

## MALAYSIAN JOURNAL OF CONSUMER AND FAMILY ECONOMICS

**Building Students' Loyalty through Superior University Entities**

Nafiza Mahayuddin\*

Lecturer, Faculty of Business and Accountancy, Universiti Selangor,  
Jalan Zirkon A 7/A, Seksyen 7, 40000 Shah Alam, Selangor, Malaysia.  
e-mail: [nafiza@unisel.edu.my](mailto:nafiza@unisel.edu.my)

Dr. Mazni Saad

Assistant Professor, Kulliyah of Languages and  
Management, International Islamic University Malaysia, Pagoh Edu Hub  
KM1, Jalan Panchor, 84600 Pagoh, Muar, Johor, Malaysia.  
e-mail: [ms\\_mazni1971@yahoo.com](mailto:ms_mazni1971@yahoo.com)

Wan Nurul Fatimah

Lecturer, Faculty of Business and Accountancy, Universiti Selangor,  
Jalan Zirkon A 7/A, Seksyen 7, 40000 Shah Alam, Selangor, Malaysia.  
e-mail: [wannurul@unisel.edu.my](mailto:wannurul@unisel.edu.my)

Aznita Ahmad

Lecturer, Faculty of Business and Accountancy, Universiti Selangor,  
Jalan Zirkon A 7/A, Seksyen 7, 40000 Shah Alam, Selangor, Malaysia.  
e-mail: [aznita@unisel.edu.my](mailto:aznita@unisel.edu.my)

Mohd Hanafi Azman Ong

Lecturer, Department of Statistics and Decision Sciences, Faculty of  
Computer and Mathematical Sciences, Universiti Teknologi MARA  
(Segamat Campus), 85000 Segamat, Johor, Malaysia.  
e-mail: [napieong@uitm.edu.my](mailto:napieong@uitm.edu.my)

**Abstract**

This study expands a previous qualitative investigation of students' experience of existing entities in higher education institutions (HEIs) of Malaysia. We specifically investigated how the experience impacted students' loyalty which eventually drove them to return to the same university for further studies. The Structural Equation Model with Partial Least Square (PLS-SEM) was done on a selected group of 200 undergraduates from these institutions. The findings illustrated the top three reasons that positively and significantly influenced their academic progression at the same university as Campus Infrastructure, Support System, and Teaching Quality. The study, therefore, concludes that if the average level of these three entities were good, then the level of Student Loyalty would also excel accordingly. The study highlights the need for HEIs to enhance their reputation by continuously improving and upgrading these identified entities to attract the university's main stakeholders to come back for more quality learning experience.

**Keywords:** Satisfaction; students' loyalty; quality services; higher education institutions; Malaysia.

## **Introduction**

Malaysia's Higher Education Blueprint (2015-2025) Report recently highlights the country as the world's eleventh most preferred study destination by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The year 2015 witnessed the enrollment of more than a million students in Malaysia's HEIs (i.e. public universities, private higher educational institutions, polytechnics and community colleges). Of this total number, 93,000 were international students from more than 100 different countries from around the globe. This statement was presented in a report by the Deputy Director-General, Ministry of Higher Education in London in 2016.

This scenario presents students with an array of available alternatives especially for further studies and dramatically increases competition among the HEIs. The challenge now is to investigate the factors that they use to woo and to retain the students for an extended period of study in their universities. Retention is only derived once the student becomes loyal and comes back for more quality learning experience which they have already gained from previous experience with HEIs. Building loyalty could be a long, difficult and costly process which requires these institutions to meet students' expectations of efficient facilities, quality teachers and many more. A lot of work goes into making sure that students are satisfied and loyal customers of the institution who need very little or even no persuasion to come back for more academic studies.

Students in HEIs are now treated as stakeholders. HEIs that want to gain a competitive edge in the future may need to begin searching for effective and creative ways to attract, retain and foster stronger relationships with the students, and encouraging feelings of loyalty towards the institution. Student loyalty is a critical measure of HEIs' ability at retaining students until graduation and then attracting them to come back for an even greater academic experience.

The growing demand for quality higher education has led to an increasing number of HEIs. Significant changes in infrastructure and the system of higher education in Asian countries have contributed to the exponential growth in supply and demand in the higher education industry in Malaysia, thus eventually changing the landscape of competitiveness among the HEIs. To be sustainable, HEIs need to be excellent and need loyal customers that will support them in the future.

As a result, the competition to woo as many students as possible is intense since market share has become even smaller due to the competition. This study, therefore, examines how students perceive entities in higher education institutions that will impact students' loyalty. These insights assist the HEIs administrator to improve the quality of services provided, enhance student satisfaction and loyalty and strengthen the image of HEIs.

### **Literature Review**

This study is an extension of a previous study on the expected quality learning experience of 190 undergraduate students. Saad et al.'s (2017) study was carried out qualitatively and found that students who were familiar with the existing entities offered by the university were the ones who would usually determine their intention to enrol in postgraduate programs. In their study, they also found quality teaching, lecturers and facilities on offer, course fee structure, and accreditation for courses, technology, and support systems frequently highlighted by the students.

### **Student Loyalty**

Students' loyalty is fast becoming the key factor to private higher learning institution's ability to sustain in the long run and to survive in this globalized era. The battle to attract and retain customers between HEIs in Malaysia is intense especially with the phenomenal growth of these institutions. In the context of higher education, students are considered as primary customers (Sultan and Wong, 2013). To Barusman & Mihdar (2014), the concept of loyalty consists of four dimensions, namely cognitive, affective, conative and behavioural. To Goolamally and Latif (2014), students' loyalty is significantly influenced by trust, emotional commitment and satisfaction. In yet another context, Temizer and Turkyilmaz (2012) define loyalty as the student's tendency to choose the same provider or service for a particular need. In a large body of literature, according to Ryu, Lee and Kim (2012) customer satisfaction influences loyalty. It has also been confirmed several times that there is a link between students' satisfaction and student loyalty in the higher education context (Arif and Ilyas, 2013). Negricea, Edu and Avram (2012) also added that to earn consumer loyalty, consumer satisfaction is important.

Furthermore, Shahsavar and Sudzina (2017) describe identifying students' demands and fulfilling their needs as essential to make students satisfied and loyal.

This means that if students' experience meets their expectations, they will be loyal to their university. A loyal student population is a source of competitive advantage with outcomes such as positive word of mouth (WOM) communication, retention and repeat (Thomas, 2011). Based on several studies that have been done, there are a lot of factors that affect the level of loyalty. Usman and Mokhtar (2016) reported that student satisfaction is seen to be a major driver of student's loyalty. Acquiring students' satisfaction through quality services, building trust and emotional commitment are important aspects of securing students' loyalty (Goolamally and Latif, 2014).

#### Entities in Higher Education Institutions

Today, higher education institutions are beginning to realize that their entities represent a business-like service industry and that they are therefore being forced to attract students' satisfaction. As a result, a private higher learning institution will always try to create the best learning environment that fosters successful students who are excellent academically and loyal to the university (Saad, Husain, Nawi, & Mahyuddin, 2017). A recent study by Subrahmanyam and Bellamkonda (2015) has shown that service quality is made up of six latent dimensions that include Teaching, Administrative Services, Academic Facilities, Campus Infrastructure, Support Services, and Internationalization. The result of this study could help leaders of the institution to provide better services that enhance student satisfaction, motivation and loyalty.

#### Campus Infrastructure

Campus infrastructure is fast becoming an important entity in higher learning education nowadays. In satisfying the students, physical facility on the campus plays a major role. It includes the quality of physical infrastructures such as classrooms, security, library, sports facilities, internet service, hostel and student canteens (Mansori, Vaz&Ismail 2014). A study conducted by Khamis and Said (2014) investigated the relationship between facilities provided by the university, management and staff performance to student loyalty toward residential college at UTHM. A total of 363 undergraduates consisting of 167 (46%) males and 196 (54%) females participated in the questionnaire survey. The structural equation modelling (SEM) shows that that facilities such as cafeteria services, restroom facilities, a

reading room and a student activity room, internet access or Wi-Fi, computer laboratory, cleaning supervision, have a significant and direct effect on students' loyalty. To increase overall student satisfaction and loyalty, computer and IT facilities and general student amenities need to be improved in higher education (Nair, Bennett & Shah, 2012). This is further supported by Hanssen & Solvoll (2015) who suggest that the university can improve students' satisfaction by improving the university's reputation and by investing in university facilities. This will increase the chances of the students remaining loyal to the same higher learning institution to further their studies.

### Teaching Quality

Another significant university asset which has a major influence on overall student loyalty is teaching. According to Purgailis and Zaksa (2012) academic staff that pass over their knowledge, study content and teaching methods, acquired skills and readiness for the labour market are currently the most important element in the study process. The study by Ali and Ahmed (2018) on five higher education institutions in Karachi, Pakistan provides the evidence. Their study had a sample size of 503 students from private and semi-government universities whose flagship programs were business studies. Their study covered perceived academic quality, perceived administrative quality, physical facilities, student satisfaction, university image, and university switching cost as determinants of student loyalty through an adapted questionnaire on a 5-point Likert scale. The results of the exploratory Factor Analysis and structural equation modelling (SEM) using AMOS reveal that academic quality has a significant direct on impact student loyalty, while administrative quality does not. The authors concluded that the ability to teach coupled with professional knowledge and supportive attitude is the key to learning. Students' satisfaction in academia specifically in teaching quality will improve the image of the institution which in turn builds students' loyalty.

Furthermore, Thomas (2011) studied what drives student loyalty in the main campus of major universities in South India. Data were collected from students undergoing postgraduate programmes in arts, commerce, science, and engineering of South India. The sample consisted of 279 students of which 131 were males and 103 females, at an average age of 24 years old. Their study highlights the importance of students' satisfaction in driving loyalty. Teaching quality and the role of

the teaching staff seem to be the most important aspect of students' satisfaction. Feedback from lecturers, good access to lecturers and the quality of teaching demonstrates that it is crucial when it comes to overall students' satisfaction in South India's higher education. This is further supported by Wilkins and Stephens (2013) who revealed that the quality of the lecturer is one of the significant predictors of students' satisfaction, while students' satisfaction is commonly viewed as a major driver of student's loyalty.

In another study, Sharabi (2013) stated that students compare the "knowledge value" that they expect from the service provider because of hyper-competition in the higher education sector. As a result, for each ringgit that they pay, students expect a maximum value. The author also added that the most important factors in "knowledge value" are the quality of the academic staff and the curriculum.

#### Administrative Service

Another variable that plays a vital role in significantly influencing student loyalty is administrative service and its support system. Annamdevula and Bellamkonda (2016) studied the effect of students' perceived of service quality on satisfaction, loyalty and motivation in Indian universities: development of High Education Quality (HiEduQual). This study employed a descriptive research design to gather data regarding attitudes of students about service quality, satisfaction, motivation and loyalty towards university services. From the results of SEM, administrative service acts as one of the key antecedents to student satisfaction, loyalty and motivation as well as other service quality dimensions that include teaching, academic facilities, campus Infrastructure, support services, and internationalization.

In another study, Taecharungroj (2014) developed a comprehensive university student loyalty model that incorporates important constructs in the service and relationship quality dimension, as well as image and perception of reputation. The model is tested using the structural equation modelling approach in which a multiple group analysis is conducted to compare the models across different types of university. For data collection, the researcher distributed questionnaires to 20 selected universities in the Bangkok Metropolitan area and had a total sample size of 2,413 for the main study. Five service quality dimensions that covered most aspects of students' satisfaction and loyalty were discussed which included administration, instructor, curriculum, social environment and physical environment. Based on the

above study, the researcher found that administrative quality is the construct that has the highest total effect on student loyalty in private universities. Improved perception of administrative quality could have a substantial impact on student loyalty.

Present literature on the crucial entities of HEIs, students' expectations, perceptions, and experiences concerning advancing studies in their preferred institution are very much influenced by campus infrastructure, teaching quality, and administrative service.

### **Methodology**

By extending the student's quality learning experience that was qualitatively conducted, this study now employs a quantitative approach with a cross-sectional research design to tackle the issues of this research. A structured questionnaire was used to measure the targeted variables (Saunders et al., 2009) and was distributed to 200 respondents. The framework was tested using the Structural Equation Modeling with Partial Least Square (i.e. PLS-SEM) since the primary objective of this research is about exploring the relationship between the targeted variables (Hair et al., 2012; Astrachan et al., 2014; Hair et al., 2017) using SmartPLS 2.0. As for accessing the significant influence of the variables, 5000 replications of the sample (i.e. bootstrapping) were used, as suggested by Hair et al (2017) and Henseler and Chin (2010). Bootstrap-t, as well as t-statistics, were computed.

Since the procedure to obtain the standard error of the parameter was by using the bootstrapping procedure, extremely non-normal data distribution can give an unrepresentative standard error of parameter estimates (Hair et al, 2011). In this assessment, Skewness and Kurtosis statistics were to access the existence of extremely non-normal data distribution. The data can be approximately normal if the Skewness and Kurtosis statistics are in the range of  $\pm 2.0$  (Hair et al., 2012). In this study, the data can be concluded as having an approximately normal distribution due to the range of the Skewness (Range: -1.072 to -2.70) and Kurtosis (Range: -.748 to 1.059) statistics which were in the range of the  $\pm 2.0$ . Hence, the parameter estimates can be considered valid and good (Hair et al, 2011; Hair et al, 2017).

## Results and Discussion

### Respondent's Profile

Table 1 is a summary of the respondents who participated in this study. The descriptive analysis indicates that 58.5% of the respondents were Malay males. The top three reasons for choosing HEIs were reputation of the HEIs (28.0%), good education (26.5%) and the interesting courses on offer (13.0%).

**Table 1: Respondent's Profile**

Profile	Frequency	Percentage
Gender		
Male	117	58.5
Female	83	41.5
Race		
Malay	117	58.5
Chinese	42	21.0
Indian	41	20.5
Reasons for Choosing HEIs		
Reputation	56	28.0
Good Education	53	26.5
Marketing / Advertising	19	9.5
Lower Cost	16	8.0
Infrastructure/ Facilities	21	10.5
Opportunities for Work	9	4.5
Interesting Courses on Offer	26	13.0

### Measurement Model Analysis

Table 2 is a summary of the results of the convergent validity assessment for the measurement model. All indicators that were used to measure the targeted constructs met the minimum requirements of a loading value of above .70 (Hair et al., 2012), but two indicators were maintained in the analysis since their loading values were above .60 (Hair et al., 2017). Besides that, assessment of the Average Variance Explain (i.e. AVE) for each construct was above .50 (Hair et al., 2017), while for both the reliability tests (i.e. Composite Reliability and Cronbach's Alpha), each of the targeted constructs was also above .70 (Hair et al., 2017). Thus meeting validity from the aspect of a uni-dimensionality concept.



**Table 2: Convergent Validity for Measurement Model**

Indicator	Loading	AVE	$\gamma$	$\alpha$
<b>Teaching</b>				
Lecturers are accessible	.873*			
Lecturers treat all students equally	.858*	.706	.905	.862
Course content develops a student's knowledge	.816*			
Student evaluate lecturers to prove better service	.812*			
<b>Administrative Service</b>				
Administrative staff are courteous and willing to help	.817*			
Administrative staff maintains accurate retrieval record	.815*			
Administrative staff are accessible during office hours	.820*	.688	.917	.889
Attitude, appearance, and professionalism of the administrative staff	.855*			
Students are provided appropriate course information	.840*			
<b>Academic Facilities</b>				
Science labs are well equipped	.740*			
Computers are of the latest technology	.829*			
Campus environment is convenient for studying well	.834*	.633	.896	.855
Classrooms are equipped with teaching aids	.847*			
Educational facilities have an impact on education	.719*			
<b>Campus Infrastructure</b>				
University has sports and recreational facilities	.791*			
Acceptable healthy working environment	.869*			
University has safety aspects	.859*	.618	.889	.841
University has adequate hostel facilities	.638*			
Café provides good quality food	.750*			
<b>Support System</b>				
University provides counselling service	.818*			
University provides good medical service	.765*			
Accessibility of system for students (i.e. students portal)	.735*	.565	.866	.821
Accessibility of timetable	.723*			
The usefulness of the program's website for studies	.713*			
<b>Internalization</b>				
University has teachers from abroad	.681*			
University provides international activities	.881*			
University has an internalization policy	.911*	.707	.923	.894
University has various strategies to increase the benefit of internalization	.874*			
Students are knowledgeable of international issues	.836*			
<b>Student Loyalty</b>				
Preference to pursue higher studies in the same university	.789*			
Recommend university to friends and family members	.854*			
Talk positively about university	.898*	.730	.931	.907
Will choose the same university to start a career	.875*			
Feel proud to be associated with the university	.852*			

Note: AVE = Average Variance Explained;  $\gamma$  = Composite Reliability;  $\alpha$  = Cronbach's Alpha; \*p < .05.

Table 3 shows the result of the Fornell-Larcker analysis used for accessing the discriminant validity of the model. The analysis confirms that each latent variable discriminated each other since the diagonal values were greater than the off-

diagonal values (Fornell and Larcker, 1981; Hair et al., 2017). Therefore, the indicators that were used to measure the targeted constructs were also totally used for each respective construct.

**Table 3: Fornell-Larcker Discriminant Analysis for Measurement Model**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)	<b>.796</b>						
(2)	.531	<b>.829</b>					
(3)	.598	.552	<b>.786</b>				
(4)	.429	.324	.474	<b>.841</b>			
(5)	.465	.427	.548	.423	<b>.854</b>		
(6)	.531	.432	.601	.483	.521	<b>.752</b>	
(7)	.487	.529	.391	.314	.441	.401	<b>.840</b>

Note: (1) = Academic Facilities; (2) = Administrative Service; (3) = Campus Infrastructure; (4) = Internalization; (5) = Student Loyalty; (6) = Support System; (7) = Teaching; the value in the diagonal (bold) is a square root of the AVE of each latent variable and the element off-diagonal value is the inter-correlation value between latent variable.

#### Structural Model Analysis

The result of a structural analysis indicated that about 41% ( $R^2 = .410$ ) of variance explained toward Student Loyalty were ably explained by these six independent variables. Also, all independent variables can be considered having a small effect size (Range = .002 to .049) and also having a small predictive relevance (Range: .003 to .030) toward student Loyalty (Hair et al., 2012).

**Table 4: Structural Model Assessment**

Path	$\beta$	t-statistic	p-value	95% Bootstrap-t	$f^2$	$q^2$	Remark
AF → SL	0.051	0.585 (NS)	.559	(-0.120, 0.221)	.002	.003	Small
AS → SL	0.045	0.497 (NS)	.620	(-0.131, 0.220)	.002	.003	Small
CI → SL	0.249	2.085*	.038	(0.015, 0.483)	.049	.030	Small
IT → SL	0.119	1.172 (NS)	.243	(-0.080, 0.317)	.015	.013	Small
SS → SL	0.195	2.561*	.011	(0.046, 0.345)	.036	.021	Small
TA → SL	0.180	2.197*	.029	(0.019, 0.340)	.032	.023	Small

Note: AF = Academic Facilities; AS = Administrative Service; CI = Campus Infrastructure; IT = Internalization; SL = Student Loyalty; SS = Support System; TA = Teaching; NS = Not Significant;  $\beta$  = Standardized Beta Coefficient;  $f^2$  = Effect Size;  $q^2$  = Predictive Relevance; <sup>a</sup>The bootstrap samples was 5000 samples; \*p <.05.

The structural analysis indicates that Campus Infrastructure ( $\beta = 0.249$ ,  $t = 2.085$ ,  $p <.05$ ; 95% Bootstrap-t: (0.015, 0.483)), Support System ( $\beta = 0.195$ ,  $t = 2.561$ ,  $p <.05$ ; 95% Bootstrap-t: (0.046, 0.345)), and Teaching ( $\beta = 0.180$ ,  $t = 2.197$ ,

$p < .05$ ; 95% Bootstrap-t: (0.019, 0.340)) simultaneously have a positively significant effect towards Student Loyalty. Therefore, if the average level of Campus Infrastructure, Support System, and Teaching were at a good level, then the level of Student Loyalty will also be high. However, the analysis also indicates that Academic Facilities ( $\beta = 0.051$ ,  $t = 0.585$ ,  $p = .559$ ; 95% Bootstrap-t: (-0.120, 0.221)), Administrative Services ( $\beta = 0.045$ ,  $t = 0.497$ ,  $p = .620$ ; 95% Bootstrap-t: (-0.131, 0.220)), and Internalization ( $\beta = 0.119$ ,  $t = 1.172$ ,  $p = .243$ ; 95% Bootstrap-t: (-0.080, 0.317)) did not have a significant effect towards Student Loyalty. Therefore, no matter what the average level of Academic Facilities, Administrative Services, and Internalization is, Student Loyalty will not be affected. Figures 1 and 2 show the assessment of the PLS-SEM based on the theoretical model.

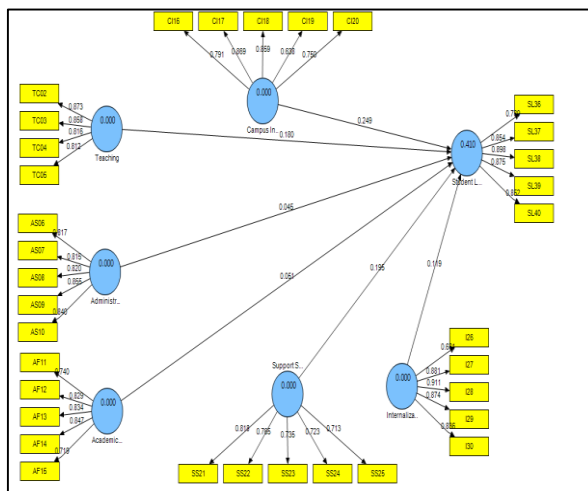


Figure 1: Loading Assessment

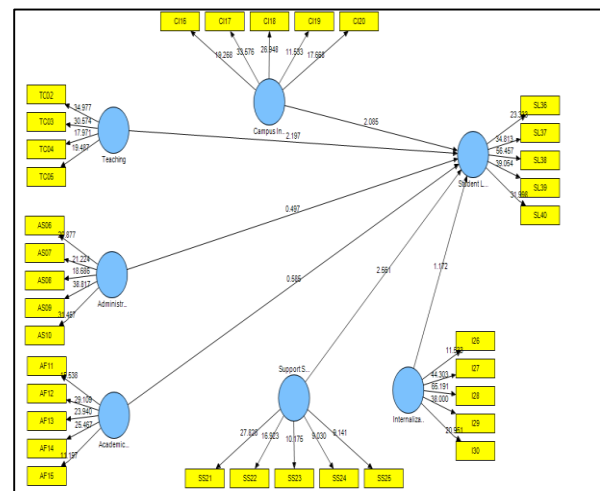


Figure 2: Bootstrapping Assessment

## Discussion and Analysis

This section discusses the six quality service entities in HEIs that were tested in this study to discover their impact on students' loyalty. They are campus infrastructure, support system, teaching quality, academic facilities, administrative service and internalization. Campus infrastructure was found to be the most influential entity that impacted students' loyalty. This finding is similar to that found by Khamis and Said (2014) who used structural equation modelling (SEM) to analyze a total of 363 undergraduate questionnaire responses. Their results confirmed that facilities such as cafeteria services, restroom facilities, a reading room, a student activity room, internet access, a computer laboratory, and cleaning supervision have a significant and direct effect on students' loyalty.

The second influential entity is support system. This is supported by a comprehensive university student loyalty model developed by Taecharungroj (2014) which discovered five service quality dimensions that largely influence most aspects of students' satisfaction and loyalty. This included administration, instructor, curriculum, and the social and physical environment, which are entities basic to a support system of any higher education institution. The researcher also found that administration and the quality of the support system have the highest total effect on students' loyalty in HEIs.

The final entity is teaching expertise; one of HEIs' major assets that play a vital role in shaping students' satisfaction and ultimately loyalty towards any organization. This result is expected as lecturers are at the frontline of any academic set-up; they design, review and teach courses, they are in direct contact with the students, and they ensure that courses are not only current and relevant but are of the highest standards that would satisfy personal and academic needs of the students. A similar study in a university in South India (2011) highlighted both quality teaching and the lecturers' role in influencing students' satisfaction and loyalty towards a place of study.

### **Conclusion and Recommendation**

We conclude here that all HEIs should focus on continuously improving and upgrading their entities especially those of campus infrastructure, support system and teaching quality. When all these entities are of the highest standards, students will develop a positive perception of an institution that cares for their well-being and future. It is the institution of choice that they will talk highly about to others. The ultimate goal of all HEIs is to have their degree students demonstrating loyalty to the institution by returning for further studies. Thomas' (2011) study explains how a loyal student population is a source of free marketing with outcomes such as positive word of mouth (WOM) communication, retention and repeat that will establish a good image of HEIs. This present study also found that students choose to come back to the same HEI because of the good reputation it has gained from its entities. Thus, improvement in the perception of the quality of these entities guarantees satisfaction that leads to a substantial impact on student loyalty.

## References

- Ali, M., & Ahmed, M. (2018). Determinants of students' loyalty to university: A service-based approach.
- Annamdevula, S., & Bellamkonda, R. S. (2016). Effect of student perceived service quality on student satisfaction, loyalty and motivation in Indian universities: development of HiEduQual. *Journal of Modelling in Management*, 11(2), 488-517.
- Arif, S., & Ilyas, M. (2013). Quality of work-life model for teachers of private universities in Pakistan. *Quality Assurance in Education*, 21(3), 282-298.
- Astrachan, C.B., Patel, V.K., & Wanzanried, G. (2014). A comparative study of CB-SEM and PLS-SEM for theory development in family firm research. *Journal of Family Business Strategy*, Vol. 5, 116-128.
- Barusman, A. R. P., & Mihdar, F. (2014). The Effect of Perceived Social Support on Student Loyalty with Student Satisfaction as Mediating Variable at Private University.
- Fornell, C., & Larcker, D.F. (1981). Evaluating structural equation models with unobservable and measurement error. *Journal of Marketing Research*, Vol. 34 (2), 161-188.
- Goolamally, N., & Latif, L. A. (2014). Determinants of student loyalty in an open distance learning institution. In *Seminar Kebangsaan Pembelajaran Sepanjang Hayat* (pp. 390-400).
- Hair, J.F., Ringle, C.M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, Vol. 19 (2), 139-151.
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modelling in marketing research. *Journal of the Academy Marketing Science*, 40(3), 414-433.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). A primer on partial least squares structural equation modelling. (PLS-SEM) (2nd ed.). Thousand Oaks: Sage Publications.
- Hanssen, T. E. S., & Solvoll, G. (2015). The importance of university facilities for student satisfaction at a Norwegian University. *Facilities*, 33(13/14), 744-759.
- Henseler, J., & Chin, W. W., (2010). A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modelling. *Structural Equation Modeling* 17 (1), 82-109.
- Khamis, A., & Said, N. B. M. (2014). Measuring student loyalty towards residential college using structural equation model. *International Journal of Science and Technology*, 4(12), 1-10.
- Mansori, S., Vaz, A. F., & Ismail, Z. M. M. (2014). Service quality, satisfaction and student loyalty in Malaysian private education. *Asian Social Science*, Vol. 10, No. 7.
- Nair, C. S., Bennett, L., & Shah, M. (2012). The Student Experience in Private Higher Education in Australia. *The ACPET Journal for Private Higher Education*, 1(2), 23.
- Negricea, C. I., Edu, T., & Avram, E. M. (2014). Establishing Influence of Specific Academic Quality on Student Satisfaction. *Procedia-Social and Behavioral Sciences*, 116, 4430-4435.
- Purgailis, M., & Zaksa, K. (2012). The impact of perceived service quality on student loyalty in higher education institutions. *Journal of Business Management*, 4(6), 138-152.

- Ryu, K., Lee, H. R., & Kim, W. G., (2012). The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions. *International Journal of Contemporary Hospitality Management*, 24(2), 200-223.
- Saad, M., Husain, R., Nawi, W. N. F. W. M., & Mahyuddin, N. (2017). Students' Quality Learning Experience: Key to further studies in the same university. *Environment-Behaviour Proceedings Journal*, 2(5), 127-134.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Method for Business Students* (5th ed.). New York: Prentice Hall Publications.
- Shahsavar, T., & Sudzina, F. (2017). Student satisfaction and loyalty in Denmark: Application of EPSI methodology. *PloS one*, 12(12), e0189576.
- Sharabi, M. (2013). Managing and improving service quality in higher education. *International Journal of quality and service sciences*, 5(3), 309-320.
- Sultan, P., & Wong, H. Y., (2013). Antecedents and consequences of service quality in a higher education context: a qualitative research approach. *Quality assurance in education*, 21(1), 70-95.
- Taecharungroj, V. (2014). University student loyalty model: structural equation modelling of student loyalty in autonomous, state, transformed, and private universities in Bangkok. *Scholar: Human Sciences*, 6(1).
- Temizer, L., & Turkyilmaz, A. (2012). Implementation of student satisfaction index model in higher education institutions. *Procedia-Social and Behavioral Sciences*, 46, 3802-3806.
- Thomas, S. (2011). What drives student loyalty in universities: An empirical model from India. *International Business Research*, 4(2), 183.
- Usman, U., & Mokhtar, S. S. M. (2016). Mediating Effect of Satisfaction on Service Quality, Image and Student Loyalty in Higher Education. *IOSR Journal of Business and Management*, 18(3), 102-108.
- Wilkins, S., & Stephens Balakrishnan, M. (2013). Assessing student satisfaction in transnational higher education. *International Journal of Educational Management*, 27(2), 143-156.