



## ASSESSING THE EFFECT OF HIGHER EDUCATION SERVICE QUALITY ON JOB SATISFACTION AMONG LECTURERS IN PREMIER POLYTECHNICS USING HEDPERF MODEL

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**ABSTRACT. Background:** Dynamic change has compelled Malaysian Polytechnics to embrace service quality to achieve competitive advantage and sustainability for nation economic development. Current literature in higher education service quality shows that appropriate implementation of HEdPERF in the organization operation will improve the service quality and job satisfaction that subsequently will enhance the organizational performance. Although many studies have explored the relationship between service quality and satisfaction in higher education, the role of service quality as antecedents for employee satisfaction has been poorly discussed in higher education quality management literature.

The aim of this study is to measure the service quality and satisfaction relationship among lecturers at premier Malaysian polytechnics.

**Methods:** This study employed self-report questionnaires gathered from 187 lecturers at premiere Malaysian polytechnics using HEdPERF (Higher Education Performance) model. Data were analysed using the Statistical Packages for Social Science (SPSS) version 23.

**Results:** The results revealed that non-academic aspects, academic aspects, programme issue, and access are significant predictors for job satisfaction at Malaysian polytechnics. Conversely, reputation does not play a significant role with satisfaction.

**Conclusions:** The findings confirm the ability of service provider to correctly execute non-academic, academic, programme issue and access aspects as being important to improve the employee's satisfaction. Only reputation which is insignificant to employee satisfaction is found in the studied organization. Employee and staff should be treated as customers of the organization in view of their criticality for service delivery excellence to achieve organizational vision and mission.

**Key words:** service quality, job satisfaction, Higher Education Performance (HEdPERF), polytechnics.

## INTRODUCTION

Service quality in higher education sector has gained importance due to the social mobility and government agenda for human capital development. Hence, it has attracted attention of scholars and practitioners since the introduction of the concept. Generally, scholars affirm service quality leads to the retention of existing customers and the

attraction of new ones, reduced costs, enhanced corporate image, positive word-of-mouth, and ultimately enhanced profitability. Service quality study was dominated by the two western perspectives namely Two-factors Model [Grönroos 1984] and SERVQUAL [Parasuraman, Zeithaml and Berry 1988]. Two-factors Model argue that service quality combines functional, technical and image qualities. On the other hand, Parasuraman et al. [1988] claimed that service quality entails

responsiveness, assurance, tangibility, empathy and reliability. Both scholars argue that service quality is an elusive concept difficult to evaluate due to its subjective nature, abstract and hard to define because of its complex characteristics.

The conceptualization of service quality is different from goods as the definition of the perceived service quality must be decided by the customers (service recipient) that have always been subjective and kept changing [Parasuraman et al. 1988]. Scholar refer it as comparisons of expectations of service with their perceptions of actual service performance [Grönroos 1984], perception of service performance [Cronin, Taylor 1992], meeting customer's needs and requirements [Lewis and Mitchell 1990]. Service is considered as any activity, benefit or satisfaction that is offered for sale to customer. It is intangible, heterogeneous, inseparable, perishable (cannot be stored) and does not result in the ownership of anything [Parasuraman et al. 1988]. Its production may or may not be tied to a physical product. In short, the main idea of service quality is to focus on meeting the customer's needs and requirements to meet their satisfaction. If the firm can fulfil the customer's needs and requirements, the customer will feel that the service quality is high. Conversely, if the firm fails to fulfil the needs, the service is considered as poor quality. Hence, it becomes necessary to explore the factors that affect service quality and customer's satisfaction as perceived by customers or other stakeholders to satisfy their needs.

Previous studies in service quality have shown that service quality implementation is able to increase the standard of service delivery and customer's satisfaction (internal and external) that subsequently will enhance organization performance [Trivellas, Santouridis 2016]. An in-depth investigation of literature related to organizational management suggests that, an exceptional and well-planned quality agenda is difficult to execute if organization fails to understand customer's requirement effectively in the higher education sector. The needs and wants of customers (internal and external) are critical

and they need to be constantly reviewed and integrated into organizational operations processes. Therefore, customers' needs and wants must be given due attention and fulfilled to ensure their satisfaction.

Although the relationship between service quality and customer's satisfaction is a well research area, the role of service quality as antecedents for employee satisfaction is poorly discussed in higher education quality management literature [Trivellas, Santouridis 2016]. Quality management researchers found that this situation has been due to the following reasons: First, previous studies have given more attention regarding the differences of definition, purpose, dimensions and importance of service quality [Gupta, Kaushik 2017]. Secondly, many studies used simple correlation analysis methods to assess the relationship between the perception of customers with service quality and relationship between the service quality and customer's attitude [Mokhtar, Husain 2015]. Thirdly, the practice of measuring higher education service quality by employing generic model (SERVQUAL) has ignored the context specific to the education service environment [Ushantha, Kumara 2016]. Consequently, previous studies only produced general recommendation insufficient for organization to understand the complex nature of service quality to design the systematic continuous improvement plan to achieve customer satisfaction and meet organization goals. Thus, this may be the reasons why clear answer regarding what dimensions form comprehensive model of service quality to achieve satisfaction in higher education is still being disputed.

In Malaysia, higher education is one of critical areas in Malaysia Service Sector Blueprint. Therefore, higher education service quality measurement and management is important for economy sustainability and national targets achievement. This pushes higher education to be more accountable for their service quality and responsive to customer's needs, and subsequently forcing HEIs to find ways for more efficient, effective and customer-centric. However, public HEIs in Malaysia received many complaints from

customer showing the incapability of their service performance. In service organization, the service employees play a vital role for service efficiency, effectiveness and deliver service to external customer of the firm. Conversely, majority of the previous studies in higher education quality management has given attention towards student's satisfaction as a customer and ignore the employee's perception as the main driver of service quality excellence in organization. Although the study is important, the role of service quality as a critical determinant of employee's satisfaction especially in Malaysian polytechnics has been neglected. The satisfied employee is a productive employee who is committed to carry out duties and responsibilities to fulfil external customer's needs and wants, that subsequently will help to achieve the organization vision and mission. Therefore, this situation inspires the researcher to fill the gaps in the existing literature by assessing the effect of service quality on employee's attitudes. This study is designed to evaluate the relationship between HEdPERF dimensions and satisfaction. In this article, the scope of the discussion will be touched on six important aspects, namely literature review, methodology, result, discussions and conclusions and recommendations.

## **LITERATURE REVIEW**

### **Service quality**

Parasuraman et al. [1988] proposed SERVQUAL as five factors service quality to measure service quality that is widely accepted in service setting including higher education. However, SERVQUAL received much debate regarding the validity and reliability of the model to measure high contact service setting such as higher education [Silva et al. 2017]. Furthermore, current development in higher education service quality management study suggested the employment of industry specific measurement model to investigate service quality in higher education [Silva et al. 2017] for more understanding and meaningful findings.

Abdullah [2005] proposed HEdPERF (Higher Education Performance), a more complete measurement model [Ushantha, Kumara 2016] to assess the service quality in higher education sector which entails five critical elements namely non-academic aspects, academic aspects, programme issue, reputation and access [Ushantha and Kumara 2016]. Most of the results of the organizational quality management published recently revealed that the ability of higher education organizations to implement HEdPERF accordingly in the course of daily work activities can increase customer's satisfaction towards the organization [Silva et al. 2017]. HEdPERF has been empirically tested for unidimensionality, reliability and validity using both exploratory and confirmatory factor analysis and found to be better model than SERVQUAL and SERVPERF [Brochado 2009]. HEdPERF scale is more comprehensive that is able to capture the authentic determinants of service quality within higher education sector [Ali et al. 2016] and the findings demonstrate an apparent superiority of the factors of HEdPERF scale. HEdPERF encompasses all the aspects of the total service environment [Brochado 2009] in education setting. This element has been used as an important indicator for measuring the achievement of service quality in educational organizations.

Numerous recent studies using HEdPERF to investigate service quality in higher education such as Brochado [2009] that studied 360 students in Portuguese university and found the suitability of the model to measure higher education setting. Ali et al. [2016] investigated service quality among 241 international students at three public Malaysian university campuses in Kuala Lumpur. Their findings displayed that all HEdPERF dimensions influenced student's satisfaction, institutional image and student's loyalty. Mang'unyi and Govender [2017] found that the HEdPERF model can enable higher education managers to identify aspects by which students gauge the quality of the service. Shukla, Gadhavi and Patel [2018] have their finding showing HEdPERF having positive impact on behavioural intentions among customers in higher education in India.

## Customer Satisfaction in Higher Education

The concept of which customer group defines quality has still received much debate. It is well understood that customer is the key party interested in higher education that is being served. Often HEIs are confused and face problems in identifying key customer groups and paying close attention to their needs. Firms often use the customer satisfaction index as an indicator for determining the level of quality of services provided [Ali et al. 2016]. Sahney et al. [2004] reported customer in HEIs can be grouped as internal and external customers. According to a well-known quality management scholar in the higher education sector, employees are internal customers and students are external customers [Kanji and Tambi 1999; Sahney et al. 2004]. The quality of service delivered by internal customers (employee) determines the external customer's (student) satisfaction [Hogreve, Iseke, Derfuss and Eller 2017]. Key obstacle relating to service quality performance achievements are mainly related to human resource factors [Abdullah, Abdul Razak, Hanafi and Jaafar 2013]. Employee makes quality happen as well as they can avoid failure to ensure performance sustainability.

In service quality implementation, internal customer focus is critical to service performance and sustainability driven by employee as customer to organization. The implementation of service quality enables organization to fulfil the need and want of the employee as a customer. Management should engage their employees in designing an effective system and shares the achievement. Management can determine the needs and wants of the employee, create role clarity (reduce role conflict and role ambiguity), produce complete materials or knowledge for employee to execute his or her job sufficiently, reduce stress and create procedures for smooth daily operation that sustains improvements. Thus, this may generate conducive working environment for employees that ultimately create employee's satisfaction with their job and organization. In this context, satisfaction is defined as an evaluation of the overall experience with the organization that involves pay, promotion, co-worker, work and

supervision [Yee, Yeung, Cheng 2008]. A satisfied employee is productive, committed and pays attention to the efforts of organizational improvement and is willing to jointly achieve the organization's goals [Makhbul, Hasun 2003]. In contrast, a dissatisfied employee tends to sabotage and spread negative stories about the organization to other workers to hate the organization [Talib, Ali 2007]. However, in view of the critical and importance of employee's satisfaction, majority of previous studies have given attention to students and ignored the perspective of employee as internal customer of the organization.

Numerous studies have shown that satisfaction is an important outcome of service quality such as in Weerasinghe and Fernando [2018] with 650 respondents from Sri Lanka, Silvestri, Aquilani and Ruggieri [2017] with 350 tourists of a spa resort as well as Keong, Baharun and Abdul Wahid [2018] involved 329 students from Malaysian public universities. Based on the literature reviewed, Figure 1 shows the theoretical framework for this study.

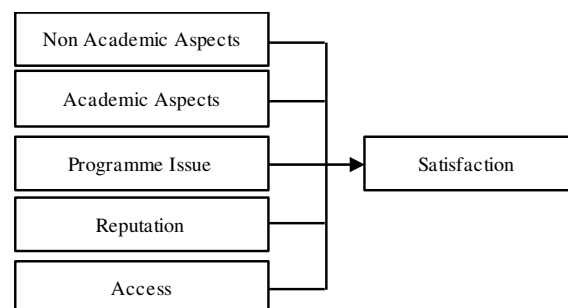


Fig. 1. The theoretical framework for this research

Based on the framework, the hypotheses proposed are as follows:

- H1: Non-academic aspects positively affect Satisfaction.
- H2: Academic aspect positively affects Satisfaction.
- H3: Programme issue positively affects Satisfaction.
- H4: Reputation positively affects Satisfaction.
- H5: Access positively affects Satisfaction.

## METHODOLOGY

This research is a cross-sectional study that has enabled data collection within stipulated time and reduced the dropout and biased data. Data were collected through a set of questionnaires administered by the researcher. The first step in the data collection procedure was to develop a questionnaire from the service quality literature review. This study measures the level of lecturers' satisfaction serving at three premier polytechnics using purposive sampling. The premier polytechnic is a polytechnic that of same level with university in terms of management excellence, administration, student affairs, academic and it is an icon to the entire polytechnic system. Lecturer is an internal customer of the institution. The sample selection strategy at premier polytechnics has at least served for two years to ensure that respondents have sufficient experience and knowledge regarding the polytechnic system so that the responses are accurate and fair, regarding the implementation of the quality programmes in the institution.

### Measures

The questionnaire consists of three sections. The first part is the set of questions to measure the service quality construct of higher education services in polytechnics namely non-academic aspects, academic aspects, program issues, reputation, and access. Items questionnaire of non-academic aspects, academic aspects, program issues, access and reputation are adapted from Ali et al. [2016] and Abdullah [2005]. Non-academic factor includes variables that linked to management's ability that relates to duties and responsibilities carried out by non-academic staff. Academic aspects represent the responsibilities of academics, and it highlights key attributes such as having positive attitude, good communication skill, allowing sufficient consultation, and being able to provide regular feedback. Program issue factor emphasizes the importance of offering wide ranging and reputable academic programmes/specializations with flexible structure and syllabus. Reputation refers to graduate employability, and excellent place to live and

study. Finally, access relates to issues such as approachability, ease of contact, availability and convenience including convincing website or on-line services.

The second part measured the satisfaction using Job Descriptive Index by Smith, Kendall, and Hulin [1969] that has been widely used for assessment of all aspects of job satisfaction. Items of satisfaction was adopted from a study by Yee et al. [2008]. It covers five facets namely pay, promotion, co-worker, work and supervision. The third part included the respondent demographic information. Demographic characteristics of respondents were only used as control variables as this study focuses on lecturer's behaviour.

The validity process was carried out and a questionnaire was reviewed by two academic experts in service quality management and four lecturers in the study setting. Question items have been checked face-to-face. This method was in line with the recommendations Hunt, Sparkman and Wilcox [1982]. After the improvement, the number of questions on non-academic aspects were ten, academic aspects were eight questions, program issues were six questions, access had nine items, reputation was four questions, and satisfaction was five questions. All questions were measured using the five-point Likert scale starting from Strongly Disagree (1) to Strongly Agree (5). From 300 questionnaires distributed at the research setting, 187 (62.3%) completed and fit for further analysis. All feedback provided was undisclosed and solely for research purposes.

### Data Analysis

The Statistical Software for Social Science (SPSS) version 23 has been used to analyze the research data according to the recommended procedures Hair, Hult, Ringle and Sarstedt [2017]. The data were analyzed using four steps. First, performing the confirmatory factor analysis to assess the validity and reliability of the questionnaire. Second, construct analysis was executed to determine the construct rate according to the respondents' perceptions, and to assess the data collinearity. Third, study hypothesis was tested using linear regression analysis. Significant hypotheses were

determined using value of beta ( $\beta$ -Value) and t-statistic (t-Value) at  $p < 0.05$ ,  $p < 0.01$ , or  $p < 0.001$ . Fourth, overall strength of the model will be based on R2 Value. The degree of model strength was determined based on the following criteria: 0.02 (weak), 0.13 (simple) and 0.26 (strong) (Cohen, 1988).

## RESULT

Table 1 shows the demographic profile of the respondents. As the education area was

considered a female dominated sector, it was found that the biggest number of respondents were female (61%) and majority respondents aged between 31 and 40 years (54.0%). With regards to working experience with current polytechnic, more than half of the respondents had 11 to 20 years of experience (54%) and majority of staff hold Master's degree (60.4%). Finally, the respondents from academic department were 93.6% and non-academic were 6.4%.

Table 1. Respondent's background (n=187)

Respondent's characteristics	Category	Frequency	Percentage (%)
Gender	Male	73	39.0
	Female	114	61.0
Age	20 -30	8	4.3
	31- 40	101	54.0
	41- 50	59	31.6
	51 and above	19	10.2
Working experience	Less than 10	64	34.2
	11- 20	101	54.0
	21 - 30	19	10.2
	31 and above	3	1.6
Education	Diploma	5	2.7
	Bachelor Degree	54	28.9
	Masters	113	60.4
	PhD	15	8.0
Department	Academic	175	93.6
	Non-academic	12	6.4

Table 2 shows the results of the reliability and validity analysis of instruments based on the procedure recommended by Hair et al. (2017). Confirmatory factor analysis were conducted on 42 items representing six constructs, namely non-academic aspects (10 items), academic aspects (8 items), programme issue (6 items), access (6 items), reputation (4 items) and satisfaction (5 items). The results from factor analysis found that all items representing each construct had factor loading greater than 0.40, indicating that all items reached the level of item validity (Hair et al., 2017). Furthermore, the Kaiser Mayer-Olkin (KMO) test was conducted to determine the suitability size of the sample study. The results showed that all the constructs had value higher than 0.60 and Bartlett's test of sphericity value

was significant, suggesting that the sample of this study was sufficient to be used in the hypothesis testing [Hair et al. 2017]. All constructs have an eigenvalue of more than 1.0 with a percentage of variance explained were more than 45 percent, indicating that all constructs reached the specified level of validity (Hair et al., 2017). The Cronbach alpha value for each construct has a value greater than 0.70, indicating that all constructs reached a high level of reliability (Hair et al., 2017). Overall, the results of this statistical analysis confirmed that this study instrument was valid and highly reliable.

Table 2. Findings on reliability and validity test

Construct	Item	Factor loading	KMO	Bartlett test of sphericity	Eigen value	Variance Explained (%)	Cronbach Alpha
Non-academic aspects	10	0.733-0.841	0.889	$\chi^2=1484.379$ , $p < 0.001$	6.382	63.818	0.936
Academic aspects	8	0.796-0.892	0.916	$\chi^2=1290.720$ , $p < 0.001$	5.824	72.802	0.946
Programme Issue	6	0.689-0.928	0.920	$\chi^2=898.152$ , $p < 0.001$	4.444	74.060	0.918
Access	9	0.783-0.884	0.939	$\chi^2=1415.241$ , $p < 0.001$	6.422	71.356	0.948
Reputation	4	0.838-0.935	0.805	$\chi^2=617.872$ , $p < 0.001$	3.256	81.398	0.922
Satisfaction	5	0.829-0.891	0.836	$\chi^2=686.242$ , $p < 0.001$	3.739	74.784	0.913

Table 3 shows the results of the descriptive statistics and Pearson correlation analysis. The mean value of each construct ranged from 3.629 to 4.097, meaning non-academic aspects, academic aspects, programme issue, access, reputation and satisfaction levels were between neutral (3) and agree (4) levels. Correlation

coefficients for relationships between independent variables (non-academic aspects, academic aspects, programme issue, access, reputation) have a value of less than 0.90, meaning that the constructs of this study were free from serious multicollinearity issues (Hair et al. 2017).

Table 3. Result of descriptive statistics and Pearson correlation analysis

Construct	Mean	Std. Dev.	Pearson correlation analysis					
			Non-academic aspects	Academic aspects	Programme Issue	Access	Reputation	Satisfaction
Non-academic aspects	3.714	0.657	1					
Academic aspects	4.097	0.608	0.680**	1				
Programme Issue	3.884	0.740	0.640**	0.755**	1			
Access	3.910	0.679	0.740**	0.795**	0.828**	1		
Reputation	4.012	0.763	0.530**	0.674**	0.774**	0.740**	1	
Satisfaction	3.629	0.883	0.641**	0.564**	0.701**	0.722**	0.576**	1

\*\*Note: significant at  $p < 0.01$  level

Table 4 shows the results of hypothesis testing H1, H2, H3, H4 and H5. Variance inflation factor (VIF) of each independent variable of non-academic aspects (2.350), academic aspects (3.142), programme issue (4.110), access (4.971) and reputation (2.764) were smaller than 10.0 (Hair et al., 2017); meaning that the construct was free from multicollinearity problems. Meanwhile, the input of non-academic aspects, academic aspects, programme issue, access, reputation into the analysis has contributed 58.8% changes in satisfaction. This contribution level illustrates that the model of this study is strong (Cohen 1988). Hence, the results of hypothesis testing produced four important findings. First, academic aspects have a significant relationship with work satisfaction ( $\beta = -0.186$ ;  $p < 0.05$ ), hence H1 is supported. Second, the

non-academic aspects have a significant relationship with work satisfaction ( $\beta = 0.254$ ;  $p < 0.05$ ), hence H2 is supported. Thirdly, programme issue has a significant relationship with work satisfaction ( $\beta = 0.359$ ;  $p < 0.05$ ), hence H3 is supported.

However, it was found that reputation does not have a significant relationship with work satisfaction ( $\beta = 0.010$ ;  $p < 0.05$ ), hence H4 is rejected. Lastly, findings from regression analysis shows that access has a significant relationship with work satisfaction ( $\beta = 0.377$ ;  $p < 0.05$ ), hence H5 is supported. This finding explains that non-academic aspects, academic aspects, programme issue and access have significant impact towards work satisfaction. It was also found that access has the largest contribution among others ( $\beta = 0.377$ ).

Table 4. Regression analysis result

Independent variable	Dependent variable (Satisfaction)	
	$\beta$ value	t-value
Non-academic aspects	0.254**	3.466
Academic aspects	-0.186**	-2.201
Programme Issue	0.359***	3.709
Access	0.377***	3.547
Reputation	0.010	0.131
R square	0.588	
Adjusted R square	0.576	
F	51.617***	

Notes: Significant at \*\*p < 0.05; \*\*\*p < 0.001

## DISCUSSION

The findings confirm that non-academic aspects, academic aspects, programme issue, and access are effective higher education service quality practices to help increase employee's satisfaction. Conversely, reputation is a service quality dimension that is not capable to improve employee's satisfaction.

The result revealed that reputation has no significant relationship with satisfaction among the lecturers in premier Malaysian polytechnic. The results of this study are probably due to Malaysian polytechnic is a public HEIs and employees are considered as government servants. As a government servant, reputation is not important because it did not contribute to any needs and wants related to job benefit, welfare and recognition. The recruitment of employees in polytechnic was conducted under Education Service Commission of Malaysia via on-line system. The recruited employees are then deployed to polytechnics throughout Malaysia. The deployment was based on the lecturer's expertise and polytechnic niche area. This process is assisted by Department of Polytechnics Education and Community Colleges as a centralized coordinating body that governed polytechnic system. The lecturers do not select the polytechnic based on the reputation of the institutions. Likewise, in-service lecturer can be transferred to other polytechnics depending on strategic planning of polytechnics system, institution's needs, and government requirements that affect the polytechnics operation.

Another finding from this study was academic dimension has negative significant relationship with satisfaction. As concurred by some scholars that quality initiatives tend to generate unhealthy working environment such as increase the workload and limit the academic freedom that subsequently increased stress, insecurity and dissatisfaction among lecturer [Van Kemenade, Pupius and Hardjono 2008]. A study among 1,500 teachers in the Netherlands higher education found that quality initiatives create more stress and workload and are always facing employee rejection [Van Kemenade et al. 2008]. Quality is external control that needs lecturer to comply with bureaucratic and documentation procedures. Lecturers are highly-educated people that require continuous improvement, creativity and innovation which are internally driven and prefer autonomy in their work situation [Van Kemenade et al. 2008]. They do not want to be controlled through tight procedure that limits their creativity and innovation in the classroom while delivering their lectures. Thus, quality initiatives implementation is always seen as standard and static measures that limit the academic endeavors, hence, this leads to stress and dissatisfaction among lecturers. To move forwards, organizations should not only improve quality of product or service, but also the quality of employees' work life.

This study is able to show the main characteristics of the higher education system which has to be handled for quality excellence implementation, also provided an insight into the application of quality and the benefits it can bring to employees in terms of satisfaction



and welfare. This finding is also in line with the previous study, revealing that implementation of quality with more focus to hard factors such as structure, procedure, documentation; thus, ignoring the soft factors may affect the satisfaction of human in the system [Van Kemenade et al. 2008].

The findings of this study can implicate three important aspects, namely, contribution to theory, contribution to methodology and contribution to management. In terms of contribution to theory, this study has increased our understanding that the implementation of non-academic aspects, academic aspects, programme issue, and access are effective higher education service quality practices to help increase employee's satisfaction. Conversely, reputation cannot increase employee's satisfaction. For the contribution to the methodology, the questionnaires used in this study have reached the level of validity and reliability. Therefore, this situation can help to produce accurate and credible research findings.

Furthermore, this study can help the management to improve the quality management of the organization. To ensure the success of this agenda, the top management should focus on the following aspects; first, management must keep engaging the employees and give attention to fulfil the needs and wants of the employees. It should be done thoroughly covering every layer of workers in the organization. This exercise will get employee buy-in and shape a new way of thinking as well as in the long run that will generate an excellent service quality culture. Secondly, management need to amend the client charter and quality policy to include employee as customer of the organization. Website survey conducted by the researcher on client charter and quality policy shows that none of the premier polytechnics include employee as customer in these important documents. Thirdly, organization needs to conduct survey to collect needs and wants of the employee and integrate it in the organization policy. Employees must be engaged, so that they can provide practical and effective suggestions for improvement and service quality in relation to non-academic

aspects, academic aspects, programme issue, reputation and access. Employees are a critical element because quality services in HEIs are determined by the employees who deliver the services. Fourthly, organization must invest in training program and the improvement of workplace competencies that focus on skills, knowledge and attitudes relating to academic quality implementation in polytechnics. Finally, organizations need to conduct employee's satisfaction assessment and consistently improve services in line with the changing needs of work situation and the environment.

## CONCLUSION AND RECOMMENDATION

This study examines service quality hypotheses to predict its effect on employee satisfaction. The research utilised HEdPERF instrument that also shows high level of validity and reliability through factor analysis. Furthermore, the findings confirm that non-academic, academic, programme issue, and access are important to improve the employee's satisfaction. Only reputation is insignificant to employee's satisfaction. Factors that do not contribute to dependent variables are given explanation. Accordingly, future studies should look into account non-academic, academic, programme issue, reputation and access as important dimensions in the field of organizational service quality. In conclusion, this study attempts to assist organizations to focus on the critical aspects that need to be addressed by the management and appropriate planning of the organizational level. Employees and staff should be treated as customer of the organization in view of their criticality for service delivery excellence.

This study employed HEdPERF dimension to test the relationship between service quality and satisfaction at premier Malaysian polytechnics. As shown in the findings, non-academic aspects, academic aspects, programme issue, access have significant relationship with satisfaction among lecturers at premier Malaysian polytechnics. Only reputation has no significant relationship with satisfaction. Future research should replicate

the study to different contexts to assess the quality satisfaction for more solid results. Future studies also should analyse the relationship of quality programme towards work stress among lecturers in polytechnics. This factor may further explain the low-level satisfaction that may decrease the organizational effectiveness.

This present study is a cross-sectional study and data were collected only at a certain period of time. Meanwhile, the data were collected only in premier polytechnics, which did not involve other types of polytechnics such as conventional polytechnic. Finally, the generalizability of finding must be conducted with care due to sample limitation. Future studies can be further reinforced based on the following recommendations; first, future study is suggested to cover the broader context of education services including community colleges and private HEIs. The broader perspective will increase the understanding of the attitude and behaviour of different employees on the quality of services provided by the organization. Finally, it can be crucial to conduct longitudinal study design to see patent changes and the influence of the relationship between service quality constructs and satisfaction in view of quality programme implementation.

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## REFERENCES

- Abdullah F., 2005. HEdPERF versus SERVPERF: The quest for ideal measuring instrument of service quality in higher education sector. *Quality Assurance in Education*, 13(4), 305–328.  
<http://doi.org/10.1108/09684880510626584>
- Abdullah S., Abdul Razak. A., Hanafi M.H., Jaafar M., 2013. Implementation barriers of ISO 9000 within the Malaysian local government. *International Journal of Quality & Realibility Management*, 30(8), 853–876.  
<http://doi.org/10.1108/MRR-09-2015-0216>.
- Ali F., Zhou Y., Hussain K., Nair P.K., Ragavan N.A., 2016. Does higher education service quality effect student satisfaction, image and loyalty? *Quality Assurance in Education*, 24(1), 70–94.  
<http://doi.org/10.1108/QAE-02-2014-0008>.
- Brochado A., 2009. Comparing alternative instruments to measure service quality in higher education. *Quality Assurance in Education*, 17(2), 174–190.  
<http://doi.org/10.1108/09684880910951381>
- Cohen J., 1988. *Statistical power analysis for the behavioral sciences*. New York: Routledge.
- Cronin J.J., Taylor S.A., 1992. Measuring service quality: A reexamination and Extension. *Journal of Marketing*, 56(3), 55–68.  
<http://doi.org/10.2307/1252296>.
- Grönroos C., 1984. A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36–44.
- Gupta P., Kaushik N., 2017. Dimensions of service quality in higher education - critical review (students' perspective). *International Journal of Educational Management*. 32(4), 580-605.  
<http://doi.org/10.1108/IJEM-03-2017-0056>
- 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.)*. Los Angeles: SAGE Publication.
- Hogreve J., Iseke A., Derfuss K., Eller T., 2017. The Service-Profit Chain: A meta-analytic test of a comprehensive theoretical framework. *Journal of Marketing*, 81(3), 41–61.  
<http://doi.org/10.1509/jm.15.0395>.
- Hunt S.D., Sparkman R.D., Wilcox J.B., 1982. The Pretest in survey research: Issues and preliminary findings. *Journal of Marketing Research*, 19(2), 269–273.  
<http://doi.org/10.2307/3151627>.
- Kanji G.K., Tambi A.M., 1999. Total Quality Management in UK higher education

- institutions. *Total Quality Management*, 10(1)(October 2013), 129–53.
- Keong L.K., Baharun R., Abdul Wahid N., 2018. Provide good service quality to satisfy students' needs and make them become loyal students. *International Journal of Supply Chain Management*, 7(1), 36–42.
- Lewis, B. R., Mitchell, V. W., 1990. Defining and measuring the quality of customer service. *Marketing Intelligence & Planning*, 8(6), 11–17.
- Mang'anyi E.E., Govender K.K., 2017. Using the higher education performance framework to assess service quality and satisfaction among private university students. *International Review of Management and Marketing*, 7(3), 299–309. Retrieved from <http://dergipark.org.tr/irmm/issue/32110/356027>.
- Mohd Makhbul, Z.K., Mohamad Hasun F., 2003. *Pengenalan kepada pengurusan sumber manusia*. Petaling Jaya: Leeds Publications.
- Mokhtar S.B., Husain M.Y., 2015. Service quality of polytechnic using SERVQUAL model for sustainable TVET system. *Advanced Journal of Technical and Vocational Education*, 1(October), 33–37.
- Parasuraman A., Zeithaml V.A., Berry L.L., 1988. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40. [http://doi.org/10.1016/S0148-2963\(99\)00084-3](http://doi.org/10.1016/S0148-2963(99)00084-3).
- Sahney S., Banwet D.K., Karunes S., 2004. Conceptualizing total quality management in higher education. *The TQM Magazine*, 16(2), 145–159. <http://doi.org/10.1108/09544780410523044>
- Shukla Y.S., Gadhavi D.D., Patel J.D., 2018. Role of information of service quality in formation of behavioural intention among students: Empirical analysis in university settings. *International Journal of Services, Economics and Management*, 9(1), 61. <http://doi.org/10.1504/ijsem.2018.10016776>.
- Silva D.S., Hermínio G., Marcondes S., Makiya I.K., Giocondo F.I., 2017. Measurement of perceived service quality in higher education institutions: A review of HEDPERF scale use. *Quality Assurance in Education*, 25(4), 415–439. <http://doi.org/10.1108/QAE-10-2016-0058>.
- Silvestri C., Aquilani B., Ruggieri A., 2017. Service quality and customer satisfaction in thermal tourism. *TQM Journal*, 29(1), 55–81. <http://doi.org/10.1108/TQM-06-2015-0089>
- Smith P.C., Kendall L.M., Hulin C.L., 1969. *The measurement of satisfaction in work and retirement*. Oxford, England: Rand McNally.
- Talib D., Mohd Ali K.A., 2007. An empirical study on the effects of service quality towards organizational performance in Malaysian local authorities. *Journal of Global Business Management*, 3(1), 1–10.
- Trivellas P., Santouridis I., 2016. Job satisfaction as a mediator of the relationship between service quality and organisational commitment in higher education. An empirical study of faculty and administration staff. *Total Quality Management*, 27(2), 169–183. <http://doi.org/10.1080/14783363.2014.969595>.
- Ushantha R.A.C., Kumara P.A.P.S., 2016. A quest for service quality in higher education: Empirical evidence from Sri Lanka. *Services Marketing Quarterly*, 37(2), 98–108. <http://doi.org/10.1080/15332969.2016.1154731>.
- Van Kemenade E., Pupius. M., Hardjono T. W., 2008. More value to defining quality. *Quality in Higher Education*, 14(2), 175–185. <http://doi.org/10.1080/13538320802278461>
- Weerasinghe I.M.S., Fernando R.L.S., 2018. Critical factors affecting students' satisfaction with higher education in Sri Lanka. *Quality Assurance in Education*, 26(1), 115–130. <http://doi.org/10.1108/QAE-04-2017-0014>.

Yee R.W.Y., Yeung A.C.L., Cheng T.C.E., 2008. The impact of employee satisfaction on quality and profitability in high-contact service industries. *Journal of Operation*

*Management*, 26(5), 651–668.  
<http://doi.org/10.1016/j.jom.2008.01.001>.

## OKREŚLENIE WPŁYWU JAKOŚCI USŁUG WYŻSZEGO SZKOLNICTWA NA ZADOWOLENIE Z PRACY U WYKŁADOWCÓW UCZELNI PRZY UŻYCIU MODELU HEDPERF

**STRESZCZENIE. Wstęp:** Dynamiczna zmiana wymusiła na Politechnice Malezyjskiej skupienie się na jakości usług w celu osiągnięcia przewagi konkurencyjnej oraz rozwoju zrównoważonego ekonomii kraju. Przegląd literatury naukowej dotyczącej jakości usług w szkolnictwie wyższym wskazuje, że prawidłowego wdrożenie modelu HEdPERF w działaniach operacyjnych zwiększa jakość usług oraz zadowolenie z pracy, co z kolei zwiększa efektywność organizacyjną. Aczkolwiek wiele pracy dotyczy zależności pomiędzy jakością usług a satysfakcją w szkolnictwie wyższym, to rola jakości usług jako czynnik wpływający na satysfakcję pracowników szkolnictwa wyższego nie jest należycie zbadana.

Celem tej pracy jest zmierzenie zależności pomiędzy jakością usług a satysfakcją z pracy wśród wykładowców w najważniejszej Politechnice Malezyjskiej.

**Metody:** Dane do analizy zebrano poprzez przeprowadzenie ankiety wśród 187 wykładowców w najważniejszej Politechnice Malezyjskiej, przy zastosowaniu modelu HEdPERF (Higher Education Performance). Następnie dane poddano obróbce statystycznej przy pomocy Statistical Packages for Social Science (SPSS) version 23.

**Wyniki:** Otrzymane wyniki wskazują na istnienie wpływu na zadowolenie z pracy pracowników Politechniki Malezyjskiej takich czynników jak aspekty pozaakademickie, aspekty akademickie, realizowany program oraz istniejący dostęp. Z drugiej strony, reputacja nie ma istotnego wpływu na satysfakcję z pracy.

**Wnioski:** Otrzymane wyniki potwierdzają istnienie czynników wpływających istotnie na zadowolenie z pracy zatrudnionych, takich jak aspekty pozaakademickie, aspekty akademickie, realizowany program oraz istniejący dostęp. W badanej organizacji tylko jej reputacja nie wpływała na zadowolenie pracowników. Pracownicy oraz pracodawcy powinni traktowani jako klienci organizacji, gdyż mają istotny wpływ na jakość oferowanych usług i związane z tym osiągnięcie wizji i misji organizacji.

**Słowa kluczowe:** jakość usług, satysfakcja z pracy, Higher Education Performance (HEdPERF), politechnika.

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