




Language Deficiency and International Students Satisfaction: Role of Social, Cultural, and Academic Factors

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Received 03 September 2023 | Received in revised form 03 December 2023 | Accepted 23 December 2023

APA Citation:

Mabkhot, H., & Alzahrani, S. A. (2023). Language Deficiency and International Students Satisfaction: Role of Social, Cultural, and Academic Factors. *Eurasian Journal of Applied Linguistics*, 9(3), 142-154.

Doi: <http://dx.doi.org/10.32601/ejal.903013>

Abstract

Education plays a pivotal role in fostering socio-economic development, and the phenomenon of globalization has significantly increased the influx of students pursuing studies in foreign countries. Given that education serves as a catalyst for economic and cultural advancement, nations face the challenge of enticing international students. Consequently, this research seeks to scrutinize the interplay of social, cultural, and academic factors influencing the satisfaction levels of international students. Additionally, the study investigates the moderating role of language proficiency in this context. Adhering to a positivist philosophy, the research employs a quantitative deductive approach. Data collection involved the distribution of questionnaires to students from Middle Eastern countries enrolled in Malaysian universities. Out of the 500 questionnaires distributed, 383 were subjected to statistical analysis using SPSS. The findings indicate that positive interactions between students and teachers contribute significantly to international student satisfaction. Similarly, favourable social interactions on the university campus, successful adaptation to cultural differences, and a well-balanced academic workload are identified as key determinants of student satisfaction. Moreover, the study highlights the mitigating impact of language deficiency on the aforementioned relationships. In conclusion, the research underscores the imperative of prioritizing the satisfaction of students studying at host universities to attract a greater number of international students. Universities are advised to focus on enhancing the academic, cultural, and social dimensions of the student experience to create an environment conducive to satisfaction.

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Keywords: Student Satisfaction, Language Efficiency, Cultural Differences, Teacher-Student Interaction, Social Interactions.

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DOI: <http://dx.doi.org/10.32601/ejal.903013>

Introduction

Education is a vital contributor to the social and economic development of nations and is closely linked to the accelerating forces of globalization. This global phenomenon has led to a rise in the number of students pursuing education abroad. Consequently, the attraction and retention of international students have emerged as significant priorities for universities, playing a crucial role in overall economic development (Abu-Rumman & Qawasmeh, 2022). An additional investigation has documented a notable escalation in the global populace of students pursuing education abroad. Presently, the international student cohort encompasses approximately 5.6 million individuals, with 1 million enrolled in educational institutions within the United States, 5.5 million in England, and over 5 million in Canada. These statistics underscore the prevalent preference for these study destinations. Noteworthy is the annual expenditure incurred by students studying at international locations, averaging around USD 20,000. This substantial market has prompted nations to strategically vie for a larger share, recognizing the potential for advancement, augmented foreign reserves, and socio-economic development associated with attracting a substantial number of international students (Yilmaz & Temizkan, 2022). Nevertheless, there exist specific factors that require attention in order to enhance student satisfaction and consequently augment the enrolment of students at a particular destination.

The present study is formulated within the Malaysian context, which stands as an emerging study destination aspiring to attract an estimated 250,000 students by the year 2025 (Jiang et al., 2023). A considerable number of students are currently enrolled in educational institutions in Malaysia, though a comprehensive exploration of specific academic outcomes, such as student satisfaction, remains to be undertaken (Singh & Jamil, 2021). Student satisfaction is contingent upon various factors, necessitating attention, with cultural aspects being one among them (Singh & Jamil, 2021). The significance of student satisfaction extends beyond institutional interests, encompassing the positive learning outcomes of individual students. Consequently, there is an imperative need to enhance comprehension regarding the factors that contribute to heightened student satisfaction, encompassing both academic and social dimensions (Bismala & Manurung, 2021; Wong & Chapman, 2023). The contentment of students stands as a pivotal determinant influencing the quality of education and services rendered within higher education institutes. It serves as a noteworthy predictor of the overall quality and performance of these institutions, guiding the allocation of resources necessary to meet the students' needs (Weingarten et al., 2018).

Primary among the determinants of student satisfaction is the nature of their interactions. The significance of student satisfaction is underscored by its association with positive outcomes for universities, including favourable word-of-mouth promotion through highly satisfied students, fostering student loyalty, and engendering advocacy on behalf of the institution (Paul & Pradhan, 2019). It is noteworthy that student satisfaction holds the potential to make positive contributions to the development of higher education. While numerous factors have been scrutinized in this context, limited attention has been devoted to the exploration of interactions, specifically within the realms of social and teacher engagements. Consequently, there is a compelling need for research endeavours aimed at investigating how diverse interactions, notably those involving student-teacher dynamics and social engagements, influence student satisfaction. This study is explicitly designed to fulfil the objective of examining the impact of student-teacher interaction and social engagement on international student satisfaction (Wong & Chapman, 2023).

In addition to the pivotal dimensions of teacher-student and social interactions, there exist other influential factors that contribute to shaping student satisfaction, notably cultural differences. Upon embarking on educational pursuits in international settings, students encounter a multitude of cultural disparities necessitating adaptation. However, the existing body of research addressing students' adjustments to these cultural differences remains relatively sparse (Singh & Jamil, 2021). The primary objective of this study is to deepen the comprehension of cultural differences and their implications for student satisfaction. The investigation into the outcomes of cultural differences is deemed essential, as they have the potential to precipitate instances of racism and discrimination among students. Cultural disparities emerge as a significant challenge confronted by students in the academic environment (Pazil et al., 2023) this has the potential to lead to diminished satisfaction. Conversely, if the cultural differences are comprehensively understood and effectively accommodated by the students (Lien & Miao, 2023) will yield favourable results, such as an increased level of satisfaction among them.

Significantly, the present study includes an examination of academic work's impact on student satisfaction. Emotional and situational factors, stemming from poor academic performance, contribute to lower satisfaction. Additionally, the adverse effects of the pressure associated with extra academic workload are noteworthy (Lardier Jr et al., 2020). Furthermore, it has the propensity to diminish their satisfaction. Students may encounter academic burdens through an additional workload or struggle to maintain equilibrium between university obligations and personal life, leading to heightened stress and dissatisfaction. Furthermore, satisfaction with the university can be disrupted by academic challenges, such as inadequate time for exam preparation, imbalanced university schedules, and mismanagement of personal life. Cumulatively, these academic difficulties contribute to a decline in satisfaction with the university (Shehadeh

et al., 2020). Lastly, the study has considered the moderating influence of language deficiency. Proficiency in any language fosters confidence in individuals. Similarly, students who can articulate themselves in the language of instruction exhibit confidence and are perceived as adept learners of that particular language, and vice versa (Chand, 2021). Conversely, if a student faces challenges in effectively communicating in the international language, assimilating into the local culture may become challenging. Language deficiency in students can hinder class participation, exert pressure on the acculturation process for international students, and, among all factors considered, stands out as a detrimental element contributing to suboptimal academic outcomes. Consequently, satisfaction levels are observed to decrease for international students grappling with language deficiencies (Gong et al., 2021). The primary objective of the current study is to scrutinize the influence of social, cultural, and academic factors on international student satisfaction. Moreover, the study delves into the moderating effect of language deficiency as a limiting factor. This research holds particular significance in scholarly discourse as it collectively explores the impact of academic, social, and cultural dimensions on student satisfaction. Additionally, the study contributes to the literature by introducing the boundary condition of language deficiency, elucidating its potential to either fortify or attenuate the relationships between predictors and the satisfaction levels of international students.

Literature Review

Teacher Student Interaction, Academic Work and International Student Satisfaction

Both academic coursework and teacher-student interaction are pivotal determinants fostering robust student engagement and satisfaction within the classroom setting. In alignment with this perspective, a prior study posited that educators are tasked with offering emotional, instructional, and classroom support to students. Positive and constructive support from teachers correlates positively with student satisfaction. To enhance overall student satisfaction, teachers are encouraged to demonstrate care, provide support, value students, and facilitate the attainment of their academic goals (Mallik, 2023). Furthermore, a positive teacher-student interaction contributes to the creation of a conducive learning environment, leading to heightened student satisfaction with both their academic pursuits and the institution (Wentzel et al., 2010). Elevated levels of teacher-student interactions contribute positively to the learning environment. Increased interactions with teachers correlate with students' intentions to persist in their educational endeavours, and vice versa. This trend holds true even in online learning environments, where heightened interactions are associated with improved outcomes. Consequently, it is contended that augmented face-to-face interactions between teachers and students in traditional classroom settings serve as a motivational factor for studying, driven by enhanced satisfaction (Zhang et al., 2023). Conversely, a judicious distribution of academic workload among students contributes to their satisfaction in contrast to an excessive burden. A recent study, however, failed to identify a significant correlation between academic workload and student satisfaction (Yilmaz & Temizkan, 2022). The allocation of academic tasks to students exhibits global variability; nevertheless, surpassing a certain threshold may lead students to experience academic burnout, consequently diminishing satisfaction levels (Huang et al., 2022). The dynamic between students and teachers is purported to be a determinant of student satisfaction. A positive and supportive teacher-student relationship is correlated with higher satisfaction, contrasting with environments characterized by poor teacher-student interaction. Previous research substantiates this connection, as exemplified by a study reporting that positive teacher-student interaction encompasses attention to student needs, ensuring safety, and providing a structured learning environment (Vantieghem et al., 2020). The presence of positive teacher-student interaction within the educational institution yields enhanced learning outcomes and fosters increased motivation among the students (Zhan et al., 2021). Moreover, students are prone to experiencing a heightened sense of accomplishment, increased self-efficacy in their academic pursuits, and augmented leadership capabilities (Xiao et al., 2023). The positive interaction between instructors and students contributes to heightened satisfaction. Likewise, a balanced distribution of academic tasks among students is associated with satisfaction, and vice versa. Consequently, it is postulated that;

H1: *There is significant relationship between the teacher student interaction and the international student satisfaction.*

H2: *There is significant relationship between the academic work and the international student satisfaction.*

Social interaction and International Student Satisfaction

Social interaction serves as an additional predictor of student satisfaction, encompassing the interactions occurring between students and teachers as they employ strategies to foster interpersonal encouragement and social engagement (Jung et al., 2002; Lonni et al., 2011). A recent study highlighted that social interaction among students manifests in various forms, including learner-learner, learner-content, and learner-instructor interactions. Students engage in these interactions, particularly when accessing materials through e-learning platforms. It is noteworthy that the quality of social interaction encountered by students significantly

influences their overall experience and contributes to satisfaction (Alenezi, 2022). Existing literature has elucidated that the satisfaction of students is contingent upon the calibre of interactions they engage in within educational institutions. For instance, a recently conducted study (Wiers-Jenssen, 2023) recognizing the significance of student social interaction, scholars asserted that such interactions play a pivotal role in influencing both student satisfaction and academic outcomes. Nevertheless, their findings indicated a diminished level of interaction among the students. According to Salam and Farooq (2020) In the online education system, social interaction tends to foster a collaborative environment among students, resulting in improved learning outcomes and heightened active engagement. The frequency and timeliness of interactions among students, as well as interactions between students and teachers, emerge as significant predictors of student satisfaction (Al-Adwan et al., 2020). Consequently, the current study posits that the social interaction occurring among students contributes to their satisfaction. Therefore, the hypothesis is as follows:

H3: *There is significant relationship between the social interaction and the international student satisfaction.*

Cultural Differences and International Student Satisfaction

Cross-cultural transitions pose numerous challenges for students and are frequently associated with adverse outcomes for their psychological well-being (Bethel et al., 2020). Upon pursuing higher education abroad, students encounter cultural transitions stemming from disparities between their home countries and the host country. International students grapple with heightened stress as they adapt to the foreign culture for academic pursuits, undergoing multiple transitional phases. Moreover, they contend with distinctions in educational systems arising from their diverse cultural backgrounds (Bethel et al., 2020). According to Abrar-ul-Hassan (2021) Globalization and diversity contribute to the enrichment of human relations and provide novel learning experiences. Nevertheless, it is imperative for students to actively embrace cultural differences and adapt for enhanced learning experiences. Students encounter various challenges related to diverse cultures, languages, and social relations, necessitating the development of a new social support system and relationships within their academic and social circles (Taylor & Ali, 2017). The challenges arising from cultural differences impose stressful circumstances on students, potentially resulting in diminished satisfaction (Yilmaz & Temizkan, 2022). In accordance with the current study, it is posited that international students experiencing successful adaptation to new cultures and traditions will exhibit lower stress levels, thereby leading to heightened satisfaction, and conversely.

H4: *There is significant relationship between the cultural differences and the international student satisfaction.*

Language Deficiency as a Moderator

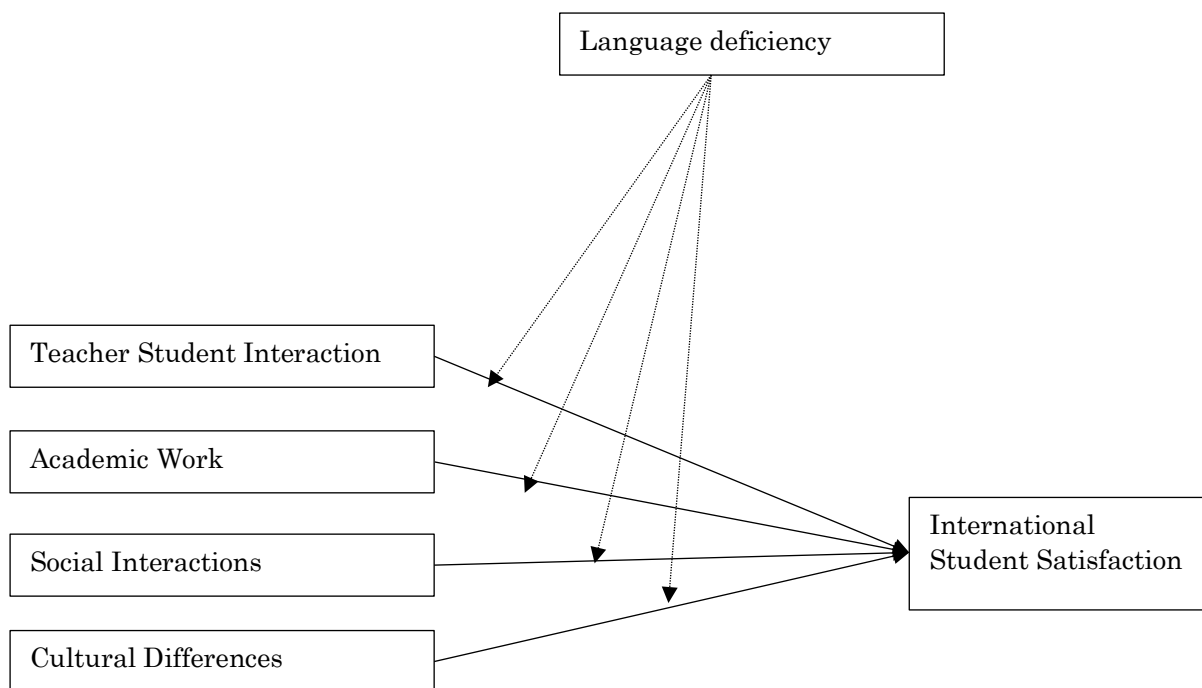
Language assumes a pivotal role in both the general and educational aspects of the lives of international students, exerting influence on their communication within academic circles and the local community. It is noteworthy that individuals lacking proficiency in the language of the host country experience language insufficiency, encountering challenges in communicating with the local community due to deficient skills in the host country's language (Yilmaz & Temizkan, 2022). Furthermore, it leads to a diminished comprehension of the culture and contributes to inadequate cultural adaptation. This circumstance influences the perception of the environment, and international students with deficiencies in the local language tend to exhibit limited interactions as well (Lou & Noels, 2020). Specifically focusing on the English language, it is noteworthy that English serves as the teaching and learning medium in non-native countries, presenting a formidable challenge. From school to university levels, students are exposed to English as the language of instruction, with many universities adopting it as their primary medium. However, as students are non-native English speakers, they often encounter challenges in acquiring proficiency in this language. In the Malaysian context, although English is considered the medium of instruction, students at the university level encounter difficulties due to deficiencies or limited proficiency in English. Consequently, their academic pursuits, including social interactions, are adversely affected (Chand, 2021). In line with the current investigation, it is posited that students with language deficiencies will exhibit suboptimal teacher-student interaction, encounter challenges in academic tasks, experience limitations in social interactions, and struggle to adapt to cultural differences, consequently resulting in lower satisfaction. The ensuing hypotheses are outlined as follows:

H5: *Language deficiency is a significant moderator between the relationship of teacher-student interaction and international student satisfaction.*

H6: *Language deficiency is a significant moderator between the relationship of academic work and international student satisfaction.*

H7: *Language deficiency is a significant moderator between the relationship of social interaction and international student satisfaction.*

H8: *Language deficiency is a significant moderator between the relationship of cultural differences and international student satisfaction.*



Methodology

The primary aim of the present study is to examine the association between social, cultural, and academic factors and the satisfaction levels of international students. To explore this relationship, the study incorporates the following factors: academic workload, cultural disparities, social interactions, and teacher-student interactions. Moreover, the study seeks to evaluate the moderating influence of language deficiency in this context.

Research Design

The research design can be characterized as the structured plan formulated to achieve the research objectives of the study (Saunders et al., 2015). Given that the study endeavours to examine the hypothesized relationships between variables, it adheres to the positivist research philosophy and employs a quantitative deductive approach (Bell et al., 2022). In line with this, data were gathered from the participants in a singular instance, adhering to the cross-sectional research design.

Questionnaire Design and Pre-testing

Given the utilization of a questionnaire for data collection, this section delineates the particulars concerning the adaptation of the questionnaire in the study. The questionnaire comprised queries pertaining to variables, drawn from prior research. Notably, the questionnaire was not translated into the local language, considering that the target audience consisted of international students studying at Malaysian universities. The subsequent section provides a comprehensive overview of the questionnaire employed for data retrieval from the respondents.

Language deficiency was assessed through a four-item measurement, which was adapted from a preceding study (En et al., 2023). Furthermore, the measurement of teacher-student interaction employed a six-item scale (Xu & Mahenthiran, 2016). The assessment of both academic work and the satisfaction of international students (Chen & Miao, 2016) utilized four-item measures adapted from previous research. This study has considered various attributes pertaining to the socio-cultural aspects of international students. Consequently, satisfaction has been evaluated solely based on academic quality. Lastly, a five-item scale was employed to measure social interaction (En et al., 2023). All of the measures were evaluated on Point 5 Likert scale with the following range “1 --> strongly disagree to 5 --> strongly agree”. Despite adopting measures from previously validated studies, a pre-testing phase was conducted to assess the representativeness of the scales for their respective constructs. For this purpose, a panel of academic experts was enlisted to participate in the pre-testing process. A questionnaire draft was disseminated to three academic experts for evaluation, and minor modifications were incorporated based on their recommendations. No significant changes were suggested for the questionnaire. Subsequently, a total of 40 questionnaires were distributed to respondents for pilot testing. The reliability analysis indicated satisfactory reliability for the questionnaire.

Sampling and Data Collection

The study's student population comprises all international students enrolled in Malaysian universities. Specifically, the research focuses on Arab students from the Middle East and North America (MEAN) region, encompassing countries such as Algeria, Bahrain, Egypt, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the United Arab Emirates, and Yemen. It is estimated that around 3400 students from Arab countries commenced their education in Malaysia in the year 2022 (Husain, 2023). As per EMGS Malaysia, a total of approximately 8,979 students submitted applications to Malaysian institutes (EMGS Malaysia, 2023). According to additional statistical data, approximately 3,090, 1,782, 8,170, and 376 students are pursuing education in Malaysia from the respective destinations of Yemen, Iraq, Iran, and Palestine (Jackson & Bridgstock, 2021). Given that the total student population in the current study surpasses 15,000, the research has employed the Krejcie and Morgan table for the selection of the sample size (Krejcie & Morgan, 1970). In accordance with the parameters, the determined sample size for the study is 375 respondents. It is worth noting that the recommended range for sample sizes in studies generally falls between 30 and 500 respondents (Sekaran & Bougie, 2016). Therefore, the current study established a sample size of 500 respondents and distributed the questionnaires accordingly. Subsequently, 383 questionnaires underwent analysis through SPSS and PLS-SEM for data interpretation.

Results

Measurement Model Assessment

The hypotheses testing in this study employed the PLS-SEM approach, involving a two-staged process: the evaluation of the measurement model and the evaluation of the structural model (Chin, 1998; Henseler et al., 2009). According to Henseler et al. (2009) both convergent and discriminant validity were employed.

The study utilized Composite Reliability (CR) for assessing reliability, following (Starkweather, 2012), where values should not fall below 0.8. Additionally, factor loadings were examined, with Hair Jr et al. (2014), suggesting that factor loadings should exceed 0.5. According to Table 1, all values surpass 0.5, indicating no issues with factor loadings. Moreover, Average Variance Extract (AVE) was employed to establish convergent validity (CV) (Hair et al., 2010; Hair Jr et al., 2014), with values expected to exceed the minimum threshold of 0.5 (Hair et al., 2017; Hair Jr et al., 2014). Table 1 presents AVE values greater than 0.5, signifying that all latent constructs have explained more than half of the variation in their respective indicators (refer to Figure 2).

Table 1: *Confirmatory Factor Analysis.*

Constructs	Items	Loadings	Alpha	rho_A	CR	AVE
Academic Work	AW1	0.912	0.92	0.926	0.943	0.806
	AW2	0.896				
	AW3	0.887				
	AW4	0.896				
Cultural Difference	CD1	0.805	0.746	0.748	0.81	0.589
	CD2	0.815				
	CD3	0.674				
International Student Satisfaction	ISS1	0.845	0.847	0.849	0.898	0.689
	ISS2	0.740				
	ISS3	0.845				
	ISS4	0.883				
Language Deficiency	LD1	0.728	0.798	0.807	0.868	0.622
	LD2	0.750				
	LD3	0.842				
	LD4	0.829				
Social Interaction	SI2	0.916	0.78	0.801	0.874	0.699
	SI3	0.846				
	SI5	0.736				
Student Teacher Interaction	STI1	0.842	0.75	0.773	0.82	0.859
	STI2	0.858				
	STI4	0.881				

Discriminant Validity

The "Heterotrait-Monotrait Ratio of Correlations" (HTMT) was employed to evaluate the distinctiveness of all constructs within the framework, and the criterion for acceptability is that values should not exceed 0.85 (HTMT < 0.85) (Kline et al., 2012). All HTMT values presented in Table 2 fall within the recommended range. Hence, discriminant validity has been successfully established.

Table 2: Discriminant Validity.

	AW	CD	ISS	LDE	SINT	Std.TI
AW						
CD	0.189					
ISS	0.626	0.296				
LDE	0.503	0.327	0.756			
SINT	0.324	0.396	0.614	0.705		
Std.TI	0.724	0.102	0.15	0.769	0.741	

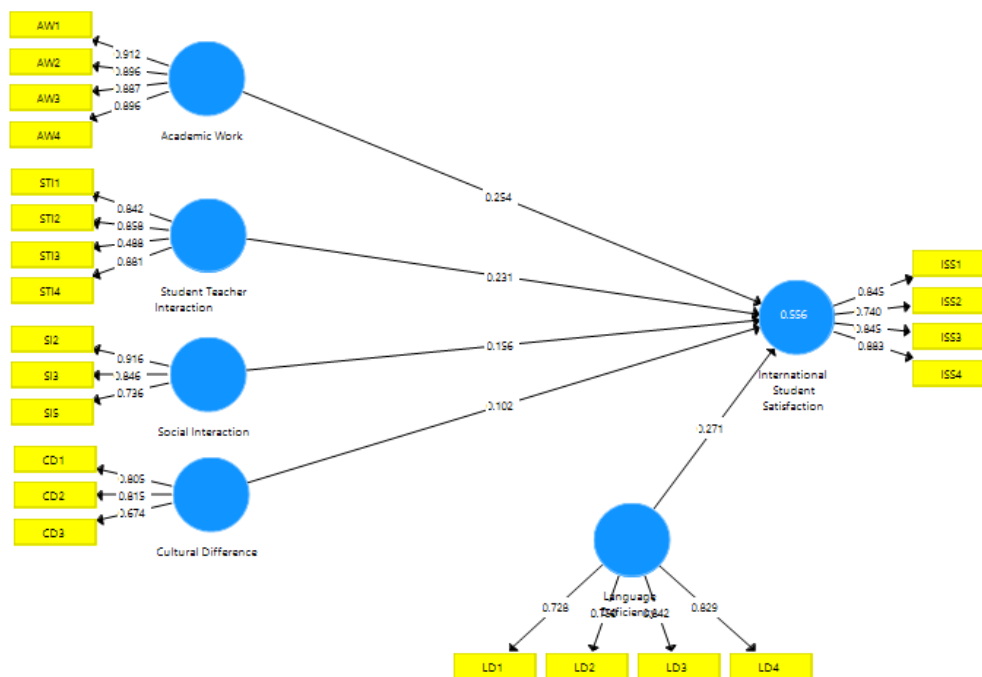


Figure 2: Measurement Model Assessment.

Path Analysis

The pathways examined using PLS-SEM are displayed in the following table (refer to Figure 3). Table 3 reveals that academic work exhibits a positive relationship with international student satisfaction (Beta value = 0.169, t = 3.107, p < 0.01). Moreover, cultural differences are also positively associated with international student satisfaction (Beta value = 0.130, t = 3.036, p < 0.01). Additionally, both social interaction (Beta value = 0.162, t = 3.496, p < 0.01) and student-teacher interaction (Beta value = 0.322, t = 4.701, p < 0.01) are found to be linked with international student satisfaction. Consequently, all hypotheses (H1 to H4) receive support from the statistical findings.

In addition to the direct paths, Table 3 illustrates the moderation paths. Language deficiency is observed to significantly moderate the relationship between student-teacher interaction and student satisfaction (Beta value = 0.193, t = 2.937, p < 0.05). Similarly, it is identified as a significant moderator in the relationship between cultural differences and international student satisfaction (Beta value = 0.121, t = 3.020, p < 0.05). However, it is not found to significantly moderate the relationship between student interaction and student satisfaction (Beta value = -0.084, t = 1.401, p > 0.01).

AW	CD	ISS	LDE	SINT	Std.TI
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Table 3: Hypotheses Testing Results.

Relationships	Beta	SD	t value	p value
AW -> ISS	0.169	0.054	3.107	0.002
CD -> ISS	0.13	0.043	3.036	0.002
LDE -> ISS	0.266	0.051	5.193	0.000
SINT -> ISS	0.162	0.046	3.496	0.000
Std.TI -> ISS	0.322	0.068	4.701	0.000
Moderation Paths				
AW* LDE -> ISS	-0.137	0.08	1.713	0.087
CD* LDE -> ISS	0.121	0.04	3.02	0.003
SINT* LDE -> ISS	-0.084	0.06	1.401	0.161
Std.TI*LDE -> ISS	0.193	0.066	2.937	0.003

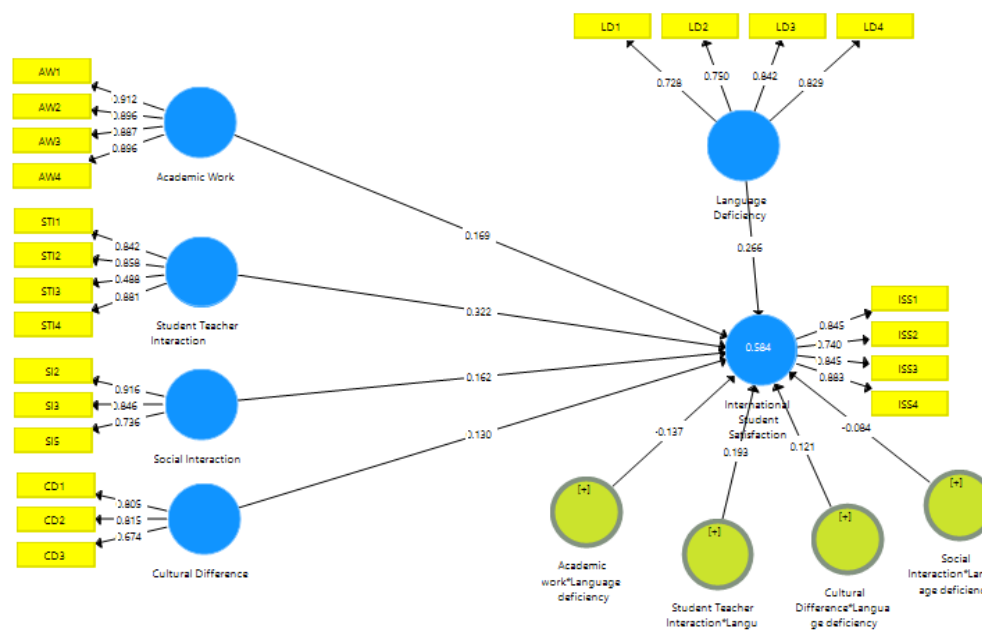


Figure 3: Structural Model Assessment.

Discussion and Conclusion

This research aimed to examine the impact of both social and academic factors on the satisfaction levels of international students, with a specific focus on considering language deficiency as a moderating variable. The data were collected from international students enrolled in Malaysian educational institutions, and subsequent analysis was performed using SPSS and PLS-SEM. The study's findings, as detailed in this section, emphasize that student satisfaction is influenced by multiple factors rather than a singular element. In particular, the study posited a positive association between teacher-student interaction and international student satisfaction. The results indicated that students experiencing positive interactions with their teachers tend to report higher levels of satisfaction. This observation aligns with the premise that favourable student-teacher interaction entails educators meeting the safety and learning environment needs of their students, as suggested by prior research (Vantieghe et al., 2020). This is because such a positive learning environment tends to yield improved learning outcomes and enhanced motivation among students within the teaching and learning context (Zhan et al., 2021). The provision of instrumental support, positive feedback, and encouragement by teachers contributes to heightened satisfaction among students with the learning environment. Furthermore, students tend to experience satisfaction when receiving positive feedback regarding their class participation. Additionally, the study delves into the examination of the influence of social interactions on shaping students' satisfaction.

The study's results indicated a positive correlation between students' social interaction and their satisfaction, aligning with previous research. Notably, a positive social experience holds substantial significance in fostering positive outcomes, including satisfaction, for students. Furthermore, such positive social interactions extend their positive impact to the overall learning outcomes for students (Wiers-Jenssen, 2023). Salam and Farooq (2020) argued that positive social interactions within the hybrid teaching model foster a collaborative system within the learning environment. Within such a favourable social and collaborative learning context, students are likely to experience satisfaction, leading to higher academic performance. Consequently, they achieve better learning outcomes and display increased active engagement due to these interactions. Social interactions may manifest through providing students with opportunities to participate in class and engage in self-assessment, ultimately enhancing their learning experience and satisfaction with academic quality (Alenezi, 2022).

It is evident that students encounter a distinct culture when they visit another country, differing from the one they were accustomed to in their hometown. Recognizing the substantial significance of culture in students' lives, the current study has examined the relationship between cultural differences and student satisfaction. A prior study argued that the challenge of cross-cultural adjustment is among the difficulties students encounter while pursuing education abroad (Bethel et al., 2020). Nevertheless, the study outcomes demonstrated that elevated cultural adjustment and reduced differences correlate with increased student satisfaction. Consistent with prior research, it was asserted that high cultural differences contribute to heightened stress levels among students, consequently diminishing their satisfaction. Conversely, when

students perceive lower cultural differences, it facilitates their adaptation to the new culture, fostering satisfaction (Bethel et al., 2020). Therefore, the study findings affirm that cultural differences play a role in influencing satisfaction within the international study context. Moreover, the results indicate that when students' perspectives are acknowledged, it fosters a heightened sense of responsibility and encourages their participation in extracurricular activities. This positive impact can be effectively achieved by demonstrating respect for the students' cultural backgrounds rather than perpetuating cultural stigmas. Furthermore, the celebration and recognition of cultural differences contribute to heightened satisfaction among students (Alsulami et al., 2022). In addition to investigating direct associations, the research has systematically examined the moderating influence of language proficiency. It is observed that a lack of awareness and proficiency in the language of the host country leads to linguistic insufficiency in individuals. Consequently, such individuals encounter challenges in effectively communicating with the local community, attributing these difficulties to inadequate skills in the language of the host country (Yılmaz & Temizkan, 2022). The outcomes of the study did not unequivocally substantiate the moderation effects. Specifically, the presence of language deficiency was identified as attenuating the correlation between academic performance and international student satisfaction. This underscores that students experiencing language-related challenges are prone to diminished satisfaction levels. Moreover, the study findings indicate that the association between social interaction and student satisfaction is not contingent upon language deficiency. From the perspective of language deficiency, it is posited that students resort to using an international language when faced with difficulties in communicating in the host country language. Furthermore, it is conceivable that students may refrain from acquiring proficiency in the host country language, thus diminishing its significance as a determinant of student satisfaction. In sum, the study's outcomes underscore the confluence of cultural and academic factors as joint drivers of student satisfaction, with due acknowledgment of the contributory role of language deficiency in this context.

Implications

This study holds noteworthy practical implications. Specifically, it is advised that in order to ameliorate language deficiency challenges among international students, the implementation of local language courses is imperative. Such courses would facilitate linguistic adaptation and cultural assimilation. Additionally, instances of racial discrimination or cultural disparities may be encountered by students. Consequently, we advocate for universities to actively engage in acknowledging and promoting cultural inclusivity within their academic environments. It is further recommended that universities and policymakers proactively address cultural stigmatization and harassment directed at international students, thereby fostering a more conducive and supportive learning milieu.

This study elucidates that cultural differences constitute a pivotal impediment to student satisfaction. Consequently, it is suggested that universities demonstrate support for diverse cultures through initiatives such as organizing cultural events, thereby affording international cultures the recognition they deserve rather than subjecting them to stigmatization. From a cultural standpoint, it is further recommended that universities provide opportunities for international students to actively participate in cultural activities and events, fostering an environment conducive to the acceptance and appreciation of diverse cultures. These engagements also present opportunities for international students to familiarize themselves with the local culture, facilitating a smoother adjustment process. Furthermore, the study underscores the significance of student-teacher interactions and social engagements in influencing student satisfaction. Thus, a recommendation is put forth to enhance both community and teacher interactions to promote a comfortable environment for international students to interact with their peers and educators, thereby enhancing overall satisfaction. Training sessions addressing effective student-teacher interactions may be organized to instill confidence and communicate requisite expectations.

Moreover, academic workload emerged as a substantial determinant of student satisfaction. Accordingly, it is advised to implement policies that monitor and manage the workload assigned to students, ensuring it remains manageable. Such policies should be designed to preserve a balance in students' academic and personal lives. The findings of the study underscore the adverse effects of language deficiency on students' academic and social experiences. Hence, policymakers are urged to introduce interventions aimed at enhancing students' language proficiency in the host country. Introducing mandatory language courses during the initial semester for newly enrolled students is recommended to fortify their linguistic skills. Additionally, encouraging the use of the local language among students is advocated to surmount language barriers, enabling a comprehensive integration into academic and social life at the host university.

Limitations and Future Directions

Several objectives of the study were achieved, and the hypotheses aligned with the conceptual framework were substantiated. Nevertheless, certain limitations are acknowledged, prompting the suggestion that future research endeavours address these constraints to further enhance comprehension of factors influencing student satisfaction

in the international study context. The study, conducted within a cross-sectional temporal framework, entailed a single data collection point. Consequently, exercising caution is warranted in establishing causal relationships, as the observations lack temporal continuity. Therefore, it is advocated that forthcoming studies embrace a longitudinal research design to yield more robust and nuanced findings. Furthermore, it is noteworthy that the framework was tested exclusively among international students in Malaysian universities.

The generalizability of the findings may be constrained, necessitating the re-evaluation of the framework in alternative countries or regional contexts for a more comprehensive understanding. The present study employed convenience sampling to select participants, opting against random sampling techniques. While justified in the research methodology, it is proposed that future investigations adopt probability sampling methods to enhance the replicability of the path model. Given the relatively modest sample size in the current study, there exists the possibility of limited applicability to the broader population. Therefore, it is advisable for subsequent research endeavours to employ larger sample sizes to yield more reliable results. Furthermore, the absence of control variables in the study warrants attention. Hence, it is recommended that future studies incorporate the testing of control variables, particularly given the diverse backgrounds of the student cohort under consideration.

Acknowledgment

This work was supported by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia [Grant 5798].

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Appendix A

Questionnaire

Teacher Student Interaction	<p>I can speak freely in class.</p> <p>Teacher–student interaction is easier in class</p> <p>In class, I prefer to interact with the teacher synchronously.</p> <p>In class, I will take the initiative to raise my hand to answer when I have an idea.</p> <p>My classmate has become more interested in class due to positive teacher student interaction</p> <p>In class, students in our class actively participate in classroom interaction.</p>
International Student Satisfaction	<p>You are Satisfied with atmosphere for learning and overall mood of campus</p> <p>You are Satisfied with safety of campus environment</p> <p>You are Satisfied with academic atmosphere at campus</p> <p>You are Satisfied with elegance of campus environment</p>
Social interaction	<p>You are getting used to building relationships</p> <p>You are communicating with people of a different ethnic group</p> <p>You are making friends in Malaysia</p> <p>You seek help from the classmates</p> <p>You are having a good interactions within community and class mates</p>
Academic Work	<p>You are able to understand academic work that is required from you at university</p> <p>You are able to cope with academic work</p> <p>You are able to adapt to academic programs and courses</p> <p>You are able to always finishing assignments on time</p>
Cultural Difference	<p>You are able to speak in a culturally appropriate manner.</p> <p>You are getting used to the local climate</p> <p>You are adapting to local etiquette</p> <p>You are adapting to the local accommodation</p>
Language Deficiency	<p>You find it difficult to understanding host language</p> <p>You find it difficult to read and/or write host language</p> <p>You face difficulty in understanding the accent (English) of the Malaysians</p> <p>You face difficulty to communicate with people from other countries when you are in Malaysia</p>