

## The Level of TQM Practices in Tertiary Education Industry

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**Abstract:** The purpose of this paper is to identify the level of understanding on Total Quality Management (TQM) in education sector among undergraduate students in public university in Malaysia. Random sampling technique was applied in this study whereas 299 questionnaires were distributed. Thus, all the data obtained was analyzed by using Statistical Package for Social Sciences (SPSS) version 20. From the result of mean score, the study suggested the overall of understanding on TQM practices among undergraduates were high.

**Key words:** Total Quality Management • Public University • Undergraduate Students

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### INTRODUCTION

The implementation of total quality management (TQM) in manufacturing considered as one of major development mainly in western countries. Thus, many organizations have embraced the concept of TQM to make their business runs smoothly. Generally, TQM known as management philosophy because it pursue for attaining quality, with the quality being a continuous improvement that associated with customers' satisfaction with the service they received [1-6].

To improve performance, a number of universities have aware the benefit of TQM. Thus, TQM is practical process-based approach is attractive to many higher education administrators who find themselves increasingly challenged to offer a higher quality 'product' at more affordable price [7,8].

Meanwhile, Vazzana *et al.* [9], stated TQM is widely practiced in higher education and the Malcom Baldrige National Quality Award, an internationally-recognized guide of modern quality management, now has criteria for educational sector. As mentioned by Ramona, Sower and Jaideep [10], TQM can be applied in higher education but it must be modified to fully recognize some unique prospect of education because of education service industry

is no visible, tangible "product", *per se* (as in manufacturing) and it serves multiple customers as main stakeholder.

Garvin [11] provides a useful framework towards understanding the concept of quality. He suggested that quality should have different meanings in different contexts through five main approaches. Approaches of various writers in describing the meaning and concept of quality seem to fit in the Garvin's classification scheme for quality meanings (Table 1).

**Literature Review:** Dixit and Garg [12] in their study have shown that customer focus or satisfaction supposed to be as prime objective for various industries in order to achieve total quality management. Hence, all factors must be used systematically to achieve total quality management and it can be efficiently by using a model that set up by these authors which having four phases to implement TQM.

Furthermore, previous study has been conducted at California State University, the survey's result shown that TQM is frequently practiced among California's public universities than it was previously reported. The evidence appears more than half (55%) of the universities surveyed have indicated using TQM concepts in one form or another.

Table 1: Five meanings of 'Quality'

Meaning of 'quality'	Description of the meaning
(1) <i>Transcendent</i>	Quality is understood only after exposure to a series of objects that develop its characteristics. The example that is often used to explain this definition is that the quality of a particular artist only becomes apparent when a number of his or her works have been viewed. The idea here is that quality can't be defined and you recognize it only when you see it.
(2) <i>Product-based</i>	Quality is based on the presence or absence of a particular attribute. If an attribute is desirable, greater amounts of that attribute, under this definition, would label that product or service as one of higher quality.
(3) <i>Manufacturing-based</i>	Quality in manufacturing is defined as the conformance of a product or service to a set of predetermined requirement or specifications. Failure to meet these requirements is, by definition, a deviation and, as such represents a lack of quality. This approach assumes that specification is a valid surrogate for a customer requirement and that, if met, it would satisfy the customer.
(4) <i>User-based</i>	Quality "lies in the eye of the beholder". The ability to satisfy customers' requirements, expectations, or wants is the sole criterion by which quality will be determined. This definition supports the marketing concept in which the ultimate aim of the organization is the complete satisfaction of the customer.
(5) <i>Value-based</i>	Quality under this definition consists of offering a product or service to customer with certain characteristics at an acceptable cost of price. This definition combines the idea of worth or value with the offering.

Source: Garvin (1988)

Besides that, the idea of starting TQM is more on the business side of universities because of its relatively easier. Thus, survey results tend to enforce this idea and suggest that most universities to implement TQM should start with their administrative level where processes are very similar to business processes in industry. 94% of the universities using TQM have reported showed some improvement in various areas such as customer service, whereas the customer focus approach has increased the awareness about students' needs. In addition, TQM also contribute to continuous improvement and streamlining financial, purchasing, admissions and administrative processes [13].

Bernhardt *et al.* [14] in their study showed that customer satisfactions of 472 restaurants are related to restaurant profits nine month later. Whilst anderson *et al.* [15] focused on customer perceptions of quality that are positively gain the return of investment.

Hence, customer satisfaction is effective in quality management and also important during implementation of total quality management as proposed by Eklof and Westlund [16]. Besides that, the implementation of TQM also will strengthen customer satisfaction towards company as well as improve financial performance [17,18,19].

**Methodology:** This study has employed quantitative approached as mentioned by Sugiyono [20], quantitative approach is to test theories through the independent variable and dependent variable and analysed the data with the statistical tool. 299 questionnaires has distributed by using random sampling to undergraduate students in public university. The questionnaire will employ a 5 point Likert scale format that ranging from 1 – strongly disagree,

2 – disagree, 3 – neutral, 4 – agree and 5 – strongly agree. After all data collected, the questionnaires will be analysed by using Statistical Package for Social Sciences (SPSS).

## RESULTS AND DISCUSSION

From analyse data of profile respondents below, the percentage of respondents for male student is 32.8% whilst female student recorded 67.2%. The age of overall respondents were classified into four groups whereas respondent who has age less than 20 years showed 37.5%, 21 – 25 years recorded 57.5%, 4.0% served the age between 26 – 30 years and the respondents who age more than 30 years represent 1.0%. Meanwhile, 63.5% represent for Malay, Chinese were 21.4%, Indian showed 9.0% and followed by others races which is non Malaysian citizen is 6.0%. Last demographic view is refer to year of study that recorded to first year student is 38.1%, meanwhile second year student represent 17.4%, third year student were 26.1% and fourth year student served 16.4%. A profile of the respondent can be referred in Table 1.

Table 2 showed about the descriptive statistics of the implementation of total quality management aspects that has been distributed and filled by undergraduate students in public university. Thus, all the collected data will be analysed through mean and standard deviation.

Through to this article, it was classified to four categories the mean scored value based on the rank of understanding: mean 2.59 and below is indicating a less understanding, mean value between 2.60 to 3.40 is indicated as moderate understanding, mean value ranging from 3.41 to 4.20 is indicated as high understanding and mean value 4.21 and above is indicating as highest understanding.

Table 2: Demographic Characteristics of Sample

Respondent's profiles		Frequency	Percentage (%)
Gender	Male	98	32.8
	Female	201	67.2
Age	< 20 years	112	37.5
	21 – 25 years	172	57.5
	26 – 30 years	12	4.0
	> 30 years	3	1.0
Race	Malays	190	63.5
	Chinese	64	21.4
	Indian	27	9.0
	Others	18	6.0
Year of Study	1 <sup>st</sup> year	114	38.1
	2 <sup>nd</sup> year	52	17.4
	3 <sup>rd</sup> year	84	26.1
	4 <sup>th</sup> year	49	16.4

Table 3: The Description of Total Quality Management Aspects

TQM Aspects	Mean	SD
I believe that top management actively participate in quality activities	3.7157	.82908
I believe that top management strongly encourage staffs involvement in quality movement	3.7759	.74633
I believe that top management empowers employee to solve quality problem	3.6555	.79326
I believe that top management focuses on the service quality rather than yield	3.6254	.85146
I believe that top management discuss many quality issues in top management meeting	3.8763	.89821
I believe that higher education ins. has audit various teaching syllabus	3.8361	.83740
I believe that higher education ins. regularly conducted the quality audit	3.6589	.74906
I believe that benchmarking is used extensively in higher education ins.	3.6120	.83746
I believe that the aims of evaluation is for improvement not criticism	3.8729	.95392
I believe that the quality system in higher education ins. is cont. improve in their service	4.0535	.76225
I believe that higher edu. ins. use ISO 9000 as a guideline for est. the quality system	3.9231	.81765
I believe that higher edu. ins. has a clear quality manual	3.8361	2.4101
I believe that higher edu. ins. has a clear procedure in serving the service	3.6957	.81781
I believe that in higher education institution the staffs are actively involved in quality-related activities.	3.7157	.82502
I believe that higher education institution has implement suggestion activities extensively.	3.6756	.81416
I believe that most staffs' suggestions are implemented after an evaluation.	3.4615	.80749
I believe that the staffs in higher edu. ins. is very committed towards on achieving the vision.	3.5853	.89100
I believe that staffs are encouraged to fix the problem they find.	3.5719	1.0087

Table 3: Continued

TQM Aspects	Mean	SD
I believe that higher education institution collects extensive complain information from students.	3.6421	.91723
I believe that quality-related students' complaints are treated with priority.	3.5452	.85949
I believe that higher education has conducts a students' satisfaction survey every year.	3.5284	.89087
I believe that higher education institution always conduct the survey in order to collect suggestions for improving the quality.	3.4582	.92727
I believe that higher education institution are stressing on customer focus/students satisfaction for a long term.	3.5184	.99436

Therefore, based on the finding it found that all the items were at rank of moderate understanding of the total quality management implementation in public university whereas mean scored value between 2.60 to 3.40 (*I believe that top management actively participate in quality activities, I believe that top management strongly encourage staffs involvement in quality improvement, I believe that top management empowers employee to solve quality problem, I believe that top management focuses on the service quality rather than yield, I believe that top management discuss many quality issues in top management meeting, I believe that higher education institution has audit various teaching syllabus, I believe that higher education institution regularly conduct the quality audit, I believe that benchmarking is used extensively in higher education institutional, I believe that the aims of evaluation is for improvement not criticism, I believe that the quality system is higher education institution is continuously improved in their service, I believe that higher education institution use the ISO 9000 as a guideline for establish the quality system, I believe that higher education institution has a clear quality manual, I believe that higher education institution has a clear procedure in serving the service, I believe that in higher education institution the staffs are actively involved in quality-related activities, I believe that higher education institution has implement suggestion activities extensively, I believe that most staffs' suggestions are implemented after an evaluation, I believe that the staffs in higher education institution are very committed towards on achieving the vision, I believe that staffs are encouraged to fix the problem they find, I believe that higher education institution collects extensive complain information from students, I believe that quality-related students' complaints are treated with priority, I believe that higher education has*

*conducts a students' satisfaction survey every year, I believe that higher education institution always conduct the survey in order to collect suggestions for improving the quality and I believe that higher education institution are stressing on customer focus/students satisfaction for a long term).*

Discovering from the mean score, the level of understanding on the implementation of total quality management in public university was proposed to be neutral to agree. The mean score from 3.4582 to 4.0535 on five point Likert scale.

Besides that, the variability of the rating presented to be relatively high with the standard deviation range of 0.74906 to 2.41011, suggesting some consistencies in importance relating to the understanding of the implementation of total quality management in public university among undergraduate students. From these, all the items were reported as moderate understanding based on undergraduate perspective.

The result exposed a moderate mean value about the understanding level of the implementation total quality management in public university. It is probably lack of knowledge about TQM where students did not understand the importance of TQM implementation in public university. Furthermore, students also never have an experience and does not exposed with working environment in a real situation. Thus, it contributes to lack of understanding of implementation TQM in public university. All these practices have been well employed by the respondents of all genders, race, age and year of study in public university.

## CONCLUSION

The result obtained show that undergraduate students need to be educated or disclose them about total quality management in education sector. TQM does not necessarily supposed to practice in manufacturing but it can apply in education in order to enhance the continuous improvement and also will encourage the top management in public university to improve the quality and efficiency in managing the public university.

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