Exploring The Impact of Study Abroad on International Students' Emotions, Behaviors, and Cognition: An Application of the ABC Model

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Abstract

Studying abroad provides academic and personal growth but comes at a price of emotional, behavioral, and cognitive challenges. Thailand has become increasingly popular among international students; however, research on their adaptation to a foreign environment is limited. This study investigates how studying abroad in Thailand affects international students' emotions, behaviors, and cognition. Using the ABC Model of Acculturation (Affect, Behavior, Cognition) as the framework, the adaptation process was examined, and key factors that influenced successful adaptation were identified..The research used structured questionnaires for qualitative descriptive analysis with a sample of 281 international students from multiple Thai universities. Moreover, reliability tests, correlation, regression, and thematic analysis for qualitative responses are also conducted.

The study found a strong positive correlation between behavioral adaptation and psychological affects of studying abroad. Moderately positive correlations were also identified between affective and cognitive adaptation, and behavioral adaptation and cognitive adaptation. Regression analysis showed a significant influence of behavioral and cognitive adaptation on predicting affective adaptation. Qualitative insights revealed emotional challenges of homesickness and loneliness, as well as meaningful adaptation methods used by the studentswhich included activities related to social engagement and cultural learning. The results strongly suggest that students' emotional, behavioral, and cognitive adaptation are mutually reinforcing. Most importantly, behavioral engagement is a key factor in emotional adaptation, while cognitive skills support adaptation but to a lesser extent. By improving social interaction, cultural immersion, and student engagement programs, Thai universities can improve their support for international students.

Keywords: *Affective Adaptation, Behavioral Adaptation, Cognitive Adaptation, International Students, Study Abroad, ABC Model*

1. Introduction

In today's globalized world, studying abroad has become an important opportunity for young people seeking academic development and personal growth (Moerk, 2020; Ward, Bochner, & Furnham, 2001). Many students travel to new countries to gain better education, experience diverse cultures, and build their future careers. Thailand has become one of the most popular destinations in Asia due to its strong educational programs, affordable living costs, and welcoming cultural environment (Rujiprak & Limprasert, 2016). However, studying abroad also presents emotional, behavioral, and cognitive challenges, as students must adjust to a new academic system and unfamiliar cultural norms. These challenges can shape how students feel, behave, and think while living in a foreign country (Rujiprak, 2016).

To understand this adjustment process, the present study adopts the ABC Model of Acculturation, introduced by Ward, Bochner, and Furnham (2001), which explains cultural adaptation through three key components: Affect, Behavior, and Cognition. The affective dimension includes emotional reactions such as excitement, anxiety, and homesickness that students experience during cultural transition (Ward et al., 2001). The behavioral dimension focuses on actions and social interactions, including communication styles, classroom participation, and engagement with local and international peers (Moerk, 2020). The cognitive dimension examines how students' thoughts, beliefs, and cultural understanding develop over time as they navigate unfamiliar environments (Wirga & De Bernardi, 2002). Together, these components provide a comprehensive framework for understanding how international students adapt to life abroad.

Although previous studies have examined international student adjustment in Western countries such as the United States and the United Kingdom, research focusing on Thailand remains limited (McChesney et al., 2024). As Thai universities become increasingly international, welcoming students from Asia, Europe, Africa, and beyond, it is increasingly important to understand how these students manage emotional stress, behavioral changes, and cognitive shifts during their adaptation process (Rujiprak, 2016). Gaining insights into these experiences can help universities develop more effective support systems that promote well-being, academic success, and a positive study abroad experience for diverse student populations.

Existing research also highlights the significance of emotional intelligence, social support, and cultural understanding in shaping international students' adjustment outcomes (Ward et al., 2001; Rujiprak, 2016). Emotional shifts are common during the early phase of studying abroad, and students' level of social and academic engagement can influence how smoothly they adapt to their new environment. As their intercultural awareness grows, students often gain more flexible thinking skills, leading to stronger cognitive adaptation and improved academic performance. Understanding these patterns is essential for supporting international students more effectively within the Thai education system.

2. Objectives

Although many studies have explored international student adjustment in Western countries, research focusing on emotional, behavioral, and cognitive adaptation in Thailand remains limited. As Thai universities continue to welcome students from diverse backgrounds, it becomes essential to understand how these students adapt and what factors influence their well-being. This study aims to address this gap by examining international students' adaptation using the ABC Model of Acculturation and identifying the key factors that support successful adjustment while studying in Thailand. Accordingly, the specific objectives of this research are as follows:

1. To examine how studying abroad affects international students' emotions, behaviors, and cognition using the ABC Model of Acculturation;
2. To identify the emotional, behavioral, and cognitive challenges faced by international students studying in Thailand;
3. To explore which factors, such as social support, cultural understanding, and university engagement, contribute to better adaptation among international students; and
4. To provide insights and suggestions that can help Thai universities improve support systems for international students' well-being and academic success.

3. Literature Review

The adaptation of international students in foreign academic environments has been an extensively discussed topic within the fields of cross-cultural psychology, international education, and higher education research. As global mobility increases, universities worldwide have experienced significant growth in international student enrollment. This development has intensified the need to understand how students adjust emotionally, behaviorally, and

cognitively when immersed in a culturally unfamiliar context. The present study adopts the ABC Model of Acculturation developed by Ward, Bochner, and Furnham (2001), which conceptualizes adaptation across three primary components called Affect, Behavior, and Cognition. This literature review examines existing scholarship related to each dimension and highlights gaps that justify the relevance of the current research focusing on international students in Thailand.

Affective adaptation refers to the emotional responses individuals experience during the acculturation process. These emotional experiences may include excitement, stress, homesickness, loneliness, and culture-related anxiety. Ward et al. (2001) argue that emotional adjustment is one of the earliest and most sensitive indicators of how well newcomers adapt to a host environment. Emotional reactions are shaped not only by personal factors such as personality and coping styles, but also by situational factors such as academic pressure, cultural distance, and social support.

Research conducted within the Thai context provides valuable insight into this dimension. Rujiprak (2016) emphasized the importance of emotional intelligence as a predictor of emotional adjustment among international students in Thailand. According to his findings, students with higher emotional recognition and regulation abilities demonstrated better resilience when facing stressors related to language barriers, cultural misunderstanding, and academic workload. Emotional intelligence enhanced students' capability to interpret their emotions accurately and regulate negative affective responses, thereby facilitating more stable emotional well-being. These findings are supported by Rujiprak and Limprasert (2016), who observed that emotional well-being was strongly influenced by the availability of supportive academic and social networks. Students who regularly interacted with friends, teachers, and counselors expressed lower levels of emotional distress and a stronger sense of belonging.

Beyond the Thai environment, several international studies contribute to the understanding of affective adaptation. McChesney et al. (2024) demonstrated that students' emotional states were closely linked to their academic performance. Positive emotions such as enthusiasm and curiosity correlated with greater learning engagement and higher academic achievement, whereas negative emotions such as frustration and anxiety hindered cognitive processing and resulted in poorer academic outcomes. These findings reinforce earlier research from Wirga and De Bernardi (2002), who argued that emotional responses are shaped by cognitive interpretation processes. Students who appraised their cross-cultural challenges as opportunities for growth experienced less distress, while students who interpreted them as threats felt more emotional discomfort.

Other studies focus on the developmental benefits of emotional adjustment. Martini (2015) found that immersion in a foreign culture often produces long-term emotional growth, including increased confidence, independence, and emotional maturity. Students who overcame emotional challenges reported feeling more capable of managing unfamiliar environments in the future. Moerk (2020) similarly reported that emotional transformation played a central role in the overall study abroad experience, where emotional discomfort gradually shifted to emotional resilience as students developed coping mechanisms. Overall, the literature shows that emotional adjustment is a dynamic and multifaceted process influenced by personal competencies, cognitive interpretation, cultural distance, and social support. Emotional well-being plays a critical role not only in psychological health, but also in academic performance and overall satisfaction abroad.

Behavioral adaptation refers to the development of culture-appropriate behaviors that enable individuals to function effectively within the host society. Ward et al. (2001) define behavioral adaptation as gaining practical skills such as communication styles, academic participation, and social interaction patterns. This dimension represents the outward or observable component of adaptation, and is often influenced by how frequently students interact with host community members.

Research conducted in Thailand illustrates the challenges and strengths of international students' behavioral adjustment. Rujiprak and Limprasert (2016) observed that international students commonly struggle with language barriers, unfamiliar communication norms, and local social etiquette during the early stages of adaptation. Over time, however, these difficulties diminished as students actively engaged with Thai peers, participated in campus events,

and developed friendships. Thai hospitality played an important role in easing the adjustment process. International students frequently described Thai students and faculty as approachable, kind, and supportive, which encouraged them to participate more confidently in both academic and social environments.

Several international studies underline the importance of active participation in facilitating behavioral adaptation. Moerk (2020) reported that students who engaged in experiential learning activities such as volunteering, community projects, or homestays developed stronger communication skills and deeper cultural understanding. These students exhibited more flexible behavior, increased openness to new experiences, and greater willingness to participate in local cultural practices. Savicki (2010) suggested that intercultural competence increases significantly when students interact with peers from different cultural backgrounds. Through these interactions, students learn culturally appropriate communication strategies, negotiation skills, and conflict management techniques.

Rakhshan et al. (2011) contributed additional evidence showing that communication competence strongly predicts behavioral adjustment. Students who possessed strong listening skills, clear speaking abilities, and nonverbal communication awareness adapted more easily to both academic group work and daily interactions. Behavioral adaptation is also influenced by students' willingness to take risks, such as initiating conversations, joining group activities, or trying new cultural experiences. Taken together, the findings indicate that behavioral adaptation is largely driven by interaction frequency, involvement in cultural activities, communication competencies, and supportive host environments. Students who remain isolated or passive tend to experience slower or incomplete behavioral adaptation.

Cognitive adaptation encompasses the changes in beliefs, assumptions, and thought processes that occur when individuals encounter a new cultural environment. Ward et al. (2001) describe cognitive adaptation as intellectual and perceptual adjustments that help individuals make meaning of unfamiliar cultural cues. Cognitive adaptation often occurs more gradually compared to emotional and behavioral adaptation, but it has stronger and more lasting effects on identity and worldview.

Several studies highlight the transformative role of cognitive adaptation. Moerk (2020) found that studying abroad often produces significant cognitive development, including increased intercultural understanding, flexibility in thinking, and a more nuanced appreciation of cultural diversity. Students learned to interpret cultural differences more accurately and developed more positive attitudes toward cultural unfamiliarity.

McChesney et al. (2024) identified cognitive engagement as an important foundation for academic success. Cognitive engagement refers to the use of reflective thinking, critical analysis, and problem-solving skills. Students who actively processed cultural and academic challenges demonstrated stronger performance and more stable emotional well-being. Wirga and De Bernardi (2002) argued that cognitive adaptation plays a central role in shaping both emotional reactions and behavioral choices. When students adopt constructive cognitive frames and learning oriented mindsets, they tend to regulate their emotions more effectively and interact more confidently with local communities. Conversely, rigid cognitive patterns or negative cultural interpretations can hinder adaptation.

Research from Ilie (2010) and Midgley (2019) further illustrates that cognitive adaptation enhances students' global perspectives. Through intercultural exposure, students often reconceptualize their understanding of identity, citizenship, and cultural norms. These cognitive transformations promote broader worldviews, deeper cultural empathy, and stronger critical thinking skills. Overall, cognitive adaptation is essential for sustained cultural adjustment and long-term personal development. Cognitive flexibility supports emotional resilience and behavioral competence, forming an interconnected foundation for the overall adaptation experience.

The reviewed studies demonstrate that emotional, behavioral, and cognitive adaptation are interconnected processes that contribute to the overall adjustment of international students. Affective adaptation influences how students feel about cultural challenges. Behavioral adaptation reflects how students act and respond in social contexts. Cognitive adaptation guides how students think about cultural differences and interpret their study abroad experiences. Each dimension supports the others. For example, positive cognitive interpretations reduce emotional stress, while meaningful social interaction fosters emotional well-being and expands cultural understanding.

Despite the considerable amount of research on international student adaptation, several gaps remain. First, many studies focus on only one dimension of adaptation, such as emotional well-being or behavioral engagement. There is limited research that integrates all three components of the ABC Model in a single study. Second, although numerous studies have been conducted in Western countries, research focusing on the Thai context remains relatively scarce. Thailand is a unique cultural environment with a distinct language, communication styles, and social norms that differ significantly from Western settings. As Thai universities continue to attract more international students from Asia, Africa, Europe, and the Middle East, understanding how students adapt specifically in Thailand is increasingly important.

Third, previous research in Thailand often focuses on emotional intelligence or social support, but fewer studies examine the cognitive component of adaptation or the interplay between all three dimensions. Addressing this gap is important because Thai universities provide multicultural learning environments that require international students to navigate complex academic expectations and cultural differences.

Based on the literature reviewed, adaptation is a multidimensional process that requires emotional resilience, behavioral engagement, and cognitive transformation. The ABC Model provides a comprehensive framework for understanding how international students navigate cultural transitions. However, there is still a lack of studies that examine all three dimensions simultaneously within the Thai higher education system. This review shows that current research tends to emphasize certain aspects of adaptation while overlooking others, leading to an incomplete understanding of the full adaptation experience. The present study seeks to address this gap by investigating emotional, behavioral, and cognitive adaptation among international students in Thailand within a single cohesive framework. The findings aim to provide deeper insight into the complexities of student adaptation and inform universities on how to develop more effective support strategies to enhance student well-being and academic success.

4. Research Methodology

This study used a quantitative descriptive research design to examine how studying abroad influences the emotional, behavioral, and cognitive adaptation of international students in Thailand. The research was based on the ABC Model of Acculturation, which guided the construction of all survey items. A structured questionnaire was created using Google Forms and reviewed by the research advisor to ensure clarity, accuracy, and alignment with the study objectives. The final questionnaire consisted of 23 close ended multiple choice items with five response options each, and three open ended questions that allowed participants to provide additional details about their personal adaptation experiences.

Participants were selected using a convenience sampling method. The final sample size for this study consisted of 300 international students. The survey was distributed through online channels, including university social media groups, international student networks, and personal contacts. Respondents included international students from several Thai universities such as Rangsit University, Bangkok University, Assumption University, and other higher education institutions across the country. Participation was voluntary and anonymous. No identifying information such as names, student IDs, or contact details was collected to protect confidentiality and ensure ethical compliance. Before answering the questionnaire, participants received a short explanation of the study purpose and were required to provide informed consent.

The sample size was determined based on general recommendations for social science survey research, which suggest that a minimum of 200–250 participants is adequate for reliable regression and correlation analysis (Hair et al., 2019). With 281 usable responses, the sample exceeded the minimum requirement for detecting moderate effect sizes at the 0.05 significance level, thereby providing sufficient statistical power.

After data collection, the responses were organized and analyzed using descriptive statistical techniques. Descriptive statistics were chosen because the study aims to explore trends and patterns rather than test complex causal relationships. Frequencies, percentages, tables, and pie charts were used to summarize and interpret responses to the close ended items, allowing the researchers to identify patterns in emotional, behavioral, and cognitive adaptation. The open ended responses were examined through basic thematic analysis, which involved reading responses

carefully, grouping similar ideas, and identifying recurring themes related to challenges, cultural learning, and personal growth. This combined quantitative and qualitative approach enabled the study to provide a clear and comprehensive overview of the adaptation experiences of international students living and studying in Thailand.

5. Results and Discussion

5.1 Participant Profile

A total of 300 questionnaires were distributed, of which 281 responses were complete and retained for analysis, yielding a usable response rate of 93.7%. The sample consisted primarily of students aged 21–25 years (62.6%). Myanmar (53.7%) and Chinese (34.2%) students constituted the majority of respondents, while smaller proportions represented other nationalities. Female participants accounted for 60.5% of the sample. Nearly half of respondents (47.0%) had resided in Thailand for 1–2 years, suggesting that most participants were in an active adjustment phase rather than at the initial entry stage. Students were enrolled across multiple Thai universities, enhancing contextual diversity, although the distribution remained concentrated within a limited number of institutions.

The demographic profile indicates that findings primarily reflect the adaptation experiences of Asian international students within Thai higher education institutions.

5.2 Reliability and Construct Validation

Internal consistency reliability was assessed using Cronbach's alpha. The cognitive domain demonstrated strong reliability ($\alpha = 0.820$), indicating high internal coherence among items measuring open-mindedness, self-awareness, problem-solving, and adaptive thinking. The affective ($\alpha = 0.687$) and behavioral ($\alpha = 0.690$) domains showed acceptable reliability for exploratory research.

Initial reliability testing revealed that the homesickness item substantially reduced the internal consistency of the affective scale ($\alpha = 0.48$ when included). Upon removal, reliability improved to an acceptable level ($\alpha = 0.69$). This statistical pattern suggests that homesickness represents a distinct emotional construct rather than a direct indicator of adaptive emotional competence. Consequently, homesickness was treated as an independent variable in subsequent analysis.

The reliability results support the multidimensional structure of the ABC model, while also indicating conceptual differentiation within the affective domain.

5.3 Descriptive Analysis of ABC Domains

Mean scores for all three domains exceeded the neutral midpoint of the Likert scale (3.00), indicating generally positive adaptation.

- **Cognitive adaptation** recorded the highest mean ($M = 3.81$, $SD = 0.56$).
- **Affective adaptation** followed closely ($M = 3.77$, $SD = 0.61$).
- **Behavioral adaptation** showed the lowest mean ($M = 3.71$, $SD = 0.67$).

Although differences were modest, the pattern suggests that students reported stronger internal cognitive transformation than observable behavioral engagement.

The relatively low standard deviations across domains indicate limited dispersion, suggesting consistency in adaptation experiences among participants.

The prominence of cognitive adaptation aligns with contemporary perspectives that emphasize reflective processing and intercultural awareness as central outcomes of study abroad experiences. Students appear to internalize cultural exposure at a cognitive level even when behavioral participation varies.

5.4 Interrelationships Among Affective, Behavioral, and Cognitive Adaptation

Pearson correlation analysis revealed moderate to strong positive relationships among the three domains:

- Affective and Behavioral: r = 0.60
- Affective and Cognitive: r = 0.40
- Behavioral and Cognitive: r = 0.42

These findings empirically support the theoretical interdependence proposed in the ABC Model of Acculturation. Emotional well-being, behavioral engagement, and cognitive flexibility function as mutually reinforcing processes rather than isolated dimensions.

The strongest association between affective and behavioral domains suggests that emotional well-being is closely tied to active social participation. Students who engaged more frequently in cultural and academic activities reported stronger emotional adjustment.

5.5 Predictors of Affective Adaptation

To further examine directional influence, multiple regression analysis was conducted with affective adaptation as the dependent variable and behavioral and cognitive scores as predictors.

Behavioral adaptation emerged as the strongest predictor ($B = 0.479$, $p < 0.001$), followed by cognitive adaptation ($B = 0.194$, $p = 0.001$). The model indicates that for each one-point increase in behavioral engagement, affective adaptation increases by approximately 0.48 points, holding cognitive factors constant.

These findings suggest that emotional adjustment is more strongly shaped by external engagement behaviors than by internal cognitive flexibility alone. In practical terms, participation in social interaction, cultural exploration, and classroom involvement appears to be the primary mechanism through which emotional resilience develops.

This result refines the theoretical application of the ABC model in the Thai context: while cognition may represent the strongest descriptive domain, behavior exerts the strongest predictive influence on emotional outcomes.

5.6 Thematic Analysis of Qualitative Responses

Qualitative responses from open-ended survey questions were analyzed using thematic clustering. Five dominant emotional challenge themes emerged:

1. Cultural adaptation and environmental adjustment
2. Homesickness and family attachment
3. Language barriers
4. Loneliness and social isolation
5. Daily logistical challenges

The largest cluster concerned cultural adjustment difficulties, highlighting emotional uncertainty during transition. Homesickness was the second most prominent theme, reinforcing its conceptual distinction from adaptive emotional competence.

Behavioral strategies reported by students primarily involved spending time with friends, exploring local culture, and engaging in informal peer interaction. Institutional participation was mentioned less frequently than peer-based engagement, suggesting that informal social networks may function as stronger adaptation mechanisms than structured programs.

Meaningful experiences centered overwhelmingly on social connection and friendship formation, followed by cultural exploration and personal growth. These findings triangulate the quantitative results, particularly the strong predictive effect of behavioral engagement on emotional adaptation.

5.7 Homesickness as a Parallel Emotional Process

Despite positive ABC domain scores, a majority of participants reported moderate to high levels of homesickness. This coexistence indicates that homesickness does not necessarily signify maladjustment. Rather, it represents an emotional attachment process that may occur simultaneously with successful adaptation.

This finding supports contemporary intercultural adjustment perspectives that distinguish between emotional longing and functional adaptation. Emotional attachment to home can persist even when students demonstrate strong behavioral and cognitive integration.

Thus, homesickness should be interpreted as a normative transitional experience rather than a pathological condition.

5.8 Integrated Interpretation

Taken together, the results demonstrate that international student adaptation in Thailand is multidimensional, interactive, and contextually shaped.

Three key patterns emerge:

1. Cognitive transformation is the strongest descriptive outcome of study abroad.
2. Behavioral engagement is the strongest predictor of emotional well-being.
3. Homesickness operates as an independent emotional dimension rather than a maladaptation indicator.

The findings refine the ABC framework by demonstrating differential functional roles of each component. Cognitive adaptation reflects internal intercultural growth. Behavioral adaptation drives emotional stability. Affective adaptation reflects psychological outcomes resulting from these interactions.

Within the Thai context, social integration appears to be the central pathway linking behavior to emotional adjustment. Cultural exploration and peer interaction serve as primary mediators of well-being.

5.8.1 Affective Domain

The affective domain included four variables: adaptation experience, emotional management, emotional confidence, and emotional improvement.

The internal consistency reliability of the affective domain was acceptable, with a Cronbach's alpha of 0.687. Although slightly below the conventional 0.70 threshold, it remained within the acceptable range for exploratory social science research. The alpha values decreased notably when emotional management ($\alpha = 0.545$) and emotional confidence ($\alpha = 0.613$) were excluded, indicating that these items contributed meaningfully to the construct. Removing emotional improvement slightly increased alpha ($\alpha = 0.694$), suggesting moderate overlap but overall consistency within the scale.

The overall mean of affective score was 3.77 (SD = 0.61). Since the midpoint of the Likert scale was 3, this result indicated a generally positive emotional adaptation among international students in Thailand. The relatively low standard deviation suggested moderate variability, implying that most students reported stable and moderately positive emotional experiences.

These findings suggested that students were generally satisfied with their emotional management, felt reasonably confident in handling emotional challenges such as homesickness and loneliness, and perceived emotional growth during their time studying abroad.

5.8.2 Behavioral Domain

The behavioral domain measured students' participation in social activities, class participation, local interaction, and cultural adjustment.

The Cronbach's alpha for the behavioral domain was 0.690, indicating acceptable internal consistency. The alpha decreased substantially when social activities ($\alpha = 0.582$) and class participation ($\alpha = 0.576$) were removed, demonstrating that these items were central to behavioral adaptation. Cultural adjustment and local interaction also contributed positively to the scale's reliability.

The overall behavioral score was 3.71. This mean score, which was above the neutral midpoint, indicated that students were moderately active in engaging with Thai society and university life. Students reported relatively positive levels of participation in academic and social settings and demonstrated efforts toward cultural adjustment.

The behavioral mean was slightly lower than the affective and cognitive domains, suggesting that while students felt emotionally and cognitively adjusted, active behavioral engagement may have required more effort and practical exposure.

5.8.3 Cognitive Domain

The cognitive domain consisted of five variables: open-mindedness, self-view, problem-solving ability, thinking adaptation, and self-awareness.

The internal consistency for this domain was high, with a Cronbach's alpha of 0.820, indicating strong reliability and coherence among the cognitive variables. The alpha remained high even when individual items were removed (ranging from 0.763 to 0.799), confirming that all items were strongly interrelated and measured a consistent construct.

The overall cognitive mean score was 3.81 (SD = 0.56), which was the highest among the three domains. The minimum observed score was 2.2, indicating that even the lowest responses did not reflect extreme negative cognitive adaptation. The relatively small standard deviation suggested that most participants reported similar levels of cognitive adjustment.

This result indicated that students demonstrated strong cognitive adaptation, including open-mindedness toward cultural differences, improved self-awareness, enhanced problem-solving skills, and adaptive thinking patterns. The high reliability and highest mean score suggested that cognitive transformation may have been the strongest aspect of international students' adaptation in Thailand.

5.8.4 ABC Score Comparison

Table 2 presents the comparison of the overall Affective, Behavioral, and Cognitive scores, including the number of variables used to compute each domain, mean scores, and standard deviations.

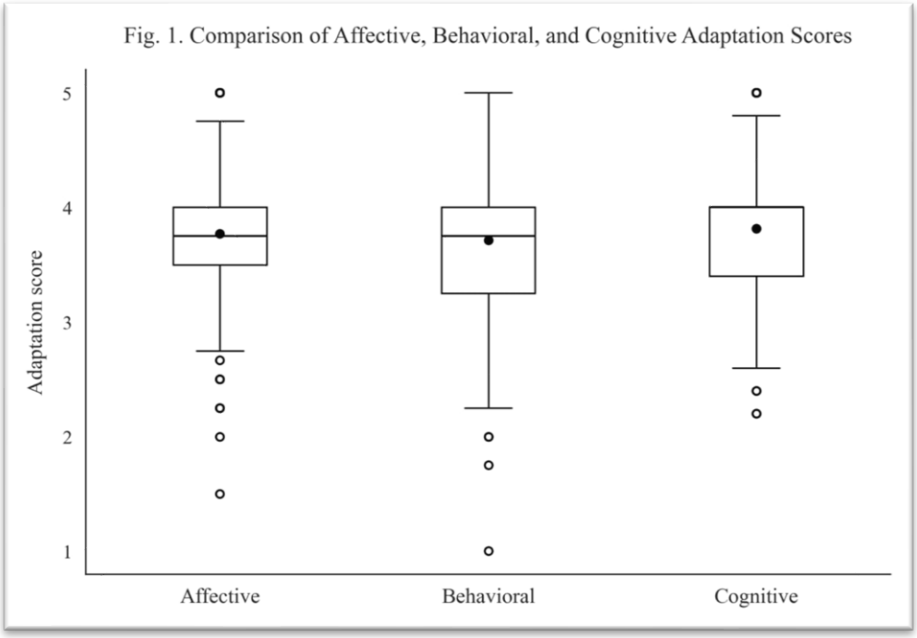
Table 2 ABC Model Scores Comparison

Scores	Number of Variables	Mean	Standard Deviation
Affective	4	3.77	0.61
Behavioral	4	3.71	0.67
Cognitive	5	3.81	0.56

As shown in Table 2, all three domains recorded mean scores above the neutral midpoint (3.00), indicating overall positive adaptation among international students in Thailand. Among the three domains, the Cognitive score was the highest (M = 3.81, SD = 0.56), followed by Affective (M = 3.77, SD = 0.61), and Behavioral (M = 3.71, SD = 0.67).

Although the differences were not large, the results suggested that cognitive adaptation was the strongest dimension of adjustment, while behavioral adaptation was comparatively lower. The behavioral domain also showed

the highest variability (SD = 0.67), indicating greater differences among students in terms of social participation and cultural engagement.



test complex causal relationships.

Figure 1 shows the boxplot comparison of the three domains. All three interquartile ranges were positioned between 3 and 4, indicating that most students reported moderately positive adaptation levels across all dimensions. The Cognitive domain showed the highest median value, confirming its stronger overall performance. The relatively compact boxes indicated limited dispersion, suggesting consistent responses among participants.

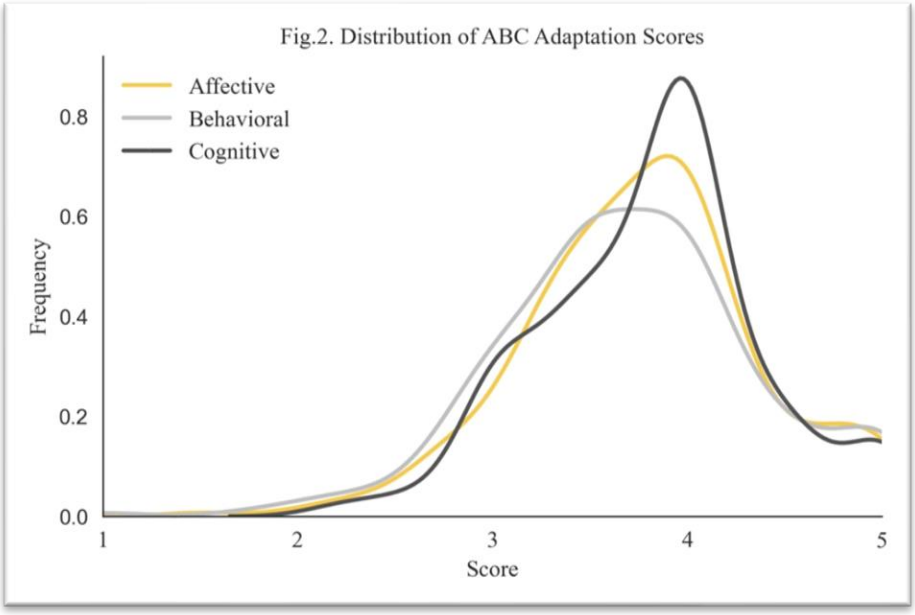


Figure 2 illustrates the distribution curves for the three domain scores. All three curves demonstrated a left-skewed distribution toward higher values, reflecting predominantly positive responses. The peak of the Cognitive distribution was slightly higher than the other two domains, reinforcing its stronger average performance.

The absence of extreme negative clustering further supported the conclusion that most international students experienced generally positive adaptation in Thailand.

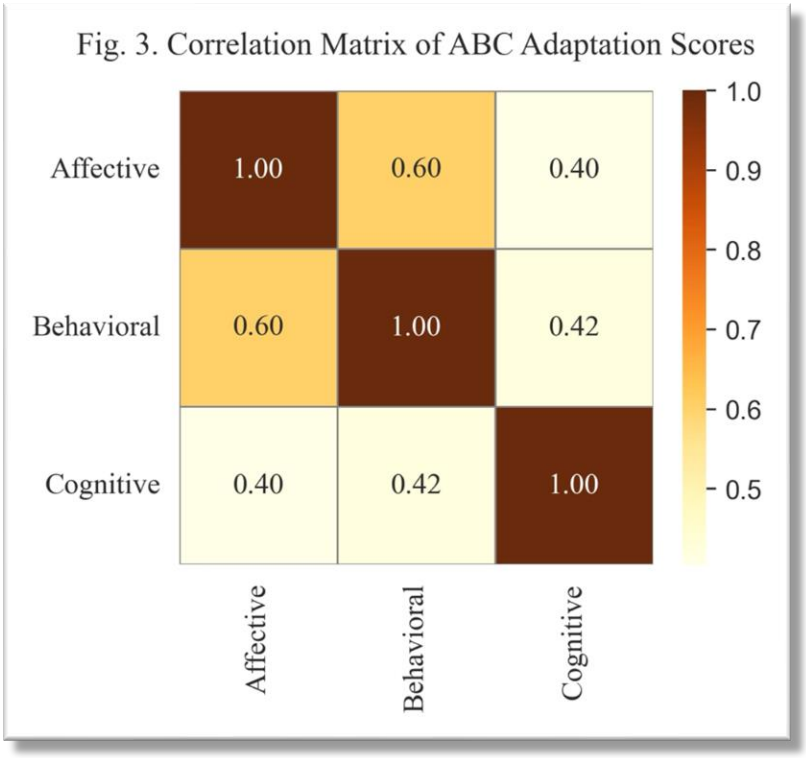


Figure 3 presents the correlation matrix among the three domain scores. The results indicated moderate positive correlations among all three domains.

Affective adaptation showed a strong positive correlation with Behavioral adaptation (r = 0.60), suggesting that students who actively engaged in social and cultural activities tended to report better emotional adaptation.

Affective adaptation was also moderately correlated with Cognitive adaptation (r = 0.40), indicating that students with higher levels of open-mindedness, self-awareness, and adaptive thinking tended to experience better emotional adjustment.

Behavioral and Cognitive domains were moderately correlated (r = 0.42), suggesting that cognitive flexibility and openness were associated with greater participation and cultural engagement.

Overall, these findings supported the theoretical interdependence proposed in the ABC Model of Acculturation, where affective, behavioral, and cognitive components influence one another.

To further examine the predictive relationship among the domains, a multiple regression analysis was conducted with Affective adaptation as the dependent variable and Behavioral and Cognitive scores as predictors.

Table 3 ABC Model Regression Table

Predictor	Coefficient (B)	Standard Error (SE)	t-value	p-value

Constant	1.25	0.212	5.909	0.000
Behavioral	0.479	0.047	10.222	0.000
Cognitive	0.194	0.055	3.508	0.001

The regression model indicated that both Behavioral and Cognitive domains significantly predicted Affective adaptation.

The intercept ($B = 1.25$, $p < 0.001$) represented the baseline predicted affective score when both behavioral and cognitive scores were zero. Although zero values were outside the observed Likert scale range, the intercept served as a statistical reference point.

Behavioral adaptation demonstrated the strongest predictive effect ($B = 0.479$, $p < 0.001$). For every one-point increase in behavioral score, the affective score increased by 0.479 points, holding cognitive adaptation constant. The large t-value ($t = 10.222$) indicated a robust and highly significant contribution.

Cognitive adaptation also significantly predicted affective adaptation ($B = 0.194$, $p = 0.001$), although its effect size was smaller than that of behavioral adaptation. This suggested that while cognitive flexibility and self-awareness contributed to emotional adjustment, practical behavioral engagement played a more influential role.

Overall, the regression results demonstrated that Behavioral adaptation was the strongest predictor of Affective adaptation, while Cognitive adaptation contributed moderately. These findings indicated that active participation and cultural interaction were key determinants of emotional well-being among international students in Thailand.

5.8.5 Thematic Analysis

Qualitative responses were analyzed using text mining and clustering techniques to identify dominant adaptation themes. The findings are presented in Figures 4 and 5.

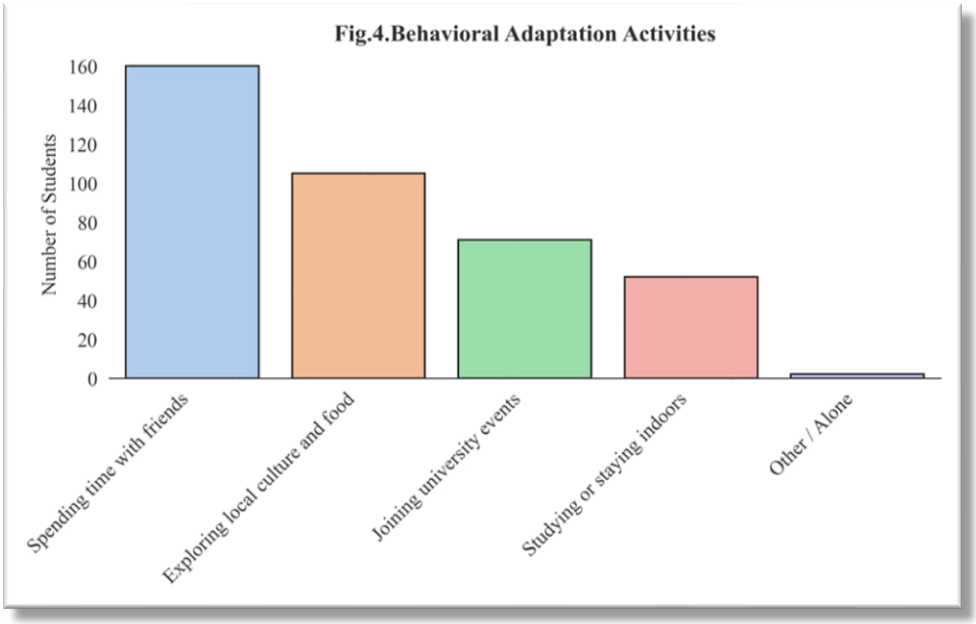


Figure 4 illustrates the most common behavioral adaptation strategies adopted by students. Spending time with friends emerged as the most frequently reported activity. This was followed by exploring local food and culture, and participating in university events.

The findings suggested that social engagement played a central role in behavioral adaptation. Activities involving peer interaction appeared more prominent than formal institutional engagement, indicating that informal social networks were a key mechanism of adjustment.

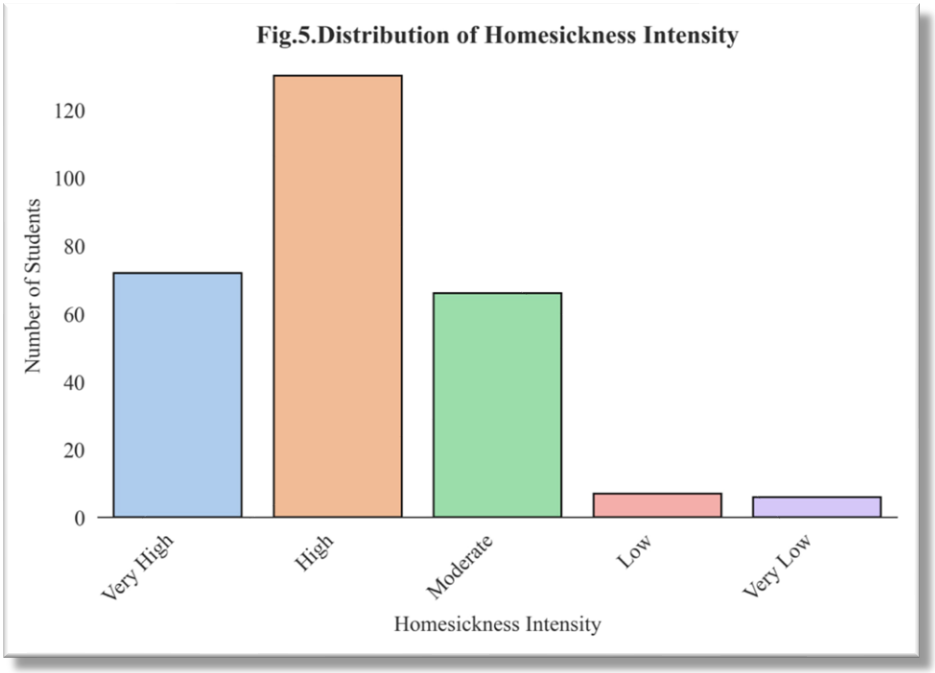


Figure 5 presents the clustering results based on students' responses regarding emotional challenges faced after arriving in Thailand. Five primary themes were identified.

The clustering analysis identified five primary themes:

- Cluster 0: Daily Logistical and Practical Difficulties
  - Adjusting to administrative processes
  - Managing transportation or accommodation
  - Patience with everyday inconveniences
- Cluster 1: Language Barriers
  - Difficulty communicating in Thai
  - Repeated mentions of "language barrier"
  - Struggles with understanding lectures or daily conversations
- Cluster 2: Homesickness and Missing Family
  - Missing parents
  - Missing home
  - Emotional attachment to family
  - Feeling nostalgic about home country
- Cluster 3: Cultural Adaptation and Personal Adjustment Challenges (Largest Cluster)

  - Adapting to new culture and environment
  - Feeling isolated
  - Adjusting to differences
  - Emotional struggles during transition
  - Words frequently appearing: feeling, new, adjusting, adapting, culture, environment, different
- Cluster 4: Loneliness and Living Alone
  - Feeling alone
  - Living without family
  - Difficulty trusting people
  - Social isolation

The most dominant theme was cultural adaptation and personal adjustment challenges, which substantially outweighed the frequency of other themes combined. Cluster 3, for example, included responses such as "adapting to new culture and environment," "adjusting," and "feeling isolated." The top words in this cluster included feeling, new, adjusting, adapting, culture, environment, and different, highlighting the centrality of cross-cultural transition experiences.

The second major theme involved homesickness and missing family members (Cluster 2). Sample responses included "missing home," "missing my parents," and "sometimes miss my home." This indicated that emotional attachment to family remained a significant factor in early adaptation.

The third theme was language barriers (Cluster 1), where repeated responses such as "language barrier" demonstrated communication challenges as a recurring concern.

Another theme involved loneliness and living alone (Cluster 4), with top words including alone, living alone, without family, and people trust. These responses reflected feelings of social isolation among some participants.

A smaller cluster included logistical or daily life challenges, such as patience with administrative procedures or daily adjustments.

Although some students reported "no challenges" others disclosed serious emotional difficulties, including depression and personal guilt. These findings show that adaptation experiences varied in intensity.

Overall, the thematic findings supported the quantitative results by demonstrating that emotional adaptation was closely connected to cultural adjustment, social integration, and language competence.

Students were also asked to describe their most meaningful experiences. The thematic distribution is summarized below:

- The most frequently reported theme was making friends and building social connections (approximately 50–60%). Students emphasized forming friendships with both local Thai students and other international peers.
- The second major theme was travel and exploration (35–40%), with many participants highlighting trips and discovering new places in Thailand.
- Personal growth and independence (30–35%) was another significant theme. Students described increased confidence, problem-solving ability, and emotional resilience.
- Cultural exposure and learning (25–30%) included experiences related to learning Thai language, culture, and food traditions.
- Participation in university life and activities (10–15%) was less frequently mentioned but still meaningful for some students.
- A minority (10–15%) reported no significant meaningful experience, possibly indicating early adaptation stages or limited engagement.

These findings indicated that social relationships were the most impactful aspect of studying abroad, reinforcing the importance of interpersonal connections in international student adaptation.

Students were asked to provide advice for new international students adjusting to Thailand. Several recurring themes emerged.

- The most common recommendation was making friends and building social connections (50–55%). Students emphasized avoiding isolation and engaging with both local and international peers.
- The second most frequent suggestion was learning Thai language and culture (40–45%). Basic language skills and cultural awareness were viewed as essential for smoother integration.
- Students also stressed the importance of maintaining an open-minded, adaptable, and patient mindset (35–40%). Emotional flexibility and resilience were repeatedly emphasized.
- Another prominent theme was exploration and travel (30–35%), encouraging students to experience Thailand beyond the classroom.
- Some responses highlighted personal growth and independence (25–30%), including self-confidence and time management.
- Participation in university activities (15–20%) and maintaining a positive mindset and well-being (15–20%) were also noted.
- A small proportion (10–15%) provided no clear or actionable advice.

Overall, the qualitative findings suggested that successful adaptation required a combination of social engagement, cultural openness, proactive participation, and positive psychological orientation.

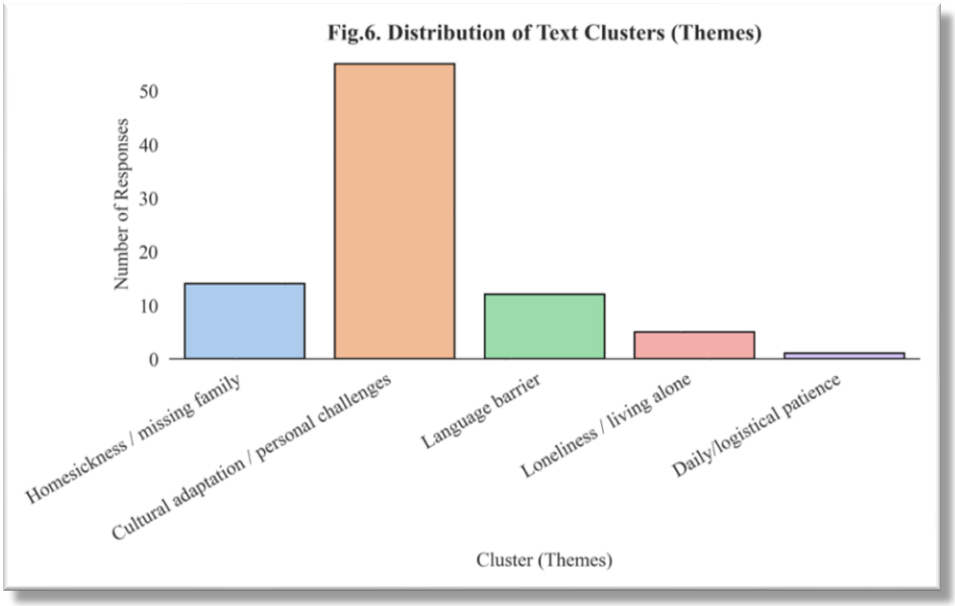
The thematic findings were consistent with the quantitative results of the ABC model. Behavioral engagement (social interaction, participation, exploration) emerged as central to emotional well-being, aligning with the regression analysis where behavioral adaptation was the strongest predictor of affective adaptation. Similarly, cognitive factors such as open-mindedness and adaptability appeared in both clusters and advice themes, supporting the high reliability and strong mean score observed in the cognitive domain.

Together, the qualitative and quantitative findings reinforced the multidimensional and interconnected nature of adaptation among international students in Thailand.

5.8.6 Independent Variables

Reliability analysis initially indicated low internal consistency for the full affective scale when the homesickness item was included (Cronbach's $\alpha = 0.48$). Further examination revealed that the homesickness variable substantially reduced overall reliability. When the homesickness item was excluded, internal consistency improved to an acceptable level (Cronbach's $\alpha = 0.69$).

This finding suggested that homesickness did not function as a direct component of emotional adaptation capacity but rather represented a distinct affective experience. While other affective variables measured emotional management, confidence, and improvement, homesickness appeared to reflect emotional attachment to home rather than adaptation strength. Accordingly, homesickness was analyzed separately from the affective adaptation composite score.



The distribution of homesickness responses is presented in the final figure. The majority of participants reported high levels of homesickness, followed by very high and moderate levels. Only a small proportion indicated low levels of homesickness.

This pattern indicated that although students demonstrated generally positive adaptation across affective, behavioral, and cognitive domains, emotional longing for home remained prominent. The coexistence of positive adaptation scores and high homesickness levels suggested that homesickness may not necessarily indicate maladjustment, but rather a parallel emotional experience common among international students.

These findings reinforced the conceptual distinction between emotional capability (adaptation capacity) and emotional attachment (homesickness), supporting the decision to treat homesickness as an independent variable in subsequent analysis.

6. Conclusion

This study examined the emotional, behavioral, and cognitive adaptation of international students in Thailand using the ABC Model of Acculturation. The findings demonstrated that international students generally experienced positive adaptation across all three domains. Among the dimensions, cognitive adaptation showed the highest mean score, followed closely by affective adaptation, while behavioral adaptation, although positive, was comparatively lower and more variable.

Correlation and regression analyses revealed that the three domains were significantly interconnected. Behavioral adaptation emerged as the strongest predictor of affective adaptation, indicating that active participation in social, academic, and cultural activities played a central role in shaping students' emotional well-being. Cognitive adaptation also significantly contributed to emotional adjustment, though to a lesser extent. These findings support the theoretical assumption of the ABC Model that affective, behavioral, and cognitive processes function interdependently rather than independently.

The qualitative findings reinforced the quantitative results. Students identified social connections, cultural exploration, and personal growth as the most meaningful aspects of their study abroad experience. Emotional challenges such as cultural adjustment difficulties, homesickness, language barriers, and loneliness were also frequently reported. Importantly, homesickness emerged as a distinct emotional experience separate from affective adaptation capacity, highlighting that emotional attachment to home may coexist with successful psychological adjustment.

Overall, the study suggests that behavioral engagement is a critical mechanism in facilitating emotional adaptation among international students. Universities in Thailand may enhance student adjustment by promoting structured social interaction, intercultural programs, peer mentoring systems, and language support services. Encouraging participation in campus activities and fostering inclusive learning environments may further strengthen both behavioral and emotional adaptation.

While this study contributes to the limited literature on international student adaptation in Thailand, several limitations should be acknowledged. The use of convenience sampling and self-reported measures may limit generalizability. Future research could employ longitudinal designs to examine adaptation over time and include comparative studies across different cultural contexts.

In conclusion, international student adaptation in Thailand is a multidimensional and interconnected process. Emotional resilience, active behavioral engagement, and cognitive flexibility collectively shape students' study abroad experiences. By understanding these dynamics, Thai universities can develop more effective strategies to support international students' well-being and academic success.

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