045	4.230	***	0.207
IM ← IC	0.177	0.036	4.917	***	0.236
ICC ← IM	0.328	0.060	5.483	***	0.303
ICC ← LP	0.366	0.050	7.319	***	0.397
ICC ← CS	0.115	0.044	2.624	.009	0.116
ICC ← IC	0.218	0.037	5.908	***	0.267

Note: LP-Language Proficiency, CS-Cultural Sensitivity, IC-Intercultural contact, IM-Intrinsic Motivation, ICC-Intercultural Communicative Competence.

The structural model results provide support for all seven direct hypotheses. Language proficiency (H1) shows a significant positive effect on intercultural communicative competence, confirming its central role. Cultural sensitivity (H2) also has a positive effect on ICC, though its influence is weaker. Intercultural contact (H3) is validated as another significant predictor of ICC.

With respect to intrinsic motivation, the results confirm H4, H5, and H6. Language proficiency, cultural sensitivity, and intercultural contact each exert significant positive effects on students' motivation. These findings highlight the importance of both skill-based and experiential factors in shaping learners' internal drive.

The mediation analysis indicates that intrinsic motivation (IM) plays a partial mediating role in the effects of cultural sensitivity (CS), intercultural contact (IC), and language proficiency (LP) on intercultural communicative competence (ICC). For CS, the indirect effect on ICC is 0.062 (p = .001), while the direct effect remains significant at 0.115 (p = .001). This suggests that CS enhances ICC not

only by increasing students' motivation but also through its direct influence on their attitudes and interpretive tendencies. IC shows a similar pattern, with an indirect effect of 0.058 (p = .001) and a direct effect of 0.218 (p = .001), indicating that intercultural experiences both stimulate motivation and strengthen ICC through direct experiential learning. LP shows the strongest mediation pattern: although the indirect effect through IM is 0.120 (p = .001), its direct effect remains substantial at 0.366 (p = .001), underscoring that language proficiency contributes to ICC by boosting motivation as well as by serving as the essential foundation for effective communication.

Table 6: Multiple Regression for Indirect Path Analysis

Mediating Relationship	Effect Type	Estimate	95% CI Lower	95% CI Upper	p-value
CS → IM → ICC	Indirect	.062	.023	.122	.001
	Direct	.115	.004	.213	.001
	Total Effect	.177	.069	.285	.001
IC → IM → ICC	Indirect	.058	.029	.103	.001
	Direct	.218	.139	.298	.001
	Total Effect	.276	.195	.360	.001
LP → IM → ICC	Indirect	.120	.067	.183	.001
	Direct	.366	.260	.486	.001
	Total Effect	.486	.382	.609	.001

Note: LP-Language Proficiency, CS-Cultural Sensitivity, IC-Intercultural contact, IM-Intrinsic Motivation, ICC-Intercultural Communicative Competence.

The mediation analysis provides support for all three hypotheses. H8 is confirmed, as intrinsic motivation significantly mediates the relationship between language proficiency and intercultural communicative competence, with both direct and indirect effects reaching statistical significance. H9 is also supported, showing that cultural sensitivity contributes to ICC primarily through its indirect influence via intrinsic motivation, while maintaining a weaker direct effect. H10 is validated as well, with intercultural contact exerting both direct and mediated effects on ICC through intrinsic motivation. Taken together, these findings demonstrate that intrinsic motivation plays a consistent and significant mediating role, reinforcing the impact of language proficiency, cultural sensitivity, and intercultural contact on students' intercultural communicative competence.

Discussion and Implications

The results of this study provide new empirical evidence for the mechanisms underlying the development of intercultural communicative competence (ICC). First, language proficiency (LP) is still confirmed as the strongest predictor, exerting significant effects on both intrinsic motivation (IM) and ICC. This finding is consistent with previous research, which has emphasized that language ability is not only a tool for intercultural communication but also a central condition for stimulating learning motivation (Lysiuchenko et al., 2021; Bagheri Nevisi & Farhani, 2022). Accordingly, higher education institutions should prioritize language training to ensure that students acquire a solid linguistic foundation.

Second, cultural sensitivity (CS) shows a weaker direct effect on ICC but a stronger indirect effect through intrinsic motivation. This suggests that the value of cultural sensitivity lies in its capacity to stimulate students' interest and motivation rather than in directly enhancing communicative performance. The result echoes the arguments of Hapsari (2021) and Liu and Zhang (2023), who noted that cultural attitudes and awareness often influence intercultural communication indirectly through psychological mechanisms. Curriculum design should therefore emphasize the cultivation of cultural awareness and reflective ability to strengthen motivation.

Intercultural contact (IC) demonstrates both direct effects and mediated effects through motivation. This highlights the indispensable role of experiential learning in intercultural competence development. Frequent and meaningful intercultural interactions not only directly improve ICC but also enhance students' motivation, creating a positive cycle. This finding is consistent with Zhou and Burhanudeen (2023), who identified intercultural contact as a crucial pathway for language learners to strengthen ICC. Educational institutions should therefore provide more opportunities for intercultural engagement, such as international collaboration projects, inter-university exchanges, or virtual intercultural classrooms (Aubrey & Philpott, 2021).

Finally, intrinsic motivation (IM) plays a stable mediating role within the model. This underscores the central importance of motivation in intercultural learning. Educational practice should not only focus on the transmission of skills and knowledge but also employ strategies to stimulate students' motivation, such as goal setting, constructive feedback, and the creation of autonomous learning environments.

Conclusion and Limitations

Based on a quantitative analysis of 207 students in a Sino-Malaysian cooperative program, this study validated the complex mechanisms through which language proficiency (LP), cultural sensitivity (CS), intercultural contact (IC), and intrinsic motivation (IM) influence intercultural communicative competence (ICC). The results show that language proficiency is the primary driver of ICC development; it not only directly enhances ICC but also serves as the key antecedent for stimulating intrinsic motivation. Intrinsic motivation played a central mediating role in the model, as LP, CS, and IC were all found to indirectly foster ICC by strengthening motivation. Notably, the value of cultural sensitivity appears to lie more in stimulating learning motivation rather than in directly translating into communicative ability. Intercultural contact, meanwhile, demonstrated a dual effect, providing both direct "practice" and indirect "inspiration."

These conclusions must be understood in the context of the study's limitations. First, the cross-sectional design, while revealing significant correlations, cannot strictly establish causality; future longitudinal research would be better suited to dynamically mapping these developmental pathways. Second, this study relied entirely on self-report scales, which risks common method bias and potential discrepancies between students' self-assessments and their objective abilities. Subsequent research could incorporate objective measures, such as standardized language scores or situational simulations. Finally, the sample was drawn from a single institution and was highly homogenous in its gender (72.5% female) and ethnic distribution, which, to some extent, limits the generalizability of the findings.

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