THE IMPACT OF UNIVERSITY ENTITIES ON STUDENTS' LOYALTY: THE MEDIATING ROLE OF STUDENT SATISFACTION

Aznita Ahmad[a,b], Nafiza Mahayuddin[a,c], Wan Nurul Fatimah Wan Muhammad Nawi[d], Mazni Saad[e], and M.H.A. Ong[f]

[a]Department of Management Information Systems & Business Analytics, Faculty of Business & Accountancy, University Selangor, Jalan Zirkon A7/A Section 7, 40000 Shah Alam, Selangor, Malaysia. (E-mail: [b]aznita@unisel.edu.my; [c]nafiza@unisel.edu.my)

[d]Department of Marketing & Muamalat, Faculty of Business & Accountancy, University Selangor, Jalan Zirkon A7/A Section 7, 40000 Shah Alam, Selangor, Malaysia. (E-mail: wannurul@unisel.edu.my)

[e]Department of Tourism, Kulliyyah of Languages and Management, International Islamic University Malaysia, Pagoh Education Hub, KM1, JalanPanchor, 84600 Pagoh, Muar, Johor, Malaysia. (E-mail: maznisaad@iium.edu.my)

[f]Department of Statistics and Decision Sciences, Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA, Jalan Universiti Off KM12, Jalan Muar, 85000 Segamat, Johor, Malaysia. (E-mail: napieong@uitm.edu.my)

ABSTRACT

Student loyalty in the higher education sector helps university administrators establish appropriate programs, facilities and services that promote, develop, and maintain a successful long-term relationship with both current and former students. This study proposes the use of a mediation model that links university entities and student loyalty via student satisfaction. A survey research design was used to collect data from 200 students of private universities in the Klang Valley, Malaysia. The data were then analyzed using the Partial Least Square-Structural Equation Model (PLS-SEM). Upon analysis, it was found that student satisfaction was the major driver of student loyalty. The result also reveals that student satisfaction has fully mediated the relationship between academic facilities and student loyalty, whereas student

satisfaction partially mediated the relationship between the support system and student loyalty. The study highlights the need for Higher Education Institutions (HEIs) to seriously acknowledge and focus in providing better university entities for students' satisfaction as the satisfied students tend to be more loyal to make a comeback to the university.

1. INTRODUCTION

A widely accepted critical factor in the long-term success of an educational institution is student loyalty (Fares, Achour, and Kachkar, 2014). All over the world, the education sector is now facing the demanding challenge of being innovative when providing education and a quality environment to its students (Danjuma and Raslia, 2012). Primary attention should be focused on the students, who are the main customers in the education industry to such an extent that the university must know how to fulfil all their students' needs (Thomas, 2011). According to Cardona and Bravo (2012) and Thomas (2011), increasing quality is a strategic step to becoming more competitive, while creating the university's competitive advantage is all about giving to the students a different value to academic experience (Martin et al., 2015). Student loyalty is believed to be positively associated with student satisfaction and educational institution performance. Satisfaction with a university according to Oliver (1997), is based on the experience one has had with it. Accordingly, both satisfaction experience and reputation of the supplier (in this case, of universities) are important for student loyalty (Zabala et al., 2005). When pursuing higher education, a student's top priority for the choice of a university is the entities it has on offer (Annamdevula and Bellamkonda, 2016). Interestingly, for the majority of these students, the quality only comes second (Kotler and Fox, 1995).

2. LITERATURE REVIEW

A student's perception of university entities is created during the duration of one's study in a university (Helen and Ho, 2011). These entities are closely related to the students' satisfaction as well as their loyalty, which subsequently determine the university's competitive advantage (Cardona and Bravo, 2012). The following discusses

previous studies done on university entities and their relationship with student satisfaction and loyalty.

2.1 UNIVERSITY ENTITIES

Higher education institutions are beginning to realize today that their entities represent a business-like service industry and are focusing all efforts on ensuring their students are happy and satisfied with their learning experience at their chosen university. Private higher learning institutions too will always try to create the best learning environment that fosters successful students who are academically excellent as well as loyal to the university (Saad et al., 2017). A study by Annamdevula and Bellamkonda (2016) found that a university's standard of service is composed of six latent dimensions, including teaching, administrative services, learning facilities, campus infrastructure, support services, and internationalization. Thus, the outcome of current study aims at helping organizational leaders provide a better strategy for increasing customer satisfaction, motivation and loyalty.

Similarly, another study by Imran, Wei, and Waheed (2019) at several Chinese institutions aimed at assessing student satisfaction with the quality of higher education. Seven selected criteria such as Academic staff, Administrative Services, Library Services, Curriculum Structure, Career Perspectives, Venue, and Infrastructure were used to determine the quality of higher education. Based on the multiple regression analysis conducted, a positive relationship was found between higher education quality and student satisfaction. It shows that the more efficient the higher institution, the happier the students will be.

Another research by Teeroovengadum, Nunkoo, and Gronroos (2019) also attempted to validate the quality of the Higher Education Service (HESQUAL) scale by using a confirmatory approach that tested an improved structural model predicting student loyalty by image, perceived value, satisfaction and service quality. The study used a comprehensive measure of service quality and showed that it is worth considering functional service quality as a higher-order model that measures the attitude and behavior of the administrative and academic staff, administrative processes, general infrastructure, academic competence and facilities support. However, there is a strong difference between functional and technical consistency, as both the technical and functional dimensions play a significant role in influencing student expectations and behaviors. In

conclusion, the quality of university service that reflects the university has an important role to play in attracting student satisfaction.

2.2 STUDENT SATISFACTION

Satisfaction can be defined as a state felt by a person who has experienced performance or an outcome that fulfils his or her expectation (Arif and Ilyas, 2013; Kotler and Clarke, 1987). This definition indirectly suggests that satisfaction happens when performance correlates with customer expectations. Service quality, experience, expectations, perceived value and consequence evaluation of service have always been fundamental to defining satisfaction (Ali and Amin, 2014). The concept of student satisfaction has been defined in past research as a short-term attitude resulting from an evaluation of student's educational experience (Elliott and Healy, 2001) or as a comparison between experience obtained in the university and expectations of that experience (Alves and Raposo, 2007). Lai et al. (2015) suggested that academic quality is not the sole determinant of satisfaction, but it is also covered by HEI's services and other external factors. Ushantha and Kumara (2016) argued that students' experience with educational services is complex and different from customer experience in any other service firm. The difference is due to the timing of the experience and the emotions felt when selecting a professional path. Most Higher Education Institutions (HEIs) realize the importance of keeping students satisfied through continuously improving and modifying their plan at meeting the students' future needs. This also includes continuous efforts at assessing satisfaction levels of current as well as potential customers (Arif, Ilyas, and Hameed, 2013).

Students usually assess their satisfaction with the university from their experience of services and facilities at their disposal during their time at these HEIs (Weerasinghe and Dedunu, 2017; Elliott and Shin, 2002). Kärnä, Julin, and Nenonen (2013) argued that the provision of university facilities and the effective management of these facilities help the university achieve its goal of providing both the students and employees with an effective infrastructure for university functions. This argument is supported by Hanssen and Solvoll (2015), who found that students' perception of university facilities is positively and significantly correlated with their overall satisfaction with the university. They also suggested that improving student satisfaction means investing in up-to-date facilities for the university's social areas, auditoriums, and libraries, for example. A

study on public HEIs in Portugal (Pedro, Alves, and Leitão, 2018) also demonstrated the positive and significant influence various services such as academic management, social action, educational supply, and infrastructure have on students' Quality of Academic Life (QAL).

Previous researchers too found that positive educational experiences, as well as quality services and facilities that students encounter during learning directly contributed to their satisfaction (Weerasinghe and Fernando, 2018; Weerasinghe and Dedunu, 2017). This is obvious in the Norwegian university system where a web-based survey of 5,232 students found that institutional reputation, attractiveness of the host university city, and the quality of facilities strongly influence student satisfaction levels (Hanssen and Solvoll, 2015). Similarly, Annamdevula and Bellamkonda (2016) found six key factors of service quality, namely teaching, administrative services, support services, hostel facilities, library and lab facilities, as well as internationalization at three of the oldest universities in Andhra Pradesh state in India.

The outcome of previous studies has shown the importance of student satisfaction on a university's support system. Whether it is the lecturers, facilities, systems, or others, everything can be the determinant that attracts students to come and stay longer in the university. Most universities realize the importance of student satisfaction as it can create student loyalty. In the context of a university, it means that students will further their studies in the same university. Therefore, this study hypothesizes that:

H1: Student satisfaction positively and significantly influences university entities.

2.3 STUDENT LOYALTY

For numerous HEIs, student loyalty is key to a critical measurement of their success. To Aritonang and Lerbin (2014), a loyal student population is a source of competitive advantage. However, behavioral loyalty is not an applicable concept to HEI service since no one buys the same service more than once due to it being produced and consumed simultaneously. In the context of HEIs, student loyalty to the educational institution may not only refer to their learning experience that includes using the institution's offering on a regular basis, but also the positive perceptive and emotional attitude that they have toward the institution that will motivate their behavioral loyalty

(Hening-Thurau, Langer, and Hansen, 2001). This notion is supported by Mansori, Vas, and Ismail (2014) who suggested that satisfied and loyal students are more likely to spread favorable comments and recommend the institution to others.

According to Shaver (2012), student loyalty refers to the student's act of devotion to the university, such as applying to graduate school or donating time and money to the university. The display of such an attitude seems to have a motivating effect on others to affiliate themselves to the same university for further studies. Fontaine (2014) too discovered that a student could demonstrate loyalty by continuing to enrol in the same university and by recommending the university to others. This is consistent with findings from recent research where Austin and Pervaiz (2017) suggested that student loyalty refers to a student's repeat purchase behaviour and word of mouth, two valuable responses expected of satisfied students. The strong association between satisfaction and loyalty means that a satisfied student is very often a loyal student who in turn will spread a good word about the institution which can bring new students for admission to the university (Austin and Pervaiz, 2017).

The above can be inferred as student loyalty is a principle of behavior and can be evaluated in several respects. Students may exhibit loyalty behaviors through physical study at the same university but this does not necessarily mean they are loyal because they are already familiar with and find it easy to adapt to the university system. If they study further at another university, they may feel trouble adapting to the new environment. Often loyalty activity may also be assessed based on the mindset of certain students with respect to how they viewed university institutions that they had encountered that contributes to forming a positive perspective such as suggesting to family and friends that they study at that same university, as well as giving good reviews to the public.

Today's media-savvy students are good at comparing and making a choice of the best university to further their studies. Some of the things they will look for include the university with the best technology, the best buildings, and the best on-campus services. Besides factors such as its professional status and its warm and comfortable environment, also vital to the students' learning experience are its teaching and learning quality, academic facilities, and student support services (Yusoff, McLeay, and Woodruffe-Burton, 2015). Several studies have proven that a strong bond between students and university entities will lead to many positive outcomes,

such as student retention. Vianden and Barlow (2015) found that a positive relationship exists between perceived quality of academic advising and student loyalty among 1,207 undergraduates at three comprehensive Midwestern institutions. Another study by Fares et al. (2014) revealed that service quality, student satisfaction, and university reputation have positive effects on student loyalty. In their study, service quality refers to the quality of teaching, physical facilities and student support services. Douglas et al. (2015) also proved that there was positive feedback between teaching and student loyalty among 350 undergraduate students across two North-West University Business Schools in the UK. In this instance, the majority of the respondents in both these universities revealed that they would continue with their studies and also recommend the university to others mainly because their teaching and learning experience in the university was very positive.

A recent study by Ali and Ahmed (2018) confirmed the significant impact that student satisfaction and perceived university image had on student loyalty. Students in this study were satisfied with the perceived academic and administrative quality, physical facilities, university image, and university switching cost as determinants of student loyalty. Switching cost refers to the cost students have to bear when shifting to another university. It could be in terms of financial or non-financial costs such as having to pay higher tuition fees or taking up some additional courses. Also, students may have to contact different universities for more information which takes additional effort and time. A higher switching cost leads to the retention of customers, which is reflected in the concept of behavioral loyalty. Their findings align with those of Egyir (2015), who studied students at the University of Ghana where perceived value, an image of the university, and perceived service quality positively influenced the level of student satisfaction. Also discovered was when these three antecedents interacted with student satisfaction, a positive influence was seen on student loyalty. Perceived value was the most influential antecedent of student loyalty, followed by university image, perceived service quality, and student satisfaction. Service quality here refers to satisfaction with the professional quality of lecturers and the overall quality of services rendered by administrative staff.

In the context of students from Thailand, Kunanusorn and Puttawong (2015) found student satisfaction, university image, student trust, and student perceived value having a positive influence

on student loyalty. They highlighted student satisfaction acting as a mediating variable and implied that it is the major driver of student loyalty, while for Mansori et al. (2014), overall satisfaction is mainly affected by tangibility. Their finding indicated that on-campus physical facilities (such as computer labs, libraries, and classrooms) play a major role in satisfying the students. Tangibility was also shown to have the highest influence (directly and indirectly) on the students' intention to continue to a higher level of studies and speak well of the institution to their friends and other society members.

Previous studies suggested that student experience in the higher education context involves service encounters within the learning and teaching environment, as well as within its supporting environment, such as academic facilities and student support services (Muhammad, Sapri, and Sipan, 2014). All of the mentioned university entities have positively and strongly contributed to increased student loyalty (Muhammad et al., 2014). On the other hand, Vianden and Barlow (2014) revealed that even student loyalty is mainly driven by the institutional dimensions (quality of an institution, student services, staff, and facilities) of perceived relationship quality of students with their universities. A different variable was also discovered by these researchers, which may encourage students to have loyalty not just to their institutions but also themselves. Based on the Student University Loyalty Instrument Model administered to 1,207 undergraduates at three comprehensive Midwestern institutions, the results suggested a positive relationship existed between the perceived quality of academic advising and student loyalty. Students who received good academic advising may value the personal investment provided to them and would, therefore, consider ways to reciprocate to the institution. For example, they may be proud and recommend the institution to prospective students, and later they may contribute financially or remain connected to the institution even after graduation.

The current study contributes to the literature on HEI management by assessing the role of student satisfaction as a mediator for university entities and student loyalty. Present literature empirically argues that university entities influence students' satisfaction. On the other hand, several studies have also shown the importance of the impact of student satisfaction on loyalty. Similarly, present literature has also highlighted the significant relationship between university entities and student loyalty. This study, therefore,

hypothesizes that student satisfaction mediates university entities and student loyalty.

H2:   University entities positively and significantly influence student loyalty.

Word of Mouth (WOM) communication usually is positively generated from satisfied customers (Kwun, Elly, and Choi, 2013) and impacts donor acquisitions, donor loyalty, and organizational reputation (Williams and Buttle, 2013). Yusoff et al. (2015) also highlighted WOM resulting from positive student experiences. From the educational institution's view, satisfied students are more interested in staying on with the institution and, in addition, stand more chance of being excellent throughout their studies. Carter and Yeo (2016) also agreed that there was a positive relationship between campus life and student satisfaction and loyalty for business students in Malaysian higher education institutions. The study by Fernandes, Ross, and Meraj (2013) found a positive relationship between satisfaction and loyalty when it showed that students saw their overall programme experience and the quality of university facilities and services as a means to satisfaction. As a result, they are more likely to be loyal to the university.

H3:   Student satisfaction mediates university entities and student loyalty.

3. METHODOLOGY

3.1 POPULATION AND SAMPLING

The random sampling technique which is cluster sampling was adopted for collecting data from 200 students who have completed at least one year of studies at private universities in the Klang Valley, Malaysia. These students were selected primarily because they have been exposed to various services provided by the universities, including administrative supports and hostel services. A list of twenty-one Higher Education Institutions (HEIs) were obtained from the respective academic departments of a private university, out of which seven HEIs were randomly selected as a sample. Questionnaires were then distributed to all students in the seven selected HEIs. The

completed questionnaires were duly collected. There were some elements of non-response bias implicit in the data as some refused or were less ready to participate in the survey (Sekaran and Bougie, 2016) and biased or unfilled responses. Approximately 98% of the valid questionnaires (n = 200) was found useful for the analysis.

3.2 ANALYSIS

The key concepts in this study are university's entities, student satisfaction and student loyalty. The structured questionnaire survey (Saunders et al., 2009) used as the primary instrument for this study gathered data on the students' attitudes toward university's entities, and their level of satisfaction and loyalty toward services offered by the university. The study also explored the relationship between the targeted variables (Creswell, 2014). The complete analysis was done in two stages. Stage 1 refers to various steps in the process of developing and validating the instrument. Convergent validity analysis was used to extract the factors and to assess validity, while Composite Reliability was used to assess the instrument reliability. To examine the distribution of data (Pallant, 2016), Skewness and Kurtosis statistics were used.

In Stage 2, the Structural Equation Modeling using the Partial Least Square estimation technique (i.e., PLS-SEM) was used to measure the relationship between three latent variables. According to Hair et al. (2012, 2017) and Ong and Puteh (2017), the PLS-SEM method is most suitable for exploring this relationship. Hair et al. (2017) and Henseler and Chin (2010) also suggested using 5000 replication samples (i.e., bootstrapping theory) to access the significant influence of these variables by estimating the t-statistics and Bootstrap-t values. In terms of measuring the effect of mediation, this study also follows the method suggested by Hair et al. (2017), which analyzes the indirect effect of the bootstrapping method.

3.3 MEASUREMENT OF CONCEPT

The questionnaire contains 25 items split into three sections, with each measuring university entities, student satisfaction, and student loyalty. A total of 15 items covering teaching, academic facilities, and system support experienced by the student as the primary customer in higher education were set aside to measure university entities. Five (5) items measured student satisfaction with university provided services. A 5-

item measure was used to capture the behavior and attitudinal dimensions of student loyalty. All items were measured on a five-point Likert scale that varies from 1 (strongly disagree) to 5 (strongly agree). In this study, there are three independent latent variables affecting student satisfaction, namely teaching experience, academic facilities, and support system. Student satisfaction is also considered the mediator in this relationship construct and is assumed to be the driver of student loyalty. The conceptual framework and the relationship between the latent variables of this study are presented in Figure 1.

FIGURE 1
Conceptual Framework
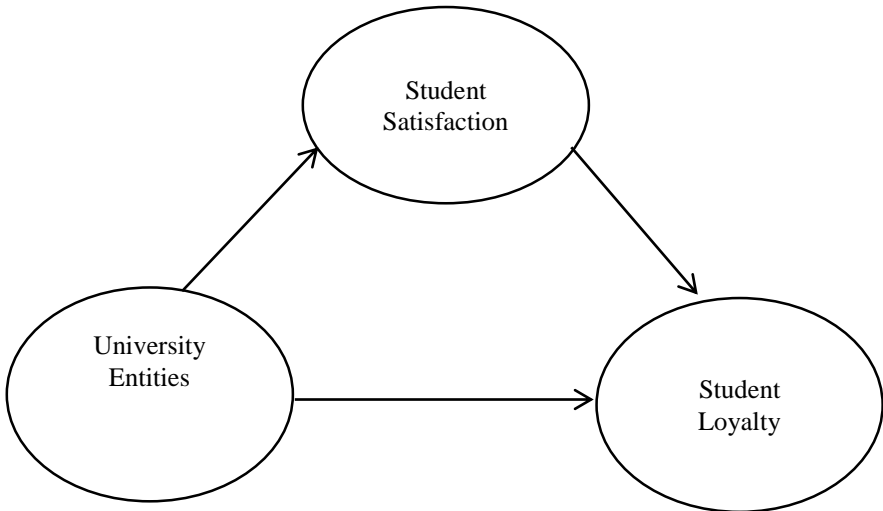
4. ANALYSIS AND RESULTS

4.1 RESPONDENT'S PROFILE

Table 1 provides demographic characteristics of the respondents who are grouped according to gender, race, education funding, and reason for choosing a college. The result shows that the majority of the respondents were male (58.5%) and Malay (58.5%). A total of 135 (67.5%) respondents sourced PTPTN to finance their university studies. The top three reasons for their choice of a place of study are the reputation of college (28.0%), a good university education (26.5%), and exciting courses on offer (13.0%).

TABLE 1
Respondent's Profile

Profile	Characteristics	Frequency	Percentage
Gender	Male	117	58.5
	Female	83	41.5
Race	Malay	117	58.5
	Chinese	42	21.0
	Indian	41	20.5
Education	PTPTN	135	67.5
Funding	MARA Fund	8	4.0
	JPA Fund	3	1.5
	Self-Funding	54	2.5
Reasons for	Reputation	56	28.0
Choice	Good Education	53	26.5
of University	Marketing/Advertising	19	9.5
	Lower Cost	16	8.0
	Infrastructure Facilities	21	10.5
	Opportunity to Work	9	4.5
	Interesting Course Offer	26	13.0

4.2 MEASUREMENT MODEL ANALYSIS

A convergent validity analysis was performed on the model and results are presented in Table 2. The results show that all indicators met the minimum threshold value of 0.70 factor loading (Hair et al., 2017) except for Student Satisfaction. However, this indicator was maintained in the analysis since the value of the loading was above 0.60 (Hair et al., 2017). On the other hand, the Average Variance Explained (AVE) for each construct was above 0.50 (Hair et al., 2017), while both reliability tests using Composite Reliability (γ) and Cronbach's alpha (α) on each of the constructs were also above 0.70 (Hair et al., 2017), therefore confirming that each variable had a good unidimensional validity. The data can also be considered to be of an approximately normal distribution with no extreme outliers present since both Skewness (range: -1.072 to -0.364) and Kurtosis (range: -0.748 to 1.059) statistics were in the range of ±2.00 (Hair et al., 2017). It was necessary that the procedure is followed although there was a free data distribution assumption in the context of PLS-SEM theory (Hair et al., 2012) where an extremely non-normal data distribution can give an unrepresentative standard error of parameter estimates from the bootstrapping procedure (Hair et al., 2017).

TABLE 2
Convergent Validity for Measurement Model

Indicators	Loading	AVE	γ	α
Teaching				
Lecturers are accessible	0.865*			
Lecturers treat all students equal	0.861*			
Course content develops a student's knowledge	0.813*	0.706	0.906	0.862
Student evaluation of lecturer to improve service	0.821*			
Academic Facilities				
Science labs are well equipped	0.718*			
Computers are of the latest technology	0.820*			
Campus environment is conducive for study	0.850*	0.635	0.897	0.855
Classrooms are equipped with teaching aids	0.859*			
Education facilities have an impact on education	0.728*			
Support System				
University provides counselling services	0.751*			
University provides good medical service	0.720*			
Accessibility of students' system (i.e. students portal)	0.787*	0.582	0.874	0.821
Accessibility of timetable	0.790*			
The usefulness of the study program's website	0.765*			
Student Satisfaction				
University classrooms are comfortable	0.631*			
Service at the university affairs office is friendly and fast	0.824*			
Satisfied with a university parking	0.777*	0.620	0.890	0.844
University recruitment process is clear and well organized	0.817*			
Satisfied with the campus security system	0.866*			

TABLE 2 *(continued)*

Indicators	Loading	AVE	γ	α
Student Loyalty				
Prefer the same university for higher studies	0.794*			
Recommend university to family and friends	0.856*			
Talk positively about university	0.898*	0.730	0.931	0.907
Choose the same university to start a career	0.872*			
Feel proud to be associated with the university	0.848*			

Note: AVE = Average Variance Explained; γ = Composite Reliability; α = Cronbach's Alpha; *p <0.05.

Table 3 is an assessment of the model based on the HTMT discriminant analysis. It shows that each latent variable was totally different from the other since each HTMT ratio value was below 0.90.

TABLE 3
HTMT Discriminant Analysis for Measurement Model

	(1)	(2)	(3)	(4)	(5)
(1)	-				
(2)	0.359**	-			
(3)	0.552**	0.319**	-		
(4)	0.431**	0.383**	0.439**	-	
(5)	0.379**	0.539**	0.421**	0.481**	-

Note: (1) = Academic Facilities; (2) = Loyalty; (3) = Satisfaction; (3) = Support System; (4) = Teaching; **p <0.01.

4.3 THE STRUCTURAL MODEL

Table 4 depicts the structural model's assessment results. The results reveal that University Entities which were measured by Teaching, Academic Facilities, and Support System was able to explain 33.6% effect on Student Satisfaction. Further, these three variables, together with Student Satisfaction, were also able to explain 35.6% variance toward Student Loyalty. Besides, Teaching, Academic Facilities, Support Systems, and Student Satisfaction had a small effect size and predictive relevance toward Student Loyalty. The results, also reveal that although Teaching and Academic Facilities had a small effect size and predictive relevance on student satisfaction, that was not the case

for the Support System variable (Hair et al., 2012; Ong and Puteh, 2017). In the context of causal relationship, the results confirm that Academic Facilities (β = 0.268, t = 3.274, p<0.05; 95% Bootstrap-t: 0.108, 0.429) and Support System (β = 0.435, t = 6.358, p<0.05; 95% Bootstrap-t: 0.301, 0.569) had a simultaneously positive and significant effect on Student Satisfaction. These results indicate that if the average level for Academic Facilities and Support System was good, then the level for Student Satisfaction will also be good. On the contrary, the results depict that Teaching (β = -0.098, t = 1.225, p =0.222; 95% Bootstrap-t: -0.254, 0.059) had an insignificant effect on Student Satisfaction. This means that the increment or decrement level of the Teaching variable will not affect the level of Student Satisfaction (Giner and Rillo, 2016).

TABLE 4
Structural Model Assessment

Path	β	t-statistic	p-value	95% Bootstrap-t	f^2	q^2	Remark
TA → ST	-0.098	1.225 [ns]	0.222	(-0.254, 0.059)	0.011	0.005	Small
AF→ ST	0.268	3.274[*]	<0.01	(0.108, 0.429)	0.068	0.035	Small
SS → ST	0.435	6.358[*]	<0.01	(0.301, 0.569)	0.196	0.101	Moderate
TA → SL	0.253	3.369[*]	<0.01	(0.106, 0.399)	0.070	0.046	Small
AF→ SL	0.143	1.877 [ns]	0.062	(-0.006, 0.292)	0.019	0.006	Small
SS → SL	0.204	2.427[*]	0.016	(0.039, 0.369)	0.037	0.027	Small
ST → SL	0.193	2.541[*]	0.012	(0.044, 0.342)	0.082	0.076	Small

Note: TA = Teaching; AF = Academic Facilities; SS = Support System; ST = Student Satisfaction; SL = Student Loyalty; NS = Not Significant; β = Standardized Beta Coefficient; f^2 = Effect Size; q^2 = Predictive Relevance; [a]The bootstrap samples was 5000 samples; *p<0.05.

On the other hand, the results in Table 4 also show that Teaching (β = 0.253, t = 3.369, p<0.05; 95% Bootstrap-t: (0.106, 0.399)), Support System (β = 0.204, t = 2.427, p<0.05; 95% Bootstrap-t: (0.039, 0.369)), and Student Satisfaction (β = 0.193, t = 2.541, p<0.05; 95% Bootstrap-t: (0.044, 0.342)) had a positively significant effect on Student Loyalty. In contrast, Academic Facilities (β = 0.143, t = 1.877, p =0.062; 95% Bootstrap-t: (-0.006, 0.292)) had a positive but insignificant effect on Student Loyalty. These results indicate that

if the average level of Teaching, Support System, and Student Satisfaction were at a good level, then the level of Student Loyalty will also be good, although the same could not be said for the Academic Facilities effect. Figure 2 and Figure 3 illustrate the PLS-SEM analysis.
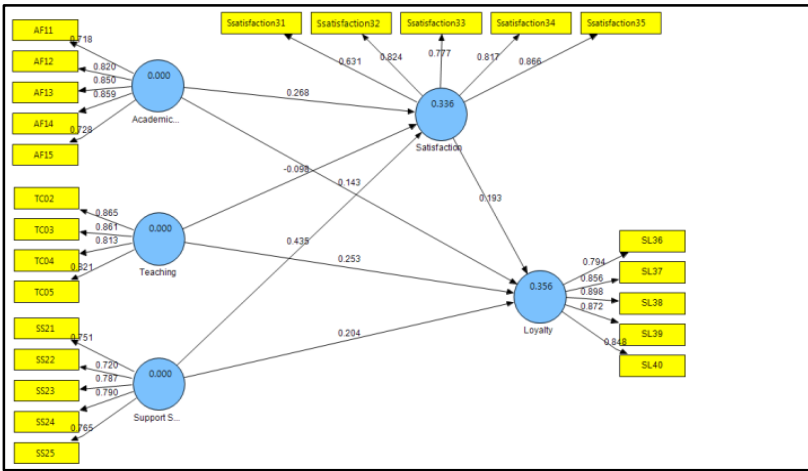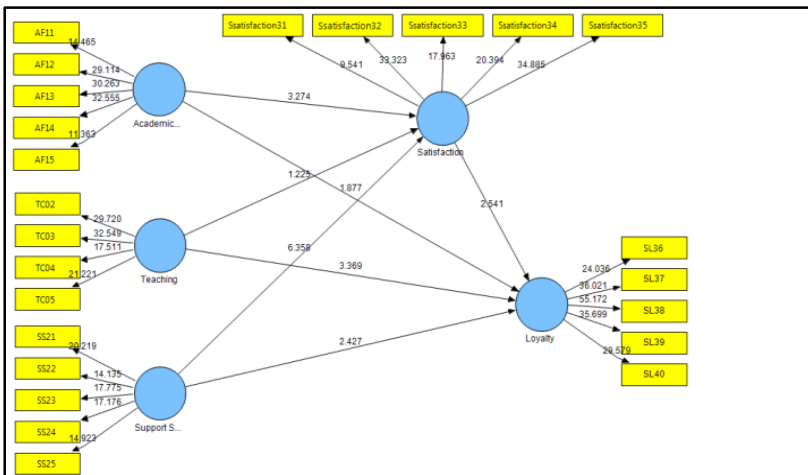
FIGURE 2
Loading Assessment

FIGURE 3
Bootstrapping Assessment

4.4 MEDIATION ANALYSIS

The indirect analysis of the results indicates that Student Satisfaction simultaneously mediated the relationship between Academic Facilities (IEC = 0.052, t = 2.156, $p<0.05$; 95% Bootstrap-t: (0.005, 0.099)) and Support System (IEC = 0.084, t = 2.556, $p<0.05$; 95% Bootstrap-t: (0.020, 0.148)) towards Student Loyalty. It is because the indirect effect of these two paths was significant at the 5% level of significance as well as the 95% confidence interval of this analysis did not include zero values. However, the indirect analysis also indicates that Student Satisfaction did not mediate the Teaching and Student Loyalty relationship since the indirect effect for this path was not statistically significant (IEC = -0.019, t = 0.987, p =0.325; 95% Bootstrap-t: (-0.057, 0.019)) due to the p-value being above the 5% level of significance and the 95% confidence interval of this indirect path included zero.

TABLE 5
Indirect Effect Assessment

Indirect Path	IEC	t-statistic	p-value	95% Bootstrap-t
TA → ST→ SL	-0.019	0.987[NS]	0.325	(-0.057, 0.019)
AF→ ST→ SL	0.052	2.156[*]	0.032	(0.005, 0.099)
SS → ST→ SL	0.084	2.556[*]	0.011	(0.020, 0.148)

Note: TA = Teaching; AF = Academic Facilities; SS = Support System; ST = Student Satisfaction; SL = Student Loyalty; NS = Not Significant; IEC = Indirect Effect Coefficient.

5. DISCUSSION

A major goal of most HEIs is to finally have their own loyal student population that will give the university an edge over others. In today's global scenario, HEIs have become extremely competitive in attracting and retaining new students (Al-Kilani and Twaissi, 2017). It is therefore vital that the management of every university knows exactly what factors can help them develop the highest level of student loyalty. These antecedents of loyalty will guide the management to devise policies aimed at student retention. To justify the link between student loyalty, student satisfaction and the students' perception of university entities, this study specifically develops an empirical model

based on the data of responses collected from 200 students at private universities in the Klang Valley.

The findings of this study reveal that academic facilities and support systems are most important for student satisfaction. Infrastructural facilities such as science labs, classroom equipment, computer centers, libraries, and educational facilities are all very important for the students. Most courses necessitate the constant use of computers, the internet, and software applications. Therefore, the presence of modern technology and adequate computer facilities enhances student satisfaction levels. A convenient and conducive campus environment will ensure that students study even better. This finding is consistent with the argument put forward by Hanssen and Solvoll (2015) who suggest that the university should invest in up-to-date facilities such as quality social areas, auditoriums, and libraries to improve student satisfaction.

Furthermore, various forms of student support such as counselling and medical services, access to student's portal, and usefulness of a program's website are considered as important variables within the support system construct that hugely influence student satisfaction with their university learning experience. A good and efficient support system specifically helps students handle the academic process better, and for this reason, academic institutions should realize the importance of the range of support that will increase student satisfaction (Annamdevula and Bellamkonda, 2016).

The findings of this study support the literature that teaching and support systems are antecedents to student loyalty (Douglas et al., 2015; Mansori et al., 2014). It is evident that easy access to lecturers, equal treatment of all students, high quality of teaching, and lecturer feedback are perceived as the most important variables influencing student loyalty. Besides, according to Li (2013), it is the support offered that is able to influence student intention to not only continue to a higher level of studies with the same university but also to spread good word of mouth about the institution to their friends and society. These findings indicate that the majority of the students value their positive experience of the teaching and support system to an extent that they will return to the University for further studies and recommend other potential students to experience what they have personally experienced.

Overall, the findings of this study show that university entities are viewed as key determinants of satisfaction that will help the university to potentially produce very happy, satisfied and loyal students who will act as a mediator in the link between university

entities and student loyalty. This result indicates that an attractive teaching method, superior academic facilities, and excellent support system offered by the university can increase student satisfaction, thus nurturing student loyalty.

6. CONCLUSION AND RECOMMENDATION

The originality of this study is grounded on the development of a comprehensive model that examines the factors influencing student loyalty. The model of this study demonstrates the link between university entities and student satisfaction toward enhancing loyalty among university students in Malaysia. Student satisfaction is found to be the mediator between university entities and student loyalty. This finding indicates that serious attention to teaching methods, academic facilities, and support system provided by universities and colleges in Malaysia is needed because the better the university entities provided, the higher the student satisfaction. Subsequently, students tend to be more loyal to the university.

The major findings of this study have some important implications for the existing field of knowledge and institution administrators. The findings contribute to existing knowledge by testing the structural theory with simultaneous measurements of the direct relationship and the mediation role of satisfaction between university entities and student loyalty. This study supports the contention that student satisfaction performs a mediating role in the link between university entities and student loyalty. The dimensions derived from this study will contribute to a greater understanding of the generic role played by these constructs in determining the future of higher education services. Further, the findings of this study could help university management to identify the factors contributing to student satisfaction so that they can discreetly provide better services that enhance student satisfaction and loyalty. The structural equation modelling (SEM) results show that university entities are key antecedents to students' satisfaction and loyalty. The teaching method, academic facilities, and support system satisfy students and, in turn, enhance student loyalty to the institution. Hence, the results of this study can help institutions to understand the importance of university entities and the relationship between students' perceived satisfaction toward university entities and loyalty.

All research has certain limitations which provide future avenues of research. In the same way, this study has a few more

aspects to explore. This study is about a group of respondents and generalization to a wider population should be done with caution. The data were reliant on a single questionnaire at a single point of time, while higher education is characterized as a long-term and continuous process. A longitudinal study to gather predictor and criterion variables before and after pursuing a university course of study would be a much stronger research design. Further, this study collected data from active students who had formally registered in a university to pursue various disciplines. Further studies also need to consider the opinion of the students prior to their joining the university, while studying in the university, as well as after graduating with a higher degree from the university. Finally, this study focused only on student satisfaction, of which university entities are the most important antecedent. Identification of other variables, besides university entities, could also prove to be a crucial contributor to overall student satisfaction. Similarly, it is just as critical to identify other elements such as value, image or institutional reputation, which may have a direct impact on service loyalty.

REFERENCES

Ali, F., and M. Amin. "The Influence of Physical Environment on Emotions, Customer Satisfaction and Behavioural Intentions in Chinese Resort Hotel Industry." *Journal for GlobalBusiness Advancement* 7, no. 3 (2014): 249-66.

Ali, M., and M. Ahmed. "Determinants of Students' Loyalty to University: A Service-based Approach." Working paper in Munich Personal RePEc Archive no 84352 (2018): 1-46.

Al-Kilani, M.H., and N. Twaissi. "Perceived Quality of Administrative Services and its Consequences on Students' Behavioral Intentions." *International Journal of Quality and Service Sciences* 9, no.1 (2017): 103-19.

Alves, H., and M. Raposo. "Conceptual Model of Student Satisfaction in Higher Education." *Total Quality Management* 18, no. 5 (2007): 571-88.

Annamdevula, S., and R.S. Bellamkonda. "The Effects of Service Quality on Student Loyalty: The Mediating Role of Student Satisfaction." *Journal of Modelling in Management* 11, no. 2 (2016): 446-62.

Arif, S., and M. Ilyas. "Quality Of Work-Life Model for Teachers of Private Universities in Pakistan." *Quality Assurance in Education* 21, no. 3 (2013): 282-98.

_____, M. Ilyas, and A. Hameed. "Student Satisfaction and Impact of Leadership in Private Universities." *The TQM Journal* 25, no. 4 (2013): 399-416.

Aritonang, R., and R. Lerbin. "Student Loyalty Modeling." *Market-Tržište* 26, no. 1 (2014): 77-91.

Austin, A.J., and S. Pervaiz. "The Relation between 'Student Loyalty' and 'Student Satisfaction' (A Case of College/Intermediate Students at Forman Christian College)." *European Scientific Journal* 13, no. 3 (2017): 324-41.

Cardona, M.M., and J.B. Bravo. "Service Quality Perceptions in Higher Education Institutions: The Case of a Colombian University." *Estudios Gerenciales* 28 (2012): 23-9.

Carter, S., and A.C.M. Yeo. "Students-As-Customers' Satisfaction, Predictive Retention with Marketing Implications: The Case of Malaysian Higher Education Business Students." *International Journal of Educational Management* 30, no. 5 (2016): 635-52.

Creswell, John W. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4th Edition). London, United Kingdom: Pearson New International Edition, 2014.

Danjuma, I., and A. Raslia. "Imperatives of Service Innovation and Service Quality for Customer Satisfaction: Perspective on Higher Education." *Procedia - Social and Behavioral Sciences* 40 (2012): 347-52.

Douglas, J.A., A. Douglas, R.J. McClelland, and J. Davies. "Understanding Student Satisfaction and Dissatisfaction: An Interpretive Study in the UK Higher Education Context." *Studies in Higher Education* 40, no. 2 (2015): 329-49.

Egyir, I.K. "The Antecedents of Student Satisfaction and Loyalty in Higher Education Institutions: An Empirical Study of Students of The University of Ghana." [Unpublished Master's Thesis]. Aalesund University College, 2015.

Elliott, K.M., and D. Shin. "Student Satisfaction: An Alternative Approach to Assessing this Important Concept." *Journal of Higher Education Policy and Management* 24, no. 2 (2002): 197-209.

_____, and M.A. Healy. "Key Factors Influencing Student Satisfaction Related to Recruitment And Retention." *Journal of Marketing for Higher Education* 10, no.4 (2001): 1-11.

Fares, D., M. Achour, and O. Kachkar. "The Impact of Service Quality, Student Satisfaction, and University Reputation on Student Loyalty: A Case Study of International Students in IIUM, Malaysia." *Information Management and Business Review* 5, no. 12 (2014): 584-90.

Fernandes, C., K. Ross, and M. Meraj. "Understanding Student Satisfaction and Loyalty in the UAE HE Sector." *International Journal of Educational Management* 27, no. 6 (2013): 613-30.

Fontaine, M. "Student Relationship Management (SRM) in Higher Education: Addressing the Expectations of an Ever Evolving Demographic and its Impact on Retention." *Journal of Education and Human Development* 3, no. 2 (2014): 105-19.

Giner, G.R., and A.P. Rillo. "Structural Equation Modeling of Co-creation and its Influence on the Student's Satisfaction and Loyalty Towards University." *Journal of Computational and Applied Mathematics* 291 (2016): 257-263.

Hair Jr, Joseph F., G. Tomas M. Hult, Christian Ringle, and Marko Sarstedt. *A Primer on Partial Least Squares Structural Equation Modeling. (PLS-SEM)* (2nd Edition). Thousand Oaks, California: Sage Publications, 2017.

_____, M. Sarstedt, C. Ringle, and J.A. Mena. "An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research." *Journal of the Academy Marketing Science* 40, no. 3 (2012): 414-33.

Hanssen, T.S., and G. Solvoll. "The Importance of University Facilities for Student Satisfaction at a Norwegian University." *Facilities* 33, no. 13/14 (2015): 744-59.

Helen, W.S.M., and W.K. Ho. "Building Relationship between Education Institutions and Students: Student Loyalty in Self-Financed Tertiary Education." *IBIMA Business Review* (2011): 1-22.

Hennig-Thurau, T., M.F. Langer, and U. Hansen. "Modeling and Managing Student Loyalty: An Approach Based on the Concept of Relationship Quality." *Journal of Service Research* 3, no. 4 (2001): 331-44.

Henseler, J., and W.W. Chin. "A Comparison of Approaches for the Analysis of Interaction Effects Between Latent Variables Using Partial Least Squares Path Modeling." *Structural Equation Modeling* 17, no. 1 (2010): 82-109.

Imran, M., Q.S. Wei, and A. Waheed. "The Impact of Higher Education Quality on Student's Satisfaction: Empirical Evidence from PR China." *Pacific International Journal* 2, no. 1 (2019): 26-35.

Kärnä, S., P. Julin, and S. Nenonen. "User Satisfaction on a University Campus by Students and Staff." *Intelligent Buildings International* 5, no. 1 (2013): 69-82.

Kotler, Philip, and Roberta N. Clarke, *Marketing For Health Care Organizations*. Englewood Cliffs, New Jersey: Prentice Hall, 1987.

_____, and Karen F.A. Fox. *Strategic Marketing for Educational Institutions*. (2nd Edition). Englewood Cliffs, New Jersey: PrenticeHall, Inc., 1995.

Kunanusorn, A. and D. Puttawong. "The Mediating Effect of Satisfaction on Student Loyalty to Higher Education Institution." *European Scientific Journal, ESJ* 11, no. 10 (2015): 449-63.

Kwun, D.J.W., E. Ellyn, and Y. Choi. "Campus Foodservice Attributes and Their Effects on Customer Satisfaction, Image, and Word-Of-Mouth." *Journal of Foodservice Business Research* 16, no. 3 (2013): 276-97.

Lai, M.M., S.H. Lau, N.A.M. Yusof, and K.W. Chew. "Assessing Antecedents and Consequences of Student Satisfaction in Higher Education: Evidence from Malaysia." *Journal of Marketing for Higher Education* 25, no. 1 (2015): 45-69.

Li, S.C. "Explore the Relationships Among Service Quality, Customer Loyalty and Word-Of-Mouth For Private Higher Education in Taiwan." *Asia Pacific Management Review* 18, no. 4 (2013): 375-89

Mansori, S., A.F. Vaz, and Z. Ismail. "Service Quality, Satisfaction and Student Loyalty in Malaysian Private Education." *Asian Social Science* 10, no. 7 (2014): 57-66.

Martin, M.C., E. Moriuchi, R.M., Smith, J.D. Moeder, and C. Nichols. "The Importance of University Traditions and Rituals in Building Alumni Brand Communities and Loyalty." *Academy of Marketing Studies Journal* 19, no. 3 (2015): 107-23.

Muhammad, S., M. Sapri, and I. Sipan. "Academic Buildings and Their Influence on Students' Wellbeing in Higher Education Institutions." *Social Indicators Research* 115, no. 3 (2014): 1159-78.

Oliver Richard, L. *Satisfaction: A Behavioral Perspective on the Consumer*. New York, NY: McGraw-Hill, 1997.

Ong, M.H.A., and F. Puteh. "Quantitative Data Analysis: Choosing between SPSS, PLS, and AMOS in Social Science Research." *International Interdisciplinary Journal of Scientific Research* 3, no. 1 (2017): 14-25.

Pallant, Julie. *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS* (6th Edition). Routledge, 2016.

Pedro, E.M., H. Alves, and J. Leitão. "Does The Quality of Academic Life Mediate the Satisfaction, Loyalty and Recommendation of HEI Students?" *International Journal of Educational Management* 32, no. 5 (2018): 881-900.

Saad, M., R. Husain, W.N.F.W.M. Nawi, and N. Mahyuddin. "Students' Quality Learning Experience: Key to Further Studies in the Same University." *Environment-Behaviour Proceedings Journal* 2, no. 5 (2017): 127-34.

Sekaran, Uma, and Roger Bougie. *Research Methods for Business: A Skill Building Approach*. New York: John Wiley & Sons Ltd, 2016.

Saunders, Mark, Philip Lewis, and Adrian Thornhil. *Research Method for Business Students* (5th Edition). New York: Prentice Hall Publications, 2009.

Shaver, B.J. "Meeting Undergraduate Students' Expectations Of The University Experience: How Enrollment Managers Can Secure Students' Loyalties." [Unpublished Doctoral dissertation]. UC San Diego, 2012.

Teeroovengadum, V., R. Nunkoo, C. Gronroos, T. J. Kamalanabhan, and A.K. Seebaluck. "Higher Education Service Quality, Student Satisfaction and Loyalty." *Quality Assurance in Education* 27, no. 4 (2019): 427-45.

Thomas, S. "What Drives Student Loyalty in Universities: An Empirical Model From India." *International Business Research* 4, no. 2 (2011): 183-92.

Ushantha, R.A., and P.A.P.S. Kumara. "A Quest for Service Quality in Higher Education: Empirical Evidence from Sri Lanka." *Services Marketing Quarterly* 3, no. 2 (2016): 98-108.

Vianden, J., and P.J. Barlow. "Showing the Love: Predictors of Student Loyalty to Undergraduate Institutions." *Journal of Student Affairs Research and Practice* 51, no. 1 (2014): 16-29.

_____, and P.J. Barlow. "Strengthen the Bond: Relationships Between Academic Advising Quality and Undergraduate Student Loyalty." *The Journal of the National Academic Advising Association* 35, no. 2 (2015):15-27.

Weerasinghe, I.M.S., and H.H. Dedunu. "University Staff, Image and Students' Satisfaction in Selected Regional Universities in Sri Lanka." *IOSR Journal of Business and Management* 19, no. 5 (2017): 34-7.

_____, and R.L.S. Fernando. "Critical Factors Affecting Students' Satisfaction with Higher Education in Sri Lanka." *Quality Assurance in Education* 26, no. 1 (2018):115-30.

Williams, M. and F. Buttle. "Managing Word-Of-Mouth: A Nonprofit Case Study." *Journal of Nonprofit & Public Sector Marketing* 25, no. 3 (2013): 284-308.

Yusoff, M., F. McLeay, and H. Woodruffe-Burton. "Dimensions Driving Business Student Satisfaction in Higher Education." *Quality Assurance in Education* 23, no. 1 (2015): 86-104.

Zabala, I., G. Panadero, L.M. Gallardo, C.M. Amate, M. Sa´nchez-Galindo, I. Tena, and I. Villalba. "Corporate Reputation in Professional Services Firms: Reputation Management Based on Intellectual Capital Management." *Corporate Reputation Review* 8, no. 1 (2005): 59-71.