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## Perception of Service Quality in Higher Education: Perspective of Iranian Students in Malaysian Universities

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### Abstract

*This article presents a gap analysis by measuring the perception and expectation of service quality in higher education from the perspectives of Iranian postgraduate students. This article first tries to understand the phenomenon for Iranian students to change their preference from studying in universities in the West to those in the East, particularly Malaysia. In addition, this article seeks to assess their perceptions of service quality in the new environment based on a modified service quality (SERVQUAL) instrument to measure five constructs: tangibles, reliability, responsiveness, assurance, and empathy. After conducting a pilot study, the instrument was administered to 163 Iranian postgraduates who were selected based on stratified sampling on the top five public universities in Malaysia. The analysis started with descriptive analysis followed by factor and reliability analyses. Single mean t-tests were then conducted to assess the significance of the gaps based on all the 35 items of the modified SERVQUAL. The study uncovered that all of the items and constructs measuring the gaps are significantly negative with empathy representing the construct with the highest gap (-0.681), followed by reliability (-0.673), responsiveness (-0.670), assurance (-0.612) and tangible (-0.601).*

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### Key Words

*Higher Education, Iranian Postgraduate Students, Service Quality*

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## I. INTRODUCTION

In the past decades, the number of students seeking higher education abroad has risen sharply as reported by [46] whereby the number of graduate students studying abroad in the year 2002/2003 was more than 2.1 million, more than 40% of the figure reported in 1989/1990. According to [47], the numbers of students who are studying abroad have been growing from 150,000 to 2.8 million since 1955 to 2007. This phenomenon can be seen as an emerging perspective of internationalization of higher education which is sometimes referred to as the "massification of education" to increase an institution's influence, visibility, and/or market share at the international level [48].

Malaysia, as one of the most advanced developing countries in South East Asia, is affected with the challenges of globalization and internationalization of education. One of the most essential responses to these challenges from the Malaysian government has been to allow international students to study in public higher education institutions [49]. Furthermore, realizing the important contribution of education services to the national economy, the government is seeking to turn Malaysia into an international hub and centre of excellence in education. In addition, according to [1], the engineering education model developed for Malaysia is expected to be capable of achieving global recognition and accreditation for excellence in engineering practice as well as educating future leaders. The attractiveness of the engineering programs offered by most of the public Malaysian universities is further enhanced with accreditation from international bodies for the engineering courses.

The number of international students in Malaysia is crucial for the national economy, particularly if considered as provider of higher quality education in the global market. In other words, higher education in Malaysia has the potential to be a major revenue earner through the offering of world class academic programs [50]. This is in line with Malaysia's plan to differentiate its export products and services by developing the export potential of its education services [2]. The targets identified include China, Iran, Indonesia, Vietnam and the Middle East. Accordingly, the aim of the Ministry of Higher Education in Malaysia is to attract 95,000 international students to study in Malaysia by 2010 [3]. Since Malaysia has been successful in increasing access to higher education, the next logical emphasis is quality assurance and improvement of its standards of higher education particularly with regards to post-graduate studies.

Graduate student enrollment in the early years of graduate education in Malaysia was made up mainly of Malaysians and they were few in number. Their number grew gradually as more graduate schools were set up, but still, with few international students. Lately, however, the scenario has changed. The early groups of international graduate students to arrive in Malaysian came from neighboring countries which are less developed than Malaysia. In the recent past, however, more international students were arriving from further afield - from countries in the Indian subcontinent, the Middle-East, and even some African countries [4]. However, the influx of students from Iran has been phenomenal. Iranian students who used to make America and Europe their top destination for further studies are now coming to Malaysia in droves. What

could be the reasons? This article seeks to understand the influx of Iranian students to Malaysian universities from the service quality perspective. As more and more Iranians are inquiring about further studies option in Malaysia, a review of the quality of services rendered to the international students becomes timely.

## **II. THE IRANIAN FACTOR**

Shafieyan [5] investigate the psychosocial, educational and economic problems of the Iranian students in the United States before and after the Iran-America crisis and the effect of the crisis on these Iranian students. For his study, 180 Iranian students (124 males and 56 females) attending various American colleges were studied. The result showed that the difference between the two groups (before and after the Iran-America crisis) in the subtest concerning educational problems. Data coming from clinical interviews confirmed the results of this research and showed that the basic problem for Iranian students after the crisis was economic, and this, in turn, aggravated other problems of non-economic types, especially psychological problems.

During the Carter administration, a decision was made to deport students who were in violation of their visas in the United States. The hostage crisis prompted a presidential order referred to as the "Iranian Control Program." The program screened, on a case by case basis, almost 57,000 students to make sure of their legal status. During this period, [6] reported that after holding a total of 7,177 deportation hearings, 3,088 students were ordered to leave the US, and the departure of 445 was verified.

Though the crisis was back in 1980, the situation has never improved. Iranian students and immigrants have been subjected to discrimination and prejudice in the U.S. Although anti-Iranian sentiments and "Islamophobia" have subsided over time, they flare up every time the Iranian regime engages in an allegedly anti-American activity [7]. At the same time, the perception of prejudice among Iranians is quite high, and as such they often interpret anti-immigrant sentiments as uniquely anti-Iranian. In addition, some Iranians experience adjustment problem which is related closely to psychopathological measures such as loneliness, anxiety, depression, homesickness, and low self-esteem [8].

The repercussions of these unfortunate incidents result in Iranian students shifting their attention towards countries which can provide affordable quality education in English. Figure 1 shows the steady decline in number of Iranian citizen doctorate recipients in Science and Engineering (S&E) has been continuously shrinking at an almost constant rate since 1990, while the number of international student has been roughly constant around ten thousand.

The data shows that the decline rate is roughly the same for both permanent and temporary residents as well [9]. Where did the Iranians go to? From 1992 to 2003, the number of degrees granted to Iranian students in Canada increased from 40 to 140 (350%), while in the U.S. it declined from 203 to 68 (-67%). However, claims of discrimination in Canada in the form of refusal to grant visa to parents, siblings, student friends, and resident students' spouses and children, despite their legal and moral eligibility are on the rise [10]. This trend of arbitrary visa

refusals to Iranian citizens and prospective students, namely on the subjective ground of “limited ties to Iran”, has increased significantly since 2004.

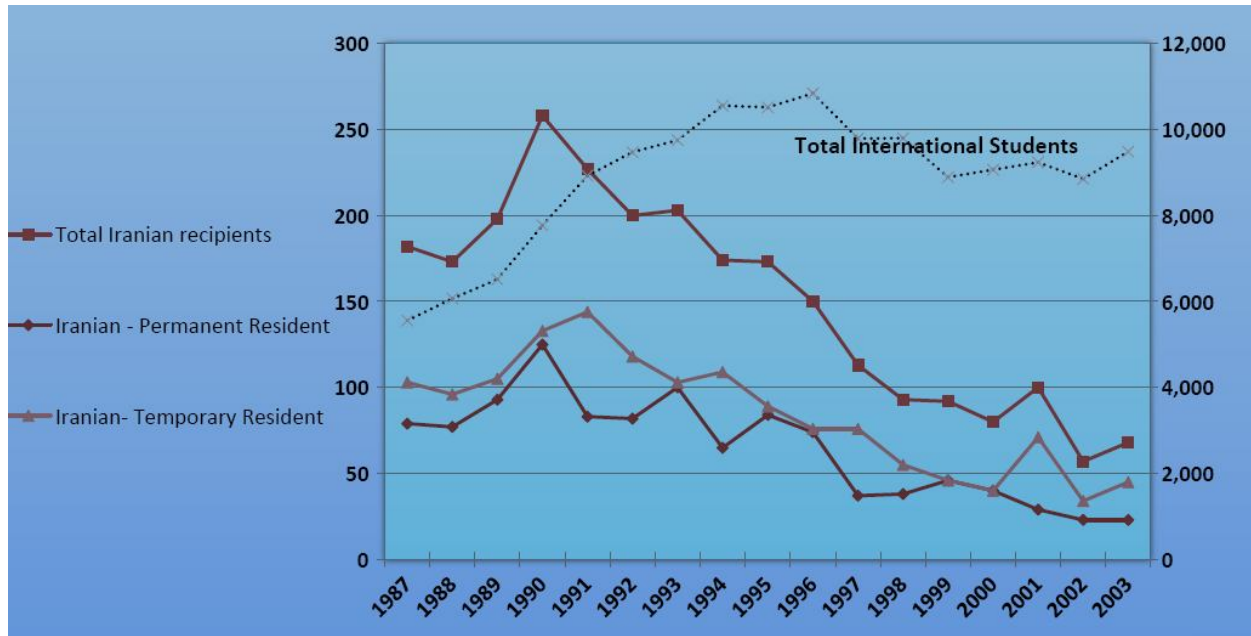


FIGURE 1: IRANIAN AND THE TOTAL INTERNATIONAL DOCTORATE RECIPIENTS IN SCIENCE AND ENGINEERING IN THE U.S.

**Note:** The colored lines and the left axis correspond to Iranians, while the dotted line and the right axis correspond to the total international recipients in the U.S. Source: Hafezi [9]

Malaysia's affordable tuition fees and cost of living, quality of post graduate programs and a high standard of living have made Iranians especially those from the middle-class, to turn their backs on the West and head to the East instead . There has been a high growth in the number of Iranians continuing their graduate studies in Malaysian universities during the last decade. In 2011, Iranians occupy about 15,000 spots in Malaysian universities the figure was only 900 in 2006 [51]. The influx of international students is due to the success of the Malaysia Education Promotion Centre organized in the Middle East and North African countries by the Malaysian Ministry of Higher Education. In addition, Malaysia also attracted more international students from these areas after the September 11 terrorist attacks in New York.

### III. LITERATURE REVIEW

There are many evidences on the importance of service quality in education institutions in the literature [11-14]. Measuring service quality in higher education is increasingly important for attracting and retaining tuition-based returns. Nevertheless, whilst service quality of undergraduates has been extensively measured, postgraduate-based research, particularly regarding international students, has been negligible [11]. This void is surprising as there is

intense competition for postgraduate students who not only bring in more income but also improve a particular university's ranking [15]. Therefore, the main objective of this article is to analyze the educational service quality of selected Malaysian universities based on a modified service quality (SERVQUAL) instrument was developed for international post-graduate students. The students' perceptions and expectations of education services were measured and a gap analysis was conducted to determine where and how gaps in educational service quality exist and the extent of their impacts. Collected data were coded, sorted, analyzed, and then classified by their gap categories.

The first version of SERVQUAL was developed in 1985, based on a series of studies by Parasuraman and his colleagues who conceptualized service quality as the gap between customer expectations and perceptions [16-18]. The confirmation/disconfirmation paradigm views customer satisfaction judgments as the result of the consumer's perception of the gap between their perceptions of performance and their prior expectations [16]. Disconfirmation is positive when service performance exceeds expectations and negative when the opposite is the case. Since then, the SERVQUAL instrument has been the predominant method used to measure consumers' perceptions of service quality. According to [53], SERVQUAL has five generic dimensions or factors: tangibles, reliability, responsiveness, assurance, and empathy. The difference between expected and perceived services is defined as a gap. Expectations are viewed as "normative expectations", which means desires or wants of customers, i.e., what they feel a service provider should offer rather than would offer [19]. Based on this premise, the use of perceptions in confirmation/disconfirmation paradigm is related to perceptions of performance. As such, [16] developed a service quality model with five types of gaps (Figure 2):

- Gap 1: The difference between what the students expected and what management perceived about the expectations of the students.
- Gap 2: The difference between management's perceptions of student expectations and the translation of those perceptions into service quality specifications and designs.
- Gap 3: The difference between specifications or standards of service quality and the actual service delivered to students.
- Gap 4: The difference between the services delivered to students and the promise of the institution to students about its service quality.
- Gap 5: The difference between students' expectation and perceived service.

Parasuraman et al. [16] proposed that service quality is a function of the gap based on the quality dimensions and their attributes. For the purpose of this study seeks to address Gap 5. According to [17, 20, 21], information on service quality gaps can help managers to diagnose where performance improvement can best be targeted. Identifying the largest negative gaps, combined with assessment of where expectations are highest, facilitates prioritization of performance improvement. Equally, positive gap scores will imply expectations are not just being met but exceeded. This information will allow managers to review whether they may be 'over-supplying' this particular feature of the service and whether there is potential for re-deployment of resources into features which are underperforming [22].

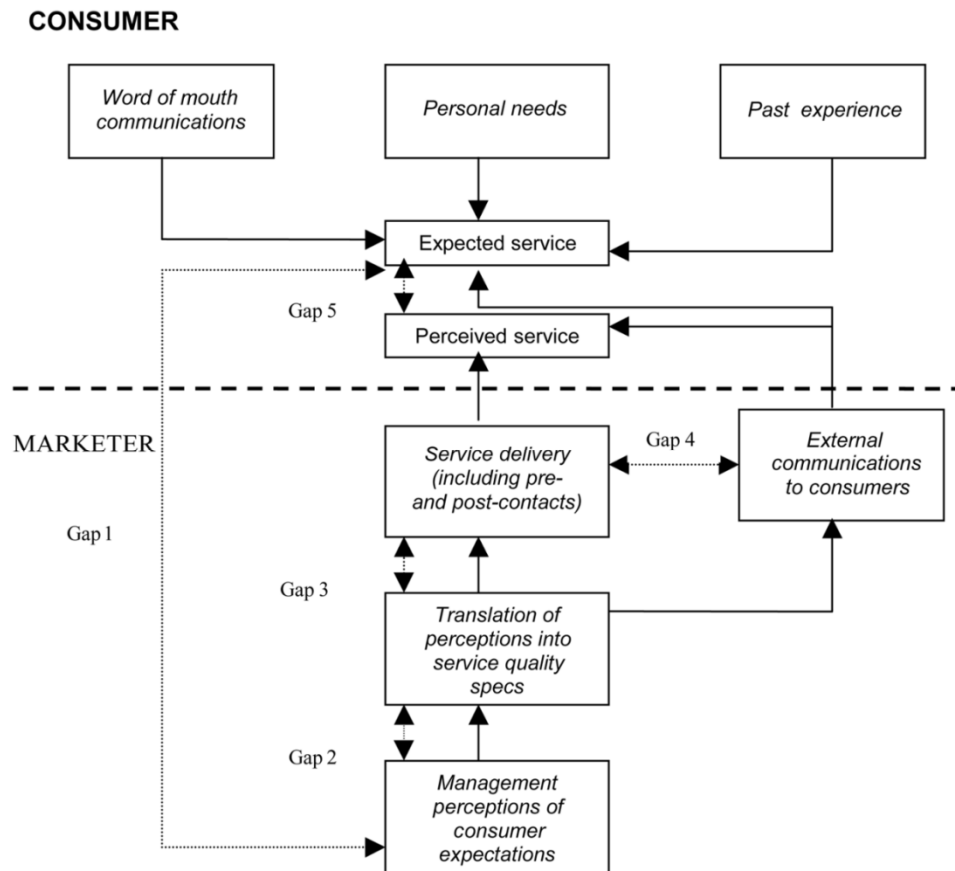


FIGURE 2: SERVQUAL FRAMEWORK, SOURCE: PARASURAMAN ET AL. [16]

#### IV. SERVQUAL

Service organizations such as institutions of higher education understandably are under constant pressure to outperform their competitors in determining the antecedents, determinants, and consequences of service quality. The importance of service quality makes its measurement and its subsequent management of utmost importance. Academics have responded by providing measurement instruments such as SERVQUAL [16] and service performance or SERVPERF [53]. Both instruments have subsequently spurred numerous studies and have been cited extensively.

Traditionally, higher education institutions endeavored to deliver high quality service throughout their educational curriculums and administrative processes. In order to do so, these institutions must view students as their primary clients and seek to maximize their satisfaction based on educational services rendered [23]. There is a substantial body of evidence in higher education literature suggesting that the SERVQUAL instrument is effective in measuring service quality in the higher education environment and is especially useful in offering guidance for changing shortcomings to strengths [11, 24-26].

Although both measures are not flawless and have been criticized by many, their contributions to the understanding of service quality are significant, recent academic endeavors have focused on the merits of SERVQUAL [25, 27-29]. Proponents of SERVQUAL such as Jain and Gupta (2004) believed that SERVPERF was incapable of diagnosing shortfalls in the desired levels of service quality, as a result of the absence of the “disconfirmation” approach. [30-32] emphasized the advantage of SERVQUAL based on the disconfirmation notion, i.e., the mental process consumers use to compare what is expected with what is actually received. Based on the SERVQUAL paradigm of disconfirmation, the gap between “expected” and “perceived” service quality will determine the customer’s overall service evaluation.

In addition, based on a study of higher education institutions in three countries by [54], the SERVQUAL is rated as better than SERVPERF for measuring service quality in cross-cultural contexts. In addition, when applied to multinational contexts, an incorporation of the impact from the cultural differences seems to explain the variations of service quality more accurately [33]. Interestingly, when expectations from a service differ across cultures, the cultural context must be incorporated into the study [34]. Based on the aforementioned arguments, the usage of SERVQUAL for this study is fully justified.

## V. METHODOLOGY

Parasuraman et al. [16,20] argued that in order to measure service quality, customers’ expectations compared to perceive service quality levels should be evaluated. To gain a better understanding of service quality in an educational situation, this study seeks to examine international students’ expectations and perceptions of educational services rendered by five Malaysian universities. Using stratified sampling based on gender and level of study, 522 international postgraduate students were selected to participate in this study.

A modified SERVQUAL questionnaire comprising 35 items was used as the survey instrument to collect data. The items were found to be consistent with those used in studies by [35-38]. Subsequently, a panel of four professors in the faculties of education and management in Universiti Teknologi Malaysia conducted content validity on the instrument. The panel recommended several amendments which were incorporated into the finalized questionnaire. The instrument was administered to 30 postgraduate international students enrolled in Universiti Teknologi Malaysia to test the instrument for face validity.

The finalized instrument consists of an introduction and two sections. The introduction is a cover letter that provides information on the research. The first section consists of 35 items with two separate sub-sections to assess the respondents’ expectations and perceptions (refer to Appendix). Each of the items in the first section is anchored on a five-point Likert scale to measure the respondent’s agreement to the item posed. The second section contains demographic questions.

According to [55], SERVQUAL gap can be determined based on three methods: (a) item-by-item analysis (e.g.,  $P1 - E1$ ,  $P2 - E2$ , . . .  $P35 - E35$ ); (b) dimension-by-dimension analysis (e.g.,  $(P1 + P2 + P3 + P4)/4 - (E1 + E2 + E3 + E4)/4$ ), where  $P1$  to  $P4$ , and  $E1$  to  $E4$  represent the four

perception and expectation statements relating to a particular dimension); and (c) computation of an overall single measure of service quality  $[(P1 + P2 + P3 \dots + P35)/35] - (E1 + E2 + E3 + \dots + E35)/35$ ). For purpose of this study, only the first method of measuring SERVQUAL gap was selected. In addition, the means of the gaps for the five dimensions were also calculated accordingly.

Subsequently, tests for statistical reliability using Cronbach's alphas for the five constructs were conducted, following which a series of one sample left-tailed t-tests was conducted to analyze SERVQUAL gaps for the 35 items. Thirty five null hypotheses were developed and would be rejected if the p-values for the respective tests are less than 0.05. This would imply the means are significantly negative.

There are five Malaysian public universities that the ministry of higher education in Iran has accredited for post graduate studies: Universiti Putra Malaysia, Universiti Teknologi Malaysia, Universiti Kebangsaan Malaysia, Universiti Malaya and Universiti Sains Malaysia. Data from the admissions office from the 5 universities indicates Universiti Putra Malaysia, with approximately 2,500 Iranian students has the highest number of Iranian students in a Malaysian university. In addition, around 50% of Iranian post graduate students are studying in engineering fields in the aforementioned universities.

## VI. FINDINGS

A total of 163 students participated in the survey. Of the participants surveyed, about 1% was deemed unusable due to the failure of the respondents to complete major portions of the survey questionnaire. With reference to Table 1, about 77% of the respondents are male and over 60% are master students. Also, a remarkable percentage of the student respondents (73%) are less than 30 years old.

TABLE 1 BACKGROUND OF RESPONDENTS (N=163)

Demography	Classification	N	% of Respondents
Gender	Male	125	76.6
	Female	38	21.4
Course Undertaken	Master	103	63.2
	Doctorate	59	36.2
	Post Doctorate	1	0.6
Age	20-25 years	43	26.3
	25.01-30 years	76	46.6
	30.01-35 years	21	12.8
	35.01-40 years	18	11
	40.01-45 years	5	3
Total			100



TABLE 2: COMPARISON OF RESPONDENTS' BACKGROUND BASED ON GENDER

Characteristics	Course Undertaken					
	Master		Doctorate		Post Doctorate	
Gender						
Male	71		53		1	
Female	32		6		0	
Age Category						
	20-25	25.01-30	30.01-35	35.01-40	40.01-45	> 45
Gender						
Male	30	55	18	16	5	1
Female	13	20	3	2	0	0
Past Working Experience						
	Working in Public University	Working in Government	Self Employed	Working in Private University	Never Worked Before	
Gender						
Male	31	18	25	33	12	
Female	7	6	4	13	6	

Table 2 presents cross tabulation of the respondents based on their gender, past working experience, age and course undertaken. Based on Table 2, a majority of the respondents are male master students and aged between 25-30 years. Finally, a majority of the respondents have worked in private universities before enrolling in a Malaysian university.

With reference to Table 3, Cronbach's alpha values of more than 0.7 were calculated for the five dimensions. This implies that the items representing five items are statistically reliable. Subsequently, all the means of perceptions are greater than the means of expectations implying all the mean gaps for the 35 items are negative. The biggest gap is for item: "support staff understood your specific needs" with a score of -0.92. In addition, the difference of means for the five dimensions ranges from -0.601 to -0.681, implying that there are gaps in all dimensions of service quality. However, the mean difference for Empathy is the biggest gap (-0.681). Finally, the one sample t-tests presented zero p-values for all the 35 items. This confirms that the means for all the items are significantly negative.

TABLE 3: MEAN SCORES OF STUDENTS' EXPECTATIONS, PERCEPTIONS AND GAP SCORE (N=163)

Dimension	Statement	Mean			p-value
		Expected Service	Perceived Service	Gap Score	
Tangible		3.86	3.25	-0.60	0.000
	Uses modern equipment and technology	3.99	3.35	-0.65	0.000
	Physical facilities visually appealing	3.80	3.28	-0.52	0.000
	Materials visually appealing	3.70	3.28	-0.42	0.000
	Support staff are well dressed	3.82	3.19	-0.63	0.000
	Members of faculty are well dressed	3.98	3.20	-0.78	0.000
Overall tangible gap				-0.601	
<b>Cronbach's alpha</b>				<b>0.779</b>	

Dimension	Statement	Mean			p-value
		Expected Service	Perceived Service	Gap Score	
Reliability		3.81	3.14	-0.67	0.000
	Promised to do something and did so	3.80	3.09	-0.72	0.000
	Showed honest interest solving your problem	3.79	3.01	-0.78	0.000
	Support staff provided services at time promised	3.89	3.01	-0.88	0.000
	Support staff performed service right first time	3.80	2.99	-0.81	0.000
	Support staff maintained error free records	3.62	3.16	-0.45	0.000
	Faculty provided services at time promised	3.91	3.43	-0.48	0.000
	Faculty performed service right first time	3.88	3.19	-0.70	0.000
	Faculty maintained error free records	3.72	3.19	-0.53	0.000
Overall reliability gap				-0.673	
<b>Chronbach's alpha</b>		<b>0.849</b>			
Respon- siveness		3.80	3.13	-0.67	0.000
	Support staff told exactly when services were done	3.82	3.10	-0.72	0.000
	Support staff gave prompt service to you	3.73	2.83	-0.91	0.000
	Staff willing to help	3.58	3.10	-0.49	0.000
	Support staff respond to requests all the time	3.74	3.13	-0.60	0.000
	Faculty told exactly when services were done	3.88	3.21	-0.67	0.000
	Faculty gave prompt services to you	3.75	3.10	-0.67	0.000
	Faculty readily helped	3.89	3.38	-0.52	0.000
	Faculty responded to requests promptly	3.93	3.22	-0.71	0.000
Overall responsiveness gap				-0.670	
<b>Chronbach's alpha</b>		<b>0.865</b>			
Assurance		3.94	3.32	-0.61	0.000
	Felt safe in learning environment	4.06	3.76	-0.30	0.001
	Support staff behavior instilled confidence in you	3.85	3.25	-0.60	0.000
	Support staff are consistently courteous to you	3.76	3.33	-0.43	0.000
	Support staff have the knowledge to answer your questions	3.98	2.87	-1.11	0.000
	Faculty behavior instilled confidence in you	3.89	3.29	-0.60	0.000
	Faculty consistently were polite with you	4.00	3.61	-0.39	0.000
	Faculty had knowledge to answer your questions	4.03	3.17	-0.86	0.000
Overall assurance gap				-0.612	
<b>Chronbach's alpha</b>		<b>0.827</b>			
Empathy		3.77	3.09	-0.68	0.000
	Operating hours were convenient for you	3.87	3.36	-0.51	0.000
	Support staff gave you individual attention	3.66	3.06	-0.60	0.000
	Staff had your best interests in heart	3.70	2.99	-0.70	0.000
	Support staff understood your specific needs	3.70	2.78	-0.92	0.000
	Faculty gave you individual attention	3.82	3.26	-0.56	0.000
	Faculty had your best interests at heart	3.76	3.17	-0.58	0.000
	Faculty understood your specific needs	3.88	3.05	-0.83	0.000
Overall empathy gap				-0.681	
<b>Chronbach's alpha</b>		<b>0.833</b>			

## VII. CONCLUSIONS AND RECOMMENDATIONS

The majority of the respondents in this research are male students. This pattern is similar to trends in the past whereby most Iranian students studying in American or European universities comprise of more male than the female students due to Iran's traditional norms, in which there is a higher likelihood for males to go abroad for higher education than females [39, 40].

The high Cronbach's alpha values generated for each dimension in the reliability analysis indicates that the modified SERVQUAL scale is efficient as a measure of the perception of education service quality. This finding conforms to previous studies by [25, 28, 29, 41].

This study was able to show that postgraduate students from Iran in five top ranked Malaysian universities have negative perceptions of education service quality in their universities, as their expectations were not met in the performance of education services. The negative values indicate dissatisfaction [56]. Students were dissatisfied with the education service quality on all the five aforementioned service quality factors. One of the most important causes for feeling this dissatisfaction could be explained by gap theory [16]. The gap theory suggests that the difference between consumers' expectations about the performance of a general class of service providers and their assessments of the actual performance of a specific provider within that class will drive the perception of service quality. In the case of Malaysian universities, the Iranian students may consider Western universities in America and Europe as a general class for higher education, and benchmark Malaysian universities with these institutions which are very well established. Interestingly, these findings are in line with results from a survey on local students in a public university in Malaysia which indicates that Malaysian students also have negative perceptions of quality as well as express dissatisfaction with the services rendered in the university [42].

A possible cause to this phenomenon is adjustment problems among international students. According to [43], adjustment is the degree of a person's psychological comfort with various aspects of a new setting. Attending a university in another country is very stressful, and foreign students must make many adjustments. If the adjustment is not successful, possibly it causes international students to feel dissatisfaction. Adjusting to a different culture is not the only adjustment a foreign student must make. They can also find difficulty in adjusting to the academic setting of a university [44]. Many of these students are secure in their home setting, but in a new environment they face differences in classroom protocol, quality of education, instructor-student relationship and methods of communication. These changes affect their attitudes toward their new environment.

Another cause possibly relates to communal interaction. Studies indicate that very few people can have a successful sojourn without extensive interaction with their hosts and good interpersonal relationships with them [45]. Smith and Luce [45] state that international students lacking satisfactory relationships with their host students and do not desire interpersonal relationships are generally dissatisfied. According to [14], the repercussions if these patterns continue are as follows:

- 1) It will cause a negative impact on international students' intent to repurchase the educational service.
- 2) It will have a negative influence in regard to students recommending the university to someone who seeks his/her advice.
- 3) It will cause international students to switch to another college/university, or in other words, it has negative impact on student retention.
- 4) The students will not spread positive word-of-mouth about the university.

For future studies, one interesting area of research might be to study types and size of gaps in the perception of educational quality performance in other developing countries and compare it with leading higher education institutions in western countries. Also, further studies could be conducted to compare perceptions and expectations of the students based on disciplines, origin and other demographic background. Finally, another potential study is to explore the factors which influence students' expectations of services rendered at institutions of higher education by conducting in-depth interviews and observations.

## **APPENDIX**

### **SERVQUAL ITEMS**

1. Uses modern equipment and technology
2. Physical facilities visually appealing
3. Materials visually appealing
4. Support staff are well dressed
5. Members of faculty are well dressed
6. Promised to do something and did so
7. Showed honest interest solving your problem
8. Support staff provided services at time promised
9. Support staff performed service right first time
10. Support staff maintained error free records
11. Faculty provided services at time promised
12. Faculty performed service right first time
13. Faculty maintained error free records
14. Support staff told exactly when services were done
15. Support staff gave prompt service to you
16. Staff willing to help
17. Support staff respond to requests all the time
18. Faculty told exactly when services were done
19. Faculty gave prompt services to you
20. Faculty readily helped
21. Faculty responded to requests promptly
22. Felt safe in learning environment
23. Support staff behavior instilled confidence in you
24. Support staff are consistently courteous to you

25. Support staff have the knowledge to answer your questions
26. Faculty behavior instilled confidence in you
27. Faculty consistently were polite with you
28. Faculty had knowledge to answer your questions
29. Operating hours were convenient for you
30. Support staff gave you individual attention
31. Staff had your best interests in heart
32. Support staff understood your specific needs
33. Faculty gave you individual attention
34. Faculty had your best interests at heart
35. Faculty understood your specific needs

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