THE CORRELATION BETWEEN SERVQUAL DIMENSIONS AND STUDENT SATISFACTION

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Abstract

Service quality is a crucial element in ensuring the competitiveness of many types of institutions. Having good service quality enhances the reputation of an organization and thus becomes their added competitive advantage. In higher education institutions, service quality is important in ensuring students, as the primary stakeholders, have a good learning experience. This subsequently influences student satisfaction levels. The primary objective of this paper is to analyze the correlation between five elements in SERVQUAL dimensions (tangibility, reliability, responsiveness, assurance, and empathy) and students' satisfaction. Questionnaires were distributed among students attending various faculties at UiTM Sabah using the convenience sampling technique. In total, 250 questionnaires were collected for analysis. Overall, the results show that the students are satisfied with the service quality at UiTM Sabah. Specifically, all five SERVQUAL dimensions correlated with student satisfaction. The reliability, responsiveness, assurance, and empathy dimensions demonstrated a strong correlation with student satisfaction. Meanwhile, tangibility had a moderate correlation with student satisfaction. This study aims to contribute knowledge to the service quality field, especially in higher education institutions. In the final section of this study, it is proposed that future research investigate different perspectives of service quality.

Keywords: servqual; students' satisfaction; service quality; higher education institution; service delivery.

1.0   INTRODUCTION

The customer is the main stakeholder for most institutions, which rationalizes the need to meet and exceed their expectations when they use different services. In the higher education context, students are considered the main customers of universities. To become a highly competitive educational establishment, institutions must not only focus on the academic aspects but also be committed to other features of service delivery, such as facilities, administration, and other support services. By maintaining a holistic commitment to service quality, higher education

institutions may produce numerous and high-quality graduates. As a result, the image that employers have of the higher education institutions in Malaysia will improve and cooperation between universities and industry may also be enhanced in the future, both locally and globally. Creating a positive image of local institutions also may enhance the global visibility of Malaysian higher education, so the country can become a global higher education hub. To deliver good service quality, the institutions must ensure they meet the students' expectation in terms of both tangible and intangible aspects. This can become a university's competitive advantage, given the intense competition they face from other universities. This is especially true today, with many higher institutions expanding and being established in this globalization era. On the other hand, if institutions do not take the student satisfaction seriously, a gap will be created between the service perceived and the service received by the students. As a result, learners' negative experiences tend to disseminate easily among other students (Petruzzellis, Uggento, & Romanazzi, 2006), especially in the digital era, in which social media has a major impact on individuals or organizations. Situations leading to student dissatisfaction with the service quality usually include teaching quality, facilities inadequacy and administrative inefficiency issues (Abbas, 2020). Given the importance of student satisfaction in the higher education context, the research objective of this study was to identify the correlation between the service quality dimensions (SERVQUAL) and student satisfaction. To achieve this objective, the following research question was designed and investigated: What is the correlation between SERVQUAL dimensions (tangibility, reliability, responsiveness, assurance, and empathy) and student satisfaction? Meanwhile, in terms of the sample, students from Universiti Teknology MARA (UiTM), Sabah Branch were chosen as the respondents in this study. UiTM Sabah is one of the public universities in Sabah and is in the Sepanggar area. It aims to achieve an enrollment of 7000 students by 2025 (*UiTM Sabah - Profil*, n.d.). Therefore, it is essential to measure the service delivery level and, with this tool, take any necessary action to provide a good image to the stakeholders and attract students to enroll in this university. Therefore, this study will be beneficial to the administration department of UiTM Sabah by enabling them to strategize their plans to attract and retain students. Furthermore, the study may become the benchmark for other universities and stakeholders with an interest in students' perceptions of the service delivery in public universities in Sabah. The outcome of this study may contribute to the existing literature and provide inputs to the relevant stakeholders for future directions.

2.0   LITERATURE REVIEW

2.1   Student Satisfaction

Student satisfaction is the main concern of educational institutions, especially higher education establishments. This is because the satisfaction of the students, who are the main customers, depends on each institution's ability to provide sufficient facilities in addition to the high-quality service delivery from the academic and non-academic staffs. Most studies have noted that providing high-quality services can enhance student satisfaction (Wulandari & Suryani, 2017). For institutions, this provision can become a critical indicator of positive word of mouth, student retention levels, and student loyalty to their institution (Cahyono et al., 2020; Temizer & Turkyilmaz, 2012). Student satisfaction is the result of short term attitude from the service experience received by them *(*Elliot & Healy, 2001), and it will be determined from their evaluation of the services whether their expectations were met or not (Athanassopoulos et al.,

2001). In addition, student satisfaction tends to increase if the service delivered was better than expected Petruzzellis, Uggento, & Romanazzi (2006). If all institutions integrate the element of student satisfaction as their critical indicator in all aspects of their planning and execution, this will be mutually beneficial for the students and the organization itself.

2.2   Tangibility

One element that influences student satisfaction is tangibility. According to Parasuraman et. al (1988), tangibility can be defined as physical proof that can be seen or touched using our senses. It refers to the equipment and personnel that are associated with the institutions, such as the facilities and the staff members' physical appearance (Farahmandian, Minavand, & Afshardost, 2013). The ability to provide a conducive learning environment may have a significant impact on student satisfaction. According to Dutta & Dutta (2009), one element often considered by students when choosing their institutions to further their studies is the availability of the facilities provided. Rusdarti (2019) found that tangibility is the most important aspect of the SERVQUAL dimensions in influencing postgraduate students' satisfaction. Adequate infrastructures, facilities, and learning environments improve students' learning experiences and thus may enhance their satisfaction (Shah Kamal Ideris et al., 2016). Therefore, it is crucial to ensure that institutions are well-equipped in terms of tangible elements to ensure their students develop and retain positive perceptions of the institutions. This is consistent with the findings by Sibai et al. (2021); Hanaysha et al. (2011); Petruzzellis & Romanazzi (2010) who demonstrated the positive impact that tangibility has on student satisfaction. Rasheed et al. (2020) revealed that even with e-learning courses, all the SERVQUAL dimensions, including tangibility, proved to have a significant relationship with student satisfaction.

2.3   Reliability

Besides tangibility, reliability is also considered an important dimension in influencing student satisfaction. Parasuraman et. al (1988) defined reliability as the *"ability to perform the promised service dependably and accurately"*. This element can reduce the gap between the service perceived and the service received by the students as it demonstrates that the institutions are committed to delivering accurate and timely services (Pollack, 2008). This is supported by Kassim & Asiah Abdullah (2010), who correlated reliability with the precision and reliability of the services provided. Institutions need to ensure that reliable and accurate actions are being performed to assist students and gain their trust. The failure to provide reliable services will result in students having a negative experience of service delivery. The importance of this dimension in terms of satisfaction is revealed in the study by Danish et al. (2010), which shows that reliability is the most significant element in determining student satisfaction. This is also supported by Nell & Cant (2014) who found a positive relationship between both variables. Moreover, the reliability factor was also identified as one of the important dimensions that may enhance student satisfaction when utilizing the Student Activities Information System (Humaidi et al., 2019). This shows that, apart from providing good service at the counter, it was demanded that the university focus on providing good e-service to students as well.

2.4   Responsiveness

The third element that can influence students' satisfaction is responsiveness. Responsiveness refers to the willingness or readiness of the staff to deliver services and provide facilities promptly (Parasuraman et al., 1985). In other words, responsiveness means the ability of the staff to respond to customer inquiries immediately (Lee et al., 2011). It cannot be denied that staffs represent the institution's image as they are the ones who engage and deliver the service to the students. Failing to show commitment to fulfilling customers' needs will affect the students' perceptions of the institutions and directly impact their satisfaction. Perera & Abeysekera (2019) found that responsiveness has a significant impact on perceived service quality, which then directly influenced user satisfaction. On the other hand, findings from a study by Sarsale & Caday (2020) revealed that students were not satisfied with the assurance element provided by their institution, so the latter needed to improve their service delivery to cater for the students' needs and expectations. As employees of higher institutions, both academic and non-academic staffs must commit to the client charter and deliver services effectively and efficiently to the students. The willingness and readiness of an institution's staff to serve the students' needs, such as being able to communicate effectively, delivering quick service, and providing a service without hesitation, may influence students' expectations of the service delivery (Mwiya et al., 2017).

2.5   Assurance

Next, assurance is another element in the SERVQUAL dimension. Parasuraman et al. (1988) stated that assurance is *"the employee's knowledge and courtesy and their ability to inspire trust and confidence"*. (Zeithaml et al., 1988) further explained that assurance can be defined as the extent to which the staff's knowledge and capabilities create trust and confidence, which then influences student satisfaction. An institution's staff are expected to have sufficient information and knowledge concerning their job scope so that they can give the correct information to students. This will demonstrate staff professionalism and thus create a strong impression among the students. The importance of assurance in service delivery is shown in the empirical study by Stephen et al. (2019), who identified a positive relationship between assurance and student satisfaction. This is also consistent with a study conducted by Sarsale and Caday (2020), who found that the level of assurance provided by the Philippine State University Satellite Campus was among the strongest of all dimensions, which reflected the satisfaction of their students. Therefore, institutions need to ensure their staffs are well equipped with the proper knowledge of their roles and responsibilities to ensure students receive the correct information from their inquiries and the right treatment as a customer of the institution (Pakurar et al., 2019).

2.6   Empathy

Another element that can influence students' satisfaction is empathy. The empathy element is considered to relate to the emotions portrayed by the service provider towards the service receiver. Someone can be considered as having empathy if they show sympathy and compassion towards a student's needs. Meanwhile, Cardona & Bravo (2012) described empathy as the capability to care and give attention to students. Empathy is highly important in influencing

satisfaction as it shows that institutions are concerned with the needs of students as the main stakeholders and not merely as students. According to the findings generated by Gregory (2019), empathy is the most important element in service quality. Twum & Peprah (2020) studied the relationship between empathy and student satisfaction, finding a significant relationship between both variables. The findings further highlighted that student at the School of Business at Valley View University were moderately satisfied with the empathy element due to the treatment they received from their lecturers. By looking at this case, lack of feeling empathy towards an institution's stakeholders including the students, may influence long-term user satisfaction. This is consistent with the findings from Zaineldeen et al. (2020), which showed that higher elements of empathy resulted in greater student satisfaction with the service delivery of the university. If staff show empathy towards students, the latter may feel a sense of belonging to their institution, thus potentially creating a harmonious relationship between them.

After reviewing the literature, it was found that studies of higher institutions in Sabah are still lacking, so few overviews are available of the service quality provided by higher education institutions in Sabah. Therefore, this study may provide insights into the perspectives of students, specifically those at UiTM Sabah, on the service quality delivered by the institution. Thus, may provide relevant inputs to achieve the objective to attract 7000 students in the near future. Parasuraman's SERVQUAL dimensions, which consist of tangibility, reliability, responsiveness, assurance, and empathy were adopted to study the correlation between service quality and student satisfaction.

3.0   METHODOLOGY

This study used a cross-sectional quantitative approach as a research design to test the correlation between one variable and another. According to Cresswell and Guetterman (2021), a quantitative method is the most suitable research design if the study objective is to examine the relationship between variables. Therefore, employing this research design was expected to answer questions related to the correlation between SERVQUAL dimensions and student satisfaction. The convenience sampling technique was employed in the data collection process. The students were selected based on their willingness to participate in this study and they answered the questionnaires voluntarily. The respondents were students from all the UiTM Sabah faculties, so the population consisted of students from the Faculties of Accountancy; Business and Management; Hotel Management and Tourism; Plantation and Agrotechnology; Applied Science; and Administrative Science and Policy Studies. The questionnaires were distributed through Google Forms and 250 responses were collected. The data were then analyzed using SPSS by running the Spearman Correlation analysis to identify correlations between the variables. The questionnaires were divided into several sections. Part A covered demographic questions such as the student's age, gender, education level, faculty, and state. Parts B to F covered questions on the SERVQUAL dimensions, while Part G covered the student satisfaction items. All the items from Part B to Part F used 5-point Likert scales, which ranged from 1 as strongly disagree to 5 as strongly agree. The SERVQUAL dimensions and student satisfaction items were adopted from Hassan et al. (2008), as shown in Table 1 below:

Table 1 Questionnaire Items

TANGIBILITY
The technical equipment in this higher education institution is up-to-date.
The facilities are adequate.
Employees are neat in appearance.
The tools and instruments used to provide the service are appealing.
Teaching aids are available as planned (e.g., computer, projector).
Classrooms and study rooms are comfortable.
Overall, the university is clean.
RELIABILITY
The services are provided as promised.
Staff can solve students' complaints.
The service is delivered correctly and first time.
Employees keep accurate records.
The teaching capability/proficiency of the lecturers is adequate.
The lecturers display a sincere interest in solving students' problems.
RESPONSIVENESS
Staff are available to assist students.
The service is delivered at the time agreed.
The channels for expressing student complaints are readily available.
Queries are dealt efficiently and promptly
ASSURANCE
The staff can be trusted to maintain a student's privacy.
Students feel safe when interacting with employees.
The staff are friendly with students.
The staff have the knowledge to answer student inquiries.
The staff are polite to students.
University employees have adequate knowledge of rules and procedures.
The lecturers are friendly and courteous.
EMPATHY
The staff give individual attention to each student.
The staff know a student's needs.
The staff understand a student's needs.
The staff have the students' best interests at heart.
Access to computer facilities is accommodated at the students' convenience.
Access to study rooms is accommodated at the students' convenience.
The higher education institution has convenient operating hours.
STUDENT SATISFACTION
I am satisfied with my decision to attend this University.
If I had a choice to do it all over again, I would still enroll in this University.
My choice to enroll in this University has been a wise one.
I am happy with my decision to enroll in this University.
I made the right decision when I decided to enroll in this University.
I am happy that I enrolled in this University.

4.0   FINDINGS & ANALYSIS

4.1   Demographic Profile

Based on the responses received, it was found that the majority of the respondents were female students (59.6%) followed by male students (40.4%). Meanwhile, in terms of age, it was found that most respondents were 20 years old or above (60%), while only 40% of them were below 20 years old. In terms of education level, more than half of the respondents were at Degree level (55.6%), followed by those at Diploma level (43.6%), while less than 1% were students at

Master's level. Meanwhile, the data showed that most respondents were students from the Faculty of Administrative Science and Policy Studies (38%), followed by those from the Faculty of Business and Management (19.6%). Students from the Faculty of Applied Science were the next largest group (11.6%), while students from the Faculty of Plantation and Agrotechnology and the Faculty of Accountancy accounted for only 10% or fewer of the total number of respondents. The demographic profile of the respondents is summarized in Table 2 below:

Table 2 Demographic Profile of Respondents

	Frequency	Percentage (%)
Gender		
Male	101	40.4
Female	149	59.6
Age		
20 and below	100	40.0
20 and above	150	60.0
Education Level		
Diploma	109	43.6
Degree	139	55.6
Master's	2	0.8
Faculty		
Faculty of Accountancy	24	9.6
Faculty of Business and Management	49	19.6
Faculty of Hotel Management and Tourism	28	11.2
Faculty of Plantation and Agrotechnology	25	10.0
Faculty of Applied Science	29	11.6
Faculty of Administrative Science and Policy Studies	95	38.0

Correlation Between SERVQUAL Dimensions (Tangibility, Reliability, Responsiveness, Assurance, and Empathy) and Student Satisfaction

To identify the correlations between all the SERVQUAL dimensions and student satisfaction, the Spearman Correlation analysis was conducted. Table 3 shows the results after analyzing the correlation between all the SERVQUAL dimensions and student satisfaction. Ratner (2009) stated that if the value of r is (<0.3), a correlation is considered weak. Meanwhile, if the value of r is (<0.7), the relationship is considered moderate, while if the r value is (>0.7), there is a strong correlation between the variables. According to the results, all the SERVQUAL dimensions demonstrated a positive correlation with student satisfaction (tangibility r=0.547, reliability r=0.723, responsiveness r=0.734, assurance r=0.703, empathy r=0.747). Meanwhile, the strongest correlation involved empathy (r=0.747**, p=<0.05), followed by responsiveness (r=0.734**,p=<0.05), reliability (r=0.723**, p=<0.05), and assurance (r=0.703**, p=<0.05); the weakest correlation was with tangibility (r=0.547**, p=<0.05). The results indicate that most respondents agreed that UiTM Sabah displays high empathy in delivering their service to the students, but UiTM Sabah can improve more in terms of the tangibility aspects, such as the facilities and infrastructures provided on the campus.

Table 3 Spearman Correlation

		Tangibility	Reliability	Responsiveness	Assurance	Empathy
Student satisfaction	Spearman Correlation	0.547**	0.723**	0.734**	0.703**	0.747**
	Sig (2-tailed)	0.00	0.00	0.00	0.00	0.00
	N	250	250	250	250	250

5. DISCUSSION AND CONCLUSION

Service quality is a pivotal element that must be considered by every institution that provides a service, according to the nature of the establishment. Maintaining good service quality will enhance an institution's reputation and this would become their competitive advantage over other players in their industry. As the main stakeholders of higher education institutions, the students' needs and expectations must be fulfilled to enhance their satisfaction. This study revealed that all the SERVQUAL dimensions (tangibility, reliability, responsiveness, assurance, and empathy) demonstrated a positive correlation with student satisfaction. This shows that the higher the correlation, the higher the level of student satisfaction.

The first element, tangibility, was found to have a positive correlation with student satisfaction, with r value=0.547. This is consistent with the works of Sibai et al. (2021); Shah Kamal Ideris et al. (2016) in which similar results were revealed. Additionally, Bawais (2020) found that student satisfaction was significantly related to the service tangibility provided by the institutions during service delivery. This was because students who experienced high-quality service tended to be more satisfied than dissatisfied (DeShields et al., 2005). Based on this finding, students at UiTM Sabah were moderately satisfied with the tangible elements, such as the adequacy of the facilities, the neatness of the staff, the conduciveness of the learning environment, and the cleanliness around the campus. Despite of the moderate correlation and was the weakest among all the SERVQUAL dimensions, tangible elements shows a noticeable impact on student satisfaction. The implication is that, institutions could improve this aspect by providing sufficient and adequate tangible elements as well as ensuring their availability in the campus. This would enhance the positive perceptions of the students.

Secondly, the reliability dimension was also found to have not only a positive but also a strong correlation, with r value=0.723. This is in line with the works of Humaidi et al. (2019); Kassim & Asiah Abdullah (2010); Nell & Cant (2014) who found a significant relationship between reliability and student satisfaction. A strong correlation existed between reliability and student satisfaction in this study, indicating that students at UiTM Sabah were highly satisfied with the service delivered in terms of the ability of staff to resolve students' complaints, the service being delivered correctly and first time, the service being delivered at the time agreed, the accuracy with which the staff maintained student information, the teaching capability of lecturers, and lecturers being sincere about solving students' problems. If institutions ensure their staff are fully equipped with the relevant information and knowledge, users are likely to be satisfied with the employees' performance. This is because the students know they can rely on the staff to respond to their concerns and needs.

Thirdly, responsiveness also showed a positive and strong correlation, with r value=0.734. This means that the students were highly satisfied with the responsiveness of the UiTM Sabah staff. The strong correlation between both variables indicates that the staff at UiTM Sabah can deliver the services as promised, resolve students' complaints and requests efficiently, deliver the services promptly and accurately, as well as provide the proper channels for the students to raise their complaints. Ensuring a high degree of responsiveness among the staff can impact the institution's image positively. This refers not only to students but also other important stakeholders, such as the public and strategic partners, as well as potential students who might want to further their studies at the institution in the future. Prior studies that show consistent results are those of Sarsale and Caday (2020), Perera and Abeysekera (2019), and Ismail and Yunan (2016), who identified the positive relationship between responsiveness and student satisfaction.

Besides, student satisfaction is also influenced by assurance, as findings show that the correlation between both variables generated r value= 0.703. The strong correlation between assurance and student satisfaction indicates that students feel assured with the staff of UiTM Sabah. Establishing a sense of trust among the students can be achieved if they feel safe whenever they interact with the staff and when employees are polite in communication, well-informed about the relevant details, and knowledgeable about any matters concerning their working duties. Performing this element of service quality would arguably boost the trust and confidence of the students in the employees' competence. The failure to fulfill this element will tarnish the institution's reputation, which is ironic given the nature of educational institutions, which are supposed to place assurance as one of their client values. This is supported by the findings generated by Sarsale & Caday (2020); Stephen et al. (2019) which showed a significant relationship between assurance and student satisfaction. Student satisfaction tends to be higher if they are assured with the service delivered by the institution.

Lastly, empathy displayed the strongest correlation of all the dimensions, with r value=0.747. This shows that the students were satisfied with the empathy and compassion of the staff in responding to student concerns. Like other customers, students also expect staff to treat them well. If the staff meet this expectation and the students feel happy, this may create positive perceptions among the students that last for longer, even after they have graduated from their institution. Thus, there is a demand that staff have strong emotional skills management in delivering services to the students. Based on the findings, the students were satisfied with the level of empathy provided by the staff. For instance, they understood students' needs and concerns, gave students individual attention, provided the facilities at the students' convenience, and had the best interests of the students at heart. This is similar with the findings of Gregory, (2019), which showed that the element of empathy has the strongest relationship with student satisfaction. In addition, Twum and Peprah (2020) and Zaineldeen et al. (2020) produced consistent results, discovering that the higher the level of empathy, the higher the students' levels of satisfaction.

In conclusion, the study found that all the SERVQUAL dimensions had positive relations with student satisfaction. Overall, most students could be regarded as satisfied with the service provided at UiTM Sabah. It was found that all four dimensions (reliability, responsiveness, assurance, and empathy) displayed a strong correlation with student satisfaction. Therefore, the senior administration and all staff must ensure consistency in all four dimensions when providing services. Meanwhile, as this study highlighted moderate satisfaction with the tangible dimension, UiTM Sabah might improve their tangibility aspects, such as the facilities and infrastructures.

This would ensure students have access to a conducive learning environment. Even though all the SERVQUAL dimensions showed a positive correlation with student satisfaction, this study has some limitations. One of these is that the respondents were limited to include only students at UiTM Sabah. Therefore, the findings generated are too contextual and cannot be generalized to a wider population. Secondly, this study used a quantitative approach, thus limiting the understanding of respondents' perceptions of the service quality delivered. Thirdly, this study was conducted during the COVID-19 outbreak, so obtaining responses to the questionnaires relied solely on the Google Form. Therefore, it is suggested that future research extend the scope to other states or countries so that comparisons can be made and any differences in the findings can be generated. Besides, other researchers could explore other dimensions that influence student satisfaction, such as culture or service perception. Lastly, it might be fruitful if future researchers conduct a similar study using a qualitative approach to gain a deeper understanding of students' actual perceptions of the service delivered to them. The output of this study contributes by enriching the literature for the reference of future studies in this field. It also provides inputs to relevant stakeholders, such as the Ministry of Higher Education, UiTM Sabah itself as well as other related institutions, to enable them to enhance their customers' satisfaction.

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