

Mediating Effect of Institutional Image on the Relationship between Student Satisfaction and Student Loyalty in Higher Learning Institutions Using the HEdPERF Model

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Abstract: Higher learning institutions in Malaysia have proliferated to fulfil the demands of students to further their studies at the higher level of education. Some higher learning institutions keep promoting their educational services and programmes to capture the interest of these potential students to further their studies in their institutions. Therefore, this study aims to obtain feedback on student satisfaction with service quality provided by the higher learning institutions. Institutional image has played an important role as a mediating variable in this study. The population for this study is 756 students and the sample size required for the study is 90 students based on G-Power. The questionnaires has been distributed to the students online by using the simple random sampling technique. However, only 370 have completed and returned the questionnaires, which have then been gathered and analysed by using PLS 3.3. There have been nine hypotheses constructed for the study. The three dimensions of the HEdPERF model, which are academic aspect, non-academic aspect, and programmes, have supported the hypotheses. However, the remaining two dimensions, which are access and reputation, have rejected the hypotheses. Thus, institutional image and student satisfaction are identified to have supported the hypotheses. Institutional image is a vital mediator between student satisfaction and student loyalty. This study has been conducted to determine whether or not the students are satisfied with services provided by the institution. The institutional image portrayed by the institution could be a pivotal factor in student satisfaction, which leads to student loyalty towards the institution. The results of this study will help to improve its current services to the students and its institutional image too. It can be further explored for future research by adding new variables in HEdPERF. In addition, conducting the same survey on other local public and private universities in Terengganu is also recommended before applying it to the whole country.

Keywords: Student satisfaction, Student loyalty, Institutional image, HEdPERF, Learning institutions, Service quality

1. Introduction

Furthering studies at higher educational institutions has become a preferred choice for many. With a bundle of choices of either public or private, higher, educational institutions, these institutions need to provide good service quality to be the educational institutions of choice. In this case, the image

of the higher learning institutions plays an important role. Apart from this, services provided by the institutions are another critical factor influencing prospective students' decisions on which institution to choose from. As higher learning institutions manage to provide good services to their students, they may lead to student satisfaction and, simultaneously, create loyalty towards the educational institutions *per se*. Considering the global development of the educational market, Abdullah (2005, 2006) has applied a new measurement scale created based on the SERVPERF model, called HEdPERF (Higher Education PERFormance), in Malaysia. The purpose of this scale is to measure service quality, specifically in higher educational institutions, as, according to the author, the generic scales presented previously might need to be revised for this purpose. In this case, the HEdPERF scale could be used by Higher Educational Institutions (HEIs) to understand students' points of view and conduct initiatives to improve services delivered. The study is significant for higher educational institutions to increase student satisfaction via quality services, which has been a subject of sustained research activities for some years.

Although service quality has received a much attention in the higher-education sector, less emphasis has been given to identifying factors that influence students' perspectives. Therefore, developing a new assessment scale containing the academic components and aspects of the total service environment as experienced by the students would be justified. Nevertheless, a similar amount of disagreements has also existed in discussing how to measure service quality in higher learning institutions and new research has revealed numerous questions about assumptions upon which the existing tools have been founded. Despite some successes in applying the SERVQUAL and SERVPERF scales for measuring the quality of distinct services, the models' general applicability still needs to be questioned when they have been replicated for evaluating perceived HEIs' quality. Even with studies on service quality, there have still been questions that need to be answered, mainly concerning the most appropriate measurement instrument for evaluating each type of service (Abdullah, 2005). Although these generic instruments have been tested with some successes in many service industries, their replications in the higher educational sector are still hazy (Abdullah, 2006a). Therefore, three objectives have been constructed for this study. The first objective has been to identify the dimensions of the HEdPERF model, which are academic, non-academic, access, reputation, and programmes, towards student satisfaction in a higher learning institution. The second objective of the study has been to investigate a relationship between student satisfaction and student loyalty. Finally, the study has also aimed to measure the mediating effect of an institutional image between student satisfaction and student loyalty.

1.1 Literature Review

1.1.1 HEdPERF and Student Satisfaction

In higher education, service quality is increasingly essential to student success (Lam et al., 2021). Nursaid et al. (2019) have discovered that student satisfaction is influenced by the quality of services provided and an institution's image in the eyes of a community. In other words, service quality and institutional image affect student loyalty and satisfaction. Similarly, Chandra et al. (2018; 2019) have also found that the influence of service quality and university image positively affect student satisfaction and loyalty. In the interim, Abdullah (2006b) has proposed a performance-based measurement scale for examining Malaysia's higher-education quality. To develop HEdPERF, the researcher has conducted surveys across Malaysia at six tertiary institutions, collecting 409 completed questionnaires. In addition, Abdullah (2006a) has also compared three measuring instruments, which are HEdPERF, SERVPERF, and HEdPERF-SERVPERF, to determine which instrument has the highest measuring capability. Findings have shown that HEdPERF's modified five-factor structure with 38 items has been the superior instrument for measuring service quality in higher education. Meanwhile, Brochado (2009) has used five alternative instruments, which are SERVQUAL, importance-weighted SERVQUAL, SERVPERF, importance-weighted SERVPERF, and HEdPERF, to examine service-quality performance. Thus, the researcher has gathered a collection of data from 360 students at a Portuguese University in Lisbon. The scales have compared their unidimensionality, reliability, validity, and explained variance. Results from the findings have shown that both SERVPERF and HEdPERF have presented the best measurement capability. Thus, Lam et al. (2021) have revealed in

their study that the HEdPERF model has been formed and developed based on the limitations of the existing service-quality scales to overcome shortcomings and provide a multidimensional service-quality measurement.

Meanwhile, Sultan and Wong (2012) have investigated culture influencing a service-quality assessment in a higher educational context. There have been operationalised service-quality constructs, including seven items from HEdPERF, seven items from PHEd, four items from Fornell et al. (1996), one item from Cronin and Taylor (1992), and seven items from discussions with focus groups. However, findings have revealed that cultural backgrounds do not affect academic-service quality. In the interim, Wibisono and Nainggolan (2009) have conducted a study by which they have tested HEdPERF to assess the quality of higher education, particularly at a university level. Among the instruments used in their research have been seven factors, which are non-academic performance, academic performance, reputation, empathy, student activities, facility, and location. Findings have indicated that students' perceptions of service quality have changed throughout their studies, as evidenced by class attendance and faculty achievement differences. Empathy, tangibility, reliability, competence, confidence, non-academic aspects, and academic aspects have been some of the factors recommended. Meanwhile, administrative quality, academic quality, programme quality, student support, and resource availability have also been the factors that determine service quality in universities. Likewise, Ravichandran et al. (2012) have also reported that standardised syllabi and structures, quality programmes, student feedback on progressive measures, empathetic administrative staff to solve students' problems, and fair and equal treatment are all dominant variables that strongly predict the overall service quality. Another study done by Vo (2021) on 1,825 respondents in higher learning institutions has found that reputation, access, academic, and administrative factors in higher learning institutions influence student satisfaction. In contrast, student loyalty is influenced by academic, reputation, and administrative factors. Hence, the hypotheses have been constructed as follows:

H1: The greater the student experience in the academic aspects, the higher the student satisfaction with the higher learning institution.

H2: The greater the student experience in the non-academic aspects, the higher the student satisfaction with the higher learning institution.

H3: The greater the student experience in the access, the higher the student satisfaction with the higher learning institution.

H4: The greater the student experience in the reputation, the higher the student satisfaction with the higher learning institution.

H5: The greater the student experience in the programmes, the higher the student satisfaction with the higher learning institution.

1.1.2 Institutional Image and Student Satisfaction

In any institutions or organisations, having a positive image is essential as many previous studies have discovered that it is a definite factor related to job satisfaction. According to Polat (2011), institutional image results from individuals' perceptions about an institution or organisation rather than a concrete, defined concept. Thus, the institution or organisation that attract its human resources or clients manage to convey a positive image to the public. The image is generally created based on multi-dimensional aspects like academic, social, political, and possibly stylistic dimensions. It is crucial because it influences the selection of students and academic staff, research funding, and donor organisations. People will react positively to whomsoever that portrays a positive image (Terkla, 1993). A previous study by Alwi (2019) has also shown that a positive brand image and experience lead to loyalty and positive word-of-mouth by students.

Apart from that, a research carried out by Osman et al. (2019) has explained that the higher the students' perceptions of an institutional image, the more satisfied they are with it, as proposed in the researchers' study on the pragmatic models of student satisfaction with an institution. On top of that, the same view by Panda et al. (2019) has also shown that a distinct brand image influences students' satisfaction levels. The researchers have found a positive mediating effect of a university's reputation on a relationship between the university's brand image and its students' satisfaction levels. Similarly, Alwi et al. (2019) have also agreed that institutional image improves institutional brand differentiation

and positioning, including products or programmes, modules, reputable courses, lecturers, environment, administration aspects, service qualities, such as responsiveness and empathy, and positive feelings towards an educational institution. A recent study by Qomariah et al. (2020) has also supported the findings that the image of a learning institution has a significant effect on its student loyalty. In addition, a study carried out by Hassan et al. (2020) has also shared the same result, which suggests a direct effect of service quality on a university's image and student loyalty. Besides, there is also a mediating effect of a university's image on a link between service quality and student loyalty. Hence, a hypothesis has been constructed as follows:

H6: Student satisfaction is positively related to the institutional image of the higher learning institution.

1.1.3 Student Loyalty and Student Satisfaction

The significance of teaching quality and emotional commitment to a higher learning institution in influencing its student loyalty cannot be overstated. Student loyalty refers to an extent to which students feel connected to the institution and how their attitudes or behaviours express the connection (Snijders, 2020). Mulyano et al. (2020) have supported that student satisfaction significantly mediates a correlation between academic, non-academic, reputation, and campus access with student loyalty. Apart from that, the image of an institution has a significant effect on student satisfaction and student loyalty, whereas student satisfaction has a significant effect on student loyalty (Qomariah et al., 2020). Meanwhile, Wijaya et al. (2021) have indicated in their study's findings that service quality and institutional image significantly influence satisfaction but do not significantly influence loyalty. Still, satisfaction has been found to influence loyalty directly.

These findings have included positive and negative emotions and the cognitive components of satisfaction that correlate with student loyalty (Butt et al., 2010). However, besides the emotions and teaching quality that influence loyalty, students' active participation has also been the evidence of positive behaviours. Students' being loyal to their institutions will serve as good ambassadors recommending their institutions to others (Ali et al., 2016). Findings generated by Schlesinger et al. (2016) are consistent with the result of shared values promoted by a university, which increase student loyalty. Furthermore, higher educational institutions, which meet students' needs and expectations, attract and retain the students because they consider student loyalty a financial basis for academic activities (Celik, 2018). Therefore, a hypothesis has been constructed as follows:

H7: Institutional image is positively related to student loyalty in the higher learning institution.

1.1.4 Student Satisfaction, Institutional Image, and Student Loyalty

A few studies have been conducted to prove that institutional image plays a vital role in higher learning institutions (Osman et al., 2019; Endo et al., 2019; Maduro et al., 2018). These studies have proven that institutional image is a significant factor for students to choose a higher learning institution. Studies conducted in higher learning institutions have shown that institutional image is positively related to student satisfaction (Alwi, 2019; Osman et al., 2019). In contrast, student satisfaction is positively related to student loyalty in several previous studies (Butt et al., 2010; Schlesinger et al., 2016). A study conducted by Chandra et al. (2019) has equally shown that student satisfaction is related to student loyalty and institutional image. For these reasons, the current study has been conducted to measure the mediating effect of institutional image on the relationship between student satisfaction and student loyalty. Hence, the hypotheses have been constructed as follows:

H8: Student satisfaction is positively related to student loyalty in the higher learning institution.

H9: Student satisfaction is positively related to student loyalty mediated by the institutional image of the higher learning institution.

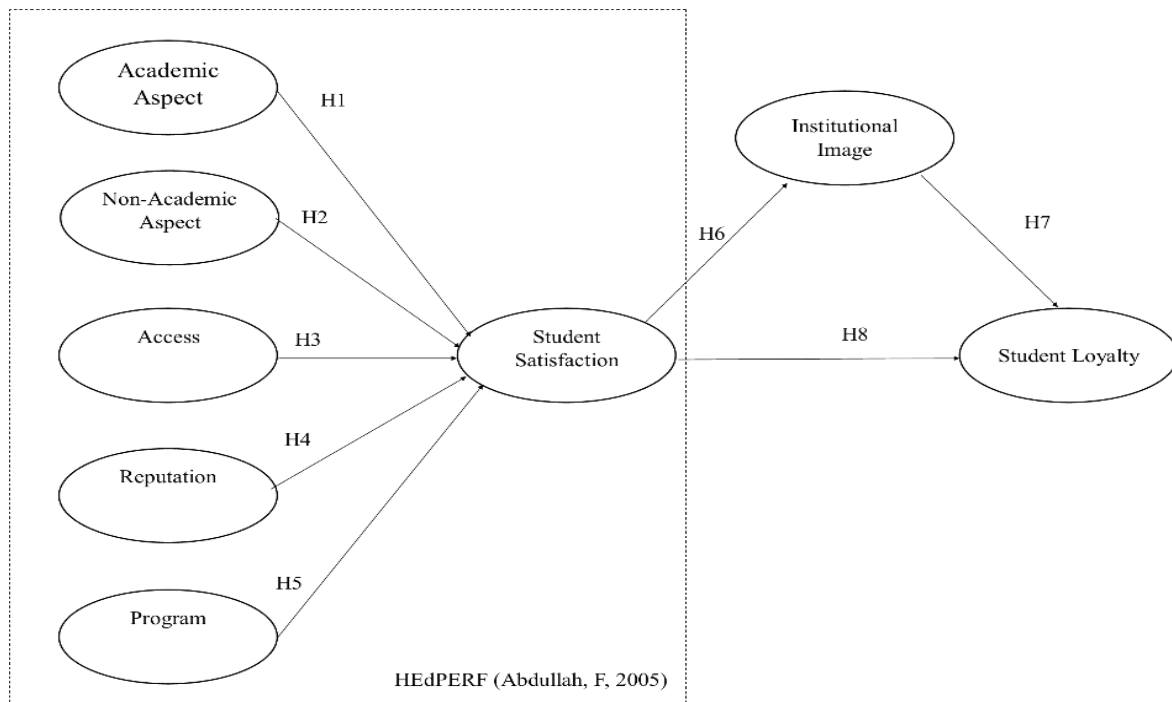


Fig. 1 Research Framework

This study has been adapted from the instrument of HEdPERF, which has been developed by Abdullah (2015), to measure service quality provided by the higher learning institution. The structural model has been developed to investigate the relationship between the HEdPERF dimensions and student satisfaction in the higher learning institution. In addition, this study has had a mediating variable to test the relationship between student satisfaction and student loyalty in the higher learning institution. The purpose of this mediating variable has been to measure the influence of the mediating variable between student satisfaction and student loyalty. Academic, non-academic, access, reputation, programmes, student satisfaction, institutional image, and student loyalty have been the eight constructs that have made up the research model. The five HEdPERF dimensions have served as the study's exogenous variables. In contrast, the endogenous variables examined in this study have been student satisfaction, institutional reputation, and student loyalty.

2. Method

This study has been conducted on the full-time students of the Diploma in Office Management and Technology programme at Universiti Teknologi MARA Cawangan Terengganu. The population for this study has been 756 students, and the sample size required has been 90 students based on G-Power (Kang, 2021). Questionnaires have been distributed online via Google Forms by using the simple random sampling technique. Three hundred seventy (370) complete questionnaires have been received, which have exceeded the required sample size. The data collected have then been analysed by using SPSS Version 23.0 and PLS 3.3.

The survey instrument has been adapted from the HEdPERF dimensions that measure higher learning institutions' service quality, including academic aspects, non-academic aspects, access, reputation, and programmes (Faris Abdullah, 2005), and used the five-point Likert scale. In addition, student satisfaction has also been measured with four items adapted from the same author using the seven-point Likert scale. In the meantime, student loyalty has also been measured through five items adapted from Helgesen and Nettet (2011) using the seven-point Likert scale. Furthermore, institutional image has been adapted from Narteh (2013), which has included seven items and used the seven-point Likert scale.

3. Results and Discussion

Table 1. Convergent Validity

Construct	Item	Loading	CR	AVE
Academic Aspects	ACADEMIC1	0.832	0.899	0.691
	ACADEMIC2	0.849		
	ACADEMIC3	0.857		
	ACADEMIC4	0.785		
Non-Academic Aspects	NONACA1	0.735	0.925	0.712
	NONACA2	0.871		
	NONACA3	0.865		
	NONACA4	0.868		
	NONACA5	0.87		
Access	ACCESS1	0.878	0.927	0.808
	ACCESS2	0.906		
	ACCESS3	0.913		
University Reputation	REPUTATION1	0.896	0.947	0.781
	REPUTATION2	0.901		
	REPUTATION3	0.86		
Programmes	PROGRAM1	0.862	0.916	0.785
	PROGRAM2	0.839		
	PROGRAM3	0.883		
	PROGRAM4	0.886		
Student Satisfaction	STUDENTSAT1	0.901	0.946	0.814
	STUDENTSAT2	0.905		
	STUDENTSAT3	0.933		
	STUDENTSAT4	0.87		
Institutional Image	IMAGE1	0.822	0.935	0.673
	IMAGE2	0.854		
	IMAGE3	0.825		
	IMAGE4	0.87		
	IMAGE5	0.828		
	IMAGE6	0.779		
	IMAGE7	0.76		
Student Loyalty	LOYALTY1	0.882	0.924	0.752
	LOYALTY2	0.914		
	LOYALTY3	0.857		
	LOYALTY4	0.895		
	LOYALTY5	0.872		

Table 1. presents the dataset, Student Satisfaction (n=370), which has been used to assess the reflective measurement model in Figure 1. The exogenous variables data have been academic aspects consisting of four indicators, non-academic aspects consisting of five indicators, access consisting of three indicators, reputation consisting of three indicators, and programmes consisting of four indicators. Meanwhile, the endogenous variables data have been student satisfaction consisting of five indicators, institutional image consisting of seven indicators, and student loyalty consisting of five indicators. Apart from the dataset, Table 1 also presents the reliability and validity of the study. The composite reliability (CR) values >0.70 has indicated that these constructs have an adequate level of internal consistency.

Besides, the average variance extracted (AVE) values have met the satisfactory level of AVE with the result of >0.50. The results have shown that the items in each construct have explained more than 50% of the construct variances (Hair et al., 2017). Item loading higher than 0.5 for indicator reliability is necessary (Kim, 2010). Therefore, there have been no items eliminated because the item loadings for this study have not had any values below 0.50.

Table 2. Discriminant Validity (HTMT)

Construct	1	2	3	4	5	6	7	8
Academic Aspects								
Access	0.797							
Institutional Image	0.801	0.632						
Programmes	0.899	0.883	0.778					
Non-Academic Aspects	0.891	0.817	0.761	0.889				
Reputation	0.888	0.801	0.810	0.870	0.898			
Student Loyalty	0.710	0.582	0.885	0.698	0.728	0.733		
Student Satisfaction	0.868	0.703	0.794	0.876	0.788	0.829	0.762	

Meanwhile, Table 2 shows that the discriminant validity of all the entry variables in the model have been determined by using the heterotrait-monotrait (HTMT) ratio of correlation criterion (Henseler et al., 2010). The discriminant validity has been established in the measurement model when the correlative values were corresponding to the respective constructs not exceeding the HTM 0.90 criterions threshold.

Table 3. Path Coefficient and Hypothesis-Testing

Relationship	Beta	Std. Error	T Value	P Value	LL	UL	VIF	Decision
Academic Aspects -> Student Satisfaction	0.27	0.06	4.33	0.000	0.17	0.37	3.98	Supported
Non-Academic Aspects -> Student Satisfaction	0.12	0.06	2.06	0.040	0.02	0.22	3.59	Supported
Access -> Student Satisfaction	-0.03	0.05	0.63	0.530	-0.1	0.05	2.77	
Reputation -> Student Satisfaction	0.12	0.06	0.06	0.060	0.02	0.22	4.09	
Programmes -> Student Satisfaction	0.39	0.08	5.25	0.000	0.27	0.52	5.63	Supported
Institutional Image -> Student Satisfaction	0.65	0.04	14.42	0.000	0.57	0.72	2.18	Supported
Student Satisfaction -> Institutional Image	0.74	0.03	26.2	0.000	0.69	0.78	1.00	Supported
Student Satisfaction -> Student Loyalty	0.23	0.05	4.54	0.000	0.14	0.31	2.18	Supported

*Direct Relationship

The bootstrapping procedure has been used to generate the results for each path relationship of the model shown in Table 3 to test the hypotheses for this study. The bootstrap sub-samples with 1,000-sample cases have been computed to estimate the model for each sub-sample (Hair et al., 2017).

There have been six hypotheses supported for the direct path relationship, where three dimensions in HEdPERF have been supported. The path relationship between academic aspects and student satisfaction in the higher learning institution has been positively related, $\beta=0.27$, $p<0.001$ at the 95% confidence level. The path relationship between non-academic aspects and student satisfaction in the higher learning institution has also been positively related, $\beta=0.12$, $p<0.05$ at the 95% confidence level. The path relationship between programmes and student satisfaction in the higher learning

institution has also been positively related, $\beta=0.39$, $p<0.001$ at the 95% confidence level. However, there have been two dimensions of HEdPERF, comprising access and reputation, that have been rejected as the P-value has been more than 0.05. The path relationship between access and student satisfaction in the higher learning institution has been negatively related, $\beta=-0.03$, $p>0.05$ at the 95% confidence level. However, the path relationship between reputation and student satisfaction in the higher learning institution has been positively related, $\beta=0.12$, $p>0.05$ at the 95% confidence level.

Table 4. Path Coefficient and Hypothesis-Testing for the Mediating Variable

Relationship	Beta	Std. Error	T Value	P Value	LL	UL	VIF	Decision
Student Satisfaction -> Student Loyalty	0.48	0.03	13.76	0.000	0.43	0.54	0.48	Supported

*Indirect Relationship

The indirect path relationship between student satisfaction and student loyalty, mediated by the institutional image of the higher learning institution, has been positively related, $\beta=0.48$, $p<0.001$ at the 95% confidence level.

Table 5. Effect Size

Construct	R2	f2		Student Loyalty	Decision
		Student Satisfaction	Decision		
Academic Aspects		0.06	Small		Small
Access		0.00	Small		
Institutional Image	0.54			0.64	Medium to Large
Programmes		0.09	Small		Small
Non-Academic Aspects		0.01	Small		Small
Reputation		0.01	Small		Small
Student Loyalty	0.70				
Student Satisfaction	0.68	1.18	Large	0.08	Small

In the meantime, Table 5 presents the coefficient of determination (R2) and the effect size (f2) of all the exogenous constructs on the endogenous constructs. The R2 value of 0.54 has suggested that the exogenous variables in this study explain a 54% variance in institutional image as an indicator of the substantial explanatory capacity. In comparison, R2 of 0.70 has indicated a 70% variance in student loyalty, and R2 of 0.68 has indicated a 68% variance in student satisfaction, contributing to student loyalty. The f2 effect size values have also exhibited the importance of each exogenous construct to the endogenous constructs. Cohen (1988) has defined that the value of 0.02 has a small effect size, 0.15 has a medium effect size, and 0.35 has a medium-to-large effect size. The effect size of the institutional image on student loyalty ($f2=0.64$) is medium-to-large compared to student satisfaction on student loyalty ($f2=0.08$), which only has a small effect size.

The model for this study has been assumed to have fewer errors in predicting ability if the PLS model's RMSE, MAE, and MAPE values have had the lower values than the Linear Model (LM). In addition, the Q2 values of the PLS have been higher than those of the LM proposed, which means that if all the items' differences are lower (negative), then there is a strong predictive power (Sarstedt & Cheah, 2019). On the other hand, if all the items' differences are higher (positive), then the predictive relevance is not confirmed. However, only the minority of the Q2 values of the PLS (mostly positive) has a low predictive power. All the endogenous item variables have fewer errors in their predictive relevance compared to the LM model. The structural model has a strong predictive power. Thus, this indicator shows that the theoretically established path model has improved the predictive performance of the available indicator data.

This study has been conducted to fulfil three main objectives, which have been, firstly, to identify the dimensions of the HEdPERF model, such as academic, non-academic, access, reputation,

and programmes, towards student satisfaction in the higher learning institution, and secondly, to investigate the relationship between student satisfaction and student loyalty. There have been five dimensions of the HEdPERF model, which are academic, non-academic, access, reputation, and programmes, that are positively related to student satisfaction in the higher learning institution. This finding has been supported by the previous studies using the HEdPERF instrument, revealing that most university students are optimistic about service quality at their universities (Vo, 2021; Mulyono et al., 2020; Kimani et al., 2011). Three hypotheses for the dimensions of HEdPERF have been supported and aligned with the previous studies (Vo, 2021; Kimani et al., 2011). However, two hypotheses for the dimensions of HEdPERF have been rejected, which are access and reputation. This finding has been in contrast with the finding resulted by a study by Mulyono et al. (2020), in which access and reputation have the highest value in the study. The respondents for Mulyono et al. studies have been the seventh-semester students at Universitas Muslim Nusantara Al-Washliyah. On the other hand, the respondents for this study have been the students at Universiti Teknologi MARA Cawangan Terengganu from semesters one to five. This university has numerous branches throughout Malaysia.

Not to forget, the final objective of the study has been to measure the mediating effect of institutional image on student satisfaction and student loyalty. This study has proposed to investigate three new endogenous constructs, which are student satisfaction, student loyalty, and institutional image, of which the institutional image acts as the mediating variable. Based on the results, it can be concluded that there is a positive relationship between these three endogenous constructs. The same finding has been shared by Chandra (2019), who has found that university image positively and significantly influences student satisfaction and loyalty. Likewise, a study by Nursaid et al. (2019) has also found that institutional image influences student satisfaction. Additionally, it has also been discovered that the excellent portrayal of an institution increases its student satisfaction levels. The direct effect of student satisfaction towards student loyalty is $\beta=0.23$, $p<0.001$ at 95%. However, when institutional image has been assigned as a mediator between the two variables, the indirect effect result is $\beta=0.48$, $p<0.001$ at 95%. The result for institutional image being a mediator has proven that this variable has a mediating effect between student satisfaction and student loyalty.

4. Conclusion

In conclusion, this study has fulfilled the three research objectives of this study. Hence, all the exogenous constructs, academic, non-academic, access, reputation, and programmes, have a significantly strong relationship with student satisfaction in the higher learning institution. The five constructs have been the part of HEdPERF to measure service quality in the higher learning institution. Programmes is the strongest factor influencing student satisfaction in the higher learning institution, followed by both the academic and non-academic aspects. For this study, the mediating variable has been tested between student satisfaction and student loyalty. Surprisingly, the institutional image of the higher learning institution has a mediating effect between student satisfaction and student loyalty. However, without the mediating variable, the path coefficient between student satisfaction and student loyalty has been lower than when the mediating variable has been added to the structural model. In the meantime, this study has proposed eight direct relationships and one indirect relationship. This study has been conducted to determine whether the students are satisfied with the services provided by the institution. The institutional image portrayed by the higher learning institution could be a pivotal factor in student satisfaction, which will lead to student loyalty towards the institution. The results of this study will help to improve its current services to the students and its institutional image. Therefore, for future research, the researchers intend to apply the same survey to other local public and private universities in the State of Terengganu. The preliminary study has proven the validity and reliability of the instruments used in this study. Besides, the researchers have also planned to add new variables in HEdPERF based on the previous studies by the other researchers.

5. Co-Author Contribution

The authors have declared that there is no conflict of interest in this article. Author 1 has carried out the field work and conducted the statistical analysis and interpretation of the results. Authors 2, 3, and 4 have prepared the literature-review section and the complete writeup of the whole article.

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