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## Development and Validation of a Cross-Cultural Capital Scale for International Academic Sojourners

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**ABSTRACT:** *This research addresses the critical need for a psychometrically sound instrument to assess the multifaceted construct of cross-cultural capital among international academic sojourners. The main objective of the study was to develop and validate the cross-cultural capital scale for academic sojourners. Through rigorous qualitative (e.g., interviews with international students) and quantitative methods (e.g., exploratory and confirmatory factor analyses, reliability and validity assessments against related constructs such as cultural intelligence and ethnocentrism), the scale's dimensionality was established using data collected from a diverse sample of academic sojourners across various host cultures. Finally, four factors were extracted, including cross-cultural skills, cross-cultural attitudes, cross-cultural knowledge, and cross-cultural belief. The resulting scale is expected to provide researchers and practitioners with a valuable tool for understanding the role of cross-cultural capital in academic*

*success, intercultural adjustment, and overall well-being among academic sojourners.*

**Keywords:** Cross-Cultural Capital, Cross-Cultural Skills, Cross-Cultural Attitudes, Cross-Cultural Knowledge, Cross-Cultural Belief, International Academic Sojourners, Development, Validation

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## INTRODUCTION

The development of a cross-cultural capital scale is crucial for accurately measuring and understanding how international sojourners navigate and leverage cultural resources in diverse, globalized contexts. While Bourdieu's framework provides a theoretical foundation, an empirical scale would allow researchers to quantify the specific skills, knowledge, and dispositions that facilitate successful intercultural interactions. Such a scale would move beyond general ethnocentrism measures, focusing instead on the acquisition and utilization of cultural competencies relevant to cross-cultural settings (Riaz, 2020; Stasel, 2021). This would enable researchers to examine how cross-cultural capital influences outcomes like intercultural communication effectiveness, global mobility success, and adaptation to new cultural environments, ultimately contributing to a more nuanced understanding of cultural dynamics in an increasingly interconnected world. The need for sojourners who can work effectively in diverse cultural contexts necessitates inquiry into which factors are most effective for adjustment in academia (Kim, 2024). For instance, previous studies revealed that different factors are crucial to the cultural adaptations, like personal attributes, motivation, assertive skills, communication competence, sense of humor, and positive attitudes (Chen, 2024; Riaz & Rafique, 2019). Hannigan (1990) reviewed that openness, empathy, tolerance of ambiguity, and perseverance flexibility are major factors for cross-cultural adaptations.

Studies reported that acculturation provides a huge opportunity for new knowledge and skills that are not possessed by the sojourners before (He et al., 2025). People experiencing cultural transition are more concerned to have cultural sensitivity and interpersonal skills as compared to the people in native culture (Onomejoh et al., 2024). The number of cross-cultural skills determined the level of socio-cultural adaptation; greater skills and knowledge will lead to a greater level of adaptation (Xue & Singh, 2025). However, the development of cross-cultural learning is complicated and cannot be possible without the willingness to learn by sojourners (Bennett, 2023). Bandura (1977) asserts in social learning theory that learning occurs in social context as it is based on cognitive processes, and people learn on the basis of social interactions and observations. The social learning theory primarily studied the influence of social participation in learning.

Hence, learning is entirely a process of participation in social context. Learning cannot be treated as an individual process; rather, it requires societal participation within a context. This context can be either cultural or historical. Empirical evidence indicates that when an individual encounters different cultures, they experience a sense of uniqueness. As Campesi (2025) suggested, cross-cultural experiences help develop unique abilities in individuals, broadening the spectrum of experiences they share with others.

Despite frequent cross-cultural contact among sojourners, little research has examined which specific competencies and attitudes underlie their successful adaptation (Riaz, 2020; Riaz et al., 2025). Researchers identified several overlapping concepts such as intercultural communication competence, cultural intelligence, transcultural communication, cultural competence, intercultural sensitivity, multicultural competence, intercultural literacy, multiculturalism, and intercultural sensitivity; cross-cultural capital helps to have effective interactions with different cultures (Braslauskas, 2021; Panditharathna, 2024). Despite broad consensus on the value of intercultural skills and competencies for cross-cultural travelers, scholars differ widely in how they define or even name these constructs. One relevant concept discussed above is cross-cultural capital, which basically originates from cultural capital that is a common concept in the late twentieth century (Spitzberg & Changnon, 2009). Cultural capital is defined as a set of skills, knowledge, and behaviors that are demonstrated through cultural competence. Sociology defines cultural capital as the accumulation of social assets of social agents that include education, intellect, style of communication, speech, dressing, etc., that provide grounds for social mobility. Thus, it builds one's social status, authority, and power in one's living society (Bourdieu, 1993).

### **Theoretical Framework**

The theory of cross-cultural capital extends the foundational work of Pierre Bourdieu on cultural capital, applying it to the complexities of intercultural interaction. Bourdieu's (1986) original concept describes how non-economic assets, such as knowledge, skills, and tastes, influence an individual's social standing within a specific cultural context. However, in our increasingly globalized world, the ability to navigate diverse cultural environments has become a crucial form of capital. Cross-cultural capital, therefore, encompasses the competencies that enable individuals to function effectively across cultural boundaries. This includes elements of cultural intelligence, intercultural communication skills, and adaptability (Gu & Meng, 2022; Qomariyah et al., 2022). A key component of cross-cultural capital is cultural intelligence (CQ). As defined by Ang and Van Dyne (2008), CQ is "the capability to function effectively across cultures." This involves understanding cultural differences, adapting behavior accordingly, and possessing the motivation to engage in intercultural interactions. Furthermore, the theory acknowledges that cross-cultural capital is

not solely innate but also developed through experience. Exposure to diverse cultures, whether through travel, education, or work, contributes to the accumulation of this capital. This experience builds on a foundation of personal traits, such as openness to experience, that facilitate learning and adaptation (Ng et al., 2019). In essence, cross-cultural capital represents a valuable asset in today's interconnected world. It facilitates successful intercultural communication, promotes harmonious relationships, and enhances individual and organizational effectiveness in culturally diverse settings. Recognizing the importance of cross-cultural capital helps us understand how individuals navigate and thrive in a world marked by increasing cultural complexity (Chedru & Ostapchuk, 2023; Rockstuhl & Van Dyne, 2023).

Cross-cultural capital is also considered a component of human capital, conceptualized as knowledge, competencies, and behaviors that enhance productivity (Dollwet & Reichard, 2014). Frank and Benanke (2007) conceptualized and discussed it as a set of factors such as experience, education, training, work habits, intelligence, and honesty and initiatives that affect productivity. As a result, human capital consists of knowledge, skills, tendencies, and traits of individuals that help to create economic, social, and personal happiness with social perspective (Fauzi, 2021). In a similar fashion, cross-cultural capital can be understood as a collective set of assets, including knowledge, information, social skills, personality traits, and other related abilities that provide a competitive advantage to cross-cultural travelers to interact and work with host societies. Cross-culture capital is a broad construct that consists of both dispositional and learned factors. These factors include certain personal attributes, knowledge of host society, and acquired culture-specific skills and behaviors. Certainly there is no dearth of research dealing with the acculturating individuals who are more likely to be successful in living and functioning in a culture different from their culture of origin for extensive periods of time. But little is known for those who stay a short period of time, such as sojourners (Riaz et al., 2025). Moreover, multiple factors for successful adaptation are discussed in the existing literature, making it challenging to understand and assess this multidimensional construct.

## **Objectives**

The following objectives were proposed:

- O<sub>1</sub>: To develop a comprehensive and psychometrically sound measurement scale that captures the multifaceted dimensions of cross-cultural capital—including cross-cultural skills, cross-cultural attitudes, cross-cultural knowledge, and cross-cultural belief—specifically tailored to the lived experiences of academic sojourners in diverse host environments.

- O<sub>1</sub>: To empirically validate the newly developed scale through exploratory and confirmatory factor analyses, assessing its construct validity, internal consistency, and cross-cultural reliability across diverse samples of academic sojourners from different national, linguistic, and disciplinary backgrounds.

## **METHOD**

The present study comprised two phases: scale development and scale validation. The Phase-I is based on the development of the scale to measure cross-cultural capital among academic sojourners. The item development phase was achieved in two steps. Step 1 involved a review of the extensive literature to understand the nature and dimensions of cross-cultural capital. Step 2 involved in-depth interviews with academic sojourners to obtain deeper insight into the construct. Cross-cultural capital is a new construct, and, to the researcher's knowledge, it has not been systematically examined in the literature. Although numerous studies have sought to identify a range of variables associated with successful adaptation to the host culture, no comprehensive effort has examined cross-cultural capital. Organizational and management literature considered cross-cultural capital as a component of human capital consisting of a collective set of assets, including knowledge, information, social skills, personality traits, and other related abilities that provide a competitive advantage to cross-cultural travelers to interact and work with host societies (Mehmood & Sultan, 2014). By embracing this conceptualization, the present study defined cross-cultural capital as “a broad construct comprised of all dispositional and learned factors that facilitate academic sojourners to interact, live, and work in the host society.” It means that it includes all factors on the part of sojourners that contribute to successful adaptation to a new culture.

The theoretical and empirical literature on cross-cultural capital consistently identifies behaviors, skills, and attributes essential for adapting to host societies. Thus, extensively reviewing such literature, ten dimensions were hypothesized as part of cross-cultural capital, including 1) **cultural knowledge** that refers to the knowledge of basic things of cross-cultural regions, such as economy, strategies of decision-making, political system, norms, and religion, was hypothesized as part of cross-cultural capital; 2) **cross-cultural openness** refers to a trait that includes interest and motivation to have new experiences and learning in cross-cultural settings (Albrecht et al., 2014); 3) **cross-cultural empathy** refers to the ability to accurately understand and comprehend others feelings and emotions and act accordingly. Empathy serves as a key element in developing and maintaining healthy relations (Nagle & Anand, 2012), 4) **self-monitoring** that refers to one's ability to observe the environmental cues and adjust one's behavior to response such cues in culturally suitable behavioral manners (Gerstein, 2022), 5) **diversity beliefs** refers to what extent one considers

the diversity in group is profitable for group performance on certain tasks (Van Knippenberg & Schippers, 2007), 6) **cross-cultural flexibility** is about (i) being fully aware of and embracing one's own cultural experience without needless defence, and (ii) moving in and out of a culture, that is, changing in the service of values (Lin, et al., 2020), 7) **cross-cultural communication skills** refers as having effective verbal and non-verbal skills to establish communication while communicating with people from different cultural context (Yılmaz & Temizkan, 2022), 8) **tolerance for ambiguity** is defined as a human ability marked with absence of inflexibility, confusing thoughts, authoritarianism, and ethnocentrism (Abbe et al., 2007) , 9) **emotional regulation**, which is the ability that is marked with regulation and control over emotion so that the performance cannot be distracted (Gross & John, 2003). and 10) **self-efficacy** that is defined as confidence that one has in one's abilities to accomplish certain tasks to attain particular goals (Bandura, 1997).

### ***Interviews***

For further exploration of the construct, in-depth interviews were conducted. Eight students were selected for this purpose on the bases convenient and snowball sampling. 5 of the interviewees were BS and two of them were M. Phil students. Three of them were male and 5 of them were female. One of them was married the others were unmarried. Bilingual persons assisted the researcher in the whole interview. Participants were ensured regarding the confidentiality of their information. All participants were treated with high respect and were paid heartiest thanks by the researcher. The purpose of these interviews was to identify more domains of cross cultural capital that might not be existed in previous literature. Interviewees were asked to share their acculturation experiences, difficulties and adjustment process. During this process, many dimensions were identified; however, all these dimensions were similar to the existing hypothesized factor structure of cross-cultural capital. Therefore, these were merged in the hypothesized dimensions.

### ***The Final Version of the Scale***

Keeping in view the hypothesized factor structure, an initial item pool with 75 items was generated. Some items were adopted from the existing scales based on the above-mentioned hypothesized dimensions, and the remaining statements were based on interview data and theoretical and empirical literature. Items covered all possible skills that may be required for cross-cultural adaptation of sojourners. According to DeVellis (2003), following such approaches for item construction improves the content validity of the scale. All items included in the item pool were stated positively, as negative statements are highly vulnerable to measurement error and careless responding (Sonderen et al., 2013). All statements were in the English language. Linguistic errors were amended with the help of an English language expert. The scale was named the Cross-Cultural Capital Scale.

A Likert-type pattern with five response categories was selected as the response format, ranging from 1 (strongly disagree) to 5 (strongly agree). This extensively used scaling method in survey research helps to rate participants on what extent they agree on certain statements. Besides, this method is more likely. To select items for the final version of the scale, five Subject Matter Experts (SMEs) were invited. They all were specialists in scale construction and were well aware regarding cross-cultural concerns. They were requested to judge the face and content validity of the cross-cultural capital scale. They were also asked to point out whether there were issues with consistency and comprehensiveness. At this point, a trial sample containing 5 academic sojourners was also employed to check whether the whole item pool is readable and comprehensive. As a result, five of the items were excluded, and some were rephrased. After revision, 70 items were retained for the final version that was further tested by exploratory factor analysis to empirically determine the factor structure of the scale.

### **Validation of Scale**

The Phase II aimed to examine the validity (construct validity, factorial validity, discriminant validity) and reliability of the cross-cultural capital scale. A sample of 400 academic sojourners was drawn from different universities in Islamabad. The adequacy of the sample size for the present research was determined following the criteria recommended by Singleton and Straits (2017). Researchers recommended using sojourners as a sample in acculturation-related studies, as this group is generally under pressure to adapt to diverse systems of values, customs, beliefs, and culture, and to the demands of student life, within a shorter period (Riaz et al., 2025). A purposive sampling technique for the data collection was used in this study. The inclusion criteria of the sample were; only those students who do not belong to Pakistan, those who are full-time university students and have spent a minimum of one year and a maximum of 5 years in Pakistan will be a sample of the current study. Sojourners who have spent more than five years and less than one year were excluded from the sample. The demographic characteristics include; gender distribution is even, with 50% men (200) and 50% women (200). The majority of participants are unmarried (91.5%, 366) compared to married (8.5%, 34). Most participants rely on family support for finances (82.5%, 330), with smaller percentages receiving scholarships (12.5%, 50) or being self-supporting (5%, 20). The length of stay is primarily 2 years (62.5%, 250) and 3 years (35%, 140), with a small portion staying 4 years (2.5%, 10). A large majority of the participants are unemployed (97.5%, 390), with only a small fraction employed (2.5%, 10). Academically, most participants are pursuing a Bachelor's degree (86.25%, 345), followed by Master's (10.5%, 42) and Doctorate degrees (3.25%, 13). The age of the sample ranged between 19 and 28 years ( $M_{age} = 22.50$ ,  $SD = 3.05$ ).

The current cross-cultural capital scale consisted of 27 items. All items were positively worded. Likert type response pattern was used that ranged from 1 (strongly disagree) to 5 (strongly agree). The scores on the overall scale were ranged from 27 to 135. There was no cutoff in the scores thus high scores show high cross-cultural capital and vice versa. The value of alpha coefficient calculated was ranging from .81 to .93 for subscales and overall scale respectively. The convergent, factorial and discriminant validity were reported by authors. The Cross-Cultural Intelligence Scale (Ang & Dyne, 2008) was used to measure cross-cultural intelligence among participants. Twenty items are included, six of which are related to cognitive CQ, four items are related to metacognitive CQ, five come under motivational CQ, and the remaining five are grouped in behavioral CQ. Likert type response pattern was used in this scale that ranged from 1 (strongly disagree) to 5 (strongly agree). This scale was used to measure the convergent validity. The value of alpha coefficients for all subscales and the overall scale was .80, .84, .87, .82, and .92, respectively.

Another important concern in test construction is to obtain univariate normality. Bell-shaped normal symmetrical distribution strays from normal either for lack of symmetry or for pointiness, also known as skewness and kurtosis, respectively (Chattamvelli & Shanmugam, 2023). When the majority of scores fall at either the right or left end of the distribution, the distribution is skewed distribution. Distribution is positively skewed when scores are centered on the right tail, and it is negatively skewed when scores are centered on the left tail of the distribution (Cisar & Cisar, 2010). In the same way, it is essential for a normal curve that neither it involve peakedness nor flatness or be leptokurtic or platykurtic. Positive kurtosis is an indication of a relatively peaked distribution, while negative kurtosis demonstrates a relatively flat distribution (Cisar & Cisar, 2010). The curve is leptokurtic when the majority of the scores lie in the center, and in contrast, it is platykurtic when the majority of the scores stand on the tails (Chattamvelli & Shanmugam, 2023).

Written permission was obtained from the original author through mail. The Revised Generalized Ethnocentrism Scale (Neuliep & McCroskey, 1997), was used to measure an individual's tendency to perceive their own culture as superior to others. This scale was used to measure the discriminant validity. Twenty-four items included and it is a 5-point Likert response ranging from 1 (strongly disagree) to 5 (strongly agree). The value of alpha coefficients was .92. The data was collected from different universities in Islamabad, Pakistan. The ethical considerations, such as informed consent, departmental permission, and data confidentiality, were addressed. Following data collection, SPSS (Version-27) and AMOS (Version-10) were used for exploratory and confirmatory factor analysis. Finally, the researcher addressed the potential biases, ensuring transparency and enabling readers to critically evaluate the research's rigor and validity.

**RESULTS**

The first part of the current research had two main goals: first (a) to create a list of items for a scale that measures cross-cultural capital, and second (b) to check how reliable and valid the scale is. To do this, the data was analyzed using several statistical methods, including exploratory factor analysis, descriptive statistics, item total correlation, inter-scale correlation, univariate normality analysis, and alpha reliability analysis.

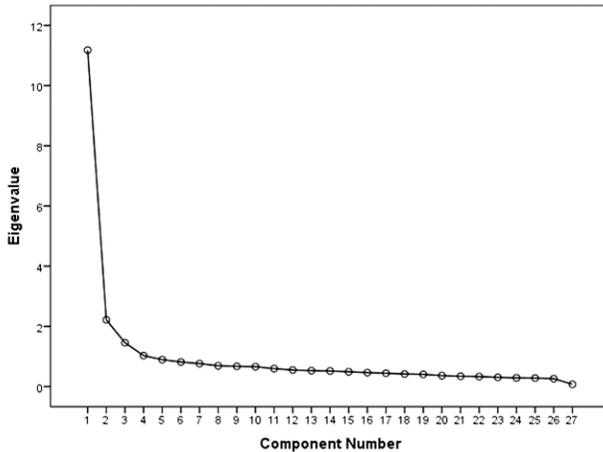
**Table 1: Exploratory Factor Analysis and Item Total Correlation of Cross Culture Capital Scale**

S #	Items	Factor I	Factor-II	Factor-III	Factor-IV	Item-total correlation
1	CCC17	<b>.71</b>	.20	.21	.15	.60
2	CCC48	<b>.72</b>	.13	.13	.15	.63
3	CCC59	<b>.67</b>	.17	.17	.20	.61
4	CCC33	<b>.69</b>	.18	.20	.19	.65
5	CCC68	<b>.65</b>	.30	.23	.16	.63
6	CCC69	<b>.69</b>	.13	.21	.17	.70
7	CCC70	<b>.67</b>	.10	.16	.15	.65
8	CCC61	<b>.62</b>	.17	.18	.08	.63
9	CCC21	<b>.59</b>	.18	.20	.07	.70
10	CCC12	<b>.53</b>	.21	.15	.19	.61
11	CCC39	<b>.56</b>	.24	.24	.10	.55
12	CCC18	<b>.60</b>	.20	.17	.13	.54
13	CCC42	.35	<b>.78</b>	.21	.18	.53
14	CCC31	.20	<b>.73</b>	.17	.22	.60
15	CCC29	.30	<b>.72</b>	.31	.19	.52
16	CCC19	.22	<b>.71</b>	.22	.15	.50
17	CCC52	.31	<b>.66</b>	.30	.18	.64
18	CCC55	.22	<b>.60</b>	.31	.19	.60
19	CCC36	.19	.19	<b>.70</b>	.05	.70
20	CCC63	.10	.21	<b>.67</b>	.07	.67
21	CCC13	.13	.22	<b>.57</b>	.04	.53
22	CCC65	.17	.09	<b>.61</b>	.09	.75
23	CCC27	.30	.12	<b>.55</b>	.11	.56
24	CCC24	.21	.31	<b>.57</b>	.09	.62
25	CCC10	.32	.10	.21	<b>.54</b>	.63
26	CCC32	.25	.11	.19	<b>.86</b>	.59
27	CCC9	.20	.12	.22	<b>.80</b>	.61

For testing the dimensionality of the Cross-Cultural Capital Scale, exploratory factor analysis was carried out, and a principal axis factoring was obtained. A total of four factors with eigenvalues greater than 1.00 were extracted by using oblique rotation. The extraction of the factors was not based on eigenvalues exclusively (Raise et al., 2000), but the resulting scree plot was also utilized for finally deciding the extraction of factors (Cattell, 1988). Finally, four factors were extracted. Hair et al. (2020) criterion was used for the extraction of the items. Thus, items having loadings above .50 were retained as factors for the final scale. Factor loadings ranged from .72 to .53 for the first factor, .78 to .60

for the second factor, .70 to .55 for the third factor, and .86 to .54 for the fourth factor. Item-total correlations were computed after extracting the factors to further validate cross-cultural capital. During solution computation, the criterion recommended by Kim and Stoel (2004) was strictly followed: items with correlation coefficients  $>.50$  with the total scores were retained in the final scale. The range of item-total correlations for the items in the overall scale was from .50 to .75 ( $p < .001$ ). All items of cross-cultural capital have the coefficients of the item-total correlation  $>.50$ , which granted an additive support for the retention of the items extracted through factor analysis, demonstrating that homogeneity of the items with underlying constructs is a satisfactory level.

The eigenvalues for the four factors were 11.16, 2.23, 1.43, and 1.04, respectively. All values exceeded 1, as Kaiser (1960) suggested for factor retention. The third column of the table represents the percentage of total variance accounted for by each factor. The four factors accounted for a total variance of 20.85%, 16.22%, 12.18%, and 13.88%, respectively. The last column of the table is based on the cumulative percentage of variance accounted for by the current and all preceding factors, which shows that all four factors collectively account for 63.85% of the total variance.



**Figure 1: Scree Plot showing the results and factor structure of Cross-Cultural Capital Scale**

Descriptive statistics, means, standard deviations, alpha reliability coefficients and values of skew and kurtosis were computed. The alpha reliability for all subscales and the overall cross-cultural capital ranged from .83 to .95, indicating satisfactory internal consistency for the overall scale and all subscales. To test univariate normality, Skewness and kurtosis were computed. For the cross-cultural capital scale and all subscales, the Skewness and kurtosis values were less

than 1, indicating that the data were not affected by skewness or kurtosis. Pearson product-moment correlation coefficients were computed to examine the relationships among subscales of the cross-cultural capital scale. Correlation coefficients indicate a significant positive relationship across all subscales and overall cross-cultural capital. To test construct validity-related issues, cross-cultural capital and all subscales were correlated with the Cross-Cultural Intelligence Scale (CCI). Results also show that cross-cultural capital and all its subscales are significantly positively correlated with the cross-cultural intelligence scale, indicating factorial and construct validity.

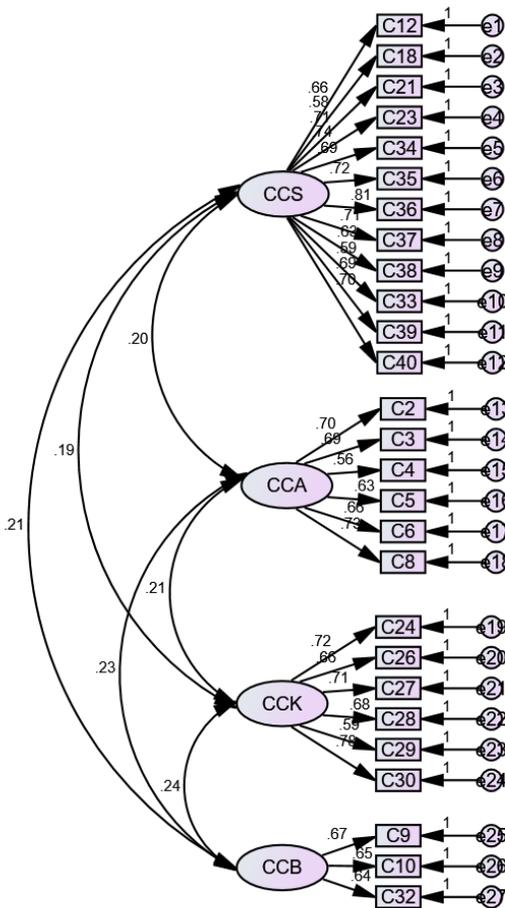


Figure 2: Factor Structure of Cross Cultural Capital

The final model to confirm the factor structure of the cross-cultural capital scale with 4 subscales (cross-cultural skills (CCS), cross-cultural attitudes (CCA), cross-cultural knowledge (CCK), and cross-cultural belief (CCB)). The above fit indices are from the Confirmatory Factor Analysis (CFA) of the cross-cultural capital scale, conducted with a sample size of 400. The table displays the following fit indices: Chi-square ( $\chi^2$ ), degrees of freedom (df), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and the ratio of Chi-square to degrees of freedom ( $\chi^2 / df$ ). The specific values for these indices are 340 for  $\chi^2$ , 0.05 RMSEA, .95 for GFI, .90 for AGFI, .95 for TLI, .94 for CFI, and 1.92 for  $\chi^2 / df$ .

The discriminant validity of the Cross-Cultural Capital Scale (CCCS) and its four subscales—cross-cultural skills, cross-cultural attitudes, cross-cultural knowledge, and cross-cultural beliefs—was assessed by examining their relationships with the Generalized Ethnocentrism Scale (GENE) (Ang & Dyne, 2008). Discriminant validity refers to the degree to which a construct is distinct from other theoretically unrelated constructs. In this analysis, Pearson correlation coefficients were calculated between each CCCS subscale and the GENE scale were carried out on the randomly selected sample for confirmatory factor analysis (CFA).

The results demonstrated non-significant correlations, consistent with theoretical expectations. Specifically, cross-cultural attitudes showed the inverse non-significant relationship with ethnocentrism ( $r = -0.09, p > .05$ ). Cross-cultural skills and knowledge exhibited no correlations with GENE ( $r = -0.15$  and  $r = -0.17$  respectively,  $p > .05$ ). Cross-cultural beliefs also demonstrated non-significant inverse correlation ( $r = -0.12, p > .05$ ). These non-significant correlations confirm that both measure distinct constructs, supporting the discriminant validity of the CCCS. Additionally, confirmatory factor analysis (CFA) further verified the distinctiveness of the CCCS and GENE as separate latent constructs, with acceptable model fit indices (e.g., CFI = 0.94, RMSEA = 0.05). These findings affirm that the Cross-Cultural Capital Scale reliably captures a multidimensional construct that is theoretically distinct from generalized ethnocentric dispositions.

**Table 2: Descriptive Statistics, Values of Skewness, Kurtosis, Alpha Reliability and Pearson Correlation**

Scales	$\alpha$	$M$	$SD$	Range	Skewness	Kurtosis	1	2	3	4	5	6
1. Cross-Cultural Skills	.91	32.23	9.56	12-80	.45	.03	-	.53***	.56***	.80***	.85***	.59***
2. Cross-Cultural Attitudes	.83	15.20	5.23	6-30	.31	.09		-	.61***	.72***	.75***	.45***
3. Cross-Cultural knowledge	.88	17.95	5.89	6-30	.25	.23			-	.65***	.77***	.50***
4. Cross-Cultural Belief	.82	65.10	15.34	3-15	.32	.19				-	.88***	.71***
5. Cross-Cultural Capital	.95	135.85	31.20	27-135	.29	.08					-	.65***
6. Cross-Cultural Intelligence	.85	60.02	11.59	20-100	.34	.10						-

\*\*\* $p < .001$

**Table 3: Test-Retest Reliability Table: Cross-Cultural Capital Scale**

Subscale	No. of Items	Test Mean (T1)	Retest Mean (T2)	Test SD (T1)	Retest SD (T2)	Pearson r	ICC (2,1)	Interpretation
Cross-Cultural Skills	12	30.10	31.10	9.20	9.89	0.85	0.84	Excellent Reliability
Cross-Cultural Attitudes	6	16.11	15.89	5.45	5.10	0.81	0.79	Good Reliability
Cross-Cultural Knowledge	6	16.23	17.01	5.78	6.02	0.83	0.82	Excellent Reliability
Cross-Cultural Beliefs	3	63.12	64.21	14.34	15.12	0.79	0.77	Good Reliability
Total Scale	27	133.20	135.10	29.10	31.03	0.86	0.85	Excellent Overall Reliability

*Note.* Test Mean (T1) and Retest Mean (T2): Average scores obtained from the first and second administration, SD: Standard Deviation, Pearson r: Pearson correlation coefficient between T1 and T2. ICC (2, 1): Intraclass Correlation Coefficient (absolute agreement, 2-way random effects model), preferred for test-retest reliability. Results revealed that on the basis of indicators values ( $\geq 0.90$ : Excellent,  $0.75 - 0.89$ : Good,  $0.50 - 0.74$ : Moderate,  $< 0.50$ : Poor), there was an excellent test-retest reliability.

**Table 4: Standardized Solutions by Confirmatory Factor Analysis of Cross cultural Capital Scale**

S #	Items	Factors			
		Cross-Cultural Skills	Cross-Cultural Attitudes	Cross-Cultural Knowledge	Cross-Cultural Belief
1	CCC12	.66			
2	CCC18	.58			
3	CCC21	.71			
4	CCC23	.74			
5	CCC34	.69			
6	CCC35	.72			
7	CCC36	.81			
8	CCC37	.71			
9	CCC38	.63			
10	CCC33	.59			
11	CCC39	.69			
12	CCC40	.70			
13	CCC2		.70		
14	CCC3		.69		
15	CCC4		.56		
16	CCC5		.63		
17	CCC6		.66		
18	CCC8		.73		
19	CCC24			.72	
20	CCC26			.66	
21	CCC27			.71	
22	CCC28			.68	
23	CCC29			.59	
24	CCC30			.78	
25	CCC9				.67
26	CCC10				.65
27	CCC32				.64

Table 4 shows the standardized solutions based on confirmatory factor analysis of cross-cultural capital. The factor structure of cross-cultural capital was also empirically supported by CFA. The standardized loadings of all items on their

respective factors were  $> .50$ . The above table also revealed the factorial validity of cross-cultural capital scale.

In the final structure confirmed through exploratory and confirmatory factor analyses, each of the four dimensions of cross-cultural capital—skills, attitudes, knowledge, and beliefs—was clearly represented by items with strong factor loadings. For the cross-cultural skills dimension, items such as “*I try to engage with people from different cultures even if I feel hesitant*” (CCC36;  $\lambda = .81$ ) and “*I adapt my communication style when interacting with people from different cultural backgrounds*” (CCC35;  $\lambda = .72$ ) demonstrated the highest loadings, indicating their strong relevance in assessing behavioral adaptability. In the cross-cultural attitudes dimension, items like “*I accept ambiguity in cultural practices without judgment*” (CCC8;  $\lambda = .73$ ) and “*I try to understand others’ perspectives even when they contradict mine*” (CCC2;  $\lambda = .70$ ) reflected openness, empathy, and flexibility. Within cross-cultural knowledge, the most representative items included “*I understand the values and traditions of the culture I live in*” (CCC30;  $\lambda = .78$ ) and “*I am aware of the social norms and customs of my host society*” (CCC24;  $\lambda = .72$ ), underscoring the importance of situational awareness in intercultural settings. Finally, in the cross-cultural belief factor, items like “*I believe cultural diversity enhances group performance*” (CCC32;  $\lambda = .64$ ) and “*I think having people from different backgrounds leads to better decision-making*” (CCC10;  $\lambda = .65$ ) highlighted inclusive and pluralistic worldviews. These exemplar items illustrate the theoretical and empirical grounding of the scale’s multidimensional framework.

## **DISCUSSION**

To understand the factors responsible for successful adaptation in diverse cultures has always been an ongoing interest among different disciplines such as anthropology, social work, and psychology. Despite the frequent cross-cultural contact among sojourners, there is little research exploring what specific competencies and attitudes are responsible for their adaptation (Riaz, 2020; Riaz et al., 2025). Researchers identified several overlapping concepts, such as cultural intelligence, cultural competence, intercultural sensitivity, and multicultural competence, that help to have effective interactions with different cultures (Basman & Bayram, 2024; Li, 2020). One of the related concepts is cross-cultural capital, whose importance is increasing because of the impact of globalization, migration, and international traffic on human society. However, the construct continues to be plagued with problems of conceptual ambiguity and the lack of valid instruments for its measurement. So the first and foremost aim of the present study is to provide conceptual clarification of cross-cultural capital. In order to fulfill that purpose, extensive literature was carried out. Cross-cultural capital was further explored through extensive reviews and in-depth interviews with sojourners. During this process, many dimensions were identified, such as cross-

cultural openness, self-monitoring, cross-cultural empathy, diversity beliefs, tolerance for ambiguity, emotional regulation, self-efficacy, cross-cultural communication skills, and cross-cultural knowledge. After identification of all possible features and aspects of cross-cultural capital, an item pool consisting of 75 items was generated measuring all major dimensions of cross-cultural capital. Items were presented to subject matter experts to ensure content and face validity. At this point, a trial sample containing academic sojourners was also employed to check whether the whole item pool is readable and comprehensive. As a result, five items were excluded, and others were rephrased. After revision, 70 items were retained for the final version that was further analyzed.

To scrutinize the stability of the factor structure and for the refinement of the new measure, exploratory factor analysis was employed. Thus, this data reduction technique was carried out to establish the multidimensional nature of cross-cultural capital using SPSS Version 27. Data was collected from 400 academic sojourners in Pakistan. At the initial level, sampling adequacy was ensured on the basis of the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. The correlation matrix was also inspected, showing all items had satisfactory correlation (at least .3) with other items. Furthermore, values of communalities were scrutinized; all were above .35. This further amplified the confidence that common variance is shared by each item with other items. Principal-axis factoring (PAF) was specified as the method of extraction. The following resulting scree plot (Reijer et al., 2024) and eigenvalues, four factors emerged, and the emerging factors were rotated to a simple structure employing oblique rotation (e.g., Oblimin with Kaiser Normalization) by converging in 50 iterations. Items were inspected using their rotated factor patterns. During this practice, items were discarded on the basis of factor loadings (<.50) and cross-loadings (onto other factors). Finally, four factors emerged, accounting for 58 % of the total variance.

Confirmatory factor analysis was also employed for verifying the factor structure of the cross-cultural capital scale. The measurement model was specified based on the item-latent factor loadings obtained from EFA. The next step was to examine to what extent the model fit to data. This was done by means of several fit indexes (i.e., the root mean square error of approximation [RMSEA], Chi-square, the goodness of fit index [GFI], the comparative fit index [CFI]), and the standardized root mean square residual [SRMR] and This resulted in retaining all 27 items, as all items have a magnitude of factor loadings >.50. In addition, the model demonstrated reasonable fit as all indices are in an acceptable range. The following confirmatory factor analysis cross-cultural capital scale contained 27 items to assess four factors of cross-cultural capital. The first factor was named cross-cultural skills, as it contained the items of cross-cultural communication and engagement. The second factor was labeled cross-cultural attitudes and comprised items related to cross-cultural empathy, openness, tolerance of ambiguity, self-regulation, and flexibility. The third factor was named cross-cultural knowledge,

as it includes all items related to the awareness of values, customs, and behaviors. The factor was named as cross-cultural belief, as items were based on the diversity belief dimension.

Along with factorial validity and construct validity was also established. Construct validity determines to what extent the scale is measuring the similar construct for what it was proposed to measure (Sürücü & Maslakci, 2020). For this purpose, the correlation coefficient was computed for the cross-cultural capital scale and cross-cultural intelligence. Finding established the construct validity of the cross-cultural capital scale, as it has a significant positive correlation with the cross-cultural intelligence scale. All subscales as well as the overall scale, including cross-cultural skills, cross-cultural attitudes, cross-cultural knowledge, and cross-cultural belief, have a positive correlation with the cross-cultural capital scale. Construct validity was further supported by computing the correlation of all four subscales of the cross-cultural capital scale and the overall scale. Positive relationships among all subscales of the cross-cultural capital scale and the overall scale confirmed the strong construct validity of the cross-cultural capital scale. In order to ensure homogeneity among scale items, item total correlation was also computed. During the computation of the solution, the criterion recommended by Kim and Stoel (2004) was strictly followed by the researcher, that is, the item containing a correlation coefficient of  $>.50$  with the total scores should be kept for the final scale. Whole test items demonstrated a correlation coefficient greater than  $.50$ , which suggested a strong association of items with the overall scale. In the next step, the question of internal consistency was satisfied through the alpha reliability coefficient that ranged from  $.82$  to  $.95$  for all subscales and the overall cross-cultural capital scale. The values of reliability coefficients provided evidence for satisfactory internal consistency for all subscales and the overall cross-cultural capital scale. The value of a reliability coefficient greater than  $.80$  is considered satisfactory (Kennedy, 2022). In the current study, for all subscales and the overall scale of cross-cultural capital, the values of skewness and kurtosis were less than  $+1$  and  $-1$ , which is ideal for symmetrical normal distribution (Brown, 1996). So it was concluded that univariate normality was not problematic in the existing scale.

## **Implications**

The development of a robust cross-cultural capital scale holds significant practical implications for both the education and business sectors, particularly in our increasingly interconnected world. For education, such a scale can serve as a valuable tool for assessing and enhancing students' intercultural competencies. By identifying areas of strength and weakness in students' cultural intelligence, adaptability, and communication skills, educators can tailor curricula and interventions to foster greater cross-cultural understanding. This is especially crucial in higher education, where students are often preparing for careers in

globalized industries. For instance, universities could utilize the scale to evaluate the effectiveness of study abroad programs or intercultural training initiatives, ensuring that students develop the necessary skills to thrive in diverse environments. This approach aligns with the growing emphasis on global citizenship and the development of transferable skills, as highlighted by Deardorff (2006), who emphasizes the importance of intercultural competence in educational settings.

### **Strengths and Limitations**

A major strength of this study lies in its rigorous, multi-phase methodology for developing the Cross-Cultural Capital Scale tailored to academic sojourners. The integration of qualitative insights (via interviews) with quantitative psychometric procedures—such as exploratory and confirmatory factor analyses—ensured both conceptual depth and statistical validity. The final scale demonstrated high internal consistency ( $\alpha = .82-.95$ ), excellent test-retest reliability, and strong evidence for construct and discriminant validity, particularly through its correlation with cross-cultural intelligence and non-significance with ethnocentrism. Another notable strength is the diverse sample of 400 international students, enhancing the generalizability across academic and cultural contexts.

However, the study also presents limitations. The use of purposive sampling and restricting the sample to academic sojourners in Pakistan may limit cross-cultural generalizability. Additionally, self-report measures are prone to biases such as social desirability and response patterns, which may influence accuracy. Moreover, although the scale reduced its items to 27 across four dimensions, it may still lack longitudinal insight into how cross-cultural capital evolves over time. Lastly, the study did not explore behavioral validation or predictive outcomes (e.g., academic success, well-being), which could further strengthen the scale's applied relevance.

### **CONCLUSION**

In conclusion, the development and validation of a cross-cultural capital scale for academic sojourners provides a valuable tool for understanding the resources and advantages these individuals possess and utilize in their international academic journeys. This scale offers a nuanced measure beyond traditional indicators of capital, capturing the specific cultural knowledge, skills, and experiences that facilitate adaptation, integration, and success in a new academic and cultural environment. The validated scale holds promise for future research to predict sojourner outcomes, inform support services, and enhance our understanding of the complex interplay between cultural capital and the academic sojourn experience.

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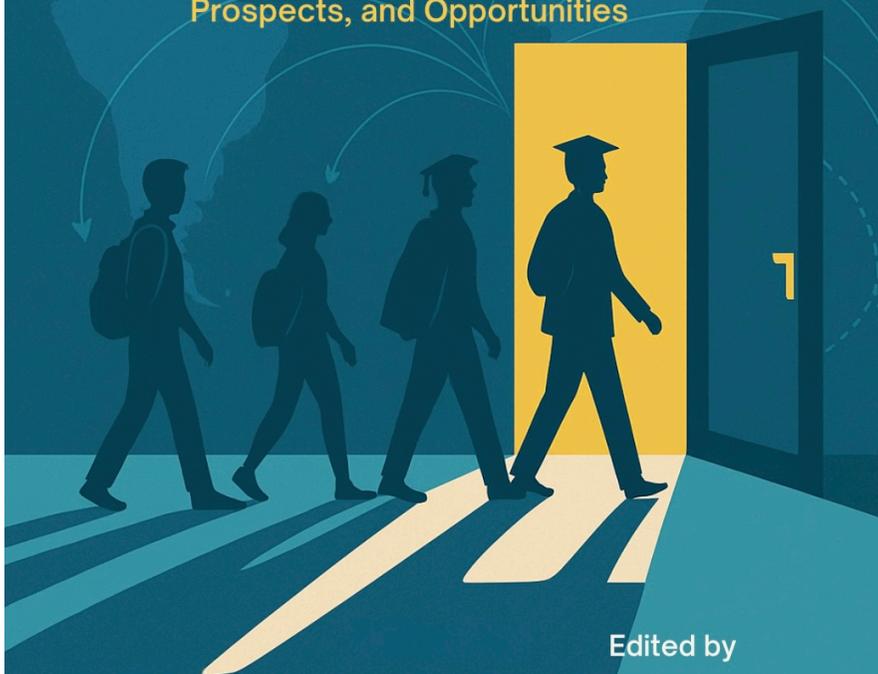
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# INTERNATIONAL STUDENT EXPERIENCES IN THE UNITED STATES AND CANADA

A Multidisciplinary Examination of Challenges,  
Prospects, and Opportunities



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