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Analysing the Influence of Cultural Distance and Language Barriers on Academic Performance among International Students in Higher Education Institutions

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ABSTRACT

This study investigates the intricate dynamics faced by international students in higher education institutions in Saudi Arabia, specifically examining the consequential impacts of cultural and language barriers on academic performance. Cultural distance, language barriers, and social adjustment are analysed for their influence on academic outcomes, with a focus on understanding the mediating role of self-efficacy and the moderating impact of cultural intelligence. Methodologically, data from 220 students were meticulously collected through surveys, and quantitative analysis using the Statistical Package for the Social Sciences (SPSS) was employed. The results indicate that language barriers significantly affect academic performance, while social adjustment and cultural distance show insignificant effects on academic outcomes. The study further highlights the pivotal role of self-efficacy as a mediator in the relationship between language barriers, cultural distance, and academic performance. Interestingly, the mediation is found to be insignificant in the association between

social adjustment and academic performance. Additionally, the research identifies the significant moderating impact of cultural intelligence in this complex interplay. The study not only contributes theoretically to understanding cultural factors impacting international students' academic performance but also provides practical implications for educational practitioners and policymakers, suggesting potential interventions to enhance the academic experiences of international students in the Saudi Arabian higher education landscape.

Keywords: Cultural Distance; Social Adjustment; Cultural Intelligence; Language Barriers; Academic Performance; Internation al Students; Self-Efficacy

INTRODUCTION

International students engage in a transformative educational trajectory that affords them invaluable opportunities. While the push-pull model has contributed insights into understanding the motivations of international students, there remains a paucity of empirical research, especially longitudinal studies, delving into these motivations (Mao et al., 2022). In the course of their educational pursuits overseas, individuals confront diverse challenges encompassing unfamiliar learning environments, linguistic disparities, accommodation and financial constraints, as well as exposure to a myriad of cultural norms (Awais et al., 2013). The intricacies inherent in these challenges intensify notably when the native cultural background of the students sharply diverges from the new cultural context. Despite the formidable undertaking of assimilating into a novel learning environment, extant research indicates that international students commonly exhibit a constructive disposition in overcoming these challenges, underscoring their adeptness in adapting to unfamiliar surroundings (Bhatti et al., 2019). Initiating a new chapter as an international student in an unfamiliar territory can evoke stress. A research by Zepeda et al. (2022) provide exploration into the acculturation of non-U.S. International Medical Graduates (IMGs) in a paediatric residency program uncovered that, overall, foreign-trained residents perceived greater complexity in adapting to life and culture in the U.S. than to the U.S. Healthcare System (HCS). These challenges encompassed diverse facets, such as housing, day-care, grocery shopping, common sports, and the American school system (Nisar et al., 2021). The predominant challenge frequently referenced by IMGs in their transition between U.S. Graduate Medical Education (GME) and the Healthcare System (HCS) is the navigation of cultural differences, a difficulty acknowledged by as many as 17% of residents (Zepeda et al., 2022). Nevertheless, studying abroad can yield positive outcomes, fostering enhanced well-being, joy, self-assurance, and positive sentiments. On a societal level, international students contribute significantly to the revenue of host universities and countries, promoting cultural enrichment, tolerance, and global harmony (Taušová et al., 2019). International college students opt for higher education to access superior academic opportunities. However, their educational journey involves numerous demands,

including forging new friendships, navigating diverse social and cultural norms, and overcoming challenges associated with daily life, such as adapting to new cultural values, cuisine, and climate (Al Doghan et al., 2019). Furthermore, they contend with adjusting to the academic and social milieu, facing challenges in language proficiency, communication, building connections, and becoming acquainted with the local culture. A paramount obstacle for international students is studying in a non-native language, where proficiency significantly influences both academic success and cultural adaptation.

Amidst the changing higher education landscape driven by globalization, an escalating number of international students seek opportunities abroad. However, linguistic and cultural barriers frequently impede their academic achievement. A study by McGregor et al. (2022) reveals an academic achievement gap between domestic and international students. Survey data suggests that intervention strategies like curricular internationalization, faculty training, and intercultural activities positively influence student experience, faculty satisfaction, and the overall learning environment (McGregor et al., 2022). Prior research has underscored the crucial necessity of addressing these issues to ensure the academic success and seamless integration of international students into higher education institutions.

In the last two decades, international student mobility has tripled, drawing students to both established and emerging education hubs. The appeal of alternative destinations is strengthened by factors such as cultural proximity, linguistic familiarity, and the presence of globally recognized universities (Glass et al., 2023). Despite this, international students frequently grapple with linguistic and cultural barriers, significantly impacting their academic success. Establishing effective support systems in higher education institutions requires a detailed understanding of how these barriers specifically affect academic achievement. Numerous subthemes emerged, encompassing (a) difficulties associated with language barriers and/or proficiency, (b) occurrences of cross-cultural dissonance, (c) the prevalence of multifaceted challenges, (d) constraints in social relationships, and (e) the extension of Asian identity within the faculty (Park et al., 2023). This study endeavours to address the existing knowledge gap by furnishing information to inform the development of targeted interventions and support systems tailored to the specific needs of international students. The findings aim to enhance the overall educational experience and academic performance of this student cohort, fostering a more inclusive and supportive learning environment. The study's objective is to assess the impact of cultural distance on the academic performance of international students within higher education institutions. The study aims to discern the specific language challenges faced by international students while closely scrutinizing the influence of language barriers on their academic performance. Additionally, it seeks to explore potential interactions among cultural distancing, language obstacles, and academic achievement, with the primary objective of identifying plausible mediating or moderating factors that may impact this intricate relationship. Ultimately, the study aspires to offer practical, actionable recommendations tailored specifically for higher

education institutions. These recommendations are intended to contribute to the development of effective support plans that foster academic success.

LITERATURE REVIEW

Theoretical Background

In accordance with social learning theory (SLT), the acquisition of pro-social and anti-social behaviours is significantly influenced by learning experiences and the individuals serving as role models (Shantanu Tilak et al., 2022). This perspective emphasizes the crucial role of socialization, positing that learning transpires within social interactions. SLT underscores the cultural impact on learning, emphasizing the significance of cultural interactions and role models in shaping educational experiences and behaviours. In line with social learning theory, stakeholders prioritize social and emotional learning (SEL) in the classroom, shown to enhance students' academic performance and well-being (Mahoney et al., 2021). This approach urges state and district-level coordination to implement policies, resources, and initiatives enhancing teachers' and communities' capacities for fostering compassionate relationships, supporting student agency, and cultivating an inclusive character-building culture.

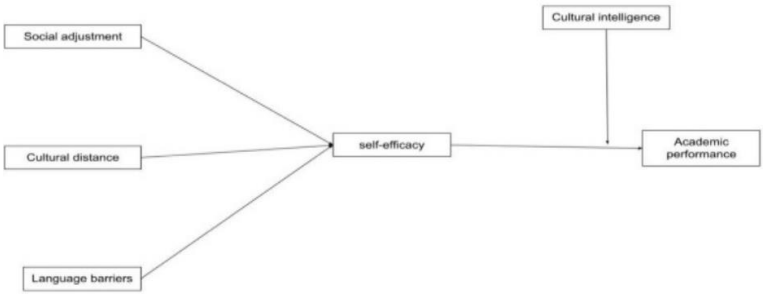

Figure 1: Research Framework

This extensive theoretical framework emphasizes the critical role of social interactions and learning experiences in shaping individuals' understanding of pro- and anti-social behaviour, integrating key concepts from social learning theory. It highlights the importance of cultural interactions and role models in influencing educational opportunities and behavioural patterns. Moreover, the discourse elucidates the impact of social factors such as language barriers, cultural distance, and social adjustment on academic performance. It underscores the imperative of cultural sensitivity and tailored support networks to foster academic success among student cohorts with diverse cultural backgrounds. Additionally, the mediating role of self-efficacy is emphasized,

elucidating its influence on learners' emotional aspects of learning, metacognitive learning techniques, and subsequent academic achievements. Significantly, the intricate interplay between academic performance and self-efficacy is emphasized concerning cultural intelligence, underscoring the pivotal role that cultural intelligence plays in adeptly navigating intricate cross-cultural dynamics. Overall, the theoretical framework provides a comprehensive understanding of diverse factors influencing academic achievement, stressing the essential need for tailored interventions and support systems to foster the holistic development of students.

Impact of Social Factors on Academic Performance

Social adjustment is characterized as the dynamic interplay between an individual and their social environment. Adolescents typically engage in the comparative evaluation of their physical and role-based attributes with those of their peers, seeking to ascertain their alignment with social norms and expectations, with the ultimate goal of achieving a state of social adjustment (Lee et al., 2020). The robust 17-item SASATS scale serves as a comprehensive tool for assessing social adjustment in teenagers, underscoring the necessity for tailored strategies to improve both academic performance and psychosocial well-being (Lee et al., 2020). According to Mittelmeier et al. (2019), emotional adjustment, institutional attachment, access to technology, and the presence of international students at home emerge as substantial predictors of academic performance. These results highlight the imperative of a nuanced comprehension of internationalization within distance learning contexts, potentially warranting a reassessment of the definitions of internationalization, both 'abroad' and 'at home,' in light of technological advancements. The challenge of adapting to diverse cultural contexts may pose difficulties, potentially leading to diminished academic performance, premature termination of cultural immersion programs, or a heightened aversion to the host culture (D. X. Fan et al., 2023; Taušová et al., 2019). The challenges, manifested as interpersonal conflicts, academic struggles, or cultural disconnection, often arise from clashes between norms, values, and customs. This underscores the significance of furnishing individuals in multicultural settings with proficient cultural orientation and robust support systems (Bender et al., 2019). The findings of Neroni et al. (2019), revealed that interpersonal interactions negatively predicted academic performance, whereas effective time and effort management, along with the utilization of intricate cognitive strategies, were positive predictors. Cultural variances have been identified as impediments to the seamless diffusion of management strategies within multinational enterprises, emphasizing the significance of cultural congruence for successful knowledge exchange and application (Alofan et al., 2020). These challenges are similarly reflected in educational settings, potentially hindering students' adaptability and flourishing. Emphasizing the pivotal role of cultural awareness and tailored support systems is essential for enhancing academic achievements. Establishing an inclusive environment that acknowledges cultural intricacies is crucial for fostering academic success among students from diverse backgrounds (Meyer et al., 2020). Sarif et al.

(2022) findings suggest that there is no significant difference among male and female students, as well as those from rural and urban backgrounds, encompassing both rural and urban males, and rural and urban females, who are enrolled as undergraduates. This pertains to their attitudes toward social adjustment. The study Oducado et al. (2020) underscores the possible obstacles posed by language barriers, impeding a comprehensive understanding of course materials and evaluation items. Consequently, tailored support and language-enhancement programs are deemed necessary to ensure equitable academic achievement for all students. The emphasis on the critical relationship between academic success and English language proficiency demonstrates its impact on students' academic performance and their ability to pass licensing exams. In light of the aforementioned studies, several hypotheses can be proposed:

H1*: There is a negative relationship between social adjustment and academic performance.*

H2*: There is a positive correlation between cultural distance and academic performance.*

H3*: There is a negative relationship between language barriers and academic performance.*

Impact of Self-Efficacy as a Mediator

A pivotal factor influencing academic success, academic self-efficacy pertains to students' perceptions and confidence in their ability to excel in academic pursuits. This encompasses their belief in effectively completing educational tasks and comprehending learning materials(Arslantaş, 2021). Self-efficacy beliefs enhance individual performance by cultivating dedication, effort, and persistence (Hayat et al., 2020a, 2020b). Individuals with heightened self-efficacy levels frequently attribute their failures to insufficient effort rather than inadequate ability, while those with low self-efficacy attribute their shortcomings to their perceived lack of competence (Di Natale et al., 2020). As a result, self-efficacy plays a role in determining task selection and persistence during task execution. In other words, individuals with reduced self-efficacy are prone to experiencing apprehension in engaging with tasks, leading to avoidance, procrastination, and premature abandonment of the task (Kaleli, 2021). A study by Wang (2022), discovered that in the realm of moderated mediation, students exhibiting high levels of self-efficacy, in contrast to their low-level counterparts, significantly amplified and positively influenced the association between teacher work engagement and student academic achievement. This nuanced observation underscores the pivotal function of self-efficacy as a moderator in this intricate relationship, suggesting that the correlation between teacher engagement and student success is contingent on the students' beliefs in their own abilities (Wang, 2022). The study by (Sabouripour et al., 2021) revealed the significant links emerged among optimism, various dimensions of psychological well-being, and resilience in Iranian students. The study emphasized the mediating role of self-efficacy in connecting

psychological well-being dimensions (encompassing environmental mastery, autonomy, self-acceptance, positive relations with others, personal growth, and purpose in life) to resilience in these students. However, the study (Sabouripour et al., 2021) did not uncover supporting evidence for the mediating influence of self-efficacy in the relationship between optimism and resilience within this student population. This is consistent with findings from a prior cross-cultural study (Katsantonis, 2020), the existing literature underscores the significant influence of cultural differences on teachers' self-efficacy transcending national borders, emphasizing the pivotal role of cultural context in shaping educators' self-perceptions. This accentuates the importance of understanding cultural nuances in examining the relationship between academic success and cultural distance, a relationship mediated by self-efficacy. The thorough examination of gender disparities and cultural norms in the context of chines institute provided by the study, in which R. C. H. Chan (2022) emphasizes how important it is to promote self-efficacy and get rid of gender stereotypes in order to improve girls' performance and engagement. In conclusion, the results elucidate the mediating function of self-efficacy in the correlation between academic performance and cultural distance (R. C. Chan, 2022). The study Hayat et al. (2020a) illustrate that the self-efficacy of students significantly affects their emotions related to learning and metacognitive learning strategies, subsequently influencing their academic performance. Additionally, the study Hayat et al. (2020a) suggests that learning-related emotions exert influence on metacognitive learning strategies, thereby serving as a mediator in the association between emotions and academic achievement.

H4*: The association between academic performance and social adjustment is mediated by self-efficacy.*

H5*: The association between academic performance and cultural distance is mediated by self-efficacy.*

H6*: The association between academic performance and language barriers is mediated by self-efficacy.*

Cultural Intelligence as a Moderator

Cultural Intelligence (CQ) has been identified as a distinct form of intelligence (AlMazrouei et al., 2021), serving as an indicator of an individual's adeptness in effectively navigating culturally diverse environments (Liao et al., 2020). Comprising four integral dimensions—motivational, behavioural, cognitive, and metacognitive—each delineating distinct capacities, collectively contributing to the comprehensive construct of CQ. While ongoing research and theories persist in elucidating the relative significance of each dimension, recent studies posit that the motivational and metacognitive dimensions are particularly critical components of CQ (AlMazrouei et al., 2021). Empirical data demonstrates the significance of cultural intelligence in enhancing the engagement and efficacy of individuals operating in cross-cultural contexts (Presbitero, 2020). Cultural intelligence facilitates adept navigation of intricate

cultural dynamics by enhancing individuals' understanding and appreciation of diverse cultural norms and practices (Ramalu et al., 2019). Furthermore, it fosters mutual respect, proficient communication, and the cultivation of harmonious professional relationships across diverse cultural contexts. Consequently, individuals possessing cultural intelligence demonstrate heightened sensitivity, adaptability, and increased efficacy in collaborative endeavours within cross-cultural professional settings (AlMazrouei et al., 2021). In the study by Sharma (2019) it was noted that behavioural cultural intelligence exerts a direct negative impact on institutional success, without any mediating effects. The study (Karataş et al., 2022) showed that all classifiers performed well, but the JRip rule-learner outperformed other classifiers in predicting culturally responsive teachers. Moreover, the research suggests that cultural knowledge needs to be supplemented by cultural metacognition to ensure institutional success. These findings highlight the importance of cultivating not only cultural knowledge but also advanced cognitive abilities, such as perspective-taking and mindfulness, in cross-cultural settings. Building upon the aforementioned discussion, the following hypotheses can be posited:

H7*: Cultural intelligence moderates the relationship between self-efficacy and academic performance.*

METHOD

Research Design

This study predominantly centres on examining the cause-and-effect relationship among social adjustment, language barriers, cultural distance, and academic performance; hence, it incorporates a positivist philosophy (Park et al., 2020). Furthermore, this underpinned the utilization of a deductive approach, prompting the adoption of a quantitative methodology. Statistical data were gathered from international students enrolled in higher education institutions in Saudi Arabia using a survey method. The data collection occurred at a specific point in time, employing a cross-sectional time horizon.

Participants and Sampling

In alignment with the study's objectives, international students enrolled in higher education institutions in Saudi Arabia were identified as the target population. Due to constraints in resources and a restricted timeframe, an efficient random sampling technique was employed to select a suitable sample for this study (Berndt, 2020). This sampling technique was instrumental in mitigating bias during the data collection process, thereby ensuring the credibility of the results. Consequently, a sample comprising 220 students was finalized for inclusion in this study.

Data Collection Route

To establish the causal relationship among the constructs under investigation, statistical data were gathered from the selected sample size through a survey method. A questionnaire was developed for this purpose, encompassing participant demographics and inquiries related to the study's variables. These questionnaires were disseminated to the participants through online platforms to ensure easy accessibility to the target audience. This approach was also cost-effective for data collection. Notably, the questionnaire employed crucial measures for each construct, as outlined in Table 3.1. These measures were adapted to align with the current research. For social adjustment, dimensions such as peer interaction and family relationships (Lee et al., 2020). were utilized and modified.

Table 3.1. Measures

Variables	Items	References
Social adjustment (proxy: peer interaction, family relationship)	8	(Lee et al., 2020)
Cultural distance	3	(D. X. Fan et al., 2023; D. X. F. Fan et al., 2023)
Language barriers	8	(Tayem et al., 2020)
Self-efficacy	3	(Choi et al., 2021a; Choi et al., 2021b)
Cultural intelligence	14	(Sharma, 2019)
Academic performance	4	(Mehrvarz et al., 2021)

Initially, the research objectives were communicated to the participants to ensure their comprehension of the study. Prior to questionnaire distribution, participants provided their consent. Furthermore, participant anonymity was preserved, affording them complete control over their decisions. Simultaneously, the researcher upheld the integrity of the collected data by safeguarding it from external exposure and research bias.

Data Analysis

This study involved statistical analysis, employing SPSS for inferential statistics. Cronbach's alpha (α) was calculated for each variable to assess its reliability, and ANOVA was performed to ascertain the model's adequacy. Ultimately, multiple linear regression was conducted to test the formulated hypotheses.

RESULTS

Demographics of the Participants

Table 4.1 presents the demographic profile of the study participants. Notably, 220 students actively participated in this research, with 118 (53.6%) being male and 102 (46.4%) female. In terms of age distribution, a predominant 173 participants (78.6%) fell within the 18 to 23 years bracket, while 40

participants (18.2%) belonged to the age group of 24 to 28 years, and 7 participants (3.2%) were aged between 29 and 32 years. Regarding educational attainment, 63 participants (28.6%) completed their intermediate education, 89 participants (40.5%) held a bachelor's degree, 58 participants (26.4%) attained a master's degree, and 10 participants (4.5%) excelled in other course.

Table 4.1. Demographics of the Participants

		Gender			
		Frequency	**%**	**Valid %**	**Cumulative %**
Valid	Male	118	53.6	53.6	53.6
	Female	102	46.4	46.4	100.0
	Total	220	100.0	100.0	
		Age			
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	18 to 23	173	78.6	78.6	78.6
	24 to 28	40	18.2	18.2	96.8
	29 to 32	7	3.2	3.2	100.0
	Total	220	100.0	100.0	
		Education			
		Frequency	**%**	**Valid %**	**Cumulative %**
Valid	Intermediate	63	28.6	28.6	28.6
	Bachelor	89	40.5	40.5	69.1
	Master	58	26.4	26.4	95.5
	Other	10	4.5	4.5	100.0
	Total	220	100.0	100.0	

KMO and Bartlett's Test (BT)

Table 4.2 illustrates that the significance level was below 0.01 for both the KMO measure and BT, with the KMO value exceeding .90, indicating noteworthy outcomes. This suggests that the collected data was deemed suitable for subsequent analysis.

Table 4.2. KMO and BT

KMO of SA		**.927**
BT of Sphericity	Approx. Chi-Square	13064.694
	df	780
	Sig.	.000

S.A.= standard adequacy

Rotated Component Matrix (RCM)

RCM were executed to assess duplication and cross-loadings among the items within each variable in this study, following (Robert A. Peterson, 2000; Robert A Peterson, 2000) methodology. Table 4.3 depicts the results of the RCM for the study variables. It is noteworthy that the value of each item for all included variables exceeded .70, indicating the absence of cross-loadings and duplication. Consequently, the collected data was deemed credible for subsequent analysis.

Table 4.3. RCM

	Component					
	1	**2**	**3**	**4**	**5**	**6**
CI1	.883					
CI2	.926					
CI3	.977					
CI4	.965					
CI5	.963					
CI6	.962					
CI7	.976					
CI8	.966					
CI9	.975					
CI10	.980					
CI11	.961					
CI12	.970					
CI13	.981					
CI14	.974					
SA1		.908				
SA2		.891				
SA3		.855				
SA4		.882				
SA5		.884				
SA6		.804				
SA7		.832				
SA8		.895				
CD1					.848	
CD2					.821	
CD3					.796	
SE1						.791
SE2						.795
SE3						.744
LB1			.744			
LB2			.809			
LB3			.874			
LB4			.817			
LB5			.837			
LB6			.808			
LB7			.781			
LB8			.708			
AP1				.887		
AP2				.890		
AP3				.776		
AP4				.764		

a. Rotation converged in 5 iterations.
CI= cultural intelligence; CD= cultural distance; SA= social adjustment; AP= academic performance; LB= language barriers; SE= self-efficacy

Reliability Analysis

Cronbach's alpha (α) is employed to assess the reliability of the collected data by examining the proportion of shared variance among the items of the corresponding instrument in relation to the overall variance (Adeniran, 2019).

Table 4.4 presents the results of the reliability analysis for this study. Notably, it is observed that the alpha (α) value exceeds .70 for each variable. Consequently, all the items were deemed reliable for the purpose of analysis.

Table 4.4. Reliability Analysis

Variables	Alpha values
CI	.996
SA	.957
SE	.816
LB	.921
CD	.874
AP	.848

CI= cultural intelligence; CD= cultural distance; SA= social adjustment; AP= academic performance; LB= language barriers; SE= self-efficacy

Correlation Analysis

This analysis was conducted to ascertain the relationships between the variables in this study. As depicted in Table 4.5, the correlation between all variables is statistically significant, with a significance level below 0.01. These findings affirm the appropriateness of the collected data for subsequent analysis.

Table 4.5. Correlation Analysis

		CI	AP	LB	SA	CD	SE
	PC	1	-.095	.106	.164*	.391**	.376**
CI	Sig. (2-tailed)		.160	.117	.015	.000	.000
	N	220	220	220	220	220	220
	PC	-.095	1	.202**	.112	.176**	.226**
AP	Sig. (2-tailed)	.160		.003	.098	.009	.001
	N	220	220	220	220	220	220
	PC	.106	.202**	1	.139*	.245**	.185**
LB	Sig. (2-tailed)	.117	.003		.039	.000	.006
	N	220	220	220	220	220	220
	PC	.164*	.112	.139*	1	.094	.305**
SA	Sig. (2-tailed)	.015	.098	.039		.164	.000
	N	220	220	220	220	220	220
	PC	.391**	.176**	.245**	.094	1	.422**
CD	Sig. (2-tailed)	.000	.009	.000	.164		.000
	N	220	220	220	220	220	220
	PC	.376**	.226**	.185**	.305**	.422**	1
SE	Sig. (2-tailed)	.000	.001	.006	.000	.000	
	N	220	220	220	220	220	220

**. significant correlation at the 0.05 level (2-tailed).*
***. significant correlation at the 0.01 level (2-tailed).*
PC= Pearson Correlation

Model Summary

Table 4.6 illustrates the model summary for this study. The coefficient of determination, denoted as R square, serves as a metric indicating the extent to

which the regression model appropriately aligns with the observed data values (Rights et al., 2020). The R square value represents the percentage of variance. Thus, Table 4.6 indicates that 65% of the variance is attributed to the predictors of the dependent variable.

Table 4.6. Model Summary

Model	R	R Square	Adj R Square	Std. Error of the Est
1	.287[a]	.082	.065	1.17374

Predictors: (Constant), CD, LB, SA, SE
Adj= adjusted; est= estimate; DV= dependent variable

ANOVA

ANOVA is employed to assess the appropriateness of the formulated model in this study (Francisco D. Guillén-Gámez et al., 2020; Francisco D Guillén-Gámez et al., 2020). Table 4.7 indicates that the significance level for ANOVA is below 0.01, demonstrating the fitness of the model.

Table 4.7. ANOVA

Model		Sum of S	df	MS	F	Sig.
1	Regression	26.597	4	6.649	4.826	.001[b]
	Residual	296.198	215	1.378		
	Total	322.795	219			

a. Dependent Variable: AP
b. Predictors: (Constant), CD, LB, SA, SE
MS= mean square

Direct Results

Multiple linear regression analysis was employed to examine the formulated hypotheses in this study. As depicted in Table 4.8, language barriers exhibit a significant impact on academic performance ($p < 0.05$). Conversely, both social adjustment and cultural distance demonstrate an insignificant impact on academic performance ($p > 0.05$). Additionally, self-efficacy is identified as significantly influencing academic performance ($p < 0.05$).

Table 4.8. Direct Results

Model		Unstandard Coeff		Standard Coeff	t	Sig.	Results
		B	Std. Error	Beta			
1	(Constant)	1.370	.517		2.648	.009	
	LB	.232	.105	.150	2.212	.028	Accepted
	SA	.032	.062	.036	.526	.600	Rejected
	CD	.087	.093	.069	.935	.351	Rejected
	SE	.194	.092	.159	2.100	.037	Accepted

Dependent Variable: AP
Coeff= coefficient; Unstand= unstandardized; stand= standardized

Mediation Analysis

Table 4.9 reveals that the mediation of SE between SA and AP was deemed insignificant ($p > 0.05$). However, the mediation of self-efficacy in the relationship between CD, LB, and AP was found to be significant ($p < 0.05$).

Table 4.9. Mediation Analysis

Relationship	Totals eff	Direct eff	Indirect eff	CI		t stat.	*p* value	Results
				LB	UB			
SA→SE→AP	.1002	.0424	.0578	-.0185	.2189	1.6640	.0957	Rejected
CD→ SE → AP	.22119	.1232	.0986	.0562	.3876	2.6387	.0089	Accepted
LB→ SE → AP	.3103	.2546	.0557	.1091	.5115	3.0391	.0027	Accepted

Eff= effect; CI= confidence interval; LB= lower bound; UB= upper bound; *CD= cultural distance; SA= social adjustment; AP= academic performance; LB= language barriers; SE= self-efficacy*

Moderation Analysis

Table 4.10 presents the results for the moderation of cultural intelligence, indicating a significant outcome ($p < 0.05$).

Table 4.10. Moderation Analysis

	Model						
	Coeff	se	t	*p*	LLCI	ULCI	Results
constant	4.3748	.8660	5.0518	.0000	2.6679	6.0817	Accepted
SE	.0012	.2291	.0054	.9957	-.4503	.4582	
CI	-.6708	.2618	-2.5627	.0111	1.1868	-.1549	
Int_1	.1141	.0652	1.7485	.0818	-.0145	.2427	

DISCUSSION

This study seeks to examine the impact of cultural distance and language barriers on the academic performance of international students within higher education institutions in Saudi Arabia. The data collection involved the use of an online survey method, with responses gathered from 220 participants. Statistical analysis was then conducted to assess and test the formulated hypotheses.

Globalization has facilitated increased opportunities for international students, contributing to inclusivity and diversity in the education sector. Despite the potential for academic and professional advancement, international students encounter challenges such as cultural stress during their adjustment to a new

country. Consequently, these students grapple with diverse cultural and social issues that hinder their overall academic performance. The cultural gaps, encompassing aspects like ethnicity, social class, religion, or age, further impact the experiences of international students (Jiao et al., 2022). This enhances their self-efficacy, motivating academic excellence. Cultural distance affects the social dynamics, impeding effective communication with local peers, fostering a sense of distance. Disparities in cultural norms intensify this feeling. Language barriers, with Arabic as the official language in Saudi Arabia, exacerbate the situation. Despite English medium schools, many courses in Arabic pose challenges for non-native students, negatively impacting their academic performance.

Therefore, it is imperative for international students to align their social behaviour with the cultural and social norms of the host country, facilitating effective engagement in academic activities. Conversely, ineffective social adjustment hinders optimal performance, potentially diminishing self-efficacy and motivation. Students with elevated self-efficacy are more likely to excel, while those with lower self-efficacy struggle to enhance their academic performance. Additionally, cultural distance and language barriers contribute to heightened cultural stress among international students, impeding their effective completion of studies. Language anxiety diminishes self-efficacy in international students, consequently adversely affecting their academic performance. This underscores the necessity of implementing robust language training and courses tailored for international students to address their language-related challenges. Such interventions can prove beneficial in enhancing their overall social behaviour, facilitating smoother adaptation to the academic environment in Saudi Arabia.

Furthermore, the integration of cultural intelligence aids international students in enhancing their cultural understanding of the host country. A culturally intelligent student is not only cognizant of diversity but also relates effectively to individuals of different genders, ages, political beliefs, abilities, cultures, socioeconomic statuses, and sexual orientations. Consequently, cultural intelligence contributes to the improvement of cognitive, social, metacognitive, behavioural, and motivational knowledge among students. This helps in increasing their self-efficacy (Liu et al., 2022), motivating them to execute academic tasks more effectively, this approach enhances the overall academic performance of international students in higher education institutions in Saudi Arabia. Cultural intelligence contributes to improved emotional intelligence among international students, fostering the development of critical thinking skills necessary for navigating cultural and social issues. In this context, social support from educational institutions and peers is deemed vital for international students. The present study effectively articulates the perspective of international students in higher education institutions in Saudi Arabia, underscoring the importance of integrating effective cultural intelligence to enhance their social and cultural behaviour for improved overall academic performance. Consequently, this research contributes valuable implications to the field. Furthermore, it

meticulously addresses the cultural challenges confronted by international students, particularly in the relationship between language barriers, cultural distance, and academic performance, thereby introducing novelty to the study.

CONCLUSION

International students in higher education institutions frequently encounter social and cultural challenges that exert an insignificant influence on their academic performance. Emphasizing the integration of effective social adjustment becomes crucial for enhancing the overall academic performance of international students. Language barriers emerge as a common obstacle, hindering their adaptation to the host country's domestic environment and adversely affecting their self-efficacy. Beyond language barriers, cultural distance and social adjustment may contribute to cultural stress among international students, impacting their academic performance. In this context, the incorporation of effective cultural intelligence is deemed essential. This facilitates international students in gaining insights into the cultural and social values of Saudi Arabia, enhancing their cultural knowledge and verbal behaviour. Consequently, this improvement in self-efficacy is anticipated to positively influence academic performance.

In summary, this study effectively illustrates the impact of various cultural and social challenges confronted by international students in Saudi Arabian higher education institutions. It advocates for the adoption of robust measures such as enhanced social adjustment, heightened cultural intelligence, and the cultivation of self-efficacy to elevate academic performance. Notably, the study underscores the pivotal role of self-efficacy in this dynamic. Findings reveal that students endowed with effective cultural intelligence exhibit elevated self-efficacy levels, fostering motivation and, consequently, improved academic outcomes. Conversely, those lacking cultural intelligence encounter hurdles in boosting motivation, hindering optimal performance in the academic milieu.

RESEARCH IMPLICATIONS

The present study yields theoretical and practical implications, representing the potential contributions to both theoretical knowledge and practical applications. Consequently, some of these implications within the study's framework are elucidated below:

Theoretical Implications

The present research has contributed to the existing literature by enhancing our understanding of how cultural factors influence the academic performance of international students in the higher education sector in Saudi

Arabia. This study introduced novelty by uncovering the direct impact of cultural distance on academic performance, thereby augmenting its overall significance. The formulated conceptual framework in this study has furthered the knowledge of stakeholders, emphasizing the importance of cultural intelligence in shaping the academic performance of international students.

Moreover, this study has effectively addressed the myriad cultural and language barriers encountered by international students in the higher education institutions of Saudi Arabia, rendering it a valuable resource for students navigating these challenges. Nevertheless, it serves as a catalyst for future researchers to delve into both the opportunities and challenges confronting international students in higher education, thereby enriching the scope and efficacy of ongoing research.

Practical Implications

The empirical findings derived from this study have delineated the influence of diverse cultural factors and language barriers on the academic performance of international students in higher education institutions. The study underscores the pivotal role of management in formulating and implementing effective teaching strategies to address these identified challenges. Moreover, the promotion of on-campus cultural programs is recommended to facilitate seamless cross-cultural adjustments for international students, thereby enhancing their self-efficacy and cultural intelligence. Additionally, fostering group discussions in classrooms can encourage mutual cultural understanding between local and international students, fostering diversity and inclusion within the higher education sector.

Furthermore, the incorporation of official language courses into higher education curricula presents an avenue for international students to acquire proficiency in the host country's official language. This initiative can contribute to the development of crucial communication and social skills among international students. Additionally, the study has the potential to impact educational policymakers, urging them to devise and implement effective educational and cultural policies that safeguard international students from cultural stress and related challenges.

LIMITATIONS AND FUTURE RESEARCH

The current study possesses both significance and limitations that warrant acknowledgment for paving the way for future research. Notably, this research exclusively employs a quantitative methodology, relying on survey methods for data collection due to resource constraints. The study lacks an in-depth exploration of the target audience's perceptions regarding the impact of social adjustment and cultural distance on academic performance. Additionally,

the study concentrates on the mediation of self-efficacy in the relationship between cultural distance and academic performance, with no consideration of other potential mediators to prevent research bias. It's worth noting that the data for this study was gathered at a single point in time, utilizing a cross-sectional approach due to the constraints of a limited timeframe.

Subsequent research endeavours could consider conducting interviews with international students to gain a more profound comprehension of the cultural and social challenges influencing their academic performance. Furthermore, incorporating additional mediators like peer victimization and psychological adjustment in future research can enhance the study's novelty. Exploring the psychological adjustment of international students, who may encounter mental distress while adapting to a new country, could be a valuable focus for upcoming studies. Longitudinal studies might be advantageous in expanding the scope of discussion in future research endeavours.

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Appendix A

Questionnaire

Section A

1. Please specify your gender.
- Male
- Female

2. How old are you?
- 18 to 23
- 24 to 28
- 29 to 32

3. What is your education?
- Intermediate
- Bachelor
- Masters
- Other

Section B

Please read the questions below and indicate your level of agreement with these statements.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5	4	3	2	1

"Please indicate the extent of your agreement with the following statement on a 5-point scale about **social adjustment**					
I am popular in personal relationships	1	2	3	4	5
I am invited to participate with friends and gatherings.	1	2	3	4	5
I have (a) good friend(s) whom I am able to share private thoughts with.	1	2	3	4	5
I have no difficulties making friends because of cultural differences.	1	2	3	4	5
I interact well with my teachers	1	2	3	4	5
I like my teachers' methods for educating me.	1	2	3	4	5
I interact well with my peers and teachers	1	2	3	4	5
I feel supported by my peers	1	2	3	4	5"

"Please indicate the extent of your agreement with the following statement on a 5-point scale about **cultural distance**	
People in Saudi Arabia and other countries have different traditional customs.	1 2 3 4 5
People in Saudi Arabia and other countries have differences in terms of richness of traditional customs.	1 2 3 4 5
People in Saudi Arabia and other countries have a different sense of culture retention.	1 2 3 4 5"

"Please indicate the extent of your agreement with the following statement on a 5-point scale about **language barriers**	
I felt a language barrier during my study	1 2 3 4 5
Language barrier made studying more difficult	1 2 3 4 5
Language barrier made understanding subjects more difficult	1 2 3 4 5
Language barrier made retaining information more difficult	1 2 3 4 5
Language barrier made adapting to study in Saudi Arabia more difficult	1 2 3 4 5
Language barrier made studying less enjoyable	1 2 3 4 5
Language barrier affected my participation in class activities	1 2 3 4 5
Language barrier affected my performance in exams	1 2 3 4 5"

"Please indicate the extent of your agreement with the following statement on a 5-point scale about **self-efficacy**					
I am confident about my ability to do my academic tasks.	1	2	3	4	5
I am self-assured about my capabilities to perform my academic activities.	1	2	3	4	5
I have mastered the skills necessary for my studies.	1	2	3	4	5"

"Please indicate the extent of your agreement with the following statement on a 5-point scale about **cultural intelligence**	
I know the cultural values and religious beliefs of other cultures	1 2 34 5
I know the marriage systems of other cultures	1 2 34 5
I know arts and crafts of other cultures	1 2 34 5
I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds	1 2 34 5
I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me	1 2 34 5
I am conscious of the cultural knowledge I apply to cross-cultural interactions	1 2 34 5
I check the accuracy of my cultural knowledge as I interact with people from different cultures	1 2 34 5
I am confident that I can socialize with locals in a culture that is unfamiliar to me	1 2 34 5
I am sure I can deal with the stress of adjusting to a culture that is new to me	1 2 34 5
I enjoy living in cultures that are unfamiliar to me	1 2 34 5
I am confident that I can get accustomed to the shopping conditions in a different culture	1 2 34 5
I change my verbal behavior when (e.g., accent, tone) when a cross cultural interaction requires it	1 2 34 5
I vary the rate of my speaking when a cross cultural situation requires it	1 2 34 5
I alter my facial expressions when a cross cultural interaction requires it	1 2 34 5"

"Please indicate the extent of your agreement with the following statement on a 5-point scale about **academic performance**					
I am confident about the adequacy of my academic skills and abilities	1	2	3	4	5
I feel competent conducting my course assignments	1	2	3	4	5
I have learned how to perform my coursework in an efficient manner successfully	1	2	3	4	5
I have performed academically as well as I anticipated I would	1	2	3	4	5"