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**TQM Critical Factors:
The Recipe for Successful Implementation**

Service Quality In Higher Education

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Abstract

The aim of this paper is to highlight the application of TQM approach in a service context. A general discussion covering several definitions of TQM terminologies and philosophy is introduced to establish theoretical background of the study. The quality management concept has been evolving in various dimensions of contexts, principles and philosophy. This paper provides some discussion on various perspectives of definitions and understanding of TQM, and elements of quality concept on TQM implementation.

Further on, this paper explores some theoretical review on TQM implementation in a service context. The discussion is focusing on a particular sector that is higher education institutions. To understand fundamental concepts on the nature of service quality would be useful to develop and strengthen a theoretical framework of research within the relevant context.

Key Words: TQM, Service Quality, Higher Education, SERVQUAL.

Introduction To Total Quality Management

TQM is not just an organisational management programme or management-initiative package, but a complete change in an organisation's culture and the way people behave at work. TQM definitions, philosophy, approaches, and models have been discussed in many organisational contexts and from various perspectives.

Oakland (1989), for example, defined TQM as:

“An approach to improving the effectiveness and flexibility of business as a whole. It is essentially a way of organising and involving the whole organisation; every department, every activity, every single person at every level. For an organisation to be truly effective, each part of it must work properly together, recognising that every person and every activity affects and in turn is affected by others.”

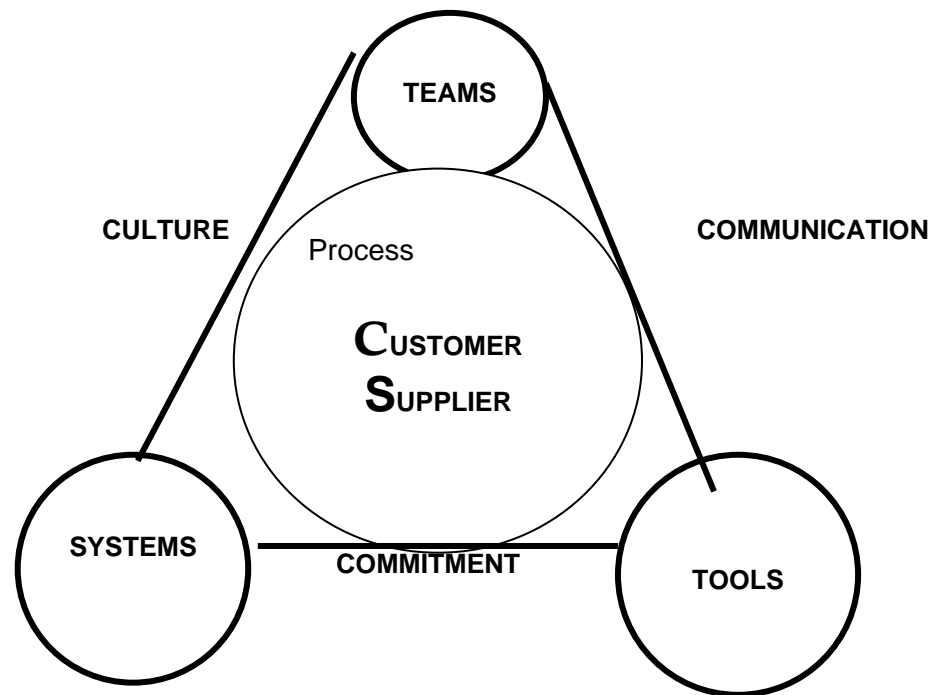
Oakland (1999, pp.14-15)

This definition focuses on functional integration and employee involvement, but has no emphasis on the customer satisfaction. However, it recognises the importance of organisational co-ordination for quality, which can be enhanced, for example, by conducting departmental purpose analysis - tasks negotiated between internal customer groups, thus smoothing workflow and interdepartmental co-ordination. Oakland and Oakland (1998) also suggests that a fundamental decision in the quality process is to decide about the sort of people behaviour and attitude that is desired. The senior management must institute the right quality of understanding and behaviour to develop a quality culture before they can be committed to quality systems. His TQM model explains this very well, and is shown in Figur .1.

Meanwhile, Harvey and Brown (2001) defined TQM as an organisational strategy of commitment to improve customer satisfaction by developing systematic procedures to carefully manage quality output. In terms of service performance, Agus (2002) suggests that TQM is the comprehensive efforts to bring significant overall service performances, including costs efficiency, quality customer relations, and increased employee involvement. These definitions are on the same lines as Juran's definition that TQM is a global strategic force which aims to achieve several

benefits, including improved customer satisfaction, greater employee focus and motivation, reduced waste, and improved overall performance (Juran, 1981)

Figure 1: TQM Model by Oakland



Source : Oakland, 1999

Furthermore, TQM encourages quality working attitudes, including quality awareness, and focusing on 'right first time' can guide workers' behaviour towards team working and participation. To ensure workers' dynamism, on to contemporary quality management techniques, Oakland (1999) recommends constant learning and retraining that will promote continuous improvement and win competitive advantage. To integrate TQM into business strategy, Oakland (2000) suggested seven steps, which are; gain commitment to quality initiatives; develop a shared vision and mission for the business and desire to change; develop the critical success factors; define the key performance indicators; understand core processes and gaining ownership; break down core processes into sub-processes, activities and tasks; and ensure processes and people alignment through a policy deployment or goal translation process.

Zairi et al. (1994), in putting TQM in terms of its ultimate goal in operational contexts, defined it as:

“A positive attempt by the organizations concerned to improve structural, infrastructure, attitudinal, behavioural, and methodological ways of delivering to the end customer, with emphasis on: consistency, improvement in quality, competitive enhancements, all with the aim of satisfying or delighting the end customer”.

Zairi et al. (1994, p.6)

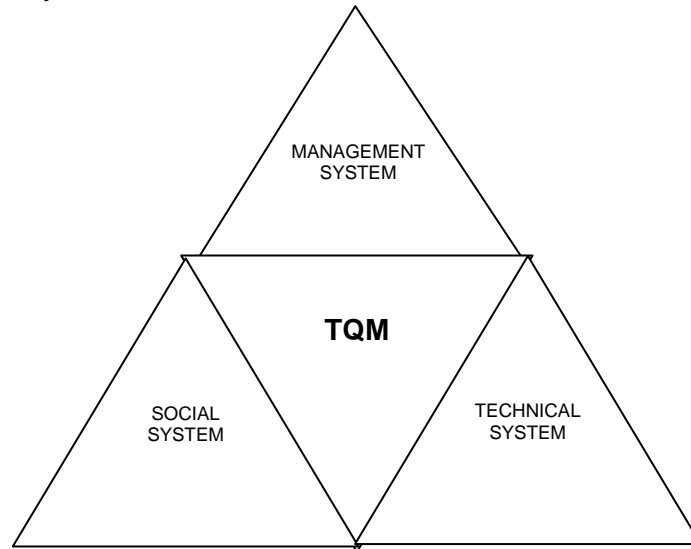
The definition encompasses the process-content dimensions of TQM implementation. The integrated elements of people and technical process in quality initiatives require the understanding of the multiple disciplines of knowledge to operationalise quality systems towards specified goals.

Pegel (1995) includes 21 distinct aspects that can describe an organisation involved in TQM initiatives: customer focus and satisfaction; strategic human resource management and employee training; team utilisation; group dynamics and team development; team process leadership roles and functions; brainstorming; data analysis and charting; cause and effect diagrams; pareto analysis; statistical control charting; quality function deployment; ISO 9000; productivity measurement; benchmarking; cycle time reduction and time-based competition; just-in-time operations; flexibility; reengineering; concurrent engineering; activity-based costing; innovation in product design; and external sourcing. Other composites of TQM which may be considered as quality initiatives are quality control circle (QCC); material planning requirement (MRP); Kanban; failure mode and effect analysis (FMEA); Taguchi methods; and six-sigma. Idris et al. (1996) conducted research into TQM implementation in 247 organisations in Malaysia, and the quality initiatives involved were internal quality audit, quality awareness programme, supplier improvement activities, total production maintenance, and workplace improvement study. All these ideas, techniques, approaches and practices are prerequisite to quality performance, and they are implemented based on TQM philosophy and principles.

The concept of TQM is commonly described as 'a management philosophy' based on a number of core quality values and attitudes. These core values attached to the definition of TQM are focus on customers, continuous improvement, top management commitment, system and process control, employee involvement, and managerial decisions based on facts (Svensson and Klefsjo, 2000). Most quality literature has termed these as principles, dimensions, elements, critical factors or cornerstones. Hellsten and Klefsjo (2000) give an interpretation of TQM as a management system consisting of quality core values, quality techniques and quality tools, which are interdependent and support each other. Core values are the basis for organisational quality working culture (Wilkinson and Dale, (2001). Therefore, TQM implementation should start with identifying the quality core values, and then choose the right techniques that support these values, and finally apply tools supporting the techniques rightly.

Meanwhile, Frank Voehl (1993) summarised the major concepts and principles of TQM in the form of 'House of Quality', as shown in Figure 2. The roof, or the superstructure of the TQM consists of three subsystems: the management, social, and technical subsystems of the organisation. Four pillars of quality support the superstructure, which are basically the principles in quality management. They are customer satisfaction, continuous improvement, managing with facts, and respect for people. The foundation of TQM, he said, is made up of four managerial levels, which are strategy, process, project, and task management. Meanwhile, the cornerstones for the quality house are the strategic, operations, project, and personal quality planning. This planning will underline the organisation's mission, vision, values, and goals and objectives. Lewis and Smiths (1994) suggest that TQM based on the 'House of Quality' framework requires quality planning by experienced individuals working together, that is, a team. Total quality efforts frequently fail because of the individuals unable to carry out their responsibilities.

Figure 2: House of Quality



CUSTOMER SATISFACTION	CONTINUOUS IMPROVEMENT	SPEAKING WITH FACTS	RESPECT FOR PEOPLE
STRATEGY MANAGEMENT	PROCESS MANAGEMENT	PROJECT MANAGEMENT	INDIVIDUAL TASK MANAGEMENT
STRATEGIC PLANNING	OPERATIONS PLANNING	PROJECT PLANNING	QUALITY PLANNING

In his book *Beyond TQM*, Flood (1993) defines quality as, 'Quality means meeting customers' (agreed) requirements, formal and informal, at lowest cost, first time, every time'. Flood underlines ten principles to summarise the definition of TQM, as shown in Table 1:

Table 1: Flood's 10 Principles of TQM

<p>Principle 1 : There must be agreed requirements, for both internal and external customers.</p> <p>Principle 2 : Customers' requirements must be met first time every time.</p> <p>Principle 3 : Quality improvement will reduce waste and total cost.</p> <p>Principle 4 : There must be a focus on the prevention of problems, rather than an acceptance to cope in a fire-fighting manner.</p> <p>Principle 5 : Quality improvement can only result from planned management action.</p> <p>Principle 6 : Every job process must add value.</p> <p>Principle 7 : Everybody must be involved, from all levels and across all functions.</p> <p>Principle 8 : There must be an emphasis on measurement to help to assess and to meet requirements and objectives.</p> <p>Principle 9 : A culture of continuous improvement must be established.</p> <p>Principle 10 : An emphasis should be placed on promoting creativity.</p>

Source: Flood (1993)

Therefore, from the above discussion, we can conclude that TQM is a management philosophy that requires total involvement and commitment of organisational members at all levels in the process of continuous improvement to ensure quality outputs to satisfy customer needs. Effective and efficient resource management is the key principle to ensure competitive advantage and excellent results.

Quality Management Concepts

In his book *Quality Through People*, Choppin (1991, p.23) defines quality as '*meeting the negotiated requirements and expectations of the customers*'. Choppin's definition highlights the management roles and efforts to ensure customers' satisfaction. Taguchi (1987) defines quality in another perspective, whereby to him, quality is the degree of customer perception of a product, beside the actual value of its intrinsic functions. Garvin (1988) interprets that such losses may include warranty costs, dissatisfied customers, and other problems due to performance failures. The greater the losses, the higher the degree of customer dissatisfaction, and this indicates low quality performance. The importance of preventive actions in quality management will be discussed under Ishikawa's quality philosophy later in this section.

However, the differences in the definitions may be caused by the word 'quality' itself that conveys the elements are subtle and nebulous, and not readily quantifiable. In other words, it is not easily concretised, measured or tied down. Pascale (1991) gave an elaborated definition to explain the meaning of quality:

‘ Quality can be a compelling value in its own right. It is robust enough to be generalised to products, service standard, and calibre of people. Everyone in every level can do something about it and feel the satisfaction of having made a difference. Making products that work, or providing first-class service, is something we can identify with from our own experience.’

Pascale (1991, p. 248)

Garvin (1988) divides quality functionally into transcendent, product-based, user-based, manufacturing-based and value-based definitions (see Table 2). He argues that despite the potential for conflict, companies can benefit from such multiple-perspective definitions, since different definitions for quality apply as the product moves from the design stage to the marketplace. Otherwise, reliance on a single definition is a frequent source of problems.

Table 2: Quality as Defined from Functional Orientation

Transcendent: Quality cannot be defined precisely; it is a simple, unanalysable property we learn to recognise only through experience. Cadillac, Mercedes-Benz and Rolls Royce are products of the automobile industry that have achieved this level of excellence.
Product-based: Views quality as a precise and measurable variable. Differences in quality reflect difference in the quantity of some ingredients or attribute possessed by the product.
User-based: This view is idiosyncratic and personal. It is highly subjective as it focuses on issues of ‘fitness for use’ by the individual customer.
Manufacturing-based: Focuses on producers of goods and services and is primarily concerned with engineering and manufacturing practices. Virtually all manufacturing-based definitions identify quality as conformance to requirements. Once design or specifications have been established any deviation implies a reduction in quality.
Value-based: Judged in terms of cost and prices. A Quality product is therefore one that provides performance or conformance at an acceptable price or cost.

Source: Garvin (1988, p.47).

Quality management should aim to attain the agreed objectives using the available resources in the organisation. Talley (1991) suggests that management commitment, structure-strategy relationship, and culture of continuous improvement are the common threads of quality programmes.

Numerof and Abrams (1996) suggest several principles inherent in any quality initiatives. The critical principles they enumerate are:

1. Quality change requires well-defined expectations, measurable objectives, accountability, feedback, monitoring, and follow-through.
2. Performance improvement is part of everyone’s job all the time.
3. Accountability is necessary at all organisational levels, not a particular group or an individual should be solely responsible.

Therefore, based on the various perspectives of quality concepts, it can be summarised that quality is understood and perceived differently by individuals. Like the word ‘beauty’, it is defined in the eyes of the beholder. However, the important message to keep in mind is that the management of an organisation should define their product or service quality from the internal and external customer perspective.

The aim of quality management must always be to satisfy customers, by fulfilling their requirements and expectations. Moreover, the management roles are to communicate and educate all organisational members to inculcate quality values and culture, and to be committed in achieving agreed quality objectives.

Quality in Services

The definition of service in the Guidelines for Services published by the International Standards Organization (ISO, 1992) is:

“Supplier’s activities at the interface with a customer, and the results of all supplier’s activities to meet customer needs.”

The definition stresses that the interactions between employees, who are the service provider, and customers are critical to determine customer satisfaction. This definition is general to both product-manufacturing and service-oriented organisations, where service quality is associated with tangible and intangible products. Service-oriented organisations are those involved in basically service business operations, including financial services, health care, tourism and hospitality, insurance postal service and teaching and education services. However, the concept of service has change radically over the years, and assumed significant importance. Sinha and Ghoshal (1999) argued that, in a marketing perspective, the dividing line between manufacturing and service is vanishing. Similarly, this study has no aim to differentiate between the two sectors, although research constructs are mainly based on a theoretical framework in the service context.

Furthermore, in the service sector, where production, delivery and consumption can occur simultaneously, the concept of quality refers to the matching between what customers expect and what they experience. Customers assess service quality by comparing what they want or expect to what they actually get or perceive they are getting (Berry et al., 1988). This is perceived quality, and any mismatch between expected service and perceived service is a ‘quality gap’ (Gronroos, 2000). As perceived quality, being a user-based category, is always a judgement by the customer, quality in this context is whatever the customer says it is. Narrowing the quality gap is one of the prime goals of service quality management.

Meanwhile, Groth and Dye (1999) suggest that service quality is that customers buy a service because they require the service, and related quality of service offers the best perceived value-to-resource choice available. ERD (expectations-realisation-divergence) identifies the difference between ex ante expectations of the service quality and the perceived ex post realisation of the service/service quality. ERD is positive (negative) if the customer feels realisation exceeded (fell short of) expectations.

Comparatively, Beckford (1998) argues that most manufacturing organisations which implement TQM are involved with formal reports, documents and record keeping on operational systems and procedures. However, service-oriented organisations, or those operating through a distributed delivery network, also require a standardised approach for management purposes and for customer satisfaction. Therefore, flexibility and creativity needed for the quality systems developed in a manufacturing context, are also important to quality service operations.

From a different perspective, Dale (1999) argues that TQM for service demands more understanding, interest and commitment of top management as an absolute precondition for success. This is because TQM depends on the creation of a quality culture in a service organisation, which puts emphasis on everyone being involved in continuous improvement. He refers to Service Chain model, that management should understand internal customers' expectations in order for them to take responsibility for making quality improvements and being committed to the initiatives to fulfil the end customers' expectations.

Parasuraman et al. (1988) analyse service on a consumer perspective based on the four following characteristics:

1. **Intangibility.** In contrast to goods, service is intangible, cannot be touched, smelled, tasted, or seen. Consumers who pay for services typically have nothing tangible to take home. Thus, tangible products associated with services like degree certificates, plastic credit cards, insurance cover notes, and service agreements, may represent the service, but are not the service itself.
2. **Heterogeneity.** Services always vary because human beings usually perform them. Therefore in a quality perspective, service is difficult to standardise. Each lecturer may deliver a same course module with specific outlines differently.
3. **Inseparability** of production and consumption. A service is usually consumed or experienced while being delivered, with the customer often involved in the process. Student-lecture interactions cannot be avoided in the teaching process. For this reason, mistakes or excellence in service may happen at any point of the process of service delivery. It is important to note that customer evaluation happens along the process.
4. **Perishability.** Most service cannot be stored and packaged for each customer on each service transaction. Referring to the first three characteristics, each customer will experience a different level of service quality provided by the same company or even by the same employee.

Parasuraman et al. (1991) have identified four overall gaps within a service organisation that, individually or in various combinations, cause the important fifth gap in customer evaluation. It is the gap between customers' service desire or expectation and their perceptions of the service that is actually delivered (Figure 3). The four gaps will determine customers' perception of the service rendered.

Gap 1. Management's perceptions of customer service expectations are different from actual customer desires. Management failures to understand customers' desires for the service expected could be a fundamental mistake that may lead to further wrong decisions. A chain reaction of mistakes that are likely to follow are setting up wrong human resource training, wrong approach to performance measurement, and also wrong promotion activities.

Gap 2. Management's specifications for service are different from its perceptions of customer expectations. Management may have understood the customer expectations of the service, but fail to translate the understanding into equivalent specifications for service performance.

Gap 3. The difference between service specifications determined and the level of service actually delivered. Even if the management does understand customer service expectations (minimum at Gap 1) and does set appropriate specifications for the service standards (minimum at Gap 2), the service delivery may still fall short of

customers' expectations. This is the most relevant aspect (of people management) to be explored in this study. The 'service performance gap' is the quality level at which there are discrepancies between the service delivered by employees as compared to the standard specified by the management. The main reasons that may cause this gap are:

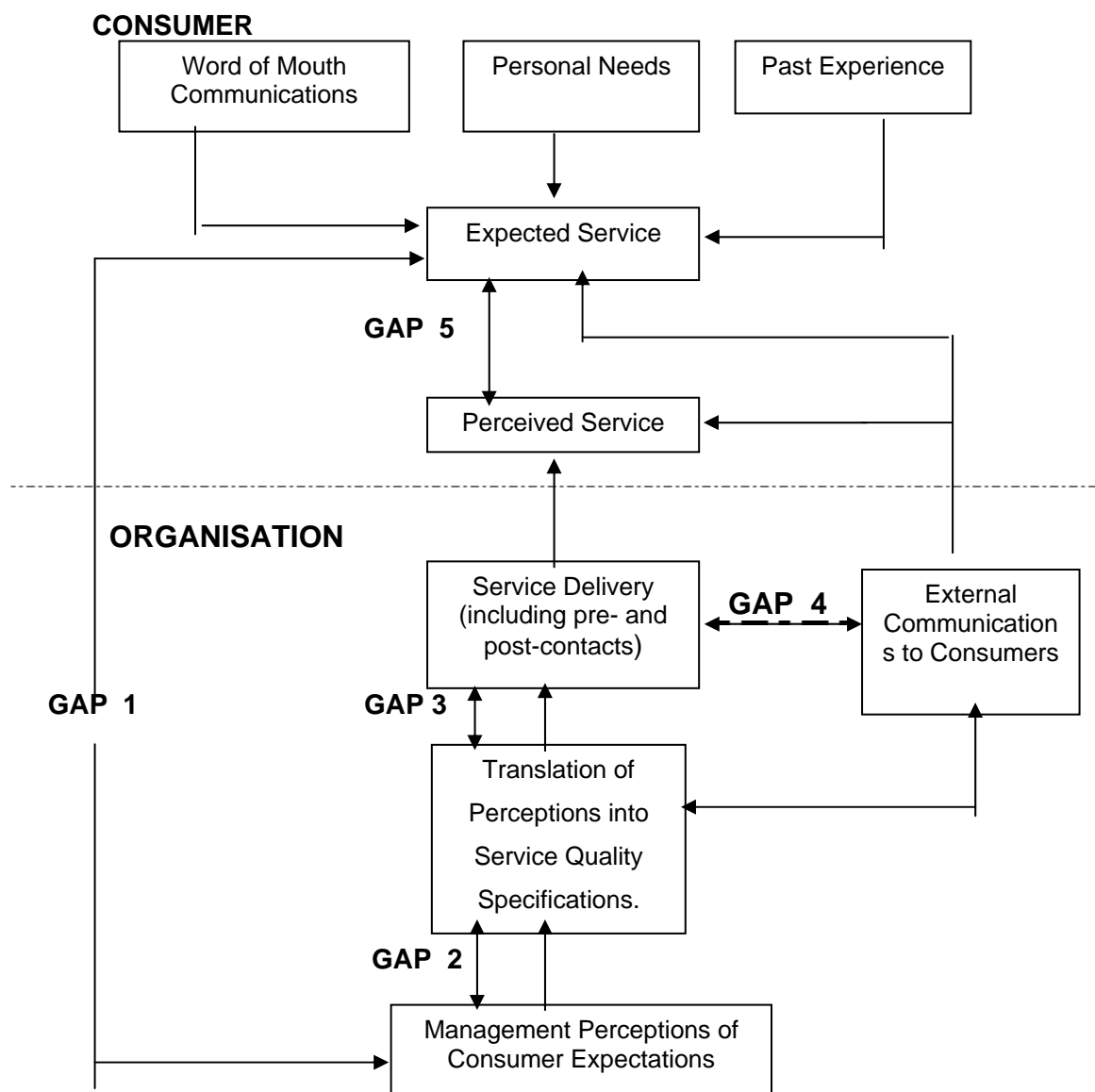
1. Lack of employees' ability and capability. A screening process in human resources' selection and recruitment is critical to identify the capable workers that fit the job. It is important to note that even if the worker is trying to do his/her best (in the case of hard working workers), if he/she does not have the capability, the quality mission may still fail.
2. Lack of motivation and willingness to perform quality service. Motivated workers will put in all efforts to ensure excellent results and quality service performance. Berry et al. (1989) describe willingness to perform in terms of 'discretionary effort', that is, the difference between maximum amount of effort and commitment a worker could put into the given job or responsibility, and the minimum amount of effort required in avoiding being fired or penalised. Specified operational factors that affect employee motivation and willingness to perform quality service are role conflict, role ambiguity, and too few or overloaded job functions.
3. Inadequate role support and attention by the management. Organisations implementing quality need to invest in appropriate technology and support systems to facilitate role performance. At the same time, workers with lack of skills and capabilities need relevant and adequate training to improve service performance. In other words, insufficient attention to support facilities, skills and knowledge development from the management will affect the workers' ability and willingness to perform to the expected quality service standards.

Gap 4. The differences between delivered service and external communication about the service. Many service organisations fall prey to the promotional temptations of promising more service than they can consistently deliver. Over-promising in promotion is especially pernicious, because it raises customers' expectation, and consequently affects perceptions of the service. Customers with high expectations for a certain level of service will be more disappointed or dissatisfied than those with moderate expectations.

Gap 5. This is the potential gap between the customers' desired or expected service and the perceived service that they received. Customers' service quality judgement is a function of the expectations in the customers before they pay for the service and make their perception of the service they experienced. Therefore, the degree of Gaps 1 and 4 constitutes the level of quality service performance. Consequently, closing or minimising Gap 1 to 4 will close or minimise Gap 5.

The challenge to quality service organisation is to meet or exceed precise customers' expectations for the four dimensions (reliable, responsive, reassuring and empathetic) of service performance. The extent to which customers' expectations and the delivery of service performance are similar or different will influence the degree of customers' satisfaction.

Figure 3: SERVICE QUALITY MODEL



Source: Zeithaml, Berry and Parasuraman (1988, p.36)

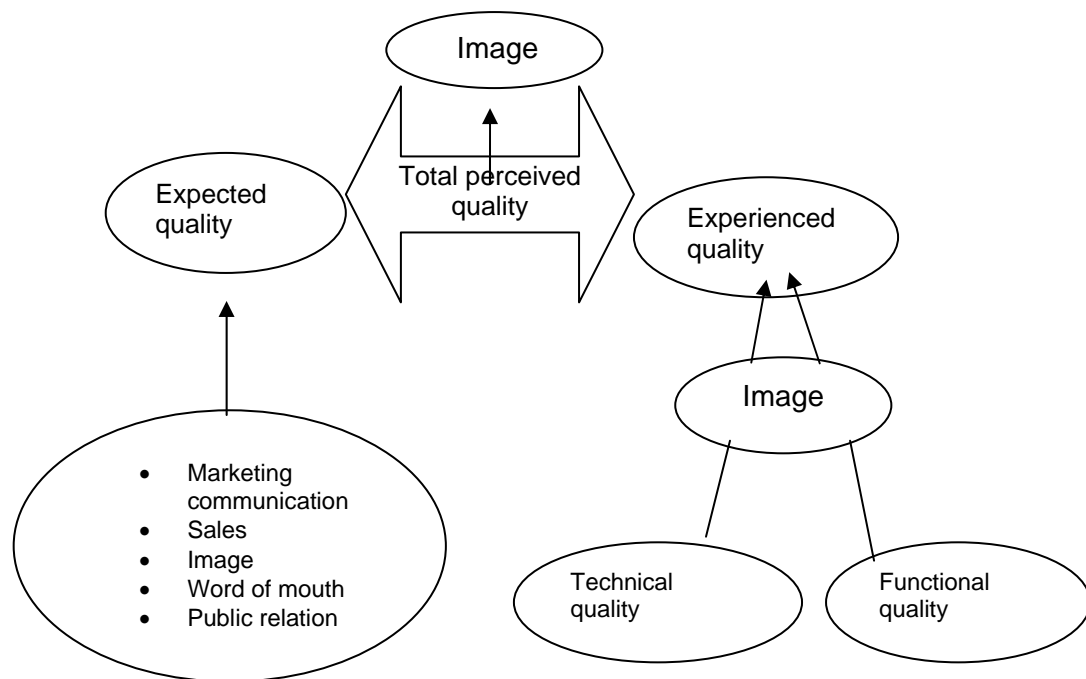
Gronroos (1990) made an empirical study to test his service quality theory and the internal marketing concept as a strategic management instrument. Basically, his service quality theory says,

“.....the perceived quality of a given service that will be the outcome of an evaluation process where consumers compare their expectations with service they perceive they have got, i.e., they put the perceived service against the expected service.”

Gronroos (1990, p.38).

The ‘Perceived Service Quality’ model shown in Figure 4 explains that superior perceived quality of service is obtained when the experienced quality meets the expectations of the customer, which is the expected his or her their expectations are fulfilled.

Figure 4: The Perceived Service Quality



Source : Gronroos (2000, p.67)

The discussion on TQM in services context suggests that customer expectations are the main factor to consider in quality planning. Furthermore, the management has to inculcate the quality culture to ensure quality service delivery. As the nature of the operations are intangible, heterogeneity, inseparable, and perishable, service performance is not quantifiable, and mainly bound to customer perception. The gap between perceived quality and expected level of service is the key determinant of performance evaluation, from the customer perspective. Therefore, employee competency, motivation and right attitudes are very important to ensure quality of service, and adequate facilities and support would create a favourable working environment to produce excellent service performance.

TQM Implementation in Higher Education Sector

Higher Education (HE) is one the important service sector in modern business, and in this study, the survey is on universities involved in TQM initiatives. The HE sector is continuously in a state of change and is being driven by the public, government and economic imperatives. The growing challenge this sector is facing is the increase in student-staff ratio that indicates rising demand for the service, and the government plan to reduce dependency on public funds. Therefore, the HE sector has no option other than to work towards more effectiveness and efficiency through quality management.

Even though the term 'quality' has broad and subjective meanings, with the concept of standards, excellence and 'fitness for its purpose', there has always been a great relevance and concern for quality in HE. In British Standard 4778, quality management in HE was taken as the totality of features and characteristics of

product services (learning process) that bear on its ability to satisfy stated or implied stakeholder expectations (HEQC 1996).

Bryan (1996) describes TQM implementation in the HE context as:

“... a comprehensive philosophy of operation in which HE institutions community members (1) are committed to continuous quality improvement, and to a common campus vision, set of quality values, attitudes, and principles; (2) understand that campus processes need constant review to improve services to customers; (3) believe that the work of community members is vital to customer satisfaction, and (4) value input from customers for further improvement.”

(Bryan, 1996, p.5).

The comprehensive definition by Bryan (1996) suggests that top management are committed not only to continuous quality improvement, but also to giving quality training and education to faculty staff and administrators. Every institutional member needs to work as a team to satisfy all customers. However, there is no emphasis on the quality audit and measurement of performance to evaluate the effectiveness of the quality initiative.

Crawford and Shutler (1999) made an analysis of the Deming (1986) and Crosby (1986) models in an attempt to relate them to the HE sector. In supporting the initiatives of TQM in education, they apply the Crosby (1984) model to suggest the following strategy: focus not on the students' examination results but on the quality of the teaching system used to educate them. Meanwhile, in relation to the Deming (1986) model, they suggest that sufficient attention should be paid to the quality systems. Examinations become a diagnostic tool assuring the quality of the teaching system. There must be continual improvement efforts in the curriculum and delivery services in order to satisfy the educational needs of the student. Based on Crosby's and Deming's perspectives, Crawford and Shutler (1999) identified the root causes of the quality system failure in HE as:

1. Weak students (poor input)
2. Lack of focus in teaching system (poor delivery services)
3. Lack of attention paid to performance standards and measurement
4. Unmotivated staff (internal customer satisfaction)
5. Neglect of students' skills (quality potential).

The study had a tendency to apply the models in the education sector as production-oriented. Thus the main drawback of this study is that teaching and examinations are geared towards producing passed students. The 'zero defect' objective may not be appropriate to HE quality performance, as the quality students are not those who just graduated with a degree, but more importantly they are accepted on employment requirements and able to perform well on the job. The analysis just concentrates on the student as a customer whereas TQM in HE should concern the customer beyond students (Dahlgaard et al., 1995; Kanji and Tambi, 1999).

Dahlgaard et al. (1995) define total quality in education as educational cultures characterised by increased customer satisfaction through continuous improvements in which all employees and students participate actively. The term educational culture reflects the long-term planning and management process, with gradual impact leading the organisation towards the fulfilment of its vision. In their analysis of TQM application for HE, they characterised five elements of TQM pyramids as fundamental principles; management's commitment (leadership), focus on the

customer (internal and external), focus on facts, continuous improvement and everybody's participation.

The leadership role in HE is not only to determine the quality vision and missions to satisfy customers, but also to motivate institutional staff for continuous improvement and knowledge advancement.

However, due to different contexts of political and social environment, a particular country has different reasons to implement TQM in its HE systems. After reviewing the milestones in quality assurance in UK's HE, Green (1994) suggest that the main reason for the need for TQM in UK's HE institutions are:

1. Rapid expansion of student numbers against limited public expenditure worries.
2. The general quest for better public services.
3. Increasing competition within the education market for resources and students.
4. The tension between efficiency and quality.

Some specific case research on universities in England supports the claims. Doherty (1994) discovered that the urge for quality initiatives at the University of Wolverhampton was that the Department of Education was concerned about quality and accountability of universities, which are mainly funded by the government. The increasing concerns of stakeholders on drop in student performance, mismatch of graduate skills and job, and decline in student funding hold a strong reason for TQM implementation at Aston University (Clayton, 1995). One of the studies on the United State's HE suggest that TQM implementation in HE institutions was influenced by the apparent success derived from the country's manufacturing and industrial sectors during the 1980s (Lozier and Teeter, 1996). These companies such, as Texas Instruments, Xerox, IBM, and Motorola, were the recipients of the coveted MBNQA, and were involved in establishing and developing corporate HE institutions in the US. They were banking on the university's outputs (such as innovative research findings and outstanding graduates as skilled workers) to improve their business positions by overcoming threats from global competition and other changes in the business environment. The perception of quality management in HE has increasingly become a concern for many outside academia. Within HE, a tradition prevails that the institutions are the preservers, transmitters, and generators of knowledge, and HE institutions should be directly related to the world of business and provide employers with the required skilled workers. In Australia, government policies on education reform in the HE sector, such as to merge colleges to become universities, demand more strategic corporate restructuring. The Royal Institute of Technology, University of Western Sydney (Fulpo and Rosier, 1993), and the University of Central Queensland (Idrus, 1995) decided on TQM implementation to cope with the challenge, with more focused objectives towards efficiency in resource management and producing quality and competitive results.

Meanwhile, in Malaysia, the Ministry of Higher Education set up a special department called the Policy and Quality Department to monitor the development of the country's education policy based on TQM principles at all levels. The Ministry envisage that all schools and HE institutions will eventually be implementing TQM policies and principles. This means that TQM in the Malaysian HE context is strongly influenced by the government policy, and the initiatives would be necessary to cope with the Ministry's main objectives to improve productivity and to expand the HE sector.

Kanji and Tambi (2003) made comparative studies on HE institutions in the US, UK and Malaysia on the reasons for implementing TQM. The findings managed to list 54 common reasons given by the total of 183 HE institutions. Some of the unique reasons for the US institutions are to satisfy industry requirements, to upgrade student performance, and to increase revenue and ensure self-reliance. The unique reasons given by the UK institutions to implement TQM are due to external pressure, to improve academic standards, and to raise teaching profile. Meanwhile, Malaysian HE institutions gave different reasons, including meeting foreign partners' expectations, to compete for funds, and to pursue core business of HE institutions. The diversity of reasons shows that the justification for implementing TQM in the HE institution depend on the internal and external conditions of each institution, and the reasons are critical as the basis of strategic planning related to TQM.

Conclusion

The paper has provided an exhaustive review on TQM, quality concepts and philosophy, and service quality. A specific discussion on the scope of quality implementation in higher education institutions has gained clear indication research on quality management can be extended to various sectors. Some of the most common elements in TQM implementation for service sector are the management commitment, customer-focus orientation, employee involvement and continuous improvement activities. Meanwhile, the distinctive reasons for implementing quality management programmes to the higher education institutions are to satisfy stakeholder's expectations, to improve overall academic standards, to meeting international partners' expectations, and mainly to improve the business and financial performance. Therefore, this paper has provided a strong foundation for literature discussions for any related research involving TQM implementation in service sectors, and performance measurement of quality management programmes.

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