

Cultural Intelligence, Social-Efficacy, and Self-Efficacy in Sociocultural Adaptation: A Comparative Study of Localite and Non-Localite University Students

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Abstract— The present quantitative cross-sectional study examined the relationships among cultural intelligence, social-efficacy, self-efficacy, and sociocultural adaptation in 106 university students (25 localites, 81 non-localites) in Vadodara, India. Data were collected using standardized instruments: the Cultural Intelligence Scale (CQS), Revised Sociocultural Adaptation Scale (SCAS-R), Cross-Cultural Social-Efficacy Scale (CCSE), and General Self-Efficacy Scale (GSE). Non-parametric analyses revealed significant positive correlations between cultural intelligence and sociocultural adaptation ($r = 0.593$, $p < .001$), social-efficacy and sociocultural adaptation ($r = 0.391$, $p < .001$), and self-efficacy and sociocultural adaptation ($r = 0.447$, $p < .001$). Mann-Whitney U tests indicated significant differences in cultural intelligence between localites and non-localites ($p = .039$), but no significant differences in sociocultural adaptation, social-efficacy, or self-efficacy. Multiple regression analysis demonstrated that cultural intelligence ($\beta = 0.441$, $p < .001$) and social-efficacy ($\beta = 0.235$, $p = .004$) significantly predicted sociocultural adaptation, accounting for 46.1% of variance ($R^2 = 0.461$, $F(3, 102) = 29.04$, $p < .001$). Findings suggest that cultural intelligence and social-efficacy play crucial roles in facilitating adaptation to diverse cultural environments among university students, with implications for educational institutions supporting student transitions.

Index Terms— cultural intelligence, social-efficacy, self-efficacy, sociocultural adaptation, cross-cultural adjustment.

I. INTRODUCTION

Background and Context

Globalization and increased educational mobility have resulted in unprecedented numbers of students pursuing higher education outside their native regions, creating diverse multicultural learning environments (Arli et al., 2023). This demographic shift necessitates understanding the psychological factors that facilitate successful adaptation to new cultural contexts. In India, internal migration for educational purposes has increased substantially, with students relocating from smaller cities and towns to major educational hubs like Vadodara, Gujarat. These transitions present unique challenges as students navigate unfamiliar cultural norms, social structures, and educational practices while maintaining academic performance and psychological well-being.

Cultural intelligence defined as the capability to function effectively across diverse cultural contexts has emerged as a critical construct in cross-cultural adaptation research (Earley & Ang, 2003; Van Dyne et al., 2012). Unlike static cultural knowledge or experience, cultural intelligence represents a dynamic capability that enables individuals to interpret unfamiliar cultural cues, adjust behavioral responses appropriately, and persist through cultural challenges (Ang & Van Dyne, 2008). As educational institutions become increasingly diverse, understanding how cultural intelligence facilitates adaptation becomes essential for supporting student success.

Theoretical Framework

Cultural Intelligence. Earley and Ang (2003) conceptualized cultural intelligence as comprising four interrelated dimensions based on Sternberg's (1986) multiple loci of intelligence theory. The metacognitive dimension involves strategic thinking about cultural encounters, including planning, monitoring, and revising mental models of cultural situations. The cognitive dimension encompasses knowledge of cultural norms, practices, and conventions across different societies. The motivational dimension reflects the drive and confidence to engage with culturally diverse situations despite potential challenges. Finally, the behavioral dimension captures the ability to exhibit appropriate verbal and nonverbal behaviors across cultural contexts (Van Dyne et al., 2012).

Research demonstrates that these dimensions collectively predict cross-cultural adjustment, with metacognitive and behavioral aspects showing particularly strong relationships with adaptation outcomes (Ang et al., 2007). However, the relative contribution of each dimension may vary depending on the specific cultural context and adaptation challenges faced by individuals.

Hofstede's Cultural Dimensions. Understanding the broader cultural context within which adaptation occurs requires consideration of fundamental value orientations that differ across cultures. Hofstede's (1980, 2001) cultural dimensions theory identifies six key dimensions along which cultures vary: power distance (acceptance of hierarchical authority structures), individualism-collectivism (emphasis on personal versus group goals), uncertainty avoidance (tolerance for ambiguity), masculinity-femininity (competitive versus nurturing values), long-term versus short-term orientation (focus on future versus present/past), and indulgence versus restraint (gratification of desires versus regulation by social norms).

India generally scores high on power distance and collectivism while showing moderate levels on other dimensions (Hofstede, 2001). However, significant regional and urban-rural variations exist within India, meaning students relocating between regions may encounter meaningful cultural differences despite remaining within national boundaries. Understanding these variations helps contextualize the adaptation challenges faced by non-localite students in Vadodara.

Self-Efficacy and Social-Efficacy. Bandura's (1997) social cognitive theory posits that self-efficacy belief in one's capabilities to execute actions required for specific outcomes fundamentally influences motivation, persistence, and performance across domains. In cross-cultural contexts, self-efficacy becomes particularly relevant as individuals face novel challenges requiring confidence in their adaptive capabilities (Schwarzer & Jerusalem, 1995). Social-efficacy represents a domain-specific form of self-efficacy focusing on confidence in social interactions and relationship building (Fan & Mak, 1998). In cross-cultural settings, social-efficacy becomes critical as establishing relationships requires navigating unfamiliar social norms, communication styles, and interpersonal expectations. Students with higher social-efficacy demonstrate greater willingness to initiate interactions, persist through social challenges, and develop supportive networks in new cultural environments (Yeh & Inose, 2003).

Sociocultural Adaptation. Ward and Kennedy (1999) distinguished between psychological adjustment (emotional well-being and satisfaction) and sociocultural adaptation (behavioral competence in managing daily activities). While related, these constructs show different patterns of change over time and respond to different predictors. Sociocultural adaptation typically improves gradually through learning and skill acquisition, whereas psychological adjustment may follow a U-curve pattern with initial euphoria, subsequent culture shock, and eventual recovery (Wilson, 2013).

The Revised Sociocultural Adaptation Scale (SCAS-R) assesses competence across five domains: interpersonal communication, academic/work performance, personal interests and community involvement, ecological adaptation, and language proficiency (Wilson, 2013). This multidimensional conceptualization recognizes that adaptation encompasses various life domains, with individuals potentially experiencing different levels of competence across areas.

Research Gap and Study Rationale

Despite growing research on cultural intelligence and adaptation, several gaps remain. First, most studies examine international students or expatriates, with limited attention to internal migration within culturally diverse nations like India. Second, few studies

simultaneously examine cultural intelligence, social-efficacy, and self-efficacy as predictors of sociocultural adaptation, missing opportunities to understand their relative contributions and potential interactions. Third, limited research compares adaptation processes between natives (localites) and newcomers (non-localites) within the same educational environment, despite the practical importance of this comparison for institutional support services.

This study addresses these gaps by investigating relationships among cultural intelligence, social-efficacy, self-efficacy, and sociocultural adaptation in university students in Vadodara, Gujarat, comparing localite and non-localite students. Understanding these relationships can inform interventions supporting student transitions and success in diverse educational environments.

Research Questions and Hypotheses

This study examined the following research questions:

1. What are the relationships among cultural intelligence, social-efficacy, self-efficacy, and sociocultural adaptation in university students?
2. Do localite and non-localite students differ in cultural intelligence, social-efficacy, self-efficacy, and sociocultural adaptation?
3. To what extent do cultural intelligence, social-efficacy, and self-efficacy predict sociocultural adaptation?

Based on theoretical frameworks and prior research, following hypothesis were framed:

H1: Cultural intelligence will be positively correlated with sociocultural adaptation.

H2: Social-efficacy will be positively correlated with sociocultural adaptation.

H3: Self-efficacy will be positively correlated with sociocultural adaptation.

H4: Localite and non-localite students will differ significantly in cultural intelligence.

H5: Cultural intelligence and social-efficacy will significantly predict sociocultural adaptation when controlling for self-efficacy.

II. METHOD

Research Design

This study employed a quantitative, cross-sectional, correlational design to examine relationships among

cultural intelligence, social-efficacy, self-efficacy, and sociocultural adaptation in university students. The cross-sectional approach provided efficient data collection while enabling examination of both correlational relationships and group differences between localite and non-localite students.

Participants

The sample comprised 106 university students from three institutions in Vadodara: Maharaja Sayajirao University of Baroda, Parul University, and GSFC University. Of the 109 students who initiated the survey, 106 (97.2%) completed all questionnaires. The sample included 72 females (67.9%) and 34 males (32.1%), with ages ranging from late adolescence through young adulthood. Students were pursuing undergraduate (19.8%), postgraduate (38.7%), or doctoral (9.4%) degrees across various disciplines. Regarding residential status, 25 participants (23.6%) identified as localites (native to Vadodara), while 81 (76.4%) identified as non-localites (relocated to Vadodara for educational purposes). Most participants (58.5%) reported middle socioeconomic status, with 30% reporting upper-middle class status and 9.4% reporting lower-middle class status. Participants were distributed across academic years, with 41.2% in second year, 25% in first year, 17.6% in fifth year, and 11.8% in third year.

Measures

Cultural Intelligence Scale (CQS). The 20-item CQS developed by Earley and Ang (2003) measures four dimensions of cultural intelligence: metacognitive (4 items, e.g., "I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds"), cognitive (6 items, e.g., "I know the cultural values and religious beliefs of other cultures"), motivational (5 items, e.g., "I enjoy interacting with people from different cultures"), and behavioral (5 items, e.g., "I change my verbal behavior when a cross-cultural interaction requires it"). Items are rated on a 7-point Likert scale (0 = *strongly disagree* to 6 = *strongly agree*), with higher scores indicating greater cultural intelligence. The CQS demonstrates good reliability and validity across diverse populations (Ang et al., 2007).

Revised Sociocultural Adaptation Scale (SCAS-R). The 21-item SCAS-R (Wilson, 2013) assesses competence in adapting to cultural environments

across five domains: interpersonal communication (7 items, e.g., "Building and maintaining relationships"), academic/work performance (4 items, e.g., "Managing my academic/work responsibilities"), personal interests and community involvement (4 items, e.g., "Attending or participating in community activities"), ecological adaptation (4 items, e.g., "Finding my way around"), and language proficiency (2 items, e.g., "Understanding and speaking [host language]"). Items use a 5-point Likert scale (1 = *not at all competent* to 5 = *extremely competent*), with higher scores reflecting greater adaptation competence.

Cross-Cultural Social-Efficacy Scale (CCSE). The 20-item CCSE (Fan & Mak, 1998) measures perceived ability to engage socially across cultures through four subscales: absence of social difficulties (9 items, e.g., "It is difficult for me to make new friends" [reverse scored]), social confidence (5 items, e.g., "I feel confident talking to my lecturers"), sharing interests (3 items, e.g., "I have common interests with local people"), and friendship initiative (3 items, e.g., "If I see someone I would like to meet, I go to that person instead of waiting"). Items are rated on a 7-point Likert scale (1 = *strongly agree* to 7 = *strongly disagree*), with appropriate items reverse-scored so higher scores indicate greater social-efficacy.

General Self-Efficacy Scale (GSE). The 10-item GSE (Schwarzer & Jerusalem, 1995) assesses general belief in one's ability to cope with difficult situations (e.g., "I can always manage to solve difficult problems if I try hard enough"). Items use a 4-point Likert scale (1 = *not at all true* to 4 = *exactly true*), with higher scores indicating greater self-efficacy. The GSE demonstrates strong psychometric properties across cultures and contexts (Scholz et al., 2002).

Procedure

Following institutional approval, data were collected between February and March 2023 via Google Forms. Potential participants meeting inclusion criteria received study information, informed consent forms, and survey links through university channels and social networks. The consent form explained study purposes, confidentiality protections, voluntary participation, and rights to withdraw without penalty. Participants who provided informed consent proceeded to complete demographic questions followed by the four standardized instruments. Survey completion required approximately 15-20 minutes. No compensation was provided, and participants could exit at any point. Some participants reported the survey length as challenging, but completion rates remained high (97.2%).

Data Analysis

Data were analyzed using SPSS Version 26.0. Preliminary analyses assessed normality using Kolmogorov-Smirnov and Shapiro-Wilk tests along with visual inspection of histograms and Q-Q plots. Results indicated non-normal distributions for all primary variables, necessitating non-parametric statistical approaches.

Descriptive statistics (medians, ranges, frequencies, percentages) characterized the sample and variable distributions. Spearman's rank-order correlations (ρ) examined relationships among primary variables. Mann-Whitney U tests compared localite and non-localite groups on each variable. Multiple regression analysis identified predictors of sociocultural adaptation, with preliminary diagnostics confirming assumptions. Statistical significance was set at $\alpha = .05$ for all analyses.

III. RESULTS

Preliminary Analyses

Table 1: Normality check of the data

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cultural Intelligence	.074	106	.182	.983	106	.193
Sociocultural adaptation	.063	106	.200*	.980	106	.117
Social efficacy	.117	106	.001	.959	106	.002
Self-efficacy	.063	106	.200*	.971	106	.021
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Normality assessments revealed significant deviations from normal distributions for all primary variables as shown in Table 1. Cultural intelligence showed Shapiro-Wilk $W = 0.983$ ($p = .193$) and Kolmogorov-Smirnov $D = 0.074$ ($p = .182$), indicating marginal normality. However, Q-Q plots revealed slight deviations. Sociocultural adaptation showed $W = 0.980$ ($p = .117$) and $D = 0.063$ ($p = .200$), also with slight deviations in Q-Q plots. Social-efficacy demonstrated more substantial departures from normality ($W = 0.959$, $p = .002$; $D = 0.117$, $p = .001$), as did self-efficacy ($W = 0.971$, $p = .021$; $D = 0.063$, $p = .200$). These results justified use of non-parametric statistical methods for primary analyses.

Descriptive Statistics

Table 2 presents medians and ranges for all study variables. Cultural intelligence showed a median of 69.50 with a range of 104 (minimum = 12, maximum

= 116), indicating substantial variability in students' cultural intelligence levels. Sociocultural adaptation had a median of 55.00 with a range of 68 (minimum = 16, maximum = 84). Social-efficacy showed a median of 40.00 with a range of 77 (minimum = 3, maximum = 80), while self-efficacy had a median of 30.00 with a range of 30 (minimum = 10, maximum = 40).

Examination of cultural intelligence dimensions revealed medians of 17 for behavioral CQ, 20 for motivational CQ, 18 for cognitive CQ, and 15 for metacognitive CQ. For sociocultural adaptation dimensions, medians were 19 for interpersonal communication, 11.5 for academic/work performance, 10 for personal interests and community involvement, 10 for ecological adaptation, and 4 for language proficiency. Social-efficacy dimensions showed medians of 16 for absence of social difficulties, 12 for social confidence, 6 for sharing interests, and 5 for friendship initiative.

Correlational Analyses

Table 2: Median and Range of Variables in the data (n = 106)

Variables	N	Median	Range	Min. Scores	Max. Scores
Cultural Intelligence	106	69.50	104	12	116
Sociocultural adaptation	106	55	68	16	84
Social efficacy	106	40	77	3	80
Self-efficacy	106	30	30	10	40
CQ- Behavior (Dimension of Cultural Intelligence)	106	17	30	0	30
CQ- Motivation (Dimension of Cultural Intelligence)	106	20	29	1	30
CQ- Knowledge (Dimension of Cultural Intelligence)	106	18	35	1	36
CQ- Strategy (Dimension of Cultural Intelligence)	106	15	23	1	24
Interpersonal Communication (Dimension of Sociocultural adaptation)	106	19	23	5	28
Academic/ Work Performance (Dimension of Sociocultural adaptation)	106	11.5	16	0	16
Personal Interests & Community Involvement (Dimension of Sociocultural adaptation)	106	10	15	1	16
Ecological Adaptation (Dimension of Sociocultural adaptation)	106	10	15	1	16
Language Proficiency (Dimension of Sociocultural adaptation)	106	4	8	0	8
Absence of Social Difficulties (Dimension of Social efficacy)	106	16	36	0	36
Social Confidence (Dimension of Social efficacy)	106	12	20	0	20
Sharing Interests (Dimension of Social efficacy)	106	6	12	0	12
Friendship Initiative (Dimension of Social efficacy)	106	5	12	0	12

From the Table no. 2, it could be seen that the Median and Range of Cultural Intelligence is 69.50 and 104 respectively is highly significant in measuring median and range than the other variables.

Table 3: Spearman rho Correlation r and P-value of the Variables

Sr.No	Variables	Spearman rho Correlation r	P-value
1	Sociocultural adaptation & Cultural Intelligence	0.593**	< 0.01
2	Sociocultural adaptation & Social-efficacy	0.391**	< 0.01
3	Sociocultural adaptation & Self- efficacy	0.447**	< 0.01

Overall Sample Relationships. Spearman's rank-order correlations revealed significant positive relationships between sociocultural adaptation and all three predictor variables (Table 3). Cultural intelligence showed the strongest correlation with sociocultural adaptation ($\rho = 0.593$, $p < .001$), indicating that students with higher cultural intelligence demonstrated significantly better sociocultural adaptation. Social-efficacy also correlated significantly with sociocultural adaptation ($\rho = 0.391$, $p < .001$), as did self-efficacy ($\rho = 0.447$, $p < .001$). These findings support Hypotheses 1, 2, and 3.

Group-Specific Relationships. When analyzed separately by residential status as shown in Table 4, localites showed significant correlations between sociocultural adaptation and cultural intelligence ($\rho = 0.623$, $p = .001$) and between sociocultural adaptation and social-efficacy ($\rho = 0.512$, $p = .009$). However, the correlation between sociocultural adaptation and self-efficacy did not reach significance for localites ($\rho = 0.380$, $p = .061$), suggesting self-efficacy may play a different role for students already familiar with the local culture.

Table 4: Spearman rho Correlations between Localities and Non-localites

CORRELATIONS (Spearman rho)	Cultural Intelligence	Social Efficacy	Self-Efficacy
Sociocultural Adaptation	r- value (<i>p- value</i>)	r- value (<i>p- value</i>)	r- value (<i>p- value</i>)
Localites	0.623** ($p = 0.001$)	0.512** ($p = 0.009$)	0.380 ($p = 0.061$)
Non-localites	0.572** ($p < 0.01$)	0.304** ($p = 0.006$)	0.466** ($p < 0.01$)

Non-localites demonstrated significant correlations across all three predictors: cultural intelligence ($\rho = 0.572$, $p < .01$), social-efficacy ($\rho = 0.304$, $p = .006$), and self-efficacy ($\rho = 0.466$, $p < .01$). The stronger relationship between self-efficacy and adaptation for non-localites compared to localites suggests that general confidence in coping abilities may be particularly important for students navigating unfamiliar cultural environments.

Group Comparisons

Cultural Intelligence. Mann-Whitney U tests revealed a significant difference in cultural intelligence between localites ($Mdn = 75.00$) and non-localites ($Mdn = 68.00$), $U = 734.5$, $p = .039$, supporting Hypothesis 4. Localite students reported significantly

higher cultural intelligence than non-localite students. This finding may reflect localites' familiarity with the regional culture, providing them advantages in understanding cultural norms and navigating social situations.

Other Variables. Contrary to expectations, no significant differences emerged between localites and non-localites for sociocultural adaptation ($U = 841.0$, $p = .145$), social-efficacy ($U = 795.5$, $p = .079$), or self-efficacy ($U = 877.0$, $p = .263$). Despite lower cultural intelligence, non-localite students achieved comparable levels of adaptation, suggesting they may employ compensatory strategies or alternative pathways to successful adaptation.

Regression Analysis

Table 9: Model Summary, ANOVA and Coefficients of Model

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.679 ^a	.461	.445	12.56197	.461	29.038	3	102	.000
a. Predictors: (Constant), Social efficacy, Self-efficacy, Cultural Intelligence									
b. Dependent Variable: Sociocultural adaptation									

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13746.809	3	4582.270	29.038	.000 ^b
	Residual	16095.918	102	157.803		
	Total	29842.726	105			
a. Dependent Variable: Sociocultural_adaptation						
b. Predictors: (Constant), Social_efficacy, Self_efficacy, Cultural_Intelligence						

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	7.604	6.265		1.214	.228	-4.823	20.031
	Self-efficacy	.425	.230	.160	1.846	.068	-.032	.881
	Cultural Intelligence	.314	.066	.441	4.798	.000	.184	.444
	Social efficacy	.311	.107	.235	2.912	.004	.099	.523
a. Dependent Variable: Sociocultural_adaptation								

Multiple regression analysis examined cultural intelligence, social-efficacy, and self-efficacy as simultaneous predictors of sociocultural adaptation. The overall model was statistically significant, $R^2 = 0.461$, adjusted $R^2 = 0.445$, $F(3, 102) = 29.04$, $p < .001$, accounting for 46.1% of variance in sociocultural adaptation. This represents a substantial proportion of explained variance, suggesting these three constructs capture important factors influencing adaptation.

Examination of individual predictors revealed that cultural intelligence significantly predicted sociocultural adaptation ($\beta = 0.441$, $t = 4.798$, $p < .001$), as did social-efficacy ($\beta = 0.235$, $t = 2.912$, $p = .004$). However, self-efficacy did not contribute significant unique variance when controlling for the other predictors ($\beta = 0.160$, $t = 1.846$, $p = .068$). These findings support Hypothesis 5, indicating that cultural intelligence and social-efficacy represent the primary predictors of sociocultural adaptation in this sample. The stronger standardized coefficient for cultural intelligence ($\beta = 0.441$) compared to social-efficacy ($\beta = 0.235$) indicates that cultural intelligence contributed more substantially to predicting adaptation. This pattern aligns with theoretical expectations, as cultural intelligence specifically targets cross-cultural competencies while social-efficacy addresses broader social confidence that, while relevant, may be less directly tied to cultural adaptation per se.

IV. DISCUSSION

Overview of Findings

This study examined relationships among cultural intelligence, social-efficacy, self-efficacy, and sociocultural adaptation in university students in Vadodara, India, comparing localite and non-localite students. Results supported most hypotheses, revealing that cultural intelligence and social-efficacy significantly predict sociocultural adaptation, with cultural intelligence showing the strongest relationship. Localite students demonstrated higher cultural intelligence than non-localites, yet both groups achieved comparable adaptation levels, suggesting multiple pathways to successful adjustment.

Cultural Intelligence and Adaptation

The strong positive correlation between cultural intelligence and sociocultural adaptation ($\rho = 0.593$, $p < .001$) aligns with extensive prior research demonstrating that individuals with higher cultural intelligence adapt more successfully to diverse cultural contexts (Ang et al., 2007; Arli et al., 2023). This relationship held across both localite and non-localite students, indicating that cultural intelligence facilitates adaptation regardless of native status. However, the slightly stronger correlation for localites ($\rho = 0.623$) compared to non-localites ($\rho = 0.572$)

suggests potential differences in how cultural intelligence operates for these groups.

For localites, cultural intelligence may enhance their ability to appreciate and leverage their existing cultural knowledge while remaining open to subcultural variations within their region. For non-localites, cultural intelligence may support more fundamental learning processes as they acquire new cultural knowledge and develop appropriate behavioral repertoires. The regression analysis confirmed cultural intelligence as the strongest predictor of sociocultural adaptation ($\beta = 0.441$), highlighting its practical importance for universities supporting diverse student populations.

The finding that localites reported significantly higher cultural intelligence than non-localites ($p = .039$) warrants careful interpretation. This difference may reflect genuine advantages conferred by cultural familiarity, including deeper understanding of local norms, more extensive networks providing cultural information, and greater confidence in cultural judgment. However, it may also partly reflect response biases, as localites may rate their cultural capabilities more favorably when assessing competence in their home culture. Future research using behavioral measures or peer ratings could clarify this issue.

Importantly, despite lower cultural intelligence, non-localite students achieved comparable sociocultural adaptation to localites. This unexpected finding suggests that cultural intelligence, while important, does not fully determine adaptation outcomes. Non-localites may compensate through heightened motivation, deliberate learning strategies, peer support networks, or institutional resources. This resilience highlights students' adaptive capacities and suggests that interventions supporting cultural intelligence development could further enhance non-localites' adaptation experiences.

Social-Efficacy and Adaptation

Social-efficacy emerged as a significant predictor of sociocultural adaptation ($\beta = 0.235$, $p = .004$), consistent with research emphasizing social confidence in cross-cultural adjustment (Fan & Mak, 1998; Yeh & Inose, 2003). The ability to navigate social interactions, initiate relationships, and communicate effectively across cultural boundaries appears crucial for successful adaptation. Students with higher social-efficacy likely experience less

anxiety about social encounters, engage more frequently with diverse peers, and persist through interpersonal challenges, thereby accelerating their adaptation.

Interestingly, the correlation between social-efficacy and adaptation was stronger for localites ($p = 0.512$) than non-localites ($p = 0.304$), despite no overall group difference in social-efficacy levels. This pattern suggests that social-efficacy may function differently depending on cultural familiarity. For localites, social confidence directly translates into engagement with their community, as they possess the cultural knowledge to navigate interactions effectively. For non-localites, social confidence alone may be insufficient without accompanying cultural knowledge, requiring them to combine social-efficacy with deliberate cultural learning.

The absence of group differences in social-efficacy ($p = .079$) despite differences in cultural intelligence suggests these constructs capture distinct aspects of adaptive competence. Social-efficacy reflects general interpersonal confidence that may develop through diverse social experiences regardless of specific cultural contexts. In contrast, cultural intelligence specifically addresses cross-cultural competencies. This distinction has practical implications, suggesting that interventions might target different student needs: social skill development for students with interpersonal anxiety versus cultural learning opportunities for students lacking cross-cultural experience.

Self-Efficacy and Adaptation

While self-efficacy correlated significantly with sociocultural adaptation in bivariate analyses ($p = 0.447$, $p < .001$), it did not contribute significant unique variance in the regression model ($p = .068$). This pattern suggests that self-efficacy's relationship with adaptation operates partly through or alongside cultural intelligence and social-efficacy rather than representing an independent pathway. Students with higher general self-efficacy may more readily develop cultural intelligence and social-efficacy, which then directly facilitate adaptation.

The stronger correlation between self-efficacy and adaptation for non-localites ($p = 0.466$) compared to localites ($p = 0.380$, ns) suggests that general coping confidence may be particularly valuable when facing unfamiliar challenges. Non-localites encounter

numerous novel situations requiring confidence in their ability to learn, problem-solve, and persist despite setbacks. This general confidence may complement domain-specific competencies like cultural intelligence and social-efficacy, providing psychological resources for managing adaptation stress.

The finding that self-efficacy did not predict adaptation when controlling for cultural intelligence and social-efficacy should not be interpreted as indicating self-efficacy's irrelevance. Rather, domain-specific efficacy beliefs (cultural intelligence's motivational dimension, social-efficacy) appear more proximal predictors than general self-efficacy for this particular outcome. This aligns with Bandura's (1997) principle that specific efficacy beliefs predict better than generalized beliefs for specific domains.

Group Differences and Adaptation Processes

The absence of significant differences between localites and non-localites in sociocultural adaptation ($p = .145$) represents perhaps the most intriguing finding. Despite facing greater cultural learning demands and possessing lower cultural intelligence, non-localite students achieved comparable adaptation outcomes. This resilience suggests several possibilities.

First, non-localites may demonstrate heightened motivation to adapt, recognizing their adaptation as essential for academic success and social integration. Motivational intensity can compensate for knowledge deficits, driving active learning and engagement. Second, universities may provide effective support systems formal (orientation programs, counseling services, international student offices) and informal (peer mentoring, student organizations) that facilitate non-localite adaptation. Third, modern communication technologies enable non-localites to maintain connections with home communities while gradually integrating into new environments, buffering adaptation stress.

Fourth, adaptation represents a dynamic process rather than a static endpoint. Our cross-sectional design captured students at various adaptation stages. Non-localites may initially experience greater challenges but eventually achieve comparable outcomes through learning and adjustment. Longitudinal research could

clarify adaptation trajectories, identifying critical periods for intervention.

The similar adaptation levels despite different cultural intelligence levels also challenge assumptions about the necessity of high cultural intelligence for successful adaptation. While cultural intelligence clearly facilitates adaptation (as evidenced by its strong predictive relationship), individuals can adapt successfully through alternative means. This has encouraging implications for practice, suggesting that students lacking natural cultural intelligence can still succeed with appropriate support and effort.

V. CONCLUSION

This study demonstrates that cultural intelligence and social-efficacy significantly predict sociocultural adaptation in university students, with cultural intelligence showing the strongest relationship. While localite students reported higher cultural intelligence than non-localites, both groups achieved comparable adaptation levels, suggesting multiple pathways to successful adjustment and highlighting students' resilience. These findings advance understanding of cross-cultural adaptation in educational contexts while providing practical guidance for institutions supporting diverse student populations.

Universities should consider implementing comprehensive approaches to supporting student adaptation, including assessment of cultural intelligence and social-efficacy, targeted development programs, peer connection opportunities, and integration of intercultural learning into curricula. Such efforts can enhance all students' intercultural competencies while providing specific support for those experiencing adaptation challenges.

As educational institutions become increasingly diverse, understanding and supporting adaptation processes becomes essential for student success and institutional effectiveness. This research contributes to that effort by clarifying relationships among key psychological constructs influencing adaptation and identifying areas where interventions may prove most beneficial. Continued research examining adaptation processes, intervention effectiveness, and contextual influences will further advance both theory and practice in this important domain.

VI. PRACTICAL IMPLICATIONS

University Programs and Services. Findings suggest several practical applications for universities supporting diverse student populations. First, assessment of students' cultural intelligence, social-efficacy, and self-efficacy during orientation could identify those requiring additional support. Students scoring low on these measures might benefit from targeted interventions before adaptation difficulties arise.

Second, workshops and courses developing cultural intelligence could benefit all students, not just non-localites. Training might address metacognitive strategies (mindful attention to cultural cues, suspending judgment, perspective-taking), knowledge acquisition (learning about regional cultures, recognizing cultural dimensions), motivational enhancement (celebrating diversity, reframing cultural challenges as growth opportunities), and behavioral skill development (communication styles, nonverbal behavior, conflict resolution across cultures).

Third, programs fostering social-efficacy could complement cultural intelligence development. Social skills training, structured interaction opportunities, peer mentoring programs, and student organizations provide contexts for developing social confidence. Particular attention to helping students initiate relationships, navigate group dynamics, and persist through social discomfort could enhance adaptation outcomes.

Fourth, connecting non-localite students with localite peers through buddy programs or living arrangements could facilitate cultural learning while providing social support. Localites possess cultural knowledge that, when shared generously, accelerates newcomers' adaptation. Such programs benefit both groups, helping localites develop intercultural competencies while supporting non-localites' integration.

Curriculum Integration. Beyond specialized programs, cultural intelligence and intercultural competence could be integrated into regular curricula. Courses incorporating diverse perspectives, collaborative projects mixing localite and non-localite students, and reflection assignments examining cultural experiences could normalize cultural learning as part of education. Faculty development helping instructors facilitate intercultural learning and manage diverse classrooms would support these efforts.

Counseling and Mental Health Services. University counselors should recognize adaptation challenges faced by non-localite students, even when not explicitly expressed. Proactive outreach, culturally sensitive counseling approaches, and groups addressing adaptation issues could provide needed support. Training counselors to assess and address cultural intelligence and social-efficacy issues would enhance their effectiveness.

Limitations

Several limitations warrant consideration. First, the cross-sectional design precludes causal inferences. While cultural intelligence and social-efficacy predict adaptation in our regression model, reciprocal relationships likely exist, with successful adaptation potentially enhancing these competencies. Longitudinal research tracking students across time could clarify developmental sequences and causal directions.

Second, convenience sampling from three universities in one city limits generalizability. Vadodara's specific cultural context, university characteristics, and student demographics may not represent other settings. Replication across diverse geographic and institutional contexts would establish findings' generalizability.

Third, self-report measures introduce potential biases including social desirability, response sets, and limited self-awareness. Particularly for cultural intelligence, individuals may overestimate or underestimate their competencies. Multimethod approaches incorporating behavioral assessments, peer ratings, or performance measures would provide more comprehensive evaluation.

Fourth, the sample's gender imbalance (67.9% female) and predominance of non-localites (76.4%) may have influenced findings. Gender differences in cultural intelligence, social-efficacy, or adaptation patterns deserve investigation. The disproportionate representation could affect statistical power for group comparisons and generalizability to more balanced populations.

Fifth, while we assessed multiple constructs, other important factors remain unexamined. Personality traits (openness, extraversion), acculturation attitudes, perceived discrimination, social support quality, institutional climate, and prior intercultural experience all likely influence adaptation. Future research

incorporating these variables would provide more comprehensive understanding.

Future Directions

Building on this study's contributions, several research directions merit pursuit. First, longitudinal research tracking students across their academic tenure could illuminate adaptation trajectories, identify critical transition periods, and establish temporal relationships among variables. Such research could determine whether cultural intelligence predicts subsequent adaptation or vice versa, inform timing of interventions, and reveal individual differences in adaptation pathways.

Second, qualitative investigations could illuminate adaptation experiences, strategies, and challenges not captured by quantitative measures. In-depth interviews or focus groups with localite and non-localite students could reveal specific adaptation difficulties, successful strategies, critical incidents shaping adaptation, and contextual factors facilitating or hindering adjustment. Mixed-methods designs combining quantitative breadth with qualitative depth would provide comprehensive understanding.

Third, intervention research could test programs designed to enhance cultural intelligence, social-efficacy, or both. Randomized controlled trials comparing different intervention approaches would establish effectiveness while clarifying mechanisms of change. Such research could guide evidence-based practice in student support services.

Fourth, expansion to diverse cultural contexts would establish generalizability. Comparing adaptation processes across multiple Indian cities with varying cultural characteristics, or extending to international student populations, would reveal universal versus context-specific patterns. Cross-cultural replications using consistent methods would enable systematic comparison.

Fifth, examining potential moderators and mediators could refine theoretical understanding. For instance, does personality moderate relationships between cultural intelligence and adaptation? Does social support mediate these relationships? Do different adaptation domains (academic, social, psychological) show different predictor patterns? Addressing such questions would advance theory while informing targeted interventions.

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