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Stakeholders' Perception of Malaysia's Edu-Tourism Sustainability Performance

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This study evaluates international students' satisfaction with Malaysia as a study destination. The assessment of edu-tourism sustainability is important to help Malaysia achieve its aspiration to become an education hub in Asia. Hence, indicators that capture international students' satisfaction should be converted into sustainability score guidelines that Malaysia can use to improve edu-tourism performance. Deviating from past sustainable tourism research that mainly investigated the perceptions of supply-side stakeholders (e.g., destination managers' and residents' perception of economic, social, and environmental sustainability), this study adds value to the sustainable tourism literature by examining the perspectives of demand-side stakeholders in the form of tourists' satisfaction. A quantitative design was used, where questionnaires were administered to collect data from 264 international students of public and private sector universities. Structural equation modelling with the SMARTPLS software, as well as descriptive analysis, were used to identify significant indicators of Malaysia's edu-tourism sustainability performance. The results indicate that Malaysia's edu-tourism sustainability performance is operating within the "potentially sustainable" category, with improvements needed to progress to the "sustainable" status. Six indicators (university reputation, perceived faculty academic competence, student-student interactions, perceived quality of faculty communications,

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climate and study environment, information availability) were found to perform moderately. The best-performing indicators were the perceived quality of electronic communications and student-administrator interaction, while the worst-performing indicators were social links and geographic proximity. The article concludes with a discussion of the study's implications along with suggestions for future research.

keywords: edu-tourism, international students, study destination choice satisfaction, sustainability performance, stakeholder's perception, sustainability indicators.

1 Introduction

Edu-tourism refers to a travel activity taken up by tourists with the priority of education and learning (Kapur, 2018; Ritchie, 2003), where students travel across international borders to seek intellectual services (Abubakar et al., 2014). These students are incoming tourists who promote the arrival of new ones, such as friends and family (López et al., 2016). The edu-tourism sector is thus an important source of tourism income for many countries. Notably, higher education institutions (HEIs) play a significant role not only in the education sector but also in the tourism sector.

By 2025, the number of international students in HEIs could achieve 7.2 million globally (Bohm et al., 2002). In particular, developed countries like European countries (Pawlak, 2013), Australia (Townsend and Jun Poh, 2008), the United Kingdom (UK) and Canada (López et al., 2016) generally perform well in edu-tourism, as they are able to attract a significant number of foreign students. The increased global demand for edu-tourism also benefits developing countries (Lam et al., 2011) that are aspiring to be education hubs, including Malaysia. In fact, Malaysia has seen double digit growth (89%) in international student numbers from 2009 (80,750 international students) to 2016 (153,328 international students) (StudyMalaysia, 2016). In 2019, Malaysia accepted 127,583 international students, mainly from Bangladesh, Indonesia, Nigeria and China (TheStar, 2020). However, in 2020, Malaysia was not able to reach targeted number of 200,000 international students due to the COVID-19 pandemic (TheStar, 2020). Nevertheless, the country aims to attract 250,000 international students in 2025 (TheStar, 2020).

Malaysia was ranked 11th in total international student population by the World Education Service Report (New Straits Times, 2013) and 12th in the list of most preferred education destinations in the world by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) in 2014 (StudyMalaysia, 2022). Some pull factors of the country are its low exchange rate, affordable cost of living, political stability, peace, and racial harmony (Pua, 2007). Therefore, examining edu-tourism sustainability is vital for Malaysia to continuously improve its international standing in this field.

The objective indicators that draw foreign students to Malaysia seem to suggest that the nation's edu-tourism sector is sustainable, with double-digit growth and reasonable

rankings. However, subjective evidence exists that may compromise its sustainability, such as education quality and the country's information availability issues (MalaysiaKini, 2013). The pressure to take in a large number of future graduates, coupled with an inadequate number of qualified academicians, has resulted in compromised education quality (Uda Nagu, 2007). There are also complaints from international students that Malaysian government offices' information availability is inefficient, causing delays in visa applications (Uda Nagu, 2007). These issues suggest that sustainability evaluations should not be dependent on objective measures alone. In fact, many studies have evaluated tourism sustainability using subjective measures from the perspectives of stakeholders, including multiple stakeholders (e.g., Ng et al., 2017), local communities or residents (e.g., Bernini et al., 2015; López et al., 2018), and tourists (e.g., Sims, 2009). In this regard, since edu-tourism exerts strong impacts on the economic, social, cultural, and environmental performance of the host country (Alipour et al., 2020) and international students are its main stakeholders, evaluating edu-tourism performance from the viewpoint of international students is relevant.

The United Nations World Tourism Organization (UNWTO) developed 17 Sustainable Development Goals (SDGs) (UNGC, 2016), three of which can be accomplished via edu-tourism: (1) Quality education, as education is the key to achieving effective sustainable tourism; (2) Decent work and economic growth, to create jobs and promote local culture and products; and (3) Sustainable cities and communities, to preserve smart and greener cities that benefit locals and tourists. For this reason, studying edu-tourism sustainability is imperative.

International students are regarded as educational tourists whose visit to the destination benefits both themselves and the destination (Tomasi et al., 2020). For example, edu-tourism facilitates personal development, knowledge, and relevance to the industry (Riley et al., 2002; Saner et al., 2016). In addition, it enhances local residents' quality of life by offering jobs for individuals as well as substantial opportunities for local entrepreneurs and small businesses (Tomasi et al., 2020). Hébert and Abdi (2013) asserted that edu-tourism derives from globalization, which has created greater mobility among people. As such, edu-tourism is able to promote local development and improve the local economy's sustainability (Alipour et al., 2020) through educational activities and other services needed by student tourists to nurture learning at the destination (Tomasi et al., 2020). Similarly, Alipour et al. (2017) examined the role of edu-tourism and affirmed that it is essential in destination management and local development. In view of these findings, exploring the educational tourism sustainability of a host country is necessary (Moscardo, 2015).

When international students are satisfied with Malaysia as a study destination, the country will be able to attract more student tourists. The resulting tourism proceeds would then help fund the development of smart cities, which brings more convenience to tourists and eventually stimulates even higher economic growth. International students are campus customers (Baharun et al., 2011) who attract more tourists to Malaysia (e.g., family, friends, and relatives); thus, aspects of their satisfaction can be used as sustainability indicators to evaluate edu-tourism. These indicators can provide insights on how edu-tourism sustainability is achieved. To identify relevant indicators, we began

by reviewing indicators used to predict international students' satisfaction. Next, all indicators were included as exogenous variables in a structural equation model to identify the significant indicators that explain the endogenous variable (i.e., student satisfaction). The significant indicators were then used to calculate sustainability performance following Tsaur et al. (2006) approach.

2 Sustainable Tourism

Sustainable tourism is a major research area (Waligo et al., 2013) that is defined by the World Tourism Organization (World Tourism Organization, 2005) as tourism that takes full interpretation of its present and prospective economic, social, and environmental effects, focusing on meeting the needs of tourists, business activities, the environment, and local communities. Despite the merits given to sustainable tourism, scholars find the concept ambiguous due to its various definitions (e.g., Baral et al., 2012; Jitpakdee and Thapa, 2012). It is an umbrella term covering ecotourism, alternative tourism, soft tourism, appropriate tourism, and responsible tourism (Ioannides, 1995). Overall, it is greatly reliant on the capability to increase the financial benefits of all actors in the tourism industry while considering the maintenance of social, cultural, and environment legacy (Harris and Williams, 2012). The "Action for more sustainable European tourism" report presents an overall framework of sustainable tourism, comprising areas such as economic capacity, local prosperity, employment quality, social balance, visitor satisfaction, local control, local community satisfaction, cultural richness, physical integrity, biological diversity, resource efficiency, and clean environment (Karas and Ferencova, 2010).

Sustainable tourism performance is typically investigated from stakeholders' perspectives (e.g. Cottrell et al., 2013; Ng et al., 2017). In this context, the stakeholder theory purports managing by virtue of a social contract with stakeholders, the essence of which lies in addressing stakeholder concerns in the planning stage (Robson and Robson, 1996). However, different stakeholder groups have different concerns and priorities, making it almost impossible to satisfy all concerns and measure sustainability precisely (Jitpakdee and Thapa, 2012).

Sustainable tourism management can be measured using sustainability indicators, wherein indicator scores provide a basis for decision making (e.g., Blackstock et al., 2008; Ceron and Dubois, 2003; Li, 2004; Manning, 1999; Miller, 2001; Twining-Ward and Butler, 2002). For example, they have been used to monitor sustainable development (Manning, 1999), improve assessment processes (Ceron and Dubois, 2003), and demonstrate the success or failure of a destination against a benchmark site (Li, 2004).

Hart (1996) explained that an indicator captures information that helps people and businesses understand their current standing, the direction in which they are headed, and how far they are from their desired position. Only when we can quantify sustainability performance using indicators does the 'sustainable' concept becomes tangible and sensible (Butler, 1999). Indicators allow continuous sustainability assessments as a 'warning sign' to create awareness (Li, 2004) and guide reviews or improvements of dynamic im-

plementation plans (White et al., 2006). Although there are obvious advantages of using quantifiable indicators, there are concerns over the universality of indicators. Tsaour et al. (2006) indicated that sustainability differs across space (i.e., the degree of interaction with locals in a shared space) and time (i.e., the length of edu-tourists' stay in the destination); thus, the relevant indicators would vary from one place to another. Similarly, Manning (1999) stressed that there is no single 'perfect' set of indicators that meets the demand of all stakeholders, as each party may have its own set of ideal indicators. Thus, indicators need constant reviews of critical information about current trends not only to track progress towards goal achievement (Twining-Ward and Butler, 2002) but also to seek stakeholders' opinions in meeting local needs (Waldon and Williams, 2012). In other words, the literature acknowledges that indicators are designed to achieve only the specific sustainable objectives of a particular study context (Roberts and Tribe, 2008) and therefore, vary greatly.

Broadly, there are two types of tourism sustainability indicators. One uses objective data, such as internet users per 10,000 people, employment impact, environmental agreements, expenditure per tourist, and number of attractions (e.g., Cernat and Gourdon, 2012). This approach does not use primary data that captures respondents' perceptions through questionnaire surveys, but uses country-level objective data provided by statistical departments like the World Development Indicator, World Tourism Organization, and National Accounts. It mainly functions as a benchmark tool for country destinations to gauge their tourism performance relative to other countries. An obvious setback of the objective indicator lies in the unavailability of data, especially in developing countries (Rutherford, 1998).

The other type uses subjective data derived by requesting respondents (i.e., stakeholders) to rate their perceptions of a tourism destination's performance, such as whether the local communities enjoy tourism income, whether there is good interaction between local communities and tourists, and whether environmental conservation is performed well (e.g., Deng et al., 2011). The main advantage of the subjective indicator is that it incorporates stakeholders' opinions, which makes it easier to engage them in the implementation phase of a project. The importance of stakeholder management has been stressed by Rodríguez et al. (2008), as it is the main criterion for a destination to transform from unsustainable to sustainable tourism. In short, indicators for edu-tourism that are evaluated by stakeholders allows more efficient stakeholder management.

3 Edu-Tourism Sustainability and International Student Stakeholders

While the concept of tourism is usually related to visiting worthy places, sightseeing, and seeking entertainment (Janusz and Bajdor, 2013), edu-tourism is associated with the tourists' knowledge gain and learning. In this endeavor, the university plays a significant role in meeting the education quality expectations of student tourists (Kapur, 2018). When a country is successful in satisfying and attracting student tourists, positive economic impacts are derived for sustainable development outcomes (Tseng et al., 2018).

Sustainable tourism is usually measured as the economic, social, and environmental impacts on the industry, as perceived by supply-side tourism stakeholders (López et al., 2018). However, the perspective of tourism's demand-side stakeholders, in this case student tourists, is equally important. To illustrate, satisfied edu-tourists may return as alumni to visit friends or relatives and may recommend the destination to their significant others, where their subsequent spending (i.e., educational or non-educational) would contribute to the local economy (O'Brien and Jamnia, 2013).

Developing sustainable tourism involves maximizing benefits and minimizing costs while simultaneously satisfying tourists (Cottrell et al., 2013). In the edu-tourism context, international student tourists are the main stakeholders that determine its economic sustainability (Blancas et al., 2018). Therefore, it is imperative to consider international students' satisfaction when evaluating edu-tourism performance, particularly in terms of various sustainability indicators such as satisfaction with university and country attributes. Satisfied international students can contribute to the rise of goods and services sales as well as to more job's opportunities for the community (O'Brien and Jamnia, 2013). Although there are many studies on sustainability tourism, such as on strategic issues for sustainable tourism development in islands (García-Falcón and Medina-Muñoz, 1999), residents' attitudes or satisfaction towards tourism sustainability (Cottrell et al., 2013; López et al., 2018), challenges to sustainable tourism development (Tosun, 2001), and the role of educational institutions and residents in edu-tourism sustainability (Alipour et al., 2020; Tomasi et al., 2020), limited research attention has been given to the identification of sustainable indicators for edu-tourism from the perspective of international students, despite the fact that edu-tourism is an important contributor to the tourism sector (Lam et al., 2011).

4 Indicators Explaining International Students' Satisfaction

There are various indicators that affect students' satisfaction (e.g., Kashif and Cheewakrakokbit, 2018; Arambewela et al., 2006; Abubakar et al., 2010), including the social and academic integration of students (Ingusci et al., 2016), lecturing facilities and library (Petruzzellis et al., 2006), teachers' expertise and courses offered (Butt and Ur Rehman, 2010; Bassi et al., 2017), student academic achievement and reputation of the institution (DeShields et al., 2005), awareness and knowledge of the host country, friends and family recommendation, the environment of the host country, geographical proximity, and social links (Asgari and Borzooei, 2014; Mazzarol and Soutar, 2002; Shanka et al., 2006; Zeeshan et al., 2013). All these indicators can be broadly divided into university or country attributes (e.g., Arambewela et al., 2006; Mazzarol and Soutar, 2002).

For university attributes, common indicators are reputation of the university, perceived faculty academic competence, student-administrator interaction, student-student interaction, perceived quality of electronic communications, and perceived quality of faculty communication (DeShields et al., 2005; Gruber et al., 2010; Ingusci et al., 2016; Kashif and Cheewakrakokbit, 2018; Sojkin et al., 2012). For example, in Arambewela

et al. (2006), quality of education, adequacy of student facilities, and institution's reputation were found to be most essential indicators of international students' satisfaction, while in Sojkin et al. (2012), social conditions, professional advancement, practicality of knowledge, courses offered, and achievements of faculty were significant indicators. Mansori et al. (2014) study also showed that physical facilities such as computer labs, libraries, and classrooms have the highest impact on international students' overall satisfaction level. Thus, they urged universities' management to focus on the quality of physical infrastructures like internet services, sport facilities, security, and hostels. Likewise, faculty members' organization, workload, and instructional abilities (Gursoy and Umbreit, 2005) were reported to be indicators to university students' satisfaction. A faculty member who is concerned with students' work, shows interest in what students have to say, and encourages students is more likely to receive good ratings from students, which leads to the latter's higher satisfaction (Gursoy and Umbreit, 2005).

Besides the university's physical attributes, services, and infrastructure, some studies on international students' satisfaction have concentrated on overall host country attributes, such as climate and study environment, social links, geographical proximity, and information availability. For instance, in the study of Lim et al. (2011), it was found that students from China choose Malaysia as their study destination due to parents' and relatives' recommendation, familiarity with the country, and a perceived favorable study climate. Conversely, the same study revealed that students from the Middle East countries believe that Malaysia offers low-cost tuition fees and a comfortable climate, making them somewhat satisfied with Malaysia as a host site. Past studies have also found that students are motivated to study in western countries because they are considered safe (Abubakar et al., 2010), best for employment and new experiences (Townsend and Jun Poh, 2008), conducive for the improvement of English, and easy to apply for (Wilkins and Huisman, 2011). Similarly, international students find that Malaysia is a safe country and has a culture that is acceptable to foreign students (Zeeshan et al., 2013). Moreover, the proximity of a destination to international students' home country as well as social and geographical links are primary reasons for a student to choose a study destination (Ojo and Yusofu, 2013; Mazzarol and Soutar, 2002; Shanka et al., 2006). Mazzarol and Soutar (2002) also acknowledged pull indicators like knowledge and awareness, recommendations from friends and relatives, cost of living, course fee, environment, social links, and geographic proximity that impact international students' satisfaction with their study destination.

However, few studies have concurrently examined the university-level and host country-level attributes influencing international students' satisfaction towards Malaysia as a study destination choice. So far, student satisfaction research has either employed only university attributes (e.g., DeShields et al., 2005; Sojkin et al., 2012) or host country attributes (e.g., Asgari and Borzooei, 2014; Lim et al., 2011; Zeeshan et al., 2013). In fact, including both categories of attributes provides a more comprehensive picture of international students' satisfaction towards their choice of study destination.

5 Perceived Discrimination

Perceived discrimination refers to the negative or destructive behaviors of the local community towards members of other groups. In the case of edu-tourism, perceived discrimination occurs when international students are denied life necessities such as privileges, rights, and opportunities enjoyed by the local community or other groups (Canestrari and Marlowe, 2004). Perceived discrimination is the most common stress faced by international students in the acculturation process, which directly impacts their interactions and communication with the host country's people (Jung et al., 2007).

Past studies on discrimination (e.g., Rasli et al., 2012) have revealed that the high prejudice towards Iranian students causes adjustment problems into the host country culture, which makes them feel lonely, anxious, depressed, homesick, and insecure. Another study discovered that African American students perceive more discrimination from the faculty, administration, and peers compared to Caucasian students (Gossett et al., 1998). These negative incidents lead international students to drop out from their university due to stress, anxiety, identity crises, and health problems (Poyrazli and Lopez, 2007), as well as poor learning outcomes and a low-quality educational experience (Karuppan and Barari, 2010). Evidently, perceived discrimination decreases international students' satisfaction; therefore, it is an indicator that should be acknowledged and dealt with to successfully manage and sustain edu-tourism (Wadsworth et al., 2008).

From the review above, edu-tourism indicators can be classified into three categories: university attributes, country attributes, and perceived discrimination. Perceived discrimination is treated as a separate category because it may happen within the university or within the country. The following framework (see Fig. 1) was developed to identify the indicators that significantly explain international students' satisfaction, which can be used for subsequent sustainability evaluations.

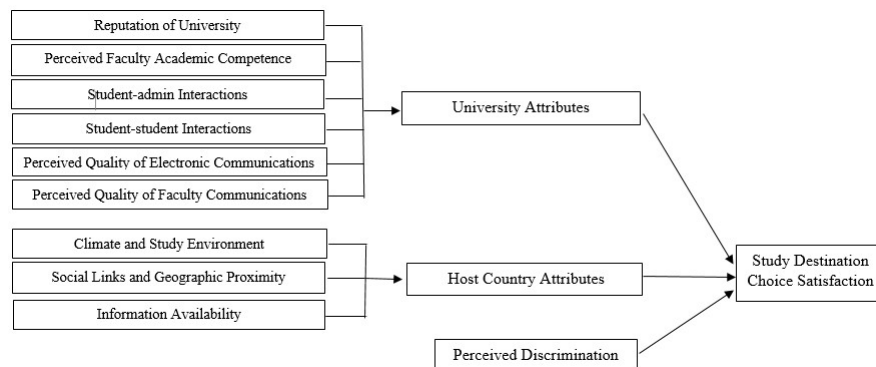


Figure 1: Research Model

Based on past literature related to the effects of university attributes, host country factors, and perceived discrimination on international students' satisfaction with their study destination, directional hypotheses were formulated to examine the relationships

under investigation. Multiple items were used for each construct and dimension in the model. Due to the use of higher order constructs, there were only three hypotheses, as follows:

H1: There is a positive relationship between university attributes and international students' study destination choice satisfaction.

H2: There is a positive relationship between host country factors and international students' study destination choice satisfaction.

H3: There is a negative relationship between perceived discrimination and international students' study destination choice satisfaction.

6 Questionnaire Development and Data Collection

A self-administered questionnaire-based survey was designed for international students studying in Malaysian universities. All constructs' items were taken from prior published scales that have been reported to have high validity and reliability scores. A 5-point Likert scale was used to measure the construct items. University attributes were measured using six sub-scales adapted from Sultan and Wong (2012); Sohail and Shaikh (2004); Cronin Jr and Taylor (1992); Abdullah (2006). Host country attributes were measured using three sub-scales adapted from Mazzarol and Soutar (2002). Perceived discrimination was measured using scales adapted from Hanassab (2006). Lastly, study destination choice satisfaction was measured using the scale adapted from Oliver (1980). A total of 300 questionnaires were distributed at five universities in Malaysia, namely University Putra Malaysia, Monash University, Sunway University, Taylors University, and UCSI University, which are all known as top universities in Malaysia (EduSpiral, 2012) and have a significant number of international students. These universities are also among the recorded 22 Malaysian universities that made it into the QS World University Rankings in 2022. Notably, Taylors University, UCSI University, and Sunway University improved their rankings from 2021 (StudyMalaysia.com, 2021). Partial Least Squares Structural Equation Modeling (PLS-SEM) was adopted to test the conceptual model.

7 Profile of Respondents

Of the 300 respondents, most were Bachelor's degree students (42%), male (63%), aged below 25 years old (62%), and from Iran, Sri Lanka, China, and Nigeria (49%). About half were undertaking their studies in private universities (52%), and slightly more than half were enrolled in business management, accounting, and finance courses (58%). About 56% of them had been studying in Malaysia for one to three years. Most of the respondents were supported financially by their parents (69%), yet 65% indicated that the choice of their study destination was made by themselves.

8 Descriptive Statistics

Table 1 shows the descriptive statistics of the raw items by indicators. Based on the results, indicators were generally scored between ‘Disagree’ (2) and ‘Satisfactory’ (4), with raw mean scores between 2.754 and 3.832 on a 5-point Likert-scale. Respondents felt ‘Neutral’ (3) to ‘Satisfactory’ (4) about their study destination choice ($M = 3.511$). From the overall raw item scores, we can also see that the lowest score of 2.303 (where 1 = never feel discriminated and 5 = feel discriminated all the time) indicates that international students rarely felt discriminated when applying for jobs on campus. On the other hand, the highest score of 3.932 (where 1 = not true and 5 = very true) indicates that respondents widely agreed that faculty members use email and electronic tools appropriately to communicate with students.

Table 1: Raw Item Score by Indicators

Indicator	Items	Raw Mean Score
Reputation of the University Mean: 3.582	RU1: The university’s facilities are visually appealing	3.538
	RU2: The university has a comfortable physical environment (e.g., infrastructure, classes, library, amenities, hotels)	3.742
	RU3: The university maintains its IT equipment very well	3.496
	RU4: The university maintains its physical facilities very well	3.470
	RU5: The university has suitable recreational facilities	3.333
	RU6: The university is known for its excellent quality programs	3.633
	RU7: The university is known for its reputable programs	3.727
	RU8: The university offers programs that allow students to select courses that they prefer	3.716
	RU9: The university provides accommodations such as hostels to support students living in Malaysia	3.583
Perceived Faculty Academic Competence Mean: 3.669	FAC1: Faculty members are highly competent in their respective subject matter	3.561
	FAC2: Faculty members have reasonable teaching experience	3.773

	FAC3: Faculty members deal with students in a caring manner	3.600
	FAC4: Faculty members respond promptly to students' request for assistance	3.636
	FAC5: Faculty members show sincere interest in solving students' problems	3.553
	FAC6: Faculty members show a positive attitude towards students	3.652
	FAC7: Faculty members are available for consultation	3.727
Student-Admin Interaction	SAI1: Administrative staff at the university are accessible	3.724
Mean: 3.628	SAI2: Administrative staff at the university respond promptly to students' request for assistance	3.595
	SAI3: Administrative staff at the university provide dependable information	3.564
	SSI1: There is good social interaction among students	3.421
	SSI2: There is good networking among students	3.462
Student-Student Interaction	SSI3: There is good collaboration among learners in course assignments	3.462
Mean: 3.420	SSI4: There is good communication among students for course group assignments	3.462
	SSI5: There is good collaboration among students during in-class course activities	3.508
	SSI6: It is easy to establish support groups among students at the university	3.205
Perceived Quality of Electronic Communication	QEC1: Faculty members use technology effectively in their teaching	3.724
Mean: 3.832	QEC2: Faculty members communicate with students through email and electronic tools	3.932
	QEC3: Faculty members encourage students to use electronic tools in their assignments	3.841
Perceived Quality of Faculty Communication	QFC1: Faculty members communicate information clearly to students	3.617
Mean: 3.474	QFC2: Faculty members provide students with feedback on assignments within adequate time	3.413
	QFC3: Faculty members provide students with detailed feedback on assignments	3.390
Climate and Study Environment	CSE1: Malaysia has a comfortable climate	3.171
Mean: 3.402	CSE2: Malaysia is an exciting place to live	3.530

	CSE3: Malaysia has a quiet study environment	3.504
Social Links and Geographic Proximity Mean: 2.754	SLG1: I have many friends and relatives studying in Malaysia	3.117
	SLG2: I have many friends and relatives living in Malaysia	2.542
	SLG3: My country has close geographic proximity to Malaysia	2.602
Information Availability Mean: 3.604	IA1: It is easy to obtain information on Malaysia	3.568
	IA2: Malaysian qualifications are recognized	3.523
	IA3: My perceived knowledge on Malaysia is...	3.629
	IA4: The quality of education in Malaysia is...	3.697
Perceived Discrimination Mean: 2.897	PD1: Interacting with professors	2.932
	PD2: Interacting with university staff	2.921
	PD3: Interacting with classmates	3.311
	PD4: Applying for a job on campus	2.303
	PD5: Prejudice in Malaysia towards people from your country	3.019
Study Destination Choice Satisfaction Mean: 3.511	DCS1: I am comfortable with my choice of studying in Malaysia	3.640
	DCS2: I am satisfied with my choice of studying in Malaysia	3.549
	DCS3: My selection to study in Malaysia was accurate	3.500
	DCS4: My choice of studying in Malaysia was a wise one	3.413
	DCS5: I am contented with my preference of studying in Malaysia	3.470
	DCS6: I made the right decision to study in Malaysia	3.496

9 Assessment of Reflective Measurement Model

Table 2 describes the assessment of construct reliability and convergent validity of the constructs in this study. As shown, the outer loadings for all items exceeded the recommended value of 0.5 (Hair et al., 2010). All composite reliability (CR) values, which were greater than the threshold level of 0.7 (Hair et al., 2010), also indicate that the constructs possessed internal consistency. Moreover, these constructs achieved the minimum threshold value of 0.5 for average variance extracted (AVE), which signifies that the items loaded onto their respective constructs explained more than 50% of the constructs' variances (Hair et al., 2014).

Table 2: Reflective Measurement Model: Loadings, Construct Reliability and Convergent Validity

Construct/Indicator	Loading	Composite reliability (CR)	Average variance extracted (AVE)
Perceived Faculty Academic Competence		0.941	0.696
FAC1	0.794		
FAC2	0.795		
FAC3	0.881		
FAC4	0.834		
FAC5	0.839		
FAC6	0.870		
FAC7	0.824		
Student-Admin Interaction		0.909	0.768
SAI1	0.863		
SAI2	0.897		
SAI3	0.869		
Student-Student Interaction		0.920	0.656
SSI1	0.803		
SSI2	0.830		
SSI3	0.835		
SSI4	0.814		
SSI5	0.824		
SSI6	0.751		
Perceived Quality of Electronic Communication		0.874	0.699
QEC1	0.829		
QEC2	0.839		
QEC3	0.840		
Perceived Quality of Faculty Communication		0.894	0.737
QFC1	0.867		
QFC2	0.890		
QFC3	0.818		
Study Destination Choice Satisfaction		0.954	0.776
DCS1	0.894		
DCS2	0.897		
DCS3	0.853		
DCS4	0.853		
DCS5	0.881		
DCS6	0.907		

Table 3: Discriminant Validity of The Measurement Model: Heterotrait-Monotrait (HTMT) Criterion

	FAC	QEC	QFC	SAI	SSI	DCS
FAC						
QEC	0.718					
QFC	0.694	0.688				
SAI	0.734	0.703	0.71			
SSI	0.557	0.505	0.547	0.463		
DCS	0.733	0.554	0.585	0.562	0.531	

Note: HTMT < 0.85 (Kline, 2011), HTMT < 0.90 (Gold et al., 2001)

Table 3 presents the assessment of discriminant validity. This study examined discriminant validity using the heterotrait–monotrait (HTMT) criterion (Henseler et al., 2015), which suggests that all constructs are distinctively different at the HTMT0.90 (Gold et al., 2001) and HTMT.85 (Kline, 2011) thresholds. In conclusion, discriminant validity was confirmed.

10 Assessment of Formative Measurement Model

Table 4 portrays the results of bootstrapping using 5000 sub-samples, which include the weights and path coefficients of all formative constructs (Hair et al., 2014). In total, there were three formative constructs to be evaluated; first-order perceived discrimination, second-order university attributes, and second-order host country factors. The bootstrapping results show that all formative indicators were significant except for student-admin interaction, perceived quality of electronic communication, perceived quality of faculty communication, and PD1 to PD4. However, these are important theoretical items that form the main constructs (i.e., perceived discrimination, university attributes, and host country attributes). As such, all items were kept to reflect their theoretical significance. Additionally, past studies or theories evidence the relevance of these indicators for capturing the operationalization of university attributes and perceived discrimination (Hanassab, 2006; Parahoo et al., 2013); thus, these indicators were maintained in the formative constructs despite their insignificant outer weights.

11 Structural Model and Path Analysis

To test the significance level of the relationships between the indicators and satisfaction, their path coefficients were assessed using the bootstrapping technique. Table 5 shows that university attributes ($\beta = 0.495, p < 0.01$) and host country attributes ($\beta = 0.336, p < 0.01$) were found to be positively related to satisfaction while perceived discrimination ($\beta = 1.313, p > 0.05$) was not significant.

Table 4: Formative Measurement Model Evaluation

	Direct Effect (β)	Standard Error	T-statistic	P-value
PD1 \rightarrow PD	0.120	0.32	0.374	0.354
PD2 \rightarrow PD	-0.466	0.473	0.986	0.162
PD3 \rightarrow PD	-0.142	0.294	0.482	0.315
PD4 \rightarrow PD	0.169	0.281	0.600	0.274
PD5 \rightarrow PD	1.015	0.586	1.732*	0.042
RU \rightarrow UA	0.326	0.091	3.571**	0.000
FAC \rightarrow UA	0.594	0.101	5.900**	0.000
SAI \rightarrow UA	-0.020	0.094	0.195	0.423
SSI \rightarrow UA	0.190	0.073	2.614**	0.005
QEC \rightarrow UA	-0.040	0.075	0.498	0.309
QFC \rightarrow UA	0.120	0.087	1.353	0.088
CSE \rightarrow HCF	0.460	0.082	5.619**	0.000
SLG \rightarrow HCF	0.233	0.075	3.106**	0.001
IA \rightarrow HCF	0.580	0.071	8.208**	0.000

** $p < 0.01$, * $p < 0.05$ (one-tailed)

Note: PD=Perceived Discrimination, UA=University Attributes, HCF=Host Country Factors, RU=Reputation of University, FAC=Perceived Faculty Academic Competence, SAI=Student-Admin Interaction, SSI=Student-Student Interaction, QEC=Perceived Quality of Electronic Communication, QFC=Perceived Quality of Faculty Communication, CSE=Climate and Study Environment, SLG=Social Links and Geographic Proximity, IA=Information Availability

Table 5: Path Coefficient Assessment

	Direct Effect (β)	Standard Error	T-statistic	P-value	Decision
UA \rightarrow DCS	0.495	0.051	9.774**	0.000	Supported
HCF \rightarrow DCS	0.336	0.050	6.698**	0.000	Supported
PD \rightarrow DCS	-0.103	0.078	1.313	0.095	Not Supported

** $p < 0.01$, * $p < 0.05$ (one-tailed)

Note: PD=Perceived Discrimination, UA=University Attributes, HCF=Host Country Factors, DCS=Study Destination Choice Satisfaction

Table 6 shows that the R^2 value for satisfaction was 0.610, suggesting that the independent variables explained 61% of the variance in satisfaction. According to Cohen (1988), R^2 values that exceed 0.26 indicate a substantial model. Effect size (f^2) assesses

whether an exogenous construct has a substantive influence on an endogenous construct on the basis of its unique, rather than shared, variance (Hair et al., 2010). Table 6 shows the exogenous variables' effect sizes on the endogenous variable, whereby university attributes ($f^2 = 0.359$) had a large effect size, host country attributes ($f^2 = 0.167$) had a medium effect size, and perceived discrimination ($f^2 = 0.026$) had a small effect size on study destination choice satisfaction. This signifies that university attributes and host country attributes are more important than perceived discrimination in explaining satisfaction.

Table 6: Coefficient of Determination (R^2) and Effect Size (f^2)

	Coefficient of Determination	Effect Size (f^2)	
	R^2	DCS	Effect Size
DCS	0.610		
UAF		0.359	Large
HCF		0.167	Medium
PD		0.026	Small

Note: DCS = Study Destination Choice Satisfaction; UA = University Attributes; HCF = Host Country Factors; PD = Perceived Discrimination

Since university and country attributes were significant predictors of satisfaction, with large and medium effect sizes respectively, only these two categories of indicators were included in the calculation of sustainability performance. Perceived discrimination was not included as an indicator of sustainability in this case (i.e., Malaysia context) as it was not a significant predictor of satisfaction and had only a small effect size (0.026).

12 Overall Evaluation of Edu-Tourism Sustainability Indicators

Table 7 shows the mean for all the indicators (six university attributes and three host country attributes) used to calculate sustainability performance. The raw scores (column A), which ranged from 3.402 to 3.832 on a 5-point Likert scale, were converted to weighted scores (D) using effect sizes taken from the structural model analysis. Tsaour et al. (2006) identified indicator weights from importance scores collected using the Delphi Technique with 12 ecotourism experts. For this study, the indicator weights were derived from their effect size, which also captures the "importance" of the indicator in explaining satisfaction (Ramayah et al., 2018). Sustainability performance, in percentage form, was then calculated based on the weighted score percentage divided by weight percentage. The grading system used by Tsaour et al. (2006) scores from 0 and 100 on the Barometer of Sustainability, where 0 to 24 is "unsustainable" (bad), 25 to 49 is "po-

tentially unsustainable” (poor), 50 to 74 is “potentially sustainable” (OK), and 75-100 is “sustainable” (excellent). As can be seen from Table 7, the overall sustainability performance achieved by edu-tourism in Malaysia was 69.70%, which fell in the category of “potentially sustainable” (OK). This shows that Malaysia is doing somewhat satisfactorily now, but still needs significant improvements to reach the “sustainable” status. To understand the relative contribution of each indicator, the sustainability performances of the nine indicators were compared (see Figure 2).

Table 7: Sustainability Performance of Malaysian Edu-Tourism

Indicators	(A) Raw Score	(B) Weight (Effect Size)	(C) Weight %	(D) Weighted Score (A*C)	(E) Weighted Score % (A/5*C)	(F) Sus- tain- ability Perfor- mance (E/C)
Reputation of University	3.582	0.359	14%	0.48	9.69%	71.64%
Perceived Faculty Academic Competence	3.669	0.359	14%	0.50	9.92%	73.38%
Student-Admin Interaction	3.628	0.359	14% 0.49	9.81% 72.56%		
Student-Student Interaction	3.420	0.359	14%	0.46	9.25%	68.40%
Perceived Quality of Electronic Communication	3.832	0.359	14%	0.52	10.36%	76.64%
Perceived Quality of Faculty Communication	3.474	0.359	14% 0.47	9.39%	69.48%	
Climate and Study Environment	3.402	0.167	6%	0.21	4.28%	68.04%
Social Links and Geographic Proximity	2.754	0.167	6%	0.17	3.46%	55.08%
Information Availability	3.604	0.167	6%	0.23	4.53%	72.08%
Total/Average	3.485	2.655	100	3.54	70.71%	69.70%

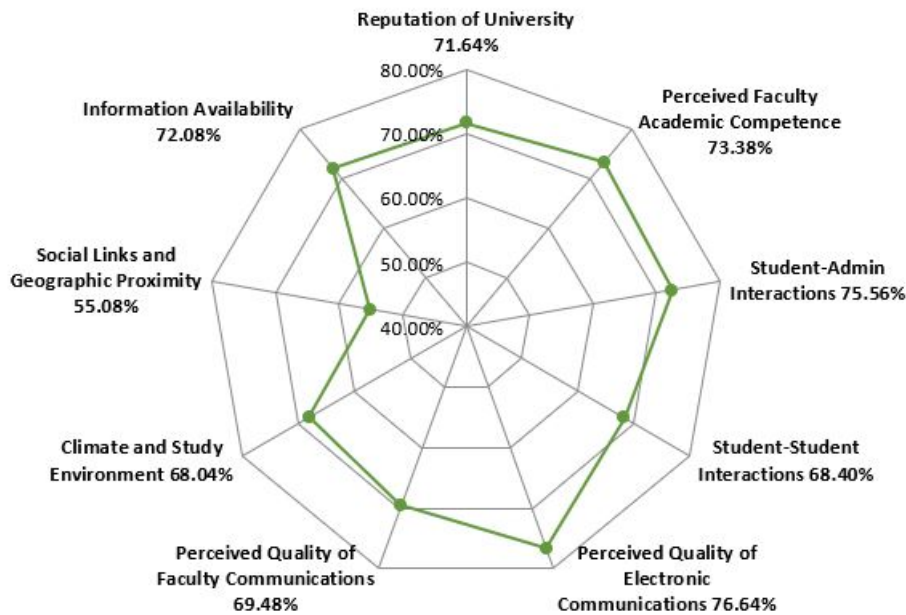


Figure 2: Sustainability Performance of Malaysia Edu-Tourism Indicators

13 Discussion

This study has discovered that university attributes and host country attributes are positively related to international students' satisfaction with their choice of study destination, while perceived discrimination is not significant in this regard. First, consistent with prior studies (e.g., Arambewela et al., 2006; Butt and Ur Rehman, 2010; Parahoo et al., 2013; Sojkin et al., 2012), factors that make up university attributes are important to international students' satisfaction with Malaysia as a study destination. Specifically, the university's reputation is essential to international students when deciding on a study destination, while good maintenance, sufficient student facilities (Arambewela et al., 2006; Wilkins and Huisman, 2011, and subject-competent faculty members are other important aspects (Abubakar et al., 2010; Shah and Nair, 2010).

Second, host country attributes (climate and study environment, social links and geographical proximity, information availability) are vital in international students' study destination choice satisfaction. This is in line with the prior research of Lim et al. (2011); Maringe and Carter (2007); Shanka et al. (2006). For example, one study revealed that Middle East and Chinese students choose Malaysia as a study destination mainly because of its comfortable climate and favorable learning environment (Lim et al., 2011).

Lastly, perceived discrimination has no effect on international students' satisfaction

with Malaysia as a study destination choice. This could be due to the fact that Malaysians are generally perceived as less discriminatory, which makes it insignificant for satisfaction. This result contradicts that of Hanassab (2006) work among HEIs in the United States, where students from the Middle East and Africa claim they experience higher discrimination when they interact with faculty, staff, other students, and the community. Our finding also challenges the evidence that perceived discrimination decreases international students' satisfaction (Wadsworth et al., 2008). Nonetheless, in the case of Malaysia, our statistics suggest that perceived discrimination is quite low and has not reached the extent that impacts students' satisfaction level.

14 Theoretical Implications

This study has contributed to the edu-tourism sustainability literature by shedding light on the perspective of stakeholders (i.e., student tourists) in following the sustainability performance evaluation approach prescribed by Tsaur et al. (2006). Measuring from the demand side of tourism stakeholders enables a better evaluation of edu-tourists' viewpoints as well as more competent stakeholder management (Rodríguez et al., 2008). In doing so, Malaysia will be able to attract more student tourists when satisfied students spread positive word-of-mouth; subsequently, the proceeds from these tourists can be channeled to support economic growth (Baharun et al., 2011). That is, satisfied edu-tourists draw more tourists (e.g., family, friends, and relatives) to Malaysia. Therefore, the study has identified sustainable indicators for edu-tourism from the perspective of international students to understand how best to meet their expectations.

The performance of Malaysian edu-tourism's sustainability indicators is between 55.08% and 76.64% (see Table 7 and Figure 2). In fact, two indicators (perceived quality of electronic communications, 76.64%, and student-admin interaction, 75.56%) are in the "sustainable" (excellent) category (Tsaur et al., 2006). This means universities are performing well in terms of using computing facilities (i.e., faculty members are effective in using technology in teaching, communicating, and administering assignments) and promoting student-administrator interactions (administrative staff are accessible, responsive, and reliable). Therefore, these two top-performing aspects should be maintained. This is in line with research by Parahoo et al. (2013) and Harvey (2001), which asserted that the service quality of electronic communication has a significant influence on students' satisfaction, especially since most courses require computer applications and analysis using basic facilities and computer equipment.

At the lowest end of performance are social links and geographic proximity, indicating that most international students do not have friends or family living or studying in Malaysia, or that Malaysia is geographically distant from their home country (55.08%). For instance, students from Singapore and Indonesia choose Perth as their study destination due to its close proximity or because they have friends or family living or studying there (Shanka et al., 2006), suggesting that social connections and distance from home are important indicators. The low score (55.08%) of Malaysia's social links and geographic proximity are relatively far from the "sustainable" status, which calls for

substantial efforts to enhance this aspect of performance. To improve international students' social links, the Malaysian government can retain foreign students in the country by granting them work permits for a three- to five-year period upon graduating from Malaysian universities. That way, their younger relatives and friends may be attracted to study in Malaysia, since there is family support in the country. In addition, Malaysian universities or private companies could give away scholarships to deserving international students and bond them to work in Malaysia for a few years.

Malaysia has the advantage of geographical proximity to Asian countries like Indonesia, China, Thailand, and the Philippines. Malaysian universities should thus use more aggressive marketing strategies to attract them to study in Malaysia. For example, introducing a twinning program, where the students' first two years are based in their home country and their last two years is based in Malaysia, might increase students' willingness to travel abroad. Other than that, the Malaysian government could introduce special visa arrangements for those from Asian countries as a welcoming gesture.

15 Managerial Implications

The findings of the study offer tourism policy makers and HEIs valuable information to design new strategies for edu-tourism sustainability. Carrying on from the above discussion, the performance of the other six indicators (reputation of university, perceived faculty academic competence, student-student interaction, perceived quality of faculty communication, climate and study environment, and information availability) fare around 68.04% to 73.38%, indicating that they are in the "potentially sustainable" category. The fact that they have not achieved the "sustainable" status implies that university and host country stakeholder groups have not contributed enough to meeting the expectations of the student tourist stakeholder group. Thus, to pursue and achieve the "sustainable" status, various strategies can be employed, as suggested below.

First, the university's reputation is essential to international students when it comes to selecting their study destination, as they seek excellent quality and reputable programs, with good maintenance and sufficient student facilities (Arambewela et al., 2006). Universities could improve their reputation through course collaborations with renowned universities, such as the University of Singapore, and the establishment of MOUs for student exchange programs. Also, continuous quality improvement of academic programs can be done by benchmarking against excellent universities with high university rankings. Next, a holistic curriculum that contributes to student achievement may enhance the reputation of universities. The curriculum could include a universal intellectual experience grounded in basic knowledge, with an emphasis on ethical values and environmental responsibility through the study of topics like human rights, environmental education, and respect for local culture. Such content would also help foreign students appreciate local culture, respect local values, and develop a deeper sense of belonging.

Second, faculty members are expected to be proficient in their area, have extensive teaching expertise, and care about students' problems (Bassi et al., 2017; Shah and Nair, 2010). Universities could ensure faculty members' competency by sending them to exter-

nal trainings, educational conferences, and seminars. Also, experienced faculty members can be paired with a younger faculty member through a mentoring and coaching program. Apart from that, faculty members can be trained to be caring towards students' problems and difficulties, where fast responses to students' requests and problems are emphasized. Sarnacchiaro and D'Ambra (2012) also asserted that to improve students' satisfaction, academic staff need to be given proper exposure and suitable teaching materials to stimulate students' interest.

Third, it is necessary to facilitate student interactions and networking (Moore, 1989; Parahoo et al., 2013; Sojkin et al., 2012). Universities could facilitate and encourage students to communicate more among each other by mixing international students with local students in assignment groups, presentations, brainstorming sessions, and class discussions. The same can be encouraged in co-curriculum and team building activities. This way, international students are able to bond with local students and build better support groups in adapting themselves to a new foreign environment.

Fourth, a comfortable climate and favorable study environment are main reasons for students to choose Malaysia as a study destination. Malaysia is blessed with a conducive climate, which should not be taken for granted, as climate is fragile and may deteriorate to a point that is non-reversible. Thus, conscious efforts should be taken by all stakeholders to preserve the environment so that climate change can be mitigated and Malaysia can continue enjoying mild weather, clean air, and a clear sky. Malaysians and tourists alike should be educated to be more environmentally friendly and to avoid irresponsible behavior such as littering, open-burning, and excessive carbon release from vehicles. With that, a sustainable, green, and resilient urban life can be created. The government should, further, invest in facilities, technology, and transportation that has access and connectivity for all, as well as in the restoration of public spaces, local services, and recreational amenities. Such efforts would develop the idea of smart cities, which benefits both local communities and student tourists in Malaysia. In addition, a conducive study environment should be provided by universities, such as in the form of comfortable libraries and study rooms for students.

Finally, the ease of obtaining information on Malaysia and the specific general knowledge a person has about Malaysia is important, while difficulty in accessing information about an institution and its country is a major turn-off for students (Maringe and Carter, 2007). The Malaysian government might want to ensure that foreign students can obtain information on Malaysia easily. It should therefore unlock more channels for outsiders to gain familiarity with Malaysia as a remarkable country to study and visit. This can be done by ensuring universities websites are easy to navigate, clear, comprehensive, and widespread. To make websites more appealing to potential students, tourism websites and university websites can also consider having multiple languages and translation options to popular Asian languages like Mandarin, Indonesian Malay, Thai, and Tagalog. Tang-Taye and Standing (2016) asserted that website translation plays an important role in destination marketing, thus, the constant evaluation of websites is crucial to maintain the recency of information and to portray an effectual image to the public. Apart from that, visa application information and processes should be made accessible and transparent to international students, as frustrations with visa processing could be

a key reason for failure in edu-tourism.

16 Limitations and Recommendations for Future Study

This study is not without limitations. First, in terms of edu-tourism sustainability development, this research only looked into one stakeholder's (student tourist) perspective of their study. Future research may want to consider examining the perceptions of other stakeholders, such as the local community (Cottrell et al., 2007). Tourism should be advanced in a manner that engenders advantages to local communities by improving the local economy, empowering the local workforce, and fully utilizing local materials, products, and traditional skills (Bernini et al., 2015; Cottrell et al., 2013). Hence, incorporating the satisfaction or attitudes of the local community in sustainability performance evaluations may provide a more holistic view of edu-tourism sustainability.

Second, this study was limited to international students already studying in Malaysia. To better understand the indicators that attract foreign students to Malaysia, future research may want to target prospective students, as this would offer more inclusive information to policy makers on ways to draw potential international students into Malaysia.

Third, despite collecting data from both public and private universities, we were not able to make comparisons on student satisfaction due to sample size and sample composition constraints, as undergraduate and postgraduate respondents were unequally represented. To make this comparison, future studies should be designed with a bigger sample size and more balanced representations of undergraduate and postgraduate students from public and private universities.

Lastly, in this study, the R^2 value for satisfaction was 0.610, which means about 39% of the indicators of student satisfaction were unidentified. Hence, future studies might consider adding additional categories of indicators to the model, such as festivals and events, enjoyable vacation activities and lifestyle, destination atmosphere and image, country amenities, peoples' traits, monetary price, and food and beverages (Asgari and Borzooei, 2014; Reisinger and Mavondo, 2004; Rittichainuwat et al., 2003). These indicators might help in examining and discovering more about international students' experiences and opinions pertaining to Malaysia as a host destination.

17 Conclusion

The tourism sector has great potential to affect economic growth, inclusive development, and environmental preservation. It also fosters exchanges between people around the world, reinforcing the understanding between cultures as well as peace between communities and countries. Hence, the tourism sector is considered one of the most vigorous and important economic sectors that can make significant contributions to the realization of the SDGs (UNWTO & United Nations Global Compact Network Spain, 2016). In this context, sustaining edu-tourism is crucial as it encourages healthy connections among people from different parts of the world, nurtures the quality of education, earns

respect for different cultures, cultivates the preservation of local heritage and cities, and contributes extensively to the local economy.

As Malaysia aspires to become an international education hub, edu-tourism could be a main revenue source for the country. This study has presented the process of assessing edu-tourism sustainability in Malaysia following the Tsaur et al. (2006) barometer, which states that sustainable edu-tourism performance can be achieved by focusing on nine performance indicators. Of the nine indicators, six (reputation of university, perceived faculty academic competence, student-student interaction, perceived quality of faculty communication, climate and study environment, and information availability) are performing moderately in Malaysia. The top two performers are perceived quality of electronic communication and student-admin interaction, while the worst performers are social links and geographic proximity, meaning that either the friends and family of international students are not residing in Malaysia or Malaysia is too far from their home country.

Generally, Malaysia's edu-tourism is operating in the "potentially sustainable" category, which demands improvements to achieve the "sustainable" status. Edu-tourism sustainability may be enhanced when more cooperation and consideration are given by stakeholders. Different actors of the tourism sector, such as the government, tourism policy makers, and educational policy makers, should therefore play their roles accordingly to maintain edu-tourism sustainability. Moreover, the findings of this study benefit Malaysian HEIs and the tourism industry in designing strategies to maintain sustainable edu-tourism. The results highlight the efforts that HEIs and tourism management bodies can implement to achieve more balanced and sustainable edu-tourism performance.

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