Impact of Service Quality on Students' Satisfaction in Newly Established Public Sector Universities in Sri Lanka: Study Based on The Faculty of Management Studies

Pathmini MGS[1], Wijewardhena WP[2], Gamage CT[3], Gamini LPS[4]
1,2,3-Faculty of Management Studies, Rajarata University of Sri Lanka
4- Department of Management Studies, Open University of Sri Lanka
thikavi76@gmail.com1, percywpv@yahoo.com2, ctgbinga@yahoo.com3,
lpgam@yahoo.com4,

Abstract

This study aims to discuss the level of service quality (SQ) and its impact on students' satisfaction in the Faculty of Management Studies (FMS) of Newly Established Public Sector Universities (NEPUs) from undergraduates' perspective. This will enable the administration of these universities to identify the strengths and weaknesses of the present service process offered to students and make necessary improvements to increase student's satisfaction. For this purpose 04 universities were taken into consideration among 05 NEPUs in Sri Lanka. Thus 590 undergraduates were selected using Stratified random sampling but only 568 responded. Five dimensions; tangible, competence, empathy, delivery, curriculum and reliability which are specific to higher education system were taken into consideration to measure the SQ. Findings reveal that faculty's SQ is positively and significantly correlated with the students' satisfaction. Further the results indicated that all SQ factors are practiced at mediocre level. Even though results showed that, only three factors are significant to determine the student's satisfaction namely; empathy, content and reliability of the service process. Finally certain recommendations are given to increase the level of SQ in these faculties which will ultimately contribute to increase the students' satisfaction and also to achieve the faculty's overall goals successfully.

Key words: *Newly Established Public Sector Universities, Service Quality, Student Satisfaction.*

Introduction

Services have been the most prominent area of modern day industries in Sri Lanka. Thus, rendering quality service is a key for success of many service organizations in the competitive environment, and many experts agree it as the most powerful tool currently reshaping marketing & business strategy. In this dynamic business environment, service

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industry has been an area that has drastically changed. Therefore, provision of quality services has been an issue of great significance. Zeithmal et al. (2009) suggests that one of the prime issues of poor performance in service organizations is not understanding of what customers expect from them. Just like other service sectors, educational sector is also assessed for the quality of service offered. In order to make up with the changing demands and to be competitive in the market is the dream of most universities in the world. In order to put it in reality, offering quality education is the need of time and observing how the universities are using quality standards, how they are emphasizing on the quality is the debate of time. Academics are looking at the quality of institution from all perspectives; input stage to output stage. Further, some studies have emphasized that the student retention and their academic performance are influenced by the service quality (SQ) provided by the higher education institutions (Sander, Stevenson, King and Coutes, 2000). Intensive competition in the higher education sector, internationalization of higher education, and the classification of education as a marketable service have prompted the management of the various private and public higher education institutions to pay more attention in assessing the overall students' perceived SQ (Ford, Joseph and Joseph, 1999). In addition, the growing level of competition that can be observed in many Sri Lankan universities requires an evaluation of factors that can fully explain the aspects of SQ that largely determine students' perception of quality of service that is being received. Therefore, this study intends to look into the SQ provided by the NEPUs in Sri Lanka.

Research Problem

As an extremely intangible service sector, one way that a University can differentiate their service offered in comparison to its competition is through the provision of excellent service quality. Improve SQ, given the limited resources available to administration is a challenge. In year 2005, the Quality Assurance and Accreditation Cell (QAAC) in Ministry of Higher Education was established to evaluate the service quality of national universities in Sri Lanka and evaluated existing degree programs based on SQ practices adopted by the degree programs separately in the Faculties. The subject review committee assigned by the UGC under the QAAC has made judgments on, to assess the SQ by means of Teaching, Learning and Assessment methods. As NEPUs, all has vital requirement to compete with the well established national universities as well as recently established private universities in Sri Lanka and today they are committed towards becoming a standard national universities in the near future. According to ranking web of world universities by 2012, most of the NEPUs earned no rank below 100 in the Asian ranking or South Asian ranking.(www.webomestricsinfo/ Assessed 24 May 2012). In case of country comparison, all of the NEPUs are behind from the top leading national universities in Sri Lanka Available online at: http://www.lankauniversity-news.com/p/sri-lanka-university-ranking.html, (accessed 3 February 2014). Looking at this issue, all Faculties in these Universities seriously committed in fulfilling the requirements stipulated by the QAAC to upgrade the standard. The FMS is one of the major actors and role players to review the quality of degree programs offered to its undergraduates among all other Faculties in these Universities. Accordingly, if the SQ level is not improved further by these faculties as expected in the near future, the competitive position in the world rank and the country rank may drop to a lower position and may label as less ranked university.

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Consequently, students who join the universities might be disappointed with the service delivery process. Therefore, carrying out a study is timely important and a survey must be undertaken to find out the factors which contribute more to the improvement of the level of SQ in these faculties in order to gain a competitive advantage in the higher education sector. Therefore, it is necessity to examine the existing level of SQ and its relationship with the students' satisfaction, because knowledgeable workforce is significant to strengthen the existing economic growth of the country.

Objectives of the Study

To identify the level of SQ and the level of students' satisfaction in the FMS of NEPUs is the main objective of this study. Further to study the relationship between different SQ dimensions and the student satisfaction in the FMS in NEPUs and to evaluate the mostly influencing SQ factor towards strengthening the students' satisfaction in the FMS of NEPUs are the other objectives.

Review of Literature

"A service is any act or performance that one party can offer to another that is essentially intangible and does not results in the ownership of anything" (Kotler & Keller, 2005). Intangibility, variability, inseparability and perishables are characteristics which are unique to Service marketing comparative to physical goods marketing (Parasuraman., 1985, as cited by Kotler & Keller, 2005). Intangibility refers that service cannot be seen, tested or felt before purchase. Inseparability refers; services are produced and consumed simultaneously. Provider and client interaction is a special feature of service marketing. Also servicers are highly variable. Because service delivery and customer satisfaction depend on, who providers them, when, where and to whom etc. Perishability refers; service cannot be stored for later consumption and if opportunity is missed that cannot be retrieved. That means difficult to synchronize the supply and demand with services (Kotler & Keller, 2005). Therefore, managing services is a challenging for service providers because quality is multi-dimensional concept and different definitions are appropriate under different circumstances. Juran and Gryna (1988) define the quality as "fitness for use". O'Neil and Palmer (2004) define SQ as the difference between what a customer's expects to receive and their perceptions of actual delivery. A common expression of SQ is that the service delivered should fulfill the customers' requirements, expectations and satisfactions. In today's competitive environment, most organizations would agree and recognize that SQ is essential for them to become winners by consistently meeting or exceeding customers' expectations (Parasuraman et al., 1985; Reichheld and Sasser, 1990; Zeithaml et al., 1990). Among most of the models developed, SERVQUAL model has been identified as the basic approach in measuring SQ. Parasuraman et al. (1988) have developed SERVQUAL model based on functional quality rather than technical quality for measuring of SQ. Parasuraman et al. (1988) cited by Zeithaml,at.el.,(2008) suggested that the measure of SQ through SERVQUAL dimensions; tangible, reliability, responsiveness, assurance and empathy. Tangibles refers; the degree to which appearance of physical facilities, equipments, personnel and communication materials. Reliability refers the degree to which employees are executing the promised service dependably and accurately. Responsiveness refers willingness to help customer and provide prompt service.

Assurance refers degree to which employees are encouraged to be trusted and confident. Empathy refers degree to which employees are giving care and provide individualized attention to customers.

Service quality' and 'satisfaction' are often used in an interchangeable way (Palmer, 2011). A topic that has been debated in the services marketing literature relates to whether satisfaction influences SQ or vice-versa. Cronin and Taylor (1992) challenge that SQ is an antecedent to satisfaction and that the direction of causality is from SQ to satisfaction. Quality is based on current perceptions whereas satisfaction is based on past, present and anticipated experiences or outcomes (Anderson et al., 1994). It was established that satisfaction and SQ were strongly correlated; however, the authors concluded that they were indeed two separate constructs (Sureshchandar et al. (2002). Zeithaml et al. (2009) says satisfaction as a broader concept than SQ. Satisfaction has been defined as the perception of pleasurable fulfillment of a service (Oliver, 1999). Athiyaman (1997) argues that satisfaction as the result of the evaluation of a specific transaction or consumption experience. As Kotler & Keller (2005) defined customer satisfaction as person's comparative judgment resulting from a product's perceived performance in relation to his/her expectation. Anyhow, majority of recent publications consider SQ as an antecedent to customer satisfaction (Cronin et al., 2000; Gruber et al., 2010). Also there are arguments that consumer satisfaction leads to perceived SQ (Parasuraman et al., 1988). It is clear that the relationship between satisfaction and SQ is strong when examined in both directions. Despite the different arguments proposed by various authors, this study focuses on SQ as the main construct. Thus, as for the basis of this study, it is assumed that SQ is an antecedent of satisfaction, advocating that SQ influences satisfaction.

Managing SQ in the education context should be handled differently from that of manufacturing or other service industries. In case of SQ in higher education researchers have interested in providing definition differently, compared with SQ of others. Some researchers say that giving definitions on the SQ of higher education is difficult and quality cannot be measure simply. As Becket and Brookes (2006) it is up to now unresolved debates on how best to define the SQ construct of HE. Cheng and Tam (1997) claim that education quality is rather vague and controversial construct. Aldridge & Rowly (1998) and Mai (2005) have suggested that SQ in higher education should be defined based on the students' perceptions. Aldridge and Rowley (1998) explain that good quality education provides better learning opportunities and it has been suggested that the levels of satisfaction or dissatisfaction strongly affect the student's success or failure of learning. Students' perceived quality is an antecedent to student satisfaction (Browne et al, 1998). It is noted that positive perceptions of SQ can eventually lead to student satisfaction thus satisfied student would attract more students through word-of-mouth communications. Students' perceptions of SQ have become a main issue in the management of higher learning institutions as students are deemed to be their customers (Hill, 1995).

*H1; There is a positive and significant relationship between SQ and Student Satisfaction.*

In relation to academic aspect of higher education services such as teaching quality, teaching methods and course content have been quite stable over time (Hill, 1995).

Taking this into consideration the summary of the SQ dimensions of different scholars are given below.

Table 1 :Dimensions in measuring SQHEs

Source	Dimensions
Parasuraman, Zethaml and Berry (1998)	Assurance, responsiveness, reliability, tangibles and empathy
Ghobadian et.al.(1994)	Reliability, Responsiveness , Customization ,Credibility ,Competence ,Access ,Courtesy , Security ,Communication ,Tangibles , Understanding customers.
Owlia and Aspinwall (1996)	Tangibles, competence, attitude, content, delivery and reliability
Waugh (2001)	Reliability , responsiveness, assurance , empathy
Sohail and Shaikh (2004)	Contact personnel, physical evidence, reputation, responsiveness, access to facilities, curriculum
Dado J.at el.,(2011)	Career prospects , care for students , tangibles , understanding of students , assurance and timeliness
Cook (1997)	academic staff factors, study factors , general welfare factors, practice factors, and extra-curricular activity factors

Figure1 : Conceptual Framework for Service Quality in Universities (SQUs)
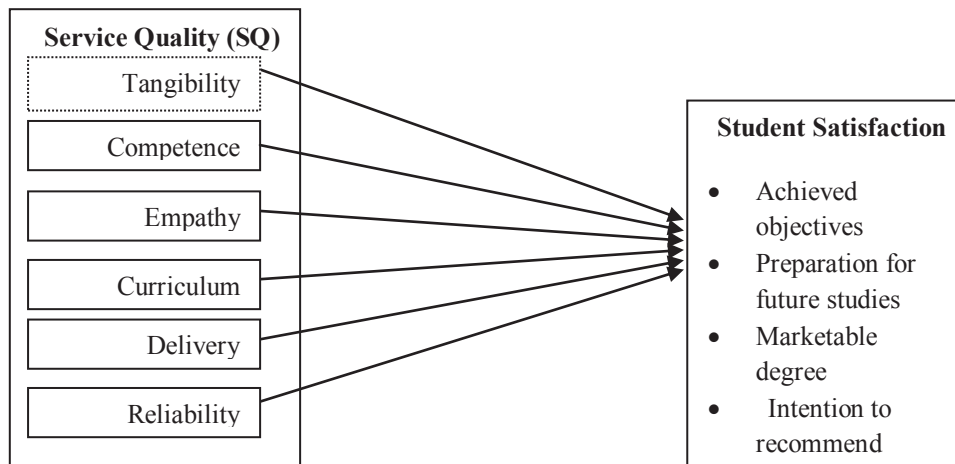
Tangibles-T	Facilities provided by the Faculty in serving good conditions for students applicable to personnel and equipments. (As Parasuraman, 1988)
Competence – C	Sufficiency and highly qualified of the academic staff and the capabilities to render good image and strong attraction in teaching (As Jusoh at.el., 2004)

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Empathy - E	Communication, caring, and individual attention and understanding students' needs (As Parasuraman, 1988)
Curriculum-CU	Curriculum design and how it can be developed to prepare the students for their potential job market (As Jusoh at.el., 2004)
Delivery– D	Capability of giving lecture and presentation effectively, the compliance of course works with the module, focusing on the learning outcome, providing useful information and proper channel for feedback and ideas (As Jusoh at.el., 2004)
Reliability - R	Ability to provide accurate and promised service to students(As Parasuraman, 1988)
Satisfaction (S)	Judgment resulting from perceived performance in relation to students' expectation (Kotler and Keller, 2005).

Methodology

The deductive method was the research approach of this study. According to Sekaran and Bougie (2011), studies may be either exploratory, descriptive or hypotheses testing. Hence, this study is descriptive and hypotheses testing was carried out to describe certain characteristics of SQ and to examine the relationship between SQ dimensions and students' satisfaction. Thus a type of investigation was correlation, as the study delineated the important SQ variables associated with the student satisfaction. Study was carried out in the natural environment in non- contrived setting. The data was collected in actual university environment and as a cross sectional. Unit of analysis was individual male and female undergraduates. Population of the study covers all undergraduates from different degree programs in the FMS, NEPUs. Study was conducted from student perspective. Stratified random sampling method applied. Study programs, and Academic year were the different strata of this sample. 10% from each stratum considered as the size of sample. Accordingly the sample size was 625, but only 568 responses received. Both primary and secondary data was gathered. Structured Questionnaire with the format of 5 point Likert scaling applied for collecting primary data and it was tested with pilot survey. Questionnaire consisted of 3 parts; part 1 for gathering data relating to the SQ level (consists of positively formatted 50 items focusing 06 Dimensions; Tangibles, Empathy, Curriculum, Reliability, Competence and Delivery), the part 2 for gathering data on student satisfaction (consists of 8 items) and the part 3 for collecting background information of undergraduates (consists of 6 items focusing University, Gender, Courses, Student status and Race). Pilot survey was conducted through 30 undergraduates in RUSL representing 3 academic years in 3 degree programs considering both male and female. This was done to assess the validity before embarking on the vast scale survey. Reliability of the measures used to test the goodness of data. Sekaran and Bougie (2011) explain α as a reliability coefficient that indicates how well the items in a set are positively correlated to one another. According to them, Cronbach's α less than 0.60 are considered to be poor, those in the 0.70 range acceptable and those over 0.80 as good. Thus the reliability of findings obtained shows that no values of α were less than 0.7. Therefore internal consistency reliability of the measures used considered being acceptable. Since face validity is rather subjective criterion it was checked using discussions with academic staff and by reviewing enough literature. Collected data were processed using SPSS 16 version and values obtained

from the survey were grouped according to the 3 range continuum developed as in table 4 below.

Table 3: Results of the Reliability Test (Pilot Survey)

Dimension	No of items	Cronbach's α
Tangible	11	0.733
Competence	7	0.889
Empathy	12	0.839
Curriculum	11	0.861
Delivery	4	0.831
Reliability	5	0.813
Student satisfaction	7	0.869

Source: Survey Data, 2013.

Table 4: Three Range Continuum

Degree	Value Range	Standard of Quality
Low /poor	1.00 -2.33	1.00 - 46%
Moderate	2.33 – 3.67	47 % - 73%
High /good	3.67 – 5.00	74% -100%
Not High segment	1.00 -3.67	Less than 74% (Low + Moderate)

Source: Survey Data, 2013.

Results and Discussion

Sample Profile

The total number of respondents was 568 and after cleaned data it was reduced to 537. Accordingly, it was revealed that, the highest number of undergraduates was from Sabaragamuwa University of Sri Lanka -SUSL (32.1%) minimum number from Rajarata University of Sri Lanka – RUSL (21.6%). Further, Wayamba University of Sri Lanka – WUSL is 22.2% and the Uwa Wellassa University of Sri Lanka – UWUSL is 24.0%. Also it is worthy to note that majority of respondents are female (65.8%) where the male were 37.2%. With regards to the Race, Sinhalese were 94.1% and the rest consisted of Tamils and Muslims. They were equal portion (2.9%). Medium of instruction of these respondents mainly were English (97.8%), followed by Sinhala (1.8%) and the rest 0.4% in Tamil medium. Further the highest number of respondents (31.7%) was from Department of Tourism and Hospitality Management (THM) while 26.4% Accountancy and Finance (ACF), 23.3% from Business Management (BM), 17.0% from Banking and Insurance (BI) and smaller number 0.6% was from the department of Business Information Technology (BIT). Also highest number of respondents recorded from 3rd year (47.0%) followed by 4th year (47.0%) and the lesser amount from 2nd year (21.6%).

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Table 5: Sample Profile

University	%	Academic Year	%	Gender	%
SUSL	32.1	2nd Year	21.7	Male	37.2
UWSL	24.0	3rd Year	47.0	Female	65.8
WUSL	22.2	4th Year	31.3	**Total**	**100.0**
RUSL	21.7	**Total**	**100.0**		
Total	**100.0**				
Course	%	Study Medium	%	Race	%
THM	31.7	English	97.8	Sinhalese	94.1
ACF	26.4	Sinhala	01.8	Tamils	2.9
BM	23.3	Tamil	00.4	Muslims	2.9
BI	17.0	**Total**	**100.0**	**Total**	**100.0**
BIT	01.6				
Total	**100.0**				

Source: Survey Data, 2013.

Validation of Measurement properties

The validation of measurement properties was established satisfactorily. The suitability of data for further analysis was identified using validity and reliability tests. Accordingly, the measurement model for construct is assessed by looking at individual item reliability and interval consistency. The individual item reliability is evaluated by examining the factor loadings of the measures. Table 6 shows that all of the loadings exceed 0.5 and load more highly on their own construct than on others. On the other hand internal consistency is assessed using the Cronbach's alpha. Nunally (1978) suggests 0.70 of Cronbach's alpha as a benchmark for a "modest" reliability. As shown in Table 6, alpha for all constructs included in the study, above the minimum acceptable value of 0.70. These results provide support for the reliability of the measures. Analysis of Histogram, Box plot and probability plot demonstrated that data of all these dimensions were normally distributed. Anyhow, before embarking the analysis 27 outliers were extracted focusing the results of box plot and normal Q-Q Plot. Values of KMO (greater than 0.5) for each factor listed in table 6 and it explains the adequacy of sample size.

Table 6: Factor loading for the service quality dimensions and results of Reliability Test

Factor	Factor 1 Tangible		Factor 2 Competence		Factor 3 Empathy		Factor 4 Content		Factor 5 Delivery		Factor 6 Reliability		Factor 7 Satisfaction	
Factor loading	T3	.784	C1	.742	E1	.734	CO1	.756	D1	.754	R1	.798	S1	.767
	T4	.821	C2	.777	E2	.781	CO2	.807	D2	.812	R2	.831	S2	.799
	T6	.784	C3	.768	E3	.812	CO3	.782	D3	.819	R3	.771	S3	.796
	T7	.759	C4	.831	E4	.807	CO4	.678	D4	.777	R4	.733	S4	.832
	T8	.821	C5	.777	E5	.636	CO5	.636			R5	.750	S5	.851
	T9	.629	C6	.800	E6	.639	CO6	.754					S6	.746
	T10	.540	C7	.775	E7	.616	CO7	.720					S7	.859
	T11	.665			E8	.768								
					E9	.757								
					E10	.673								
Cumulative % of explained variance	53.532				52.625		62.541		60.432		60.43		65.286	
KMO & Bartlett's test	0.886		0.8950		.884		0.852		0.765		0.813		0.879	
Cronbach's α	0.872		0.894		0.898		0.863		0.800		0.836		0.911	

Extraction Method: Principal Component Analysis performed on sample 537.

a. 1 components extracted.

Source: Survey Data, 2013.

Descriptive Statistics on SQ and Student Satisfaction

Table 7 :Descriptive Statistics on SQ practices and Satisfaction

SQ Dimensions	N	Mean	Standard Deviation
Tangible	537	3.04	0.78
Competence	534	3.91	0.61
Empathy	533	3.35	0.72
Curriculum	533	3.38	0.68
Delivery	533	3.46	0.75
Reliability	536	3.08	0.82
Dependent variable			
Student satisfaction	527	3.30	0.68
Overall service quality	537	3.37	0.59

Source: Survey Data, 2013.

Above table 7, shows the descriptive statistics of each of the SQ dimensions, student satisfaction and overall service quality. In each case, student satisfaction and, overall SQ

and all SQ dimensions except competence were reached mediocre levels as per values of 3 range continuum indicated in table 5. Only competence maintains the high level obtaining mean value 3.90. The variability associated with each dimensions were not high since the value of SD is less than 1.00. To analyze the impact of SQ on customer satisfaction a multiply regression analysis was employed. The result indicates that the multiple regression model is highly significant as indicated by the F-value of 74.93. Diagnosis test found that regression outcome is free from multi-collinearity. This was examined by the calculating variance Inflation Factor (VIF) and tolerance statistics. VIF values of all independent variables are well below (norm) 5 and tolerance statistics are well above the 0.2. These statistics imply that there is no multi colloniarity within the data.

Table 8 (a): Model Summary - ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	111.881	6	18.647	74.936	.000[a]
Residual	128.400	516	.249		
Total	240.281	522			

a. Predictors: (Constant), Reliability, Competence, Tangible, Empathy, Delivery, Content. b. Dependent Variable: Satisfaction

Source: Survey Data, 2013.

Table 8 (b): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.682[a]	.466	.459	.49884	1.726

a. Predictors: (Constant), Reliability, Competence, Tangible, Empathy, Delivery, Content. b. Dependent Variable: Satisfaction

Source: Survey Data, 2013.

Table 09: Model Summary and Coefficients [a]

Dimension	Standardized Beta Coefficients	t	Sig	Collinearity Statistics	
				Tolerance	VIF
Tangible	.043	1.039	.000	.602	1.660
Competence	.061	1.443	.300	.580	1.725
Empathy	.119	2.340	.150	.401	2.494
Content	.352	6.754	.020	.382	2.621
Delivery	.005	.104	.000	.388	2.579
Reliability	.217	4.441	.917	.434	2.304

a. Dependent Variable: students' Satisfaction

Source: Survey Data, 2013.

The coefficient of determination (R Square) indicates that 46.6% of the variation in student satisfaction is significantly explained by variations in different SQ dimensions. The regression results indicate that three dimensions of SQ: tangibility, content, and

delivery significantly contribute to the prediction of student's satisfaction. However, according to regression results, competence, empathy and reliability have no significant impact on students' satisfaction.

Conclusions and Recommendations

Going deeply into SQ factors that affect to students' satisfaction the need to have a systemic approach to strengthen the teaching-learning process has been identified. Regarding the relationship "impact of SQ on student satisfaction", all the SQ factors explained in the model were positively correlated to student satisfaction. This argument is supported by Sureshchandar *et al*. (2002), Cronin et al., (2000); and Gruber *et al*., (2010). However, the most influential and significant factors in explaining students´ satisfaction were reliability, content and empathy. This implies that administrators of the faculties should focus the attention more on these three factors other than tangibility, competence and delivery. According to the results it can be concluded that overall SQ and overall satisfaction of the students was at the level of mediocre. In case of empathy it was found that the requirement of treating students as individual is significant. Thus caring for students, understanding, good communication with them and giving individual attention is important. Also it is required to strengthen the curriculum to further improve the IT and Analytical skills, Team work etc which will contribute to develop their carrier. Finally, it is important to highlight the requirement of maintaining and updating the teaching and learning process as planned. Certainly the faculty should invest time and effort to releasing semester examination results in a limited time period according to an agreed scheduled. Also further studies are recommended to identify additional factors that influence students' satisfaction in these faculties since low adjusted R^2 value implies that there are other factors, not included in the model. In addition to that it is also recommended to conduct further studies to investigate why these universities do not have better ranking since it was concluded that there is a positive relationship between SQ and student satisfaction.

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