The Effect of Service Quality and Corporate Image on Student Satisfaction and Loyalty in TVET Higher Learning Institutes (HLIs)

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Abstract: The 11th Malaysia Plan has emphasised that TVET HLIs is expected to increase the number of enrolment, improve quantity and quality of graduate to meet industry demand. This is not an easy task. In a competitive higher learning sector, previous researches revealed that TVET institutes is facing challenges such as service quality and image issue which could have effect the level of student satisfaction and loyalty. Thus, the main objective of this research is to measure the linkages of service quality, corporate image, student satisfaction and loyalty in one framework for TVET HLIs. Stimulus- Organism- Response (SOR) model is adapted to conceptualise the relationship between the constructs. Six hypotheses have been developed. The scope of study is focus on student from TVET HLIs under higher education institutes of Council of Trust for the People (MARA). Since this study adapted quantitative method, a set of questionnaire was used for data collection. 398 data were collected and analysed using SPSS and PLS-SEM. The measurement model indicated that the measurement items are reliable and valid. The structural model indicates that there is a direct and significance effect between service quality, corporate image, student satisfaction and student loyalty. Thus, all hypotheses are supported. This research suggested that future research to investigate the mediating effect in the research framework and the scope of study to be extended to other TVET HLIs.

Keywords: Technical and Vocational Education and Training (TVET), service quality, corporate image, student satisfaction, student loyalty.

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1.   Introduction

Higher Learning Institution (HLIs) in Malaysia is very competitive and the competition is becoming more aggressive (Buang *et al.,* 2016). The number of HLIs is increasing as to accommodate with the demand for continuing studies at tertiary level. According to MOHE (2018), there are 20 public universities, 36 polytechnics and 478 of privates HLIs in Malaysia. While, according to Economic Planning Unit Department (2015), in overall, there are more than 1345 of TVET institutes from various ministry in Malaysia.

These indicates that, TVET HLIs has stiff competition with HLIs under government, privates and within TVET institution itself. Anusorn (2015) highlighted that, due to stiff competition among the HLIs, ensuring student satisfaction and loyalty is critical for survival in the industry. At the same time, through 11th Malaysia Plan (2016-2020), the government highlighted that the number and quality of TVET graduate was not meeting demand from industry. Thus, the number student enrolment for TVET HLIs is expected to be increased from 250,000 to 650,000 by 2025. However, TVET HLIs is facing challenges such as stiff competition with other providers, service quality, image, recognition, fragmented delivery, curriculum and competencies of teaching staff (Economic Planning Unit, 2015). TVET HLIs as well is seen as unattractive and always been associated with second option (Mohktar & Hussain, 2015; Phang, 2011). In addition, Ibrahim, Rahman and Yassin (2014) highlighted that TVET HLIs are yet operating at full capacity and overall funding structure also does not fully support the quality and performance of TVET providers. These issues reflects service quality and corporate image of TVET HLIs.

Previous research on the linkages between service quality, corporate image, student satisfaction and student loyalty in TVET HLIs were conducted at separate basis. The research framework was not integrating the four constructs (Awang *et al.,* 2011; Ibrahim, Rahman, & Yasin, 2014; Mohktar & Hussain, 2015; Danjuma, 2015). In addition, research by Subrahmanyam (2016) and Austin and Pervais (2017) on the relationship between service quality, student satisfaction and loyalty suggested that future research to consider other determinant variable of student loyalty. This scenario has created a literature gap where this research is aimed to examine by integrating the four constructs and empirically test it in one framework using Partial Least Square- Structural Equation Modelling (PLS-SEM). Thus the following research objective is developed which are to determine the effect of service quality on corporate image, student satisfaction and student loyalty, to determine the effect of corporate image on student satisfaction and student loyalty and to determine the relationship between student satisfaction and student loyalty.

1.1   Service Quality

Gronroos (1984) highlighted that quality of products or services must be evaluated by the customer. While, Cronin and Taylor (1992) emphasised that perceived service quality by customer will able to determine the level of satisfaction of the customer. In the context of this study, student is the main stakeholder in higher learning institutes (HLIs). Thus, the discussion on service quality in HLIs are emphasised on the service quality from the perspective of student (Galifa & Batalle, 2010). SERVQUAL is one of the most popular model used in assessing service quality beside SERVPERF, HEdPERF, EduQUAL, SQM-HEI and EDUDSERVE. Initially, Parasuraman*,* Zeithaml and Berry (1985) introduced SERVQUAL model consisted of ten dimension which is Reliability, Responsiveness, Competence, Access, Communication, Credibility, Security, Understanding and Tangible. It has been widely be used in service marketing field. However, the dimension of SERVQUAL has been compressed to five by Parasuraman *et al.,* (1988) which is Tangible, Reliability, Responsiveness, Assurance and Empathy. This model has been widely used in various industries such as tourism (Atilgan *et al.,* 2013; Ying, 2015), Banking (Kumar *et al*., 2010; Ali & Raza, 2015), Higher Education (Fitri *et al.,* 2008; Ibrahim *et al.,* 2014; Danjuma, 2014; Yamaqupta; 2014; Subrahmanyam, 2016) and transportation (Yilmaz & Ari, 2017). Based on previous studies, service quality is a dominant construct in determining corporate image, customer's satisfaction and loyalty. In the context of TVET HLIs, the following hypotheses are suggested: *H1 Service quality has significant and direct effect on student satisfaction, H2 Service quality has significant and direct effect on student loyalty* and *H3 Service quality has significant and direct effect on corporate image.*

1.2   Corporate Image

In accessing the overall evaluation of organization, Bitner (1990) highlighted that image was found to be the main factor. Hatch *et al.,* (2003) emphasized that, image is an overall impression of customer towards the organization based on their feeling and experience. In addition, Kotler and Amstrong (2010) look at image as the distinctive factor for product of service offered by an organization. Posit to this, in the context of HLIs, Kuo and Ye (2012) highlighted that corporate image term covered overall image, institute image and credibility of the institution. Thus, in the context of this study, corporate image term is selected as a construct since it will presents the overall view of student about the image of TVET HLIs.

Past studies revealed that there is relationship between corporate image with customer satisfaction (Zaim *et al*., 2010; Kheiry, 2012; Usman & Moktar, 2016). In addition, corporate image also influence customer loyalty (Nguyen and Leblanc, 2001; Mahadzirah and Zainuddin, 2009; Nehme, Lindos, & Charbel, 2013; Usman and Mohtar, 2016). In the context of

TVET HLIs, the following hypotheses are suggested: *H Corporate image has significant and direct effect on student satisfaction and H5 Corporate image has significant and direct effect on student loyalty.*

1.3   Student Satisfaction

Customer satisfaction is the concept in marketing which applied across the industries. According to Burnett (2008), customer satisfaction is main key for marketing success. Kotler (2003) define customer satisfaction as a feeling of an individual towards the performance of product or services. Abu El Samen *et al.*, (2011) categorize customer satisfaction to overall satisfaction, technical satisfaction and functional satisfaction. In the context of this study, overall satisfaction is selected as construct. Assessing student satisfaction is critical as it is important as feedback mechanism to the management of organization. Based on feedback, necessary strategies able to be formulated as to drive for improvement. Nair *et al.*, (2011) highlighted that in the context of higher learning, it is important for the management of HLIs to continuous improving the teaching aspect and curriculum.

Based on past literatures, student satisfaction is prominent construct in determining customer loyalty (Kheiry, 2012; Usman & Moktar, 2016; Subrahmanyam, 2016). Research by Austin and Pervais (2017) revealed that, there is relationship between student satisfaction of administration of college, facilities and faculties with student loyalty. Thus, the management of TVET HLIs should consider student satisfaction and incorporate in organization goal. Thus, the following hypotheses is suggested: *H6 Student satisfaction has significant and direct effect on student loyalty.*

1.4   Student Loyalty

Customer loyalty is a result of an organisation's creating a benefit to the customer so that they will retain with the organization (Anderson & Jacobsen, 2000). Thus customer loyalty will increase profitability of a company. While Kotler (2017) define customer loyalty as a result of developed a good relationship with customer and customer satisfaction. Customer loyalty will result in repeat purchase (Heskett *et al.*, 2008). While Nguyen and Leblanc (2001) emphasized organization to ensure customer satisfaction and loyalty. In the context of HLIs, a loyal student will retain until completion of the study, encourage others and spread positive word of mouth. Duque (2013) discussed student loyalty from the perspective of drop out intention. A loyal student will not quit the university and switch to other university.

1.5   Conceptual model

The conceptual model in this study is derived from Stimulus-Organism-Response (SOR) Model which has been developed by Mehrabian and Russell (1974). This model depicting a linkages between stimulus (e.g the external factors) which will effect organism (people's cognitive and affective) and reflection of shows by the response of people (e.g behaviour). Stimulus (S) is referred to input which is the external factor. According to Eroglu (2003), the external factors are associated with environment. The organism is referred to something that will react with the stimuli. Buxbaum (2016) highlighted that stimuli involved emotion, feeling and emotion towards the stimuli. Response (R) is referred to the action and reaction of customer toward organism. Kotler (2017) addressed that customer loyalty is a reaction of customer once satisfied with the purchase product or service used. In the context of this study service quality and corporate is conceptualized as stimulus, satisfaction as dominant organism and student loyalty as response. The conceptual model is depicted in Fig.1.0 below.

Based on conceptual model above, the following table summarise the hypotheses in this study.

Table 1.0: Summary of hypothesis

| NO	Hypotheses statements
H_1	Service quality has significant and direct effect on student satisfaction,
H_2	Service quality has significant and direct effect on student loyalty a
H_3	Service quality has significant and direct effect on corporate image.
H_4	Corporate image has significant and direct effect on student satisfaction
H_5	Corporate image has significant and direct effect on student loyalty.
H_6	Student satisfaction has significant and direct effect on student loyalty.
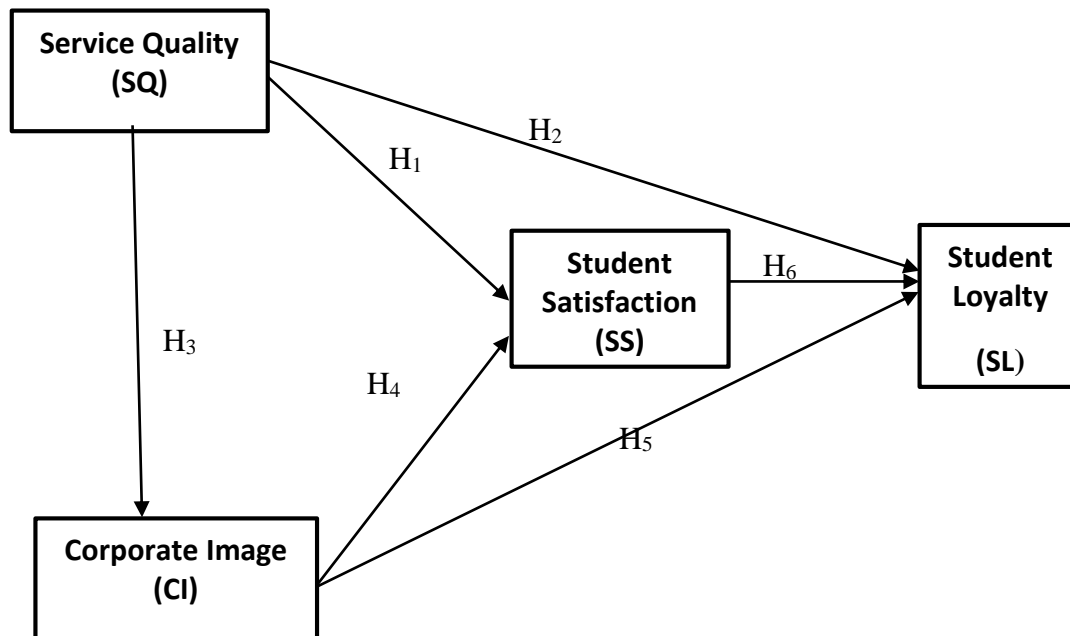
Fig. 1.0: Conceptual framework of relationship between service quality corporate image, student satisfaction and student loyalty.

2.   Research Methodology

This is a quantitative research whereby survey questionnaire is used for data collection. The questionnaire is categorised to five major sections which are Demographic (A), Service Quality (Part B, 31 items) which adapted from Fitri and Hassan (2008), Ibrahim, Rahman and Yassin (2014), Subrahmanyam (2016), Lee & Lee (2008) and Parasuraman *et al.,* (1988) , Corporate Image (Part C, 9 items) which adapted from Wong *et al.,* (2016), and Nguyen and LeBlanc(2001), Student Satisfaction (Part D, 7 items) which adapted from Wong (2016), Subrahmanyam (2016), and Liaw (2008) and and Student Loyalty (Part E, 6 items) which adapted from Subrahmanyam (2016), Mahadzirah and Zainudin (2009), Nguyen and LeBlanc(2001).

Overall, the questionnaire was developed based on adaptation from past studies by several scholars whereby reliability and validity have been tested. However, in this study validity and reliability of the questionnaire are conducted as well. Pilot test has been conducted on based on 60 respondent. The Cronbach's Apha (CA) for all construct are exceed 0.7 as per specified by Sekaran and Bougie (2016). CA for Service Quality is 0.943. This is followed by Corporate Image (0.947), Student Satisfaction (0.927) and Student Loyalty (0.910). To validate the questionnaire has been reviewed by six expert panels from four different universities.

The scope of study is higher TVET universities under People's Trust Council (MARA) higher education institutes in Malaysia which is Universiti Kuala Lumpur (UniKL). As compared with other HLIs under MARA, UniKL has the highest number of students. The total population in is derived from 10 UniKL campuses that offering engineering and technical courses. The total population is 18079. Table Krejcie & Morgan (1970) was used to determine the overall sample size. Proportionate stratified sampling was then been used as to determine the sample for each of the selected campuses. Final year student was selected as sample since they have more experience with the university and considered as best person to answer the questionnaire. 431 students were selected as respondent. Prior to data analysis, data screening wad done as to check missing data, wrong code, reverse code, outliers and incomplete data. As a result, only 398 of good questionnaires were used for data analysis. Data analysis was using SPSS version 21 and Smart PLS 3.0. Even though data analysis using PLS-SEM

was not required normal distribution of data, normality test was still be conducted as to ensure the data are not too far from normal. Normality test result shows that the *skewness* and *kurtosis* reading meeting the range of -2 and +2 as per suggested by Kline (2005) and George and Mallery (2010).

3.   Result

Data analysis for this research is conducted as per guideline by Hair *et al.*, (2017). Two main parts was involve which is measurement model and structural model. In this research, SQ and CI is a formative construct while satisfaction and loyalty is reflective constructs. The measurement model for formative construct for SQ and CI found that Redundancy analysis achieved above threshold 0.7 which is 0.798 and 0.790 respectively. There was no problem of collinearity since the Variance Inflation Factors (VIF) for both SQ and CI below 5. The next test was assessing the level of significant and relevance. The outer weight and T-value is referred first. However, in the case where indicators is not significant, outer loading threshold (above 0.5) is referred before decision is made to retain or remove the indicators. The result showed that some of the indicator achieved T-value less than threshold 1.96 but outer loading more than 0.5. Thus, all items were retained.

The next step is measurement model for reflective construct (SS and SL). It was found that the Convergent Validity is passed with loadings more than 0.7 and Average Variance Extracted (AVE) more than 0.5. Both constructs also passed Internal Consistency Reliability where the Composite Reliability and Cronbach's Alpha exceeded 0.6 and 0.7 threshold respectively. Next, Fornell and Larcker (1981) criteria are met whereby the square root of AVE for each Latent Variables (LV) was greater than the correlation among the LVs. Cross Loading result also showed that the outer loading value was greater than its loading with all other remaining constructs.

The next step of assessment is structural model. The result of collinearity for all indicators showed that VIF values achieved less than 5. This indicates that there was no collinearity problem. Second, assessing the significance and relevance of the structural model relationships by looking at T-Value (more than 1.96). The result showed that there was a significant relationship of SQ→SS (9.493), SQ→SL (1.981), SQ→CI (32.962) and CI→SL (8.071). Third, R^2 predictive accuracy level for endogenous variable for CI and SS was moderate while R^2 for SS is high. Fourth, assessment of effect size f^2 shows that SQ→CI has high effect size, SQ→SS, CI→SS and SS→SL has medium effect size while SQ→SL and CI→SL has low effect size. Overall, the structural model assessments are all passed the PLS-SEM criteria. Figure 2.0 shows the structural model of this study.
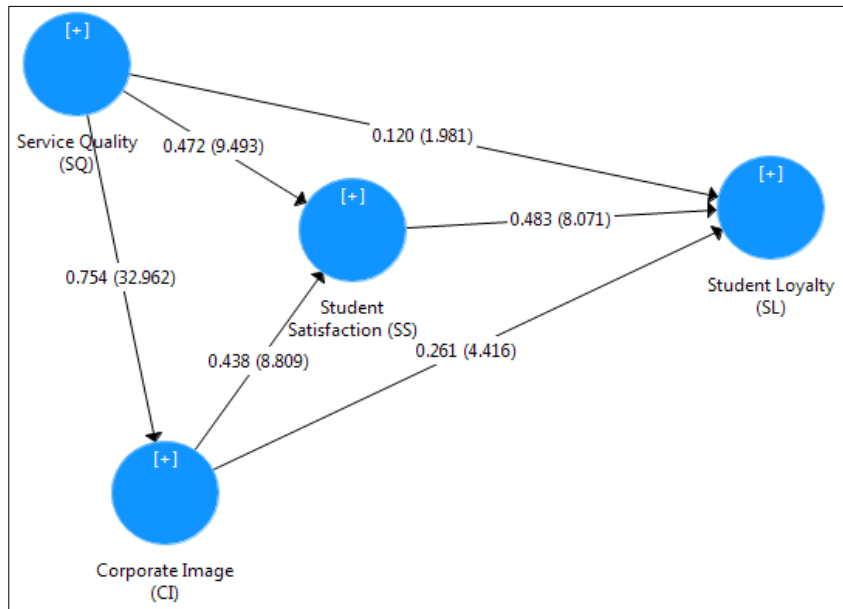

Fig. 2.0: Structural model with bootstrapping.

The bootstrapping result shows that there is direct relationship between all constructs. The highest path coefficient and significant value is the relationship between service quality and corporate image. The β and T value is 0.754 and 32.962 respectively. The lowest path coefficient and significant value is the relationship between service quality and student loyalty. The β and T value is 1.20 and 1.981 respectively. The details bootstrapping 5000 summary shows path coefficient, T- value

and P-value as per Table 2.0. The relationship between constructs in the structural model significant and relevant is shown. All hypotheses are supported and accepted since the T-value is above 1.96 and P-value is less than 0.05.

Table 2.0: Hypothesis Testing for structural model (direct effect)

Hypotheses		Path Coefficients, β	T-Value (>1.96)	P Values (<0.05)	Supported?
H1	Service Quality -> Student Satisfaction	0.472	9.493	0.00	Yes
H2	Service Quality -> Student Loyalty	0.120	1.981	0.048	Yes
H3	Service Quality -> Corporate Image	0.754	32.962	0.00	Yes
H4	Corporate Image -> Student Satisfaction	0.438	8.809	0.00	Yes
H5	Corporate Image -> Student Loyalty	0.261	4.416	0.00	Yes
H6	Student Satisfaction -> Student Loyalty	0.483	8.071	0.00	Yes

Objective of this study was to investigate the effects of service quality and corporate image on student satisfaction and student loyalty in TVET HLIs based on S-O-R model. This study also aim to integrate the four constructs of service quality, corporate image, student's satisfaction and student's loyalty in one framework by using PLS-SEM analysis methodology.

4.   Finding and Discussion

This study revealed that service quality has direct and significance effect on student satisfaction. Thus, RQ 1 is addressed and H1 is supported. This finding is consistence with earlier research by Meesala and Paul (2018), Dhananjay (2017) Umar Usman (2016) and Duque (2014). This has confirmed that service quality as stimulus has an effect to satisfaction (organism). Interestingly, this study revealed service quality (stimulus) also has a significant and direct effect with student loyalty (response). This finding is aligned with earlier research conducted by Faizan $et\ al.$, (2016), Norlia and Latifah (2014) and Mahadzirah and Zainuddin (2009). Thus, RQ_2 is addressed and H_2 is supported. In addition, service quality (stimulus) has also found to have direct and significant effect with corporate image (stimulus). Thus, RQ3 is addressed and H3 is supported. This finding is consistent with earlier study by Yilmaz and Ari (2017) and Chao and Chen (2011). Based on this finding, it is confirmed that service quality is very dominant construct in determining student satisfaction, student loyalty and corporate image of the TVET HLI. Thus, this research is suggested that the management of TVET HLIs to review the level of service quality. Based on descriptive analysis, the highest mean of Service Quality dimension is Assurance (5.463), followed by Reliability (5.131), Tangible (4.975), Responsiveness (4.871) and Empathy (4.697). Thus, more attention should be given on bottom three which is Tangible, Responsiveness and Empathy.

This research also revealed that corporate image (stimulus) has direct and significant effect on student satisfaction (organism). Interestingly, corporate image (stimulus) as well has direct and significant effect on student loyalty (response). Thus, RQ_4 and RQ_5 is address and H_4 and H_5 is supported as well. This finding is consistent with previous research by Kuo and Ye (2009), Kheiry (2012), Azoury, Daou and Khoury (2014), Umar Usman (2016) and Rodriguez (2016). This study has confirmed that corporate image has influence not only at student satisfaction but interestingly it has direct influence on student loyalty in the context of TVET HLIs.

No doubt that customer satisfaction is very dominant construct in the relationship with customer loyalty. In fact Anusorn (2015) highlighted that, to sustain in the competitive market, one organisation has to ensure customer satisfaction at it has major influence on customer loyalty. This study has confirmed that student satisfaction has direct and significant effect on student loyalty in the context of TVET HLIs. Thus RQ_6 is addressed and H_6 is supported. This finding is consistent with Wong $et\ al.,$ (2016), Usman and Moktar (2016) and Kheiry (2012). Since student loyalty in important to TVET HLIs, this research suggest that the management of TVET HLIs to enhance the level of service quality, corporate image and student

satisfaction. It is worse to develop student loyalty as they will retain until completion of the study, spread positive word about the university and encourage others to join TVET HLIs. This will help to improve the number of student in TVET HLIs as per expected in the 11th Malaysia Plan as to support demand from industry.

This study is without the limitation and it will provide direction for further study. During the research process, some of the limitations were identified and thus creating the opportunities for further study. The result of this research is seems to exemplify the five dimension of service quality which is tangible, reliability, assurance, responsiveness and empathy. It was a comprehensive dimension to explain the overall service quality however future attention should be aimed at another angle in determining the service quality. In addition, this study underlying assumption that service quality influence satisfaction, corporate image and loyalty. It could be other things besides service quality that influence satisfaction, corporate image and loyalty. It is suggest that, future study to consider other angles in more details of measuring service quality such as campus environment, physical facilities, training equipment, instructor, curriculum, training delivery, support services, library and management.

This study was focussed on the relationship between the constructs. It is suggested that future research in this area to investigate the mediating effect of student satisfaction and corporate image on the relationship between service quality and student loyalty in TVET HLIs. This research was conducted on one university under MARA. It is suggested that the scope of research in the future study to be extended to other TVET HLIs as well.

5. Conclusion

Based on SOR model, it has been shown empirically that, stimuli such as service quality and corporate image affects the student satisfaction which in turn lead to student loyalty. The finding in this study also contributed to the existing literature and extended the S-O-R Model whereby there is a direct and significant relationship between service quality (stimulus) and corporate image (stimulus), service quality (stimulus) and student loyalty (response) and corporate image (stimulus) and student loyalty (response). This study contributed to management of TVET HLIs, whereby level of service quality, corporate image, student satisfaction and student loyalty is collected and presented. This study established a comprehensive framework and valuable insights into the relationships between service quality, corporate image, student satisfaction and student loyalty in TVET HLIs.

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