Original Research Article

The Influence of TQM Successful Implementation on International Student Satisfaction in Malaysian Universities

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Abstract: This study aims to examine the influence of TQM (Total Quality Management) successful implementation on international students' satisfaction within Malaysian universities. A questionnaire was developed to collect the data. TQM is measured by (leadership, individual management and focus on customer) as the independent variable, and international students' satisfaction is measured by (administration, course design, and interaction) as the dependent variables. The sample of 192 participants who study in different Malaysian universities from non-Malaysian citizens were selected using convenient sampling. The collected data was analyzed using descriptive means and regression. The results show that only all three dimensions of TQM successful implementation have a significant influence on international students' satisfaction in Malaysian universities. Limitation of this study is noted including the generalizability of the findings within Malaysian universities. Suggestions for future research include an examination of other variables that possibly influence students' satisfaction.
Keywords: Universities; TQM; Leadership; students; satisfaction; Malaysia.

INTRODUCTION

A state of customer satisfaction occurs when customers are satisfied with the product's quality or their overall experience with the business. Overall, it's a favourable representation of a clientele's attitude towards a company (Gerdt & Schewe, 2019). In essence, when a business meets the demands and wants of its customers, those customers are satisfied (Razak & Shamsudin, 2019).

Meanwhile, Student satisfaction (SS) became recently an essential target for any Higher Educational Institution (HEI) (Guo, 2016). As it is one of the main resources of competitive edge that results in student retention, student satisfaction became a big challenge for most Higher Education Institutions (HEIs) (Arambewela & Hall, 2009). So as per recent studies, policymakers should make more efforts to achieve students' satisfaction.

Recently, higher education has become a great source of national income, and many governments in the civilized world are encouraged to adopt policies that enable their economies to gain more income from higher education not only locally but the challenge is to recruit more students from other countries to study in your local universities. That will not only improve the image of the country's high education and its policy but it will directly reflect on the financial situation of the national financial situation.

The London Economics analysis illustrates the financial significance of recruiting international students. It reveals that the UK's economy benefited financially from the 2018:19 group of international students studying there, with a net income of £25.9 billion (US$35.9 billion) – a 19% increase from the previous similar analysis conducted in 2015:16. 272,920 first-year overseas students who started their studies in UK institutions in 2018–19 made up the cohort. The analysis examined the cohort's overall impact on the country's economy during their studies' course. (London Economics, 2021).

As per reports of (International Study) website on 26 April 2022, Malaysia is home to 170,000 international students from 162 countries; 10,000 of them are from Indonesia. The government hopes to reach 250,000 international students by 2025. EMGS is a company under the purview of the Ministry of Higher Education Malaysia. In order to achieve this national target, the Malaysian higher education sector should adopt new policies that may enhance students' satisfaction because normally positive word of mouth about the institutions is supposed to be spread by the highly satisfied students who are highly trusted by other customers. So that, attracting new students' applications could be achieved by much lower marketing costs. In Malaysian education policy, reputation has a high position, so both public and private institutions of higher education strive to introduce higher quality services to their students to maintain and enhance a better image; and to develop higher competitive edges (Sohail, Rajadurai & Rahman, 2003).

As a definition of (Total Quality Management), it is a management philosophy that aims to provide organizations with highly competitive advantages, minimize their costs, and sustain continuous improvement. Adopting this management philosophy will change the way organizations think and make decisions to be a more competitively oriented method that places the achievement of customer satisfaction at the core of business operations rather than being based on production-oriented (Baidoun, 2004).

In other words, total quality management is an integrated philosophy based on customer satisfaction as the most important goal of the organization in the long term, through a sharing responsibility between management and staff to achieve continuous improvement of all processes and at all organization levels which requires consistent commitment and support from higher management to grantee quality in all its aspects and from all sections of the organization (Al- Saman & Saleh, 2005).

BACKGROUND

The higher education industry in Malaysia evolved starting from the 1960s to the 1970s when only five public universities were established, other four public universities were established between the 1980s and early 1990s plus ten public universities between the late 20th and the early 21st century. In the mid-1990s, the economy changed to be more knowledge-based so the public institutions' capacity could not cover the rising demand for higher education, higher education in Malaysia has been divided into public and private systems (Wong & Hamali, 2006).

Many education improvements consistently take place to fulfill the national development needs and the rapid increase in the number of student's enrolment in Malaysian universities (Ahmad, 1998). Moreover, public colleges and public university campus branches shifted to public universities to cover the growth of students' enrolment in degree courses.

Upgraded to university-colleges status beginning in 2000. For instance, Kolej Universiti Sains dan Teknologi Malaysia (KUSTEM) was the Fisheries and Marine Science Centre Universiti Putra Malaysia (UPM) at Mengabang Telipot, Kuala Terengganu.

Malaysian private education has boomed since the 1950s. Private schools during this time were another good option for students who could not join governmental schools. In the early 1970s, there was a significant change in the private education system's roles and functions whereby more focus on pre-university courses as well as providing tutorial support to students in preparing them for external examinations in semi-professional and professional qualifications its providers were placed by private education providers (StudyMalaysia, 2005).

Significant changes in the roles and responsibilities played by private colleges as providers of tertiary education were witnessed in the early 1980s. From the end of the 1980s till the 1990s, Malaysia experienced tremendous and unprecedented growth in private higher education. So, a lesser number of Malaysians were joining higher education courses overseas due to the growth of information and communication technology (ICT), higher costs, and a change in government education policies (StudyMalaysia, 2005).

To overcome the global recession in the 1980s, a group of Malaysian academics from the University of Malaya and Institute Technology MARA started the establishment of private colleges to offer undergraduate Bachelor's degrees (Tan, 2002). As a

result, private colleges were established during this period.

In the mid-1980s, Dr Mahathir Mohamad (Malaysia's 4th Prime Minister) initiated a twinning movement between local private colleges and higher education institutions in Australia and countries elsewhere (Tan, 2002).

The growth in the number of high school graduates, parents' income rising, and the rising costs of public higher education were also reasons for the rapid growth of Malaysian private HEIs in the 1990s (Ayob & Yaakub, 1999).

Moreover, the economic boom of the 1990s led to the establishment of a group of single-discipline private colleges. For example, the Asia Pacific Institute of Information Technology (APIIT) in the information technology field, and Limkokwing Institute of Creative Technology offer arts and design programs. The trend of corporate presence in Malaysian private higher education intensified in the 1990s because of the economic boom, Tan (2002).

This collaboration between the private corporate sector and higher education resulted in significant competition between colleges for a better image following a proliferation of colleges established in the 1990s (Tan, 2002). The increase in the number of private colleges and foreign university campuses in Malaysia also resulted in an extensive growth in foreign student numbers (Ghazali & Kassim, 2003).

From 1996 onwards, the Education Act, of 1961 provided a systematic growth for Private HEIs and brought about the setting up of private sector-funded universities and branch campuses of foreign universities. The first private Malaysian university, namely Multimedia University, was established in 1997 (StudyMalaysia, 2005).

Despite the emergence of "quality" over a long period of time, it is difficult to determine the history of this concept, but the start of large-size industrial companies and the development of mass production at the start of the twentieth century is most probably its origin.

The concept of TQM emerged during the work of Walter Shewhart, who used to work in the Bell Telephone Laboratories in the 1920s. Shewhart developed techniques to control and evaluate the products' quality and suggest ways of improvement. In addition, he designed a cyclical model, known as the "plan-do-check-act cycle", which is applied scientifically to improve any productive process (Evans & Lindsay, 2001).

In mid-1980 TQM became popular after many fundamental elements were developed during the period between the 1950s and 1970s. Although Japan has held the initiative in terms of application the most theoretical developments in TQM concepts were made in the US; (Martinez-Lorente *et al.*, 1998, p.385).

Krüger (2001) used to call Deming, Juran, Ishikawa, Crosby, and Feigenbaum the "big five" and considered them the most important scholars of the quality management revolution even though their views about TQM and its approaches were not the same. Oakland (1993) stated that all focus of those gurus was on the basics of total quality management while their behavior was as if they were presenting different solutions to the requirements of quality management. They are all using the same terms but they use different dialects.

During the 1990s, TQM was considered one of the most important competitive strategies utilized by top management in developed economies; it was widely implemented throughout different regions of the world. A consensus developed that TQM represents a philosophy that provides an organization with the ability to improve its overall effectiveness, allowing it to compete globally (Anderson *et al.*, 1994; Kanji & Tambi, 1999).

TQM as a management philosophy has many useful impacts on different aspects of the organization, such as providing products with fewer defects, rework and lead times reduction, cost reductions, and competitiveness improvement which will consequently increase market share and profitability, enhance flexibility, and increase both employee and customer satisfaction level (Youssef *et al.*, 1996).

It became undisputed that the global market in the early twenty-first century is highly competitive, and the demands of customers are becoming more and more exacting because they have more access to improved quality products and services from different markets all over the world. Thus, business organizations are desperate for a process of continuous improvement in all of their business activities which places customers' needs on top of all organizational activities, with an emphasis on flexibility and quality as a means of confronting the competitive threats that are constantly evolving (Dale, 2003).

In the fast-paced world of today, it is imperative that businesses prioritize quality in all aspects of their operations to meet consumer expectations to the lowest degree and save expenses while simultaneously optimizing earnings.

Customers or money payers must be satisfied for the business to maintain high profitability, and this cannot be done without putting a priority on providing high-quality service. Both the industrial and service sectors, where clients are not connected to any physical goods, place a premium on quality. TQM is the only way for businesses to succeed overall in this dynamic and competitive world (Ansari *et al.*, 2021).

According to Zenqar *et al.*, (2019), the educational products' ability to all the attributes and features to satisfy the needs of the students, market, society, and all beneficiaries whether internal or external is what defines the quality of higher education.

To be sure that the end product meets the educational needs that enable students to reach the level they want, it is necessary to direct all policies, human resources, processes, systems, curricula, and infrastructure to create a suitable environment that facilitates innovation and creativity (Zanqar *et al*., 2019).

According to Sabb, Abd Elzaher, and Mahmoud (2020), TQM in educational organizations especially universities does not imply turning them into for-profit businesses with the goal of double earnings. This strategy should be applied to the development of educational administrative techniques in order to ensure that education meets quality standards and to maximize benefits for all parties involved in the educational process, including the community with all educational institutions and participants (Kistiani & Permana, 2020). The demands of scientific advancement are not the only factors contributing to the difficulties and obstacles in quality improvement; higher education institutions also need to be able to act as change agents (Kistiani & Permana, 2020).

As per Weaver (1992), TQM theory relies on two tenets, the first tenet is that the customer is the most important aspect to be considered in the operation of the organization. The business existence mainly relies on customer existence and so as the organization itself. So, the main target of any organization should be achieving customer satisfaction by providing them with the expected quality of product or service (Deming, 1986). The second tenet is that the top management has to get information from non-traditional sources to establish the required quality level and that cannot be achieved without a deep belief by employees to do a higher quality work as possible. This belief will be gained if managers or decision-makers listen to them and adapt the workplace based on their ideas (Deming, 1986).

Relying on that theory and by considering the customer in the higher education business as the student, this study aims to explore the influence of TQM successful implementation in Malaysian universities on international students' satisfaction. In order to achieve this, there are two objectives have been established. First objective is to determine the level of international students' satisfaction in Malaysian universities, then determine the influence of TQM implementation by Malaysian universities on international students' satisfaction.

METHODOLOGY
Framework
Figure 1 indicates the research framework that will be examined in this study. Referring to the framework in Figure 1, the study examines the relationship between organizational culture as an independent factor and the TQM implementation-dependent factor.
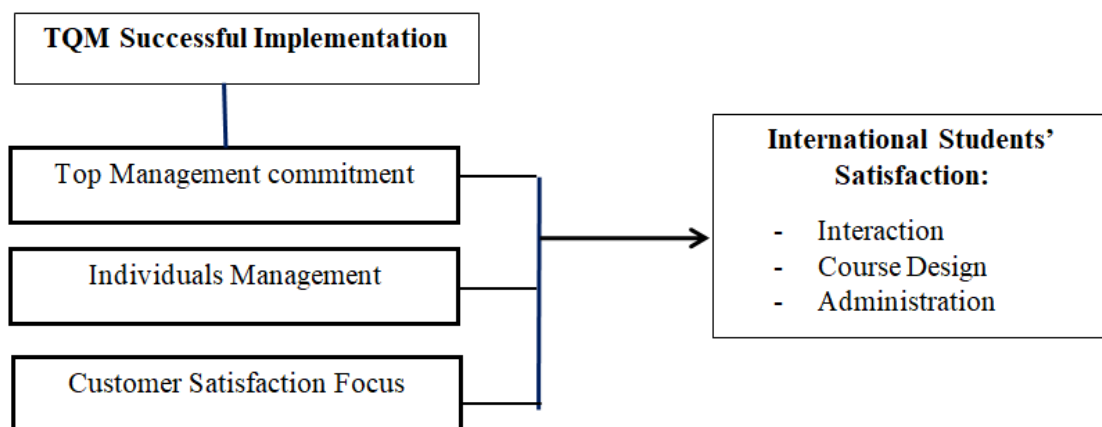

Figure 1: Conceptual Framework

Figure 1 shows the independent variable TQM Successful Implementation whose dimensions are (Leadership, individual management, and Customer Satisfaction Focus) and International students' satisfaction as the dependent variable.

Hypotheses Development
In order to achieve the above-mentioned objectives, the following hypotheses were formulated:

H1: Leadership has a positive influence on international students' satisfaction in Malaysian universities.

H2: Individual management has a positive influence on international students' satisfaction in Malaysian universities.

H3: Customer Satisfaction Focus has a positive influence on international students' satisfaction in Malaysian universities.

Population of the Study
To achieve the objectives of this study a sample of 192 Malaysian universities' international students. These students are divided between public and private universities. Convenience sampling was employed because of the paucity of statistics on the target group. The questionnaires will be distributed to the higher education organizations in Malaysia and in distributing the questionnaire via Google Docs forms the interviewees could easily fill and submit the questionnaire freely without any interference from the interviewer.

Measurement
As per the design of this study, there are two variables affecting each other total quality management (TQM) and students' satisfaction. The dimensions of these variables will be examined in detail by using the attached questionnaire in (Appendix A).

Below is the description of each variable's dimensions which were adopted by previous studies and then adapted to be usable by this study.

Total Quality Management dimensions, as per (Danny Samson, 1999)

1. Leadership: This element is considered the major 'driver' of TQM which examines senior executives' leadership and personal involvement in setting strategic directions and building and maintaining a leadership system that will facilitate high organizational performance, individual development, and organizational learning.

2. Individual management: how well the human resource practices tie into and are aligned with the organization's strategic directions.

3. Focus on the customer: This element addresses how well the organization determines current and emerging customer requirements and expectations, provides effective customer relationship management, and determines customer satisfaction.

Student satisfaction dimensions, as per (Asare-Nuamah, 2017):

1. Administration: the perception of students on the administration office of an academic institution and the services they render to students affects the quality of the utility of the institution and hence the satisfaction of students.

2. Course Design: course delivery and course design have an impact on the level of students' satisfaction.

3. Interaction: is an important element in determining students' satisfaction in both distance and traditional learning settings (Hill, 1995).

Data Collection
The data collection for this research was achieved by two kinds of data:

Secondary Data
Secondary data for this study were collected from books, journals, reports, and newspapers, both published and unpublished, as well as from online sources and previous researches.

Primary Data
This data was directly collected from the field. Data was collected from the sample population through a survey which was distributed among the academic and administrative employees in Malaysian universities electronically via emails and mobile phones.

Questionnaire Survey
The questionnaire is the most appropriate technique for collecting the intended primary data (Neuman, 2003). Thus, to investigate the influence of TQM successful implementation on international students' satisfaction in Malaysian universities a questionnaire was designed. The reasons for self-administering the questionnaires were: Firstly, according to Sekaran (2003), the self-administered questionnaire approach can ensure an almost 100% response rate. Secondly, it is suitable for collecting data about attitudes and opinions as suggested by Burns and Bush (2000) and Elanain (2003). Thirdly, they were appropriate because they can cover a wide geographic area, the cost is relatively low; it is convenient for respondents as respondent can take their own time and this allows them to think before

answering, the respondents are kept anonymous, and the questions are standard (Zikmund, 1994). Finally, self-administering questionnaires have been extensively employed in many similar studies (Perez and Canino, 2009; Wang and Ang, 2004; Chowdhury *et al.*, 2013).

Design of Questionnaire

The questionnaire will be developed from those used in previous studies (MaryLynn Helen West-Moynes; 2012). A Study of Organizational Culture in Ontario Colleges with High Student Satisfaction. However, the questions have been modified to suit the Malaysian universities' situation. The questionnaire will be divided into three parts. The first part will seek general information on the respondents' background profiles. The second part of the questionnaire will consist of 1 question about the dominant characteristics of the organization, leadership, management of employees, organizational glue, strategic emphasis, and criteria of success. The third part of the questionnaire will be about the degree of international students' satisfaction.

The respondents will be asked to express their personal views on each statement on a scale of 1–5, where 5 represents strong agreement and 1 represents strong disagreement.

The five-point scale was specifically chosen because, firstly; five points have been widely used in previous studies that investigated the implementation of TQM and its level of awareness. Secondly, McDonald (2004) indicated that respondents preferred a five-point rating scale in most surveys for three reasons. Firstly; respondents believe the five points of options were adequate to cover the range of responses. Secondly, the five-point scale was easy to use, and lastly, it did provide a mid-point.

Administration of Questionnaire

The questionnaires were distributed to recent or former international students who study at different Malaysian universities. This sample was chosen because they possess the required awareness to judge their organizations and to what extent they feel satisfied with their services.

Statistical Analysis

Using the SPSS Statistics software (Version 21), data were analyzed by using frequency and percentage mean. All numerical data were analyzed using descriptive statistics and are presented in chapter four.

RESULTS AND DISCUSSION

Distribution of Respondents by Age

Table 1 indicates that respondents between the age group 31–40 represented the largest group (44%), followed by the age group 20- 30 (35%) and age group 41-50 (15%). Both groups of less than 20 and above 50 are (3%) each and

Table 1: Distribution of Respondents by Age

Age Group	Frequency	Percent %
Below 20	6	3
20 - 30	68	35
31 - 40	84	44
41 - 50	28	15
Above 50	6	3
Total	**192**	**100%**

Distribution of Respondents by Gender

The results in Table 2 indicate that most of the respondents were male (58%) and females were only (42%).

Table 2: Distribution of Respondents by Gender

Gender	Frequency	Percentage (%)
Male	111	58
Females	81	42
Total	50	100

Distribution of Respondents by Academic Qualifications

The results in Table 3 indicate that the majority of the respondents' academic degree is a bachelor's degree (46%) followed by a master's degree (34%) then a Ph.D. degree (12%) and the smallest portion was a diploma (8%).

Table 3: Distribution of Respondents by Academic Qualifications

Academic Qualifications	Frequency	Percent %
Diploma	15	8
Bachelor	88	46
Master Degree	66	34
PH. D.	23	12
Total	**192**	**100%**

Distribution of Respondents by Position Type

Table 4 shows that (58%) of the participants studied in public universities while (42%) studied in private universities.

Table 4: Distribution of type of university

Position Type	Frequency	Percentage (%)
Public	111	58
Private	81	42
Total	**192**	**100**

Distribution of Respondents by Years of Experience

Table 5 shows that the majority of the respondents (35%) have experience from 6 to 10 years, (23%) of participants have working experience between 11-15 years. This was followed by participants who have working experience of less than 5 years (21%) then the participants who have no work experience recorded (13%) and the smallest two groups of participants who have work experience from 16 to 20 and more than 20 years represent (4%).

Table 5: Distribution of Respondents by Years of Experience

Years of Experience	Frequency	Percent %
No work experience	25	13
Less than 5	41	21
6 - 10	67	35
11 - 15	44	23
16 - 20	8	4
More than 20	7	4
Total	**192**	**100%**

Descriptive Statistics of Variables
TQM (Total Quality Management)

Table 6: Descriptive Statistics of Top Management Commitment

Variable	5	4	3	2	1	Mean	Std. D
Senior executives are visibly and explicitly committed to quality. (**TMC1**)	5%	20%	46%	26%	3%	2.98	0.87
Top management allocates adequate resources and time for quality management efforts. (**TMC2**)	12%	41%	33%	12%	2%	3.48	0.93
The top management has a clear quality vision (based on customer focus) and the vision forms the basis for strategic planning and decision-making. (**TMC3**)	9%	40%	34%	15%	2%	3.39	0.91
Top managers support any change required in style or structure to promote the new culture. (**TMC4**)	6%	41%	32%	17%	4%	3.29	0.95
Total						**3.28**	

Table 7: Descriptive Statistics of Individuals' Management

Variable	5	4	3	2	1	Mean	Std. D
Quality goals are effectively deployed within the university. (**IM1**)	4%	33%	39%	21%	3%	3.15	0.89
University strategy formulation takes into account TQM principles. (**IM2**)	7%	41%	40%	11%	1%	3.45	0.81
The quality policy is appropriate to the organization and relies on continual improvement. (**IM3**)	5%	53%	31%	10%	1%	3.50	0.79
Employees are encouraged to accept responsibility for quality. (**IM4**)	5%	51%	31%	11%	2%	3.47	0.82
Employees are empowered to implement quality improvement efforts. (**IM5**)	7%	46%	36%	9%	2%	3.47	0.83
Employees are given the necessary resources to solve any quality problems that arise. (**IM6**)	7%	47%	33%	12%	1%	3.46	0.83
Total						**3.42**	

Table 8: Descriptive Statistics of Customer Satisfaction Focus

Variable	5	4	3	2	1	Mean	Std. D
University management collects extensive complaint information from students, which is treated as a top priority. (**CSF1**)	5%	29%	42%	20%	4%	3.11	0.92
University management determines current and future international students' requirements and expectations. (**CSF2**)	7%	44%	35%	10%	4%	3.40	0.90
University management uses student surveys feedback processes, and information from international students' services to improve its processes and services. (**CSF3**)	5%	37%	33%	22%	3%	3.20	0.935
The organization encourages employees to satisfy international students. (**CSF4**)	7%	31%	22%	10%	5%	3.40	0.93
Total						3.28	

International Student Satisfaction

Table 9: Descriptive Statistics of Administration

	5	4	3	2	1	Mean	Std. D
International student affairs staff are courteous. (**A1**)	4%	39%	41%	13%	3%	3.28	0.86
Employees receive full support from the management in their duties. (**A2**)	5%	46%	35%	11%	3%	3.40	0.86
University administration always provides the latest equipment and technologies to improve education processes. (**A3**)	6%	52%	32%	9%	1%	3.51	0.80
The university's physical facilities are qualified and attractive. (**A4**)	5%	53%	31%	9%	2%	3.51	0.79
When you have a problem, the university staff are sympathetic and willing to help you out. (**A5**)	7%	45%	35%	11%	2%	3.44	0.85
Total						3.43	

Table 10: Descriptive Statistics of Course Design

	5	4	3	2	1	Mean	Std. D
The difficulty level of the subject content is appropriate and reasonable.	4%	39%	41%	13%	3%	3.28	0.86
Time table is organized.	5%	46%	35%	11%	3%	3.40	0.86
Methods of assessment coursework and/or examination are appropriate and reasonable.	6%	52%	32%	9%	1%	3.51	0.80
Materials, books, and hand-outs are always available.	5%	53%	31%	9%	2%	3.51	0.79
The PowerPoint/slides presentations are always helpful in comprehending the subjects.	7%	45%	35%	11%	2%	3.44	0.85
Total						3.43	

Table 11: Descriptive Statistics of Interaction

	5	4	3	2	1	Mean	Std. D
Academic staff are responsive and helpful to students' requests.	6%	37%	41%	14%	2%	3.32	0.84
There is always prompt feedback to evaluate student's performance.	7%	46%	31%	13%	3%	3.43	0.90
The teaching and learning equipment, for example, projectors, screens, and whiteboards are qualified to enhance interaction between students and lecturers.	7%	45%	37%	8%	3%	3.44	0.84
The university environment makes you feel comfortable and willing to learn.	12%	43%	32%	11%	2%	3.51	0.92
Total						3.42	

Table 12: Descriptive Statistics of Overall Satisfaction

	5	4	3	2	1	Mean	Std. D
As an international student, you are overall satisfied with all administrative and educational services provided by the university	2%	37%	41%	17%	3%	3.18	0.85
Total						**3.18**	

Regression Assumption
Normality

For skewness values, Hair *et al.,* (2006) suggest that these values should be within the range of -1 to +1 which indicates the normal distribution, results of Skewness tests range from -1 to +1.

Kurtosis values have a recommended range as suggested by Coakes and Steed (2003) between -2 to +2. Kurtosis values are within the -2 to +2 range. Table 4.5 presents the results.

Table 13: Skewness and Kurtosis Tests for Normality

Variables	Skewness	Kurtosis
Total Quality Management (TQM)		
Top management commitment (Leadership)		
Senior executives are visibly and explicitly committed to quality.	0.222	-0.097
Top management allocates adequate resources and time for quality management efforts.	-0.350	-0.197
The top management has a clear quality vision (based on customer focus) and the vision forms the basis for strategic planning and decision-making.	-0.263	-0.382
Top managers support any change required in style or structure to promote the new culture.	-0.428	-0.323
Individuals Management		
Quality goals are effectively deployed within the university. (IM1)	-0.169	-0.460
University strategy formulation takes into account TQM principles. (IM2)	-0.158	-0.233
The quality policy is appropriate to the organization and relies on continual improvement.	-0.655	0.255
Employees are encouraged to accept responsibility for quality.	-0.669	0.282
Employees are empowered to implement quality improvement efforts.	-0.564	0.464
Employees are given the necessary resources to solve any quality problems that arise	-0.437	-0.072
Customer Satisfaction Focus		
University management collects extensive complaint information from students, which is treated as a top priority.	-0.139	-0.231
University management determines current and future international students' requirements and expectations.	-0.605	0.326
University management uses student surveys feedback processes, and information from international students services in improving its processes and services.	-0.267	-0.585
The organization encourages employees to satisfy international students.	-0.768	0.472
International Student Satisfaction		
Administration		
International student affairs staff are courteous.	-0.477	0.135
Employees receive full support from the management in their duties.	-0.679	0.417
University administration always provides the latest equipment and technologies to improve education processes.	-0.705	0.571
The university's physical facilities are qualified and attractive.	-0.753	0.627
When you have a problem, the university staff are sympathetic and willing to help you out.	-0.521	0.258
Course Design		
The difficulty level of the subject content is appropriate and reasonable.	-0.623	0.058
Time table is organized.	-0.578	0.492
Methods of assessment coursework and/or examination are appropriate and reasonable.	-0.691	0.767
Materials, books, and hand-outs are always available.	-0.512	0.633
The PowerPoint/slides presentations are always helpful in comprehending the subjects.	-0.830	1.141
Interaction		
Academic staff are responsive and helpful to students' requests.	-0.234	-0.128
There is always prompt feedback to evaluate student's performance.	-0.561	0.025
The teaching and learning equipment, for example, projectors, screens, and whiteboards are qualified to enhance interaction between students and lecturers.	-0.578	0.562
The university environment makes you feel comfortable and willing to learn.	-0.417	-0.077
Overall Satisfaction		
As an international student, you are overall satisfied with all administrative and educational services provided by the university	-0.451	-0.201

DISCUSSION
Implication of Study

This study has contributed to previous studies such as (Noor & Mahat, 2008) and (Waqas & Ismail, 2021) in understanding and figuring out TQM implementation and practices in Malaysian universities. Moreover, this study's findings are considered a significant contribution to other previous studies such as (Maged et. al, 2021) on TQM applications in services-oriented organizations in Malaysia.

Moreover, the derived model from this study shows a methodology for the successful implementation of TQM in Malaysian universities, or in universities that plan to start TQM implementation. Generally, this model could also apply to other Malaysian service sectors. The reason is that other service organizations are also subjected to the same environment, culture, and circumstances. This framework which stemmed from this study can enable organisations to undertake more comprehensive approaches to start implementing TQM; that could be accomplished by considering organizational culture during planning for TQM implementation.

Finally, this study started from a national goal made by the Malaysian government to hire more international students and focused on achieving their satisfaction to maintain and enhance the achievement of the Malaysian education sector. So as international student hiring is a national goal of many governments all over the world, this study could be useful as a reference for any further study in any other country.

Limitations and Further Research Directions

This study has considered its population who are international students in Malaysian universities as one bulk. However, the needs may be different when the international students are classified as undergraduate or postgraduate. Thus, future studies should focus more on studying a certain segment of students whether they are college students, master's degree students, or PhD candidates because even though there are common requirements for all types of international students surely there will be particular requirements for each type of them.

Also, the population of this study was formed from international students of public and private universities or institutes together. Still, the obstacles or challenges faced by international students generally may be different from one university or institute type to another. So, future studies should focus more on studying a certain type of university whether it's public or private.

CONCLUSION

The study attempted to examine the influence of successful TQM implementing TQM on international students' satisfaction in Malaysian universities and tried to achieve the two objectives of the present study by answering three research questions.

The findings of the descriptive results study's questionnaire showed that the overall mean scale value for the level of international students' satisfaction within Malaysian universities was 3.18 (where 5.0 represents "strongly agree", 1 represents "strongly disagree" and the midpoint is 2.50). According to these results, the level of international students' satisfaction within Malaysian universities could be assigned as 64%.

The findings of the descriptive results study's questionnaire showed that the overall mean scale value for the level of TQM implementation within Malaysian universities was 3.33 (where 5.0 represents "strongly agree", 1 represents "strongly disagree" and the midpoint is 2.50). According to these results, the level of TQM implementation within Malaysian universities could be assigned as 66%.

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