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Critical Thinking Skills as Predictors of Intercultural Competences Among Korean-Speaking Learners of English*

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In an increasingly globalized world, the interaction of diverse English varieties, known as World Englishes, necessitates robust intercultural competencies among learners. This study explores the role of Critical Thinking Skills (CTS) in predicting Intercultural Sensitivity (IS), Intercultural Communicative Competence (ICC), and Intercultural Communication Apprehension (ICA) among Korean-speaking learners of English (KSLs). A sample of 53 KSLs, comprising 27 females and 26 males from various academic majors, participated in the study. Their English proficiency levels ranged from intermediate to advanced. Utilizing validated scales with reliable Cronbach's α coefficients, descriptive statistics and stepwise regression analyses were conducted. The results indicate that Intellectual Skepticism significantly predicts IS, while Persistence and Intellectual Curiosity are key predictors of ICC. Moreover, Persistence alone significantly predicts CA. These findings underscore the importance of specific CTS in enhancing intercultural competencies essential for navigating the complexities of World Englishes. These insights highlight the need for targeted educational strategies that foster critical thinking skills and therefore bolster intercultural effectiveness in multilingual and multicultural settings influenced by diverse English varieties. This study recommends the integration of the development of intellectual skepticism, persistence, and intellectual curiosity into English language curricula so as better to prepare students for effective global communication.

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[critical thinking skills/Intercultural Communication Competence (ICC)/ELF/World Englishes/Korean-speaking learners of English (KSLs)]

I. INTRODUCTION

In an era defined by hyper-globalization, the paradigm of English language teaching has shifted from the pursuit of native-like fluency to the cultivation of Intercultural Communicative Competence (ICC), reflecting a broader move away from native-speaker norms toward the development of intercultural speakers who can mediate between linguistic and cultural worlds (Alptekin, 2002; Byram, 1997). As English increasingly functions as a lingua franca (ELF), interactions frequently occur between speakers of diverse linguistic backgrounds, making mutual intelligibility and pragmatic appropriateness more important than strict adherence to prescriptive grammatical norms (Jenkins, 2015; Seidlhofer, 2011). Individuals with high levels of ICC are characterized by their capacity to flexibly adapt communicative strategies to unfamiliar cultural contexts, thereby promoting effective mutual understanding and mitigating the risk of miscommunication in intercultural encounters (Honen-Delmar & Rega, 2023). Such adaptability is widely regarded as a defining attribute of a competent global citizen, yet for many Korean-speaking learners of English (KSLs), the development of intercultural fluency remains significantly constrained by psychological barriers such as anxiety, fear of negative evaluation, and deeply internalized native-speaker ideologies.

Despite years of intensive formal instruction, many KSLs experience a 'proficiency paradox,' where high standardized test scores fail to translate into effective intercultural mediation. This gap suggests that the traditional focus on linguistic inputs—vocabulary and syntax—is insufficient for navigating the fluid and often ambiguous nature of World Englishes. The challenge for KSLs is further compounded by a persistent reliance on native-speakerism, which often breeds a sense of linguistic inadequacy and heightens Intercultural Communication Apprehension (ICA). According to Neuliep and McCroskey (1997), such apprehension can paralyze communicative performance regardless of a learner's actual linguistic competence.

Current literature indicates that intercultural success is not merely a product of language mastery but is deeply rooted in a learner's psychological and cognitive architecture. Specifically, Critical Thinking Skills (CTS) have emerged as a potential catalyst for interculturality, as they provide the *intelligible structure* necessary to organize and interpret complex cultural experiences (D'Angelo, 1971). However, the role of CTS as a predictive construct remains under-examined in the South Korean EFL context.

This study, therefore, posits that the development of ICC among KSLs requires a departure

from rote linguistic drills toward a focus on cognitive dispositions. By examining how CTS components predict intercultural outcomes, this research aims to provide an empirical basis for a new pedagogical approach. Understanding these internal mechanisms is crucial for developing effective strategies that move beyond mere linguistic training and address the psychological barriers that have long constrained Korean learners. By shifting the focus to the learner's internal sustained cognitive effort and critical awareness, this study seeks to offer a more holistic understanding of what it means to be a competent intercultural speaker in the modern era. To address this gap, the present study empirically investigates the extent to which specific cognitive dispositions influence intercultural outcomes among KSLs and, in particular, how they relate to both facilitative (ICC, IS) and potentially tension-inducing (ICA) effects. Accordingly, this research addresses the following questions:

1. How do critical thinking skills (CTS) predict Intercultural Sensitivity (IS) among KSLs?
2. What is the relationship between CTS and Intercultural Communicative Competence (ICC) among KSL students?
3. How do CTS sub-variables influence Intercultural Communication Apprehension (ICA) in KSL students?

II. LITERATURE REVIEW

1. Conceptualizing Intercultural Competency: IS, ICC, and ICA

Intercultural competence is not a monolithic trait but a multidimensional construct essential for navigating the complexities of a globalized world. UNESCO (2013) defines intercultural competences as abilities to adeptly navigate complex environments marked by a growing diversity of peoples, cultures, and lifestyles, and later UNESCO work further highlights listening, respect, empathy, curiosity, openness, and adaptability as key attitudinal and behavioral components of such competences. At the policy level, UNESCO frames intercultural competence as a key capability for engaging in intercultural dialogue, reducing prejudice, and fostering inclusive, democratic societies, highlighting not only individual skills but also the ethical responsibility to interact across differences. Drawing on Byram's model (1997), intercultural communicative competence can be understood as a composite capability that integrates knowledge, attitudes, interpreting–relating skills, discovery–interaction skills, and critical cultural awareness, enabling individuals to mediate between different cultural perspectives and to act appropriately and effectively in intercultural encounters. In line with recent work on cultural and intercultural intelligence, it can further

be viewed as a capability that mobilizes cognitive, affective, motivational, and behavioral resources to recognize culturally grounded assumptions and to adapt one's responses in culturally diverse settings. To fully understand ICC, scholars often rely on the Triangular Model of ICC proposed by Chen and Starosta (1996), which posits that competence is comprised of three interdependent dimensions:

- Intercultural Awareness (Cognitive): The understanding of cultural conventions and the self-monitoring of one's own cultural biases.
- Intercultural Sensitivity (Affective): The emotional desire and willingness to understand, appreciate, and accept cultural differences (IS).
- Intercultural Effectiveness (Behavioral): The ability to execute appropriate communication behaviors to achieve shared meaning.

While these dimensions are theoretically distinct, they are operationally linked; specifically, affective sensitivity (IS) is often viewed as a prerequisite for behavioral competence. Without the emotional willingness to engage (IS), cognitive knowledge remains abstract and behavioral skills appear mechanical. Byram and Golubeva (2020), however, expand this conceptualization by emphasizing that intercultural competence should transition from a mere *state of being* to a *state of acting*. They introduce the notion of 'intercultural citizenship,' where ICC involves the critical ability to mediate between different perspectives and to act as an agent of change within one's social environment. This suggests that for KSLs, ICC is not just a personal skill set but a civic capacity to navigate and mediate diverse cultural worlds. In this study, the term ICC is informed by Byram's notion (1997) of intercultural communicative competence in foreign language education, while empirically it is operationalized via constructs derived from Chen and Starosta's model (1996) of intercultural communication competence, particularly intercultural sensitivity as the affective dimension.

However, the development of these competencies is often hindered by ICA. Unlike general communication apprehension, which is a trait-like anxiety across all contexts, ICA is context-specific. Neuliep and McCroskey (1997) define ICA as the fear or anxiety associated with either real or anticipated interaction with people from different cultural or ethnic groups. This apprehension is often exacerbated by the socio-historical position of the learner. Martin et al. (2020) argue that all academic knowledge and communicative practices are 'historically contingent and a contextual production.' For KSLs, this means their apprehension may be rooted in an 'emic' (context-specific) tension—a struggle between globalized English standards (etic) and their local cultural identity. Recent studies highlight that ICA acts as a *silent filter*, often negating the benefits of high linguistic proficiency. Chau et al. (2024) found that high levels of ICA can paralyze a learner's ability to utilize their

cognitive resources, leading to avoidance behaviors even in students with high potential. Furthermore, Feng and Cionea (2024) argue that the relationship between these constructs is non-linear; an individual can be highly sensitive (high IS) but still paralyzed by anxiety (high ICA), suggesting a complex psychological dynamic that requires further investigation into how historical and contextual factors shape a learner's internal dispositions (Martin et al., 2020).

2. Critical Thinking Skills (CTS) as a Psychological Construct

Critical thinking is increasingly recognized not merely as a set of logical operations, but as a fundamental psychological disposition that shapes how individuals perceive and organize reality. A seminal perspective in this domain is provided by D'Angelo (1971), who posits that critical thinking is the purposeful search for intelligible structure in one's experience. According to D'Angelo (1971), critical thinking involves an active process of analyzing, evaluating, and restructuring information to transform a chaotic influx of data into a coherent and meaningful conceptual framework. This structuring process is particularly vital in intercultural contexts, where learners must decode unfamiliar social cues and reconcile them with their existing cultural schemas. D'Angelo's (1971) conceptualization suggests that a critical thinker is one who possesses the sustained cognitive efforts to resist simplistic conclusions, instead choosing to investigate the underlying logic of complex phenomena.

Building upon this foundational view, subsequent research has categorized CTS into two distinct but overlapping dimensions: cognitive skills (e.g., analysis, inference) and affective dispositions (e.g., open-mindedness, skepticism, and persistence). Scholars such as Facione (1990) and Ennis (1996) argue that the dispositional side of CTS—the spirit of the critical thinker—is what dictates whether an individual will actually apply their cognitive skills in real-world situations.

Empirical studies have further demonstrated the predictive power of these psychological CTS constructs in educational and social outcomes. Research by Stupnisky et al. (2008) found that critical thinking dispositions significantly predict academic success and perceived control, largely because students with high CTS are more likely to employ *Persistence* in the face of academic ambiguity. Furthermore, *Intellectual Curiosity* has been identified as a primary driver of cultural engagement. According to Reio and Wiswell (2001), curiosity facilitates the reduction of uncertainty, which is a key psychological prerequisite for navigating diverse social environments.

Collectively, these studies suggest that CTS should be viewed as a psychological architecture that supports the management of cognitive load and emotional tension during complex interactions. By adopting D'Angelo's (1971) view of searching for intelligible

structure, learners can move beyond the superficial vocabulary and grammar of communication to achieve a deeper, more structured understanding of interculturality.

3. The Interplay between CTS and Interculturality

The theoretical link between CTS and interculturality rests on the premise that how one thinks determines how one relates to others. Byram (1997), in his seminal work on ICC, identified *Critical Cultural Awareness* (savoir s'engager) as the core of ICC. He argued that a competent intercultural speaker must be able to critically evaluate the perspectives and practices in their own and other cultures. In their updated conceptualization, Byram and Golubeva (2020) further extend this by linking critical awareness to *intercultural citizenship*. They posit that a critical thinker does not just evaluate cultures in isolation but functions as a mediator who can *act* interculturally to resolve conflicts and promote social justice. This evolution suggests that the cognitive filter of CTS is not merely an internal mechanism but a tool for active social engagement.

Empirical research supports this theoretical connection. Peng et al. (2015), investigating Chinese university students, found that CTS serves as a fundamental cognitive architecture that supports intercultural effectiveness. They argued that students who can think critically are better equipped to handle the cultural dissonance that occurs when norms clash. More recently, Yu and Yu (2024) demonstrated that structured Cross-Cultural Management courses that explicitly demanded critical analysis (through simulations and reflective essays) led to significant improvements in the knowledge dimension of Cultural Intelligence (CQ). Their findings suggest that CTS acts as a cognitive filter, enabling learners to process cultural information more deeply and accurately. Moreover, Martin et al. (2020) emphasize that this cognitive processing is always 'historically contingent.' They argue that the way a learner exercises critical thinking is shaped by the dialectic tension between global (etic) frameworks and regional (emic) impulses. This implies that for KSLs, the interplay between CTS and interculturality is a nuanced process of reconciling their local identity with global communicative demands.

Furthermore, the connection between *Intellectual Skepticism* and IS is particularly noteworthy. While sensitivity is an affective state, it requires the cognitive ability to recognize that one's own worldview is not universal. Skepticism allows the learner to question their own ethnocentric assumptions, thereby creating the mental space necessary for empathy and sensitivity to emerge. As Martin et al. (2020) suggest, this skeptical inquiry is essential for moving beyond 'standardized' histories of communication toward a more pluralistic understanding of interculturality.

4. Challenges for KSLs: Language Anxiety and World Englishes

KSLs face unique challenges situated at the intersection of high academic pressure and the complex reality of WE. In the context of ELF, the goal of communication is intelligibility and adaptability, yet Korean English education has historically prioritized adherence to native-speaker norms. Hatakeyama (2024) similarly found among Japanese university students that intercultural exposure alone does not guarantee competence development without structured activities like group discussions and disagreement practice. Hwang et al. (2024) observed that among Korean students, higher language proficiency does not automatically guarantee lower anxiety or higher intercultural competence. Their study on out-of-class engagement revealed that while linguistic resources are important, the active engagement driven by cognitive factors is what ultimately determines competence. Students often experience *evaluation apprehension*, fearing that any grammatical error will result in a loss of face, which ironically increases their ICA even as their proficiency improves. In a recent mixed-methods study, Chung (2025) similarly reported that Korean university students with high test-based proficiency frequently struggled to initiate and sustain intercultural interactions, and that their participation patterns were better explained by cognitive–affective dispositions—such as reflexivity, willingness to decenter, and tolerance of ambiguity—than by proficiency scores alone, further underscoring the need to examine internal dispositions alongside linguistic ability.

Moreover, Safa and Tofighi (2022) point to a paradox in intercultural teacher education, suggesting that exposure to intercultural settings, without structured reflection and guidance, does not automatically translate into higher intercultural competence. Without the cognitive tools (like CTS) to process these experiences, learners may simply reinforce their existing biases or become more anxious. This literature suggests a critical gap: while language proficiency and exposure have been extensively studied, the role of internal cognitive dispositions—specifically CTS—in helping KSLs achieve high levels of ICC remains under-explored.

III. RESEARCH METHODS

1. Participants

A total of 53 KSLs took part in this study. Participants were recruited on a voluntary basis from a range of academic departments at a university in South Korea. The students consisted of 27 females (50.9%) and 26 males (49.1%). Their majors included Economics (n = 28, 52.8%), English Education (n = 13, 24.5%), Tourism & English Interpretation and

Translation Convergence (n = 2, 3.8%), International Trade (n = 2, 3.8%), History Education (n = 2, 3.8%), and smaller numbers from Business and Financial Education, Business Administration, Art Education, Law, Early Childhood Education, and Music Education (each n = 1, 1.9%), yielding 15 English majors and 38 non-English majors overall. By academic year, 3 were freshmen (5.7%), 9 sophomores (17.0%), 20 juniors (37.7%), and 21 seniors (39.6%), which can be further grouped into 12 lowerclassmen (freshmen and sophomores; 57.8%) and 41 upperclassmen (juniors and seniors; 42.2%). Self-reported English proficiency levels based on the CEFR were Advanced (B2–C1) for 12 students, Intermediate (A2–B1) for 25 students, while 16 students did not report their proficiency. Taken together, this diverse group of participants, varying in academic discipline, year level, and gender, provides a rich snapshot of intercultural communicative competence among KSLs. An overview of their demographic characteristics is summarized in Table 1.

TABLE 1
Demographic Features of Participants

		n (%)
Field of Study		
Economics (28); English Education (13); Tourism & English Interpretation and Translation Convergence (2); International Trade (2); History Education (2); (Else) Business and Financial Education, Business Administration, Art Education, Law, Early Childhood Education, and Music Education (1 each)		53 (100)
Academic Year		
Lowerclassmen		12 (57.8)
Upperclassmen		41 (42.2)
Gender		
Female		27 (50.9)
Male		26 (49.1)
	Total	53 (100)

2. Instruments

This study adopted the Intercultural Intelligence Quotient (IIQ) Test (Bong, 2024) to measure Intercultural Intelligence through values/scales. The IIQ test consists of four scales including the Critical Thinking Skills (CTS) scale. The CTS scale, one of the four, was used as the predictor variable in addition to the English proficiency variable. The current study adapted from a version previously validated in Japan. Specifically, among these four scales, the Critical Thinking Skills (CTS) scale was used as the predictor variable, whereas the remaining three scales were mapped onto the Cognitive–Affective–Behavioral (CAB) framework while the CTS served as an independent predictor variable to examine its influence on each domain of Intercultural Competences (IC).

Critical Thinking Skills (Predictor Variable): Participants' critical thinking ability

(dispositions) was assessed using the CTS scale developed by Bong (2024) adapting Zechmeister and Johnson's functional approach (1992) to D'Angelo (1971)'s proposal of ten types of attitudes necessary for the development of a critical thinker. The CTS scale includes 31 items while this study employed 28 items measuring nine sub-skills such as intellectual curiosity, flexibility, intellectual honesty, persistence, and respect for other viewpoints. In the original formulation, ten sub-skills were proposed; however, the third sub-skill, open-mindedness, was removed during scale harmonization for this joint project with a Japanese partner institution in order to align with the structure of their validated version of the instrument. Although open-mindedness is widely regarded as a core disposition of critical thinking, the open-mindedness subscale of our CTS instrument is currently undergoing validation with separate cohorts (approximately 30-100 students per year), and thus was not included in the present analysis. This omission should be considered when interpreting the pattern of relations between CTS and intercultural outcomes. As a result, the CTS used in this study assessed nine of the ten originally proposed sub-skills, which collectively reflect how learners process information and evaluate multiple perspectives. In this study, CTS served as an independent predictor variable, and its internal reliability was solid (Cronbach's $\alpha = .826$).

Cognitive Domain: To assess the cognitive dimension of IC, this study used the IS scale developed by Holm, Nokelainen, and Tirri (2012), which consists of 23 items. This instrument measures cognitive dispositions such as openness, empathy, and awareness toward cultural differences, which we conceptualize as primarily involving cognitive processes of noticing, interpreting, and evaluating cultural cues rather than immediate emotional reactions. Although IS is often treated as an affective construct in Chen and Starosta (1996)'s original model, several more recent perspectives on ICC (Herrera-López et al., 2017; Innamorati et al., 2019; Mor et al., 2013) argue that sensitivity to cultural difference is grounded in higher-order cognitive operations—such as perspective-taking, decentering, and metacognitive monitoring of one's own assumptions—thereby justifying its treatment as a cognitive dimension in the present study. This version was selected over the earlier IS scale by Chen and Starosta due to its improved psychometric validity and contextual suitability for the Korean university setting. The internal reliability was acceptable ($\alpha = .678$).

Affective Domain: The ICA scale was employed to capture the affective dimension of IC. This instrument measures individuals' anxiety and avoidance behaviors during intercultural interactions. While McCroskey's (2005) Personal Report of Communication Apprehension (PRCA) has been widely used in past research, it focuses on general communication anxiety. Therefore, this study adopted a revised ICA-specific scale that targets affective responses in explicitly intercultural settings. The instrument demonstrated high internal consistency ($\alpha = .954$).

Behavioral Domain: To assess the behavioral dimension of IC, the study used the ICC scale developed by Chen and Starosta (1996). This 24-item instrument evaluates learners' ability to interact effectively and appropriately in culturally diverse contexts. The scale showed strong internal consistency (α = .855). Although the ICC instrument proposed by Wu et al. (2013) was also considered, it was ultimately not selected due to conceptual overlap with cognitive and affective domains. Moreover, the Wu et al. (2013) scale lacked adequate validation in East Asian educational contexts, limiting its applicability to the present sample. The mapping of each instrument onto the CAB framework, along with the reliability for each construct and scale, is summarized in Table 2.

TABLE 2
Reliability of Questionnaires

Domain	Scale	# of items	α
Predictor	*Critical Thinking Skills* (Bong, 2024)	28	.826
	1 Intellectual Curiosity		
	2 Objectivity		
	4 Flexibility		
	5 Intellectual Skepticism		
	6 Intellectual Honesty		
	7 Being Systematic		
	8 Persistence		
	9 Decisiveness		
	10 Respect for Other Viewpoints		
Cognitive	*Intercultural Sensitivity* (Holm et al., 2012)	23	.678
Affective	*Intercultural Communication Apprehension* (McCroskey, 2005)	24	.954
Behavioral	*Intercultural Communication Competence* (Chen & Starosta, 2000)	24	.855
	Total	99	

3. Procedure

The survey was carried out during the fall semester of 2024, between October 15 and 17. Students from three different course sections voluntarily participated after providing informed consent. A Google Forms link was provided via a QR code embedded in the slide that described the purpose and procedure of the research. Participants were given approximately 20 minutes to complete the survey. Prior to participation, they were informed of the importance of answering honestly, and a small incentive was offered upon completion to encourage participation.

Initially, 35 out of the 99 questionnaire items (35.4%) were reverse coded for negatively worded items to ensure consistency in data interpretation. Subsequently, reliability analyses were conducted to assess the internal consistency of each scale, CTS, IS, ICC, and ICA. It was followed by frequency analyses to summarize demographic characteristics and response distributions. Correlation analyses were then undertaken to explore the relationships between individual variables. Building on these correlations, stepwise regression analyses were

conducted to identify the most significant CTS predictors of IS, ICC, and ICA. Furthermore, hierarchical regression analyses were performed by incorporating English proficiency as a control variable.

IV. RESULTS

1. Preliminary Analysis: Descriptive Statistics and Correlations

The descriptive statistics reveal that KSL students exhibit strong CTS and moderate to high levels of IS and ICC. These attributes are essential for navigating the diverse landscape of World Englishes. However, the significant variability observed in ICA indicates that while some students are adept and comfortable in these interactions, others struggle with anxiety that may impede their communication effectiveness.

TABLE 3
Descriptive Statistics for Main Variables: CTS, IS, ICC, and ICA

Variables	Minimum	Maximum	Mean	*SD*
I-1	2.50	5.00	4.0	0.54
I-2	2.33	5.00	4.0	0.63
I-4	3.00	5.00	4.1	0.45
I-5	1.67	5.00	3.5	0.67
I-6	2.67	5.00	3.9	0.57
I-7	2.67	5.00	4.0	0.51
I-8	2.33	5.00	3.8	0.63
I-9	2.67	5.00	4.1	0.49
I-10	3.33	5.00	4.4	0.45
II	2.74	4.35	3.6	0.31
III	3.00	5.00	3.7	0.42
IV	1.00	5.00	3.0	0.75

Note. I-1 = Intellectual Curiosity; I-2 = Objectivity; I-4 = Flexibility; I-5 = Intellectual Skepticism; I-6 = Intellectual Honesty; I-7 = Being Systematic; I-8 = Persistence; I-9 = Decisiveness; I-10 = Respect for Other Viewpoints; II = Intercultural Sensitivity (IS); III = Intercultural Communicative Competency (ICC); IV = Intercultural Communication Apprehension (ICA)

Specifically, as detailed in Table 3, the data confirms that KSLs possess robust CTS, highlighted by a notably high mean in *Respect for Other Viewpoints* (I-10: $M = 4.4$, $SD = 0.45$). This was followed by *Flexibility* (I-4: $M = 4.1$, $SD = 0.63$), and *Decisiveness* (I-9: $M = 4.1$, $SD = 0.49$). Regarding intercultural variables, KSLs displayed moderate to high levels of IS ($M = 3.6$, $SD = 0.31$) and ICC ($M = 3.7$, $SD = 0.42$). However, ICA showed the greatest degree of variability among all constructs ($M = 3.0$, $SD = 0.75$), with scores ranging from a minimum of 1.0 to a maximum of 5.0. This marked disparity suggests that although these learners are cognitively well-equipped, they experience markedly different levels of

psychological tension during actual intercultural interactions.

To further investigate the associations between CTS, IS, ICC, and ICA, a Pearson correlation analysis was performed (see Table 4). The results revealed several significant positive correlations that provided a strong empirical rationale for the subsequent regression models. Specifically, Intellectual Skepticism (I-5) showed a significant positive correlation with IS (r = .444, p < .01), ICC (r = .480, p < .01), and even ICA (r = .305, p < .05). This indicates that learners who are more inclined to question and evaluate information also tend to be more sensitive and competent in intercultural settings. Furthermore, Persistence (I-8) was found to have a powerful correlation with ICC (r = .606, p < .01) and a significant relationship with ICA (r = .360, p < .01). Intellectual Curiosity (I-1) also exhibited a strong association with ICC (r = .515, p < .01).

Notably, the correlations between the independent variables (CTS sub-scales) were generally below .60, indicating that there were no issues of multicollinearity, which justifies their inclusion as separate predictors in the regression analysis. These significant inter-variable relationships suggest that cognitive dispositions are deeply intertwined with how KSLs perceive and navigate intercultural communication.

TABLE 4
Correlations Between CTS Sub-dimensions and Intercultural Constructs

Variables	I-1	I-2	I-4	I-5	I-6	I-7	I-8	I-9	I-10	II	III	IV
I-1	1	.225	.124	.527**	.317*	.123	.154	.082	.220	.164	.515**	.185
I-2		1	.178	.270	.193	.555**	.209	.293*	.433**	.290*	.227	.073
I-4			1	.315*	.459**	.164	.367**	.033	.391**	.420**	.475**	.139
I-5				1	.238	.514**	.348*	.221	.304*	.444**	.480**	.305*
I-6					1	.015	.132	-.004	.311*	.200	.226	.170
I-7						1	.101	.205	.327*	.388**	.234	.203
I-8							1	.607**	.204	.252	.606**	.360**
I-9								1	.297*	.108	.271*	.268
I-10									1	.387**	.391**	.054
II										1	.372**	.109
III											1	.313*
IV												1

Note. I-1 = Intellectual Curiosity; I-2 = Objectivity; I-4 = Flexibility; I-5 = Intellectual Skepticism; I-6 = Intellectual Honesty; I-7 = Being Systematic; I-8 = Persistence; I-9 = Decisiveness; I-10 = Respect for Other Viewpoints; II = Intercultural Sensitivity (IS); III = Intercultural Communicative Competency (ICC); IV = Intercultural Communication Apprehension (ICA)

2. Hierarchical Regression Analysis of CTS on Intercultural Outcomes

To evaluate the unique predictive power of CTS while controlling for the influence of linguistic background, a series of hierarchical regression analyses were conducted for each of the three research questions. In Model 1 for each construct, English proficiency was entered as a categorical control variable. In Model 2, the specific CTS predictors identified

through initial screening were added (see Table 5).

1) Predicting IS (RQ 1)

The first model examined the predictors of Intercultural Sensitivity. As shown in Table 5, English proficiency in Model 1 significantly predicted IS, accounting for 21.6% of the variance (F = 6.878, p < .01). However, the inclusion of Intellectual Skepticism (I-5) in Model 2 significantly enhanced the model's explanatory power, which rose to 34.8% (ΔR^2 = .132, ΔF = 9.910, p < .01). Even after controlling for the effect of being an advanced or intermediate learner, Intellectual Skepticism remained a robust significant predictor (β = .371, p < .01).

This finding suggests that linguistic mastery alone does not define cultural sensitivity; rather, the cognitive willingness to engage in skeptical evaluation of cultural norms provides a distinct advantage. Learners who do not take cultural information at face value but instead analyze it through a critical lens are more likely to develop a higher degree of affective openness toward cultural diversity.

TABLE 5
Hierarchical Regression Analysis of CTS on IS, ICC, and ICA

Variables	IS (Model 2)	ICC (Model 2)	ICA (Model 2)
	β	β	β
Step 1: Control variables			
English proficiency (Intermediate)	.214	.112	.318
English proficiency (Not reported)	.185	.095	.284
Step 2: CTS			
I-5. Intellectual Skepticism	.371**	-	-
I-8. Persistence	-	.456**	.479**
I-1. Intellectual Curiosity	-	.465***	-
R^2	.348	.647	.186
ΔR^2	.132	.460	.183
F	8.718	29.854	3.737
ΔF	9.910**	31.219***	11.006**

Note. *p < .05, **p < .01, ***p < .001. β values are standardized coefficients from the final model (Model 2). Only significant predictors are included in Step 2; non-significant CTS sub-variables were omitted from the final table for clarity.

2) Predicting ICC (RQ 2)

The second research question explored the relationship between CTS and ICC. The second analysis focused on ICC, where the impact of CTS was the most dramatic. Model 1, containing only English proficiency, explained 18.7% of the variance. In Model 2, when Persistence (I-8) and Intellectual Curiosity (I-1) were introduced, the total variance explained jumped to an impressive 64.7% (ΔR^2 = .460, ΔF = 31.219, p < .001). Both Persistence (β

= .456, $p < .001$) and Intellectual Curiosity (β = .465, $p < .001$) were highly significant.

This 46% increase in explanatory power is a centerpiece of this study. It demonstrates that for KSL students, sustained cognitive efforts (Persistence) and a proactive desire for knowledge (Curiosity) are far more influential than their formal language level in determining their intercultural communicative success. In other words, a student's cognitive grit and hunger for learning are the primary engines that drive effective communication in multicultural contexts, far outweighing the contributions of grammatical or lexical proficiency.

3) Predicting ICA (RQ 3)

The final research question examined how CTS sub-variables influence ICA. The final hierarchical regression for ICA revealed a unique and counter-intuitive psychological mechanism. In Model 1, English proficiency was found to be a non-significant predictor of ICA (R^2 = .003, $p > .05$), indicating that language level has no direct role in mitigating intercultural anxiety. However, Model 2 became significant with the addition of Persistence (I-8), which increased the explained variance to 18.6% ($\Delta R^2 = .183$, $\Delta F = 11.006$, $p < .01$).

Surprisingly, Persistence showed a strong positive relationship with ICA (β = .479, $p < .01$). This implies that learners who are most committed to staying in a conversation and resolving communication difficulties (highly persistent) also experience higher levels of apprehension. This Persistence Paradox suggests that the intense cognitive effort and high stakes perceived by persistent learners may lead to increased psychological tension. Unlike IS and ICC, where proficiency played at least some role, ICA appears to be almost entirely governed by these internal cognitive dispositions, reinforcing the need for pedagogical interventions that address the cognitive-emotional link.

V. DISCUSSION

This study aimed to investigate the influence of CTS on IS, ICC, and ICA among KSLs, while controlling for English proficiency. The findings provide empirical evidence that specific cognitive dispositions play a more decisive role in intercultural outcomes than linguistic proficiency alone.

1. The Role of Intellectual Skepticism in Fostering IS (RQ 1)

The first major finding of this study is the significant predictive power of *Intellectual Skepticism* (I-5) on IS. The hierarchical regression revealed that even after controlling for

English proficiency, this reasonable reflective thinking focused on deciding what to believe or do (Ennis, 1996) significantly enhanced students' sensitivity toward cultural differences.

This finding aligns with the triangular model of ICC proposed by Chen and Starosta (1996), which posits that cognitive, affective, and behavioral dimensions are interrelated. However, it also extends the notion of 'critical cultural awareness' (savoir s'engager) as conceptualized by Byram and Golubeva (2020). They argue that critical awareness involves the ability to evaluate practices and products in one's own and other cultures based on explicit criteria. Our results suggest that Intellectual Skepticism provides the cognitive foundation for this evaluation, allowing learners to function not just as passive observers, but as intercultural speakers who can mediate between conflicting perspectives. In the context of World Englishes, *skepticism* does not imply cynicism, but rather the ability to suspend judgment and avoid uncritical acceptance of cultural stereotypes. This interpretation is compatible with perspectives that regard cognitive or metacognitive competencies as an important basis for affective or attitudinal development in intercultural encounters (e.g., Chen, 2014; Feng & Cionea, 2024), rather than claiming a simple one-way causal foundation, and it implies that educators need to encourage students to critically reflect on their own cultural assumptions in order to foster more authentic emotional openness toward cultural others.

2. Cognitive Dispositions as Primary Drivers of ICC (RQ 2)

Regarding the second research question, the results demonstrated that *Persistence* (I-8) and *Intellectual Curiosity* (I-1)—reflecting open-mindedness and inquisitiveness (Facione, 1990)—were the most powerful predictors of ICC, explaining an additional 46% of the variance beyond language proficiency.

This finding aligns with Byram and Golubeva's (2020) active intercultural engagement rather than static competence, though the current study specifically identifies *persistence* and *curiosity* as key cognitive predictors rather than directly operationalizing intercultural citizenship. While some studies suggest that language proficiency or multilingual backgrounds facilitate ICC (Hwang et al., 2024), others indicate that exposure alone does not guarantee competence (Hatakeyama, 2024; Safa & Tofighi, 2022).

The current study suggests that cognitive engagement—specifically *curiosity* and *persistence*—may help explain why linguistic skill does not automatically translate into ICC. This perspective is consistent with research emphasizing active learning processes over passive exposure (Chau et al., 2024; Hwang et al., 2023). For KSLs in ELF contexts, ICC appears less dependent on grammatical mastery and more reliant on sustained communicative effort, openness to diverse perspectives, and structured engagement opportunities (Yu & Yu, 2024), though Martin et al.'s (2020) notion of *historically contingent*

knowledge suggests these processes operate within specific socio-cultural contexts

3. The Persistence Paradox in ICA (RQ 3)

The most counter-intuitive finding emerged from the third research question: *Persistence* (I-8) was positively associated with ICA. While English proficiency had no significant impact on anxiety, highly persistent students reported higher levels of apprehension. This phenomenon, which can be termed the *Persistence Paradox*, offers a nuanced perspective on ICA.

This paradox can be understood through Martin et al.'s (2020) discussion of tensions between the global (etic) and the local (emic) in intercultural communication, in that persistent KSLs may experience stronger pressure to navigate these dual demands, which can increase psychological tension. Stupnisky et al. (2008) show persistence mediates motivation-performance relationships; here, however, anxiety may co-occur with such sustained cognitive investment rather than simply reflecting avoidance (Neuliep & McCroskey, 1997). In the Korean context, this pattern may be further amplified by perfectionistic learning orientations and face-sensitive cultural norms, whereby students feel compelled to maintain an image of linguistic competence and intercultural adequacy, even when they internally experience uncertainty or fear of losing face. For highly persistent learners, the drive to meet these perceived standards can intensify self-monitoring and fear of negative evaluation, thereby elevating ICA even as they continue to invest effort in intercultural communication.

However, the positive correlation found in the present study suggests that, for some KSLs, anxiety may co-occur with high levels of cognitive and motivational investment in intercultural interaction rather than simply reflecting avoidance tendencies. This intertwining of persistence and anxiety indicates that ICA, in such cases, may function less as a pure barrier and more as a by-product of deeply engaged, perfectionism-inflected striving to perform well in intercultural encounters.

This implies that simply reducing ICA may not always be the primary goal; rather, educators should recognize that a certain level of tension may accompany the intense cognitive effort required for persistent intercultural engagement. Pedagogically, this calls for creating learning environments where *productive discomfort* can be acknowledged and normalized, while also providing explicit strategies for emotion regulation and self-compassion so that high-persistence learners are not trapped in maladaptive perfectionism. It also highlights the need for pedagogical interventions, such as the simulated dialogues and role-playing mentioned by DeWitt et al. (2022) and Chau et al. (2024), to help students manage the psychological pressure that comes with high persistence. Rather than claiming that persistent learners already embody the full *intercultural citizenship* envisaged by Byram

and Golubeva (2020), the present findings can be seen as indicating that persistence is one potential resource for moving toward such a role, particularly in contexts where learners must navigate historically contingent communicative demands (Martin et al., 2020). These findings suggest that tension accompanying persistent intercultural engagement may reflect cognitive investment rather than mere avoidance, pointing to the potential value of pedagogical approaches that support KSLs in navigating complex communicative demands.

VI. CONCLUSION

The present study examined the predictive power of CTS on intercultural outcomes among KSLs. A key contribution lies in demonstrating that cognitive dispositions explained substantially more variance in ICC (64.7%) than English proficiency alone (18.7%), with *Intellectual Curiosity* (I-1) and *Persistence* (I-8) emerging as particularly strong predictors.

The findings also identified *Intellectual Skepticism* (I-5) as a significant predictor of IS and revealed a positive association between *Persistence* and ICA—the Persistence Paradox. These patterns collectively suggest that intercultural outcomes among KSLs reflect complex cognitive and psychological engagement rather than linguistic proficiency alone.

These results point to several considerations for ELF and KSL education. First, instructional design might prioritize activities that engage students' curiosity and sustained effort alongside traditional language practice, consistent with Byram's (1997) emphasis on developing ICC beyond native-speaker norms. For example, teachers could implement problem-based intercultural projects in which students investigate authentic cases of misunderstanding, formulate hypotheses, and collaboratively propose context-sensitive responses, thereby requiring them to sustain cognitive engagement over multiple class sessions. Second, given *Persistence*'s dual role in predicting both ICC and ICA, educators could create supportive environments for sustained interaction despite linguistic uncertainty, potentially drawing on approaches like structured task-based interactions (Chau et al., 2024; Hwang et al., 2024). Such tasks might include repeated role-plays or simulated exchanges with rotating roles (e.g., host, visitor, mediator), combined with post-task reflection journals that explicitly address how students managed discomfort, face concerns, and the urge to withdraw. Finally, fostering critical evaluation of cultural information may support IS development, where digital tools could facilitate comparative analysis of diverse perspectives alongside human interaction. In practice, this could involve guided critical reading of AI-generated or online cultural descriptions, followed by small-group discussions in which students identify biases, contrast multiple sources, and reconstruct more balanced accounts.

Despite its insights, this study is limited by its reliance on self-reported data and a specific

demographic of KSLs. In addition, the relatively small sample size (N = 53) places constraints on the statistical power of regression models that include nine CTS subscale predictors, and the findings should therefore be interpreted with caution and not overgeneralized beyond similar KSL contexts. Future research should employ qualitative measures, such as interviews or classroom observations, to explore the Persistence Paradox more deeply and determine why highly committed learners experience greater anxiety. Additionally, longitudinal studies could track how the intentional integration of CTS into language curricula actually transforms learners' real-world intercultural performance over time.

In conclusion, this study argues that the ultimate goal of language education in a globalized world should be the cultivation of a Critical Intercultural Mindset. By fostering *curiosity* and *persistence*—such as inquiry-based intercultural projects, iterative role-plays with reflective debriefing, and critical analysis of culturally loaded texts—educators can empower learners to navigate the diverse landscape of World Englishes with not just linguistic accuracy, but with cognitive depth and psychological resilience.

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