

Critical Success Factors of Total Quality Management Implementation In Higher Education Institution: A Review

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Abstract

This paper determines the research area of critical success factors of total quality management (TQM) implementation in higher education institutions which has potential to be explored and generate new knowledge, to improve the total quality management practices and outcome especially in higher education institutions. This paper has reviewed all the literature which is relevant to critical success factors of total quality management (TQM) and its implementation in various areas. The review is focused on the implementations, the impacts on the organization's performance and the encouraged indicators to the adoption of total quality management (TQM) in the organization. This study concludes the critical success factors of total quality management (TQM) and its implementation in higher education institutions. Because of lack of identified reason, many organizations do not adopt TQM approach into their organization. However, certain organization and institutions already indentified the benefits from TQM implementations on their organization performance and they believe this approach

could give them a chance to achieving their goals. The findings of this paper are a proposed conceptual model which consists of TQM critical success factors implementation and its impact of higher education institutions performance.

Keywords: Total Quality Management (TQM), Higher Education Institutions, Organization Performance and Malaysia

Introduction

Total quality management (TQM) is a way of managing to improve the effectiveness, efficiency, cohesiveness, flexibility and competitiveness of a business as a whole. As defined by British Standard Institution, TQM consists of a “management philosophy and company practices which aim to harness the human and material resources of an organization in the most effective way to achieve the objectives of the organization”. Some researchers are skeptical of the idea of applying TQM to higher education institutions (HEI). For instance, Chaston (1994) has identified obstacles, which include insufficient trust between departments and low confidence levels of ability to manage the process: “Under these circumstances, it does not appear that, for the foreseeable future, British universities are in a position to adopt TQM philosophy.” Paradoxically, however, HEIs, which research and teach TQM lack credibility if they decline to embrace the TQM philosophy and practices themselves. Because TQM is universal and proven by many successful firms, it should be used to formulate the mission statement for the services provided by HEI; a generic mission statement could be *“To provide quality education, training, research and related services to consistently satisfy stakeholders’ needs and achieve excellence through TQM”*. Since incorporation in 1989, De Montfort University (DMU) has undergone an ambitious transformation, nearly trebling in size to 25,000 students and quadrupling its campuses. It has become one of the largest universities in the UK and the fastest growing in Western Europe. “One main objective of DMU is to unlock the creativity of academic staff to find ways of increasing productivity while maintaining quality on declining resources. Fundamentally, schools (faculties) must live within their means, with cross subsidization only allowed for explicit strategic purposes”.

According to the reports of United Nations Educational, Scientific, Cultural Organizations (UNESCO) and the World Bank, social and private returns of the higher education are less than those of primary and secondary education. It is estimated that social return of primary education is 25% while that of higher education is only 1%. This has led to the thinking that the returns of higher education are largely private and therefore, subsidy on this should be reduced. There are three generic approaches to Total Quality Management (TQM) in higher education (Harris, 1994). Firstly, there is a customer focus where the idea of services to student are fostered through staff training and development, which promotes student’s choice and autonomy. The second approach has a staff focus and is concerned to value and enhance the contribution of all members of staff to the effectiveness of an institution’s operation, to the setting of policies and priorities. This entails a flatter management structure and the acceptance of responsibility for action by defined working groups. The third approach focuses on service agreements stance and seeks to ensure conformity to specification at certain key

measurable points of the educational processes. Evaluation of assignments by faculty within timeframe is an example.

Sangeeta (2004) considers education system as a transformation process comprising of inputs of students, teachers, administrative staff, physical facilities and process. The processes include teaching, learning, and administration. Output includes examination results, employment, earnings, and satisfaction. According to Roffe (1998), due to open competition, students are becoming more customers as well as consumers and expected to pay a growing share of the cost of education. This leads to competitive forces that generate different programmers for different student groups. The conceptual problems include whether TQM in higher education should be people or problem oriented, difficulty in introducing the application and acceptance of TQM in higher education institutions, which have not embraced tenets of TQM, team versus individual orientation towards TQM, and maintaining the rate of innovation amongst others. In their model for TQM implementation in higher educational institutions, Osseo-Asare and Longbottom (2002) propose enabler criteria, which affects performance and help organizations to achieve organizational excellence. These “enabler” criteria are leadership, policy and strategy, people management, resources and partnerships and processes. They also suggest “result” criteria including customer satisfaction, people satisfaction and impact on society and key performance results for measuring the effectiveness of TQM implementation. Non-implementation of TQM was due to institutions pre-occupation with funding agencies and non-embracement of continuous improvement culture. Proper education and training of those involved in the implementation process will help to mitigate this problem.

Literature Review

Quality Concept

The word quality itself stems from the Latin *qua litas*, which means “of what kind”. The concept is also often used in this sense: the quality of a particular fabric could be a statement about what kind of material it consists of. Another way of using the concept is to consider quality as ‘good’ as opposed to ‘bad’. It connotes a variety of meanings and implies different things to different people. Deming (1982) defines quality as “a predictable degree of uniformity and dependability at low cost and suited to market”. In general quality of customers as per specified standards desire one, which satisfies customer needs and continuously keeps on performing its functions.

Townshend (1990) talks about the “dual nature of quality”, there are two sub-concepts: “quality in fact” and “quality in perception”. He explains, “Quality in fact” as “the provider of goods and services who through dint of hard work and capital expenditures performs up to its own specifications achieves quality in fact.” “Quality in perception” is defined as the “subjective quality as the customer sees it. A product or *E-Leader Kuala Lumpur, 2009* service achieves quality in perception when meets the customer’s expectations”. According to Lin *et al.* (2004) , Taiwanese and American firms can benchmark the efficient of quality management practices

for Japanese –owned firms is the highest although almost all of their employees are Taiwanese, meanwhile American-owned firm’s efficiency is higher than that of Taiwanese –owned firms. Meanwhile, Aziz *et al.* (2000) surveyed 540 Malaysian and 180 UK companies emphasizing on manufacturing small and medium enterprises (SMEs). From the survey results, they found there is a reliance on inspection and relatively low use of more sophisticated statistical methods for quality improvement for both countries. They also stated that the types of quality practices are promoted by their own governments. Parast *et al.* (2006) conducted a comparative analysis of quality management practices between USA and Mexico manufacturing companies, using the Malcolm Baldrige National Quality Award (MBNQA) criteria as framework. The results show that there are differences between the critical success factors of quality management practices within USA and Mexico. In both countries, social responsibilities and supplier quality were significantly in explaining variability of quality results. More similarities in both countries were found in the effect of quality management practices on customer focus and satisfaction.

TQM Evolution

The development of TQM is traced over different periods of evolution. Evolution of TQM as it has emerged in industries, some others identify three periods in this evolution process and others propose four stages of evolution. As Steeples (1992), conclude that there are three periods: quality control, quality assurance and total quality management. Meanwhile Garvin (1998) argues that there are four stages: inspection, statistical quality control, quality assurance, and strategic quality management. In the early 1800s, the development of the rational jig, fixture and gauging system, proved a turning point in quality control science. According to Garvin (1988), in 1922, Radford (2005) has published “The Control of Quality in manufacturing “that argued for the quality function to become a separate management responsibility and function.

After World War II, Japan experienced a quality crisis and to construct the economy, the Japanese set out to improve quality. Starting 1960, the first quality circles were formed to promulgate quality improvements. TQM had advanced and developed through the influence of many differing factors. Mc Adam (2000) noted that the influencing development factors had transformed the TQM philosophy. Hence, it can be summarized, that throughout this development period, TQM has moved from a predominantly narrow and mechanistic approach to more subjective and broader organizational philosophy. Figure 1, shows the TQM evolution process.

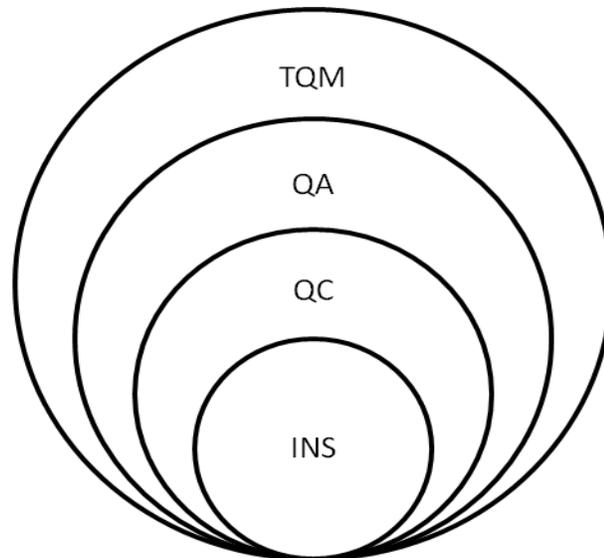


Figure 1 TQM Evolution Process

The Importance of TQM

In the competitive environment, organizations are forced to formulate and implement strategies within global context. Total Quality Management (TQM) has been described as a management philosophy and a way of thinking that has helped many organizations move towards achieving excellent businesses. TQM helps create a culture of trust, participation, teamwork, quality-mindedness, zeal for continuous improvement, continuous learning and eventually, a working culture that contributes towards a firm's success and existence (Yusof and Aspinwall, 2000).

TQM has been widely recognized and successfully implemented in many small and large organizations, giving them the edge in international as well as local competitiveness through the production of high quality products to satisfy customer needs (Dale and Plunkett, 1990). According to Quazi and Padibjo (1998), they proposed that TQM efforts in the USA and Japan highlighted the increasing importance of TQM and its impact on profitability. As Lakhali *et al.* (2006) argues that organizations with TQM systems in place consistently exceeded industry standards for return on investment.

Meanwhile, Saad and Patel (2006) conclude that by implementing TQM, the companies gained in-depth understanding of the key factors associated with the quality supply chain performance practices in Indian automotive industries. They also showed that TQM in supply chain is important to improve key factors such as quality, delivery and lead-time. Besides that, Jun *et al.* (2006) argues that the firms with human resources focused in TQM practices, can enhance employee satisfaction. The dramatic improvements in employee satisfaction lead to a higher level of customer loyalty. The summary of previous researches is shown in Table 1.

Table 1: Summary of previous researched

Authors	Title	Findings	Location
Jiju Antony <i>et.al</i> (2002)	Success factors of TQM implementation in the industry and industry-Hong Kong.	<ul style="list-style-type: none"> • factors that influence the success of TQM implementation in organizations in Hong Kong is a commitment of management, the role of quality department, training and education, employee involvement, continuous improvement • a close relationship with suppliers, product design and service, quality policy, quality of data and reports, communications and customer satisfaction orientation 	<ul style="list-style-type: none"> • Hong Kong
Mile Terziovski and Danny Samson (1999)	The relationship between implementation of TQM practices with organizational performance in various sectors and organization sizes	<ul style="list-style-type: none"> • TQM has a positive relationship to performance and business operations, employee relations and customer satisfaction. 	<ul style="list-style-type: none"> • Various sectors
Bishnu Sharma and David Gadenne (2001) h	Importance and effectiveness of quality management approach	<ul style="list-style-type: none"> • Many business firms in Australia implemented ISO 9000 and TQM in maintaining the quality level of production and services. 	<ul style="list-style-type: none"> • Business firms in australia
M.Sadiq and Teo Boon Hoong (2003)	The implementation of the TQM and organizational performance of small and medium companies in Malaysia with or without ISO 9000.	<ul style="list-style-type: none"> • ISO 9000 had a positive impact on organizational performance. • ISO 9000 as a catalyst to increase the performance of organizations implementing TQM. 	<ul style="list-style-type: none"> • Malaysia

TQM in Higher Education

Hasson and Klefsjo (2003) define TQM as “management strategy that has interrelated components, namely core values, techniques and tools”. Whereas according to Scrabec (2000), “TQM should be viewed as TQE (Total Quality Education). This model moves beyond customers to include society and business beyond student”. However, Zairi and Youssef (1995) argue, “TQM must be viewed holistically by examining management factors such as institutional goal statements, long-range plans, and assessment techniques”. Owen (2001) states that “Total and continuous quality improvement is seen as a journey not as destination and as such has no real beginning or ending”. Thus, it is a continuous effort for the management to maintain a standard in the institutions. TQM has been seen as a managerial tool to fix the problems relating to services as well as approaches in education industry and it can standardize the education industry (Venkatraman, 2007 and Peat, 2005).

The emphasis of quality maintenance in higher education has increased as the numbers of students are increasing and at the same time, their expectations are increasing, as they have to pay the tuition fee, so they look for an appropriate outcome (Becket and Brookes, 2005). Meanwhile, Symour (1992) has narrowed down the types of quality and applied them specifically to the higher education institutions.

According to the reports of UNESCO and World Bank, social and private returns of higher education are less than those of primary and secondary education. It is estimated that social return of primary education is 25% while that of higher education is only 1%. This has led to the thinking that the returns of higher education are largely personal and therefore subsidy on this should be reduced. According to Harris (1994), there are three generis approaches to TQM in higher education, firstly there is a customer focus where the idea of service to students is fostered through staff training and development, which promotes student’s choice and autonomy. The second approach has a staff focus and is concerned to value and enhance the contribution of all members of staffs to the effectiveness of an institution’s operation, to the setting of policies and priorities. The third approach focuses on service agreements stance and seeks to ensure conformity to specification at certain key measureable points of the educational processes.

Durlabhji and Fusilier(1999) states that customer empowerment in education requires greater input from students as well as from business community that will eventually employ them and this in term will streamline education and eliminate any vestiges of the esoteric academic “ivory tower” that exist in business school coursework. Gregory (1996) suggest four dimensions of institutional leaderships symbolic, political, managerial and academic in his model of distributed leadership for managing change in higher education institutions. Michael *et al.* (1997) recommended that top leadership is the key to any TQM program and the driving force behind success and failure. The TQM program must be sold and not forced on the employees. Good communication, proper training, using benchmarking, and research on TQM philosophies and program can enhance the success rate.

In managing educational change, there has been general criticism. Iven (2000) argues that government initiatives are being pushed by a “narrow, employer-driven strategy”. Policy makers do have an obligation to set policy, establish standards and monitor performance. According to Sangeeta *et al.* (2004), education system as a transformation process comprising of inputs of students, teachers, administrative staff, physical facilities and process. The processes include teaching, learning and administration. Whereby the output is includes examination results, employment, earnings and satisfaction.

In their model for TQM implementation in higher educational institutions, Osseo-Asare and Longbottom (2002) proposes enabler criteria, which affect performance and help organizations achieve organizational excellence. These “enabler” criteria are leadership, policy and strategy, people management, resources and partnerships and processes. They also suggest “result” criteria including customer satisfaction, people satisfaction and impact on society and key performance results for measuring the effectiveness of TQM implementation.

Critical Success Factors of TQM

Management Commitment and Leadership

Direct involvement of top management allows all decisions to be made quickly and facilitate TQM journey. Top management support is necessary to prove the availability of concrete actions. According Henfusky (1995) the action can be taken to establish the quality policy, establish a quality management structure, attract a whole staff, disseminate information on quality, managing the change process and organize the day of quality.

According to Abdul Aziz (2003), management is committed to be always aware of demand for change. Among the commitments that need to be highlighted is to renew and update key elements of the organization, make structural changes in the organization, prepare for a new job specification, resolving conflicts to be faced, to ensure the involvement of members and create an effective plan to improve the administration of an organization.

According to Besterfield *et al.* (2003) the skills of the management can make a significant boost to staff. Management style highlighted by the management is able to provide a boost to staff. Management is committed to promoting cooperation rather than competition within the organization. According Guten (2001) emphasizes performance management in an organization committed to the guidelines and conditions clearly stated their goals. It can also inspire employees to perform the task by focusing on the job.

Organizing requires top management leadership and commitment, promoting the participation of employees, and providing company-wide education and training. Leadership associated with clear vision and directions can foster knowledge sharing and generate commitment (NIST, 2000). Deming (1986) urges managers to institute leadership to usher the quality transformation process. Palermo and Watson (1993) argue that leaders should exhibit role model behavior, establish clear objectives and create a supportive environment.

Furthermore, Grosby (1979) stresses top management commitment as the essential element for safeguarding TQM implementation. In order to communicate quality strategy across the organization, top management should create an organizational environment that focuses on continuous improvement. Their commitment promotes the creation of clear and visible quality values, along with a management system to guide all activities of the company towards quality excellence. (Rao *et al.*, 1997).

Continuous Improvement

Continuous improvement can be considered as the “wheel of the organizational vehicle. It is the effort produced by the wheels, which will make the vehicle move forward. Organizations in the past have been concerned with doing “more of the same” (Ashtan D, Dooney J, 1990) with disregard for customer feedback and markets demand. When performance decreases, organizations tend to double their efforts in “doing more of the same”. According to Suzaki K (1987), the approach is called “Local optimization” where different groups within same organization focus on their own area of interest. This is thought to be due to lack of communication, lack of shared goals and lack of co-operation.

Schminth and Finnegan (1993), views that continuous improvement is able to elevate the performance of an employee who is able to assist in the implementation of TQM provided that the management should reduce the command and control. While the employee has to understand the organization as an interdependent system of each other. In TQM, continuous improvement assumes that everything is going well and the value can be increased either slowly or in drastic. It requires the support of all parties because it can lead to progress in their relationship with customers, innovation and organizational development. (Evans and Dean, 2003).

Total Customer Satisfaction

Total Quality Management is a system focusing on customer satisfaction through a concept of "continuous improvement". This concept emerged after the 1980s with the purpose of developing and expanding quality management strategy by adding more aspects related to quality. Most of the literature indicates that the interest in the TQM concept at the level of production began in USA, but it was only there in theoretical terms. It has been implemented in practice in JAPAN after World War II in order to improve the quality of industrial production consistently and comprehensively. The growing intensity of global competition, especially from Japan, led the US to follow Japanese strategy. This happened when Hewlett-Packard criticized US chips manufacturers for poor products quality comparing with their Japanese competitors (Grant D. *et al.*, 2002), (Grant D. *et al.*, 2004), Oakland JS, (2006).

The Total Quality Management concept is one of the modern management concepts, which helped to increase the competitiveness between organizations. This has resulted from the level of customer awareness, which helps them to select a product or service of high quality and at a

reasonable price. For all of these reasons, the management of most organizations encourages the adoption of a TQM concept (Samuel KM, 1994).

In the service industry focus on customer satisfaction perspective to the customer to wait, given the period of service shall be as promised, perfection without blemish, character, consistency and accuracy in service, comfort in dealing with the organization and responsive to the problem is do not expected (Evans and Dean, 1999). While customer satisfaction from the perspective of the organization follows, Ross (1999) views of the three dimensions of organizational processes (operations), staff who provide services to customers and customer expectations.

The importance of customer satisfaction to the implementation of TQM is seen through three dimensions. The first dimension is the segmentation of customer service to customers is not the same. Organizations need to differentiate services to customers depending on their needs. Red more customers who are served, the more information obtained by the organization. (Gates, 2001)The study by Ross (1999) indicates that a complaint in the service industry represents 26 other clients. If the organization fails to deal with these complaints, it will affect negatively on the organization.

Employee Involvement

Employee involvement is a process for empowering employees to participate in managerial decision-making and improvement activities appropriate to their levels in the organization. Since McGregor's Theory Y first brought to managers the idea of a participative management style, employee involvement has taken many forms, including the job design approaches and special activities such as quality of work life (QWL) programs. There are at the end of the day only one thing that differentiates one company from another its people. Not the product, not service establishments, not the process, not secret ingredients; ultimately any of these can be duplicated. The Japanese have always recognized this and it is one of the reasons for their success in world markets, they place tremendous value on the integration of people with organizational objectives, equipment and processes.

According to Lawler, "Employee Involvement", if well implemented, changes the fundamental relationship between individuals and the organization they work for". "It really builds employees in as a business partner, so they know more and they do more to make the organizations successful, particularly in industries where the human component is important most knowledge work, high-tech and many kinds of service industries.

According to Chapman (2001), employee engagement can increase the understanding of organizational policies. It involves processes such as lower levels of decision making, adopt the experience, knowledge and the ideas for the advancement of the organization. Employees shall be given due recognition for their contributions and their ideas (1992). It is a psychological process to develop confidence between the members of the organization and encourage them to make decisions and solve problems with each other.

Apgar (1999) maintained that job involvement could be produced in the outer and inner self. Internal involvement is influenced by its own commitment. It involves defining the duties of employees entrusted with any evaluated behaviour shown by the employee. Involvement also enables management, employees share the resulting performance, and member understanding of the employees will work goals. It is important because without employee engagement, an organization cannot function properly. It is able to provide satisfaction, especially on the quality of working life and increase employee commitment to continuous quality improvement process.

Training

Increased involvement means more responsibility, which in turn requires a greater level of skill. This must be achieved through training. For example, Baldrige Award winners place a great deal of emphasis on training and support it with appropriate provision of resources. Motorola allocates 2.5 % of payroll costs or \$120 million annually to training 40% of which goes to quality training.

Training is an important factor that helps in making efforts toward quality improvement. Quality training includes educating and training all employees, help employees to increase knowledge, provide information about the mission, vision, direction and organization structure to enable them to gain skills in an effort to improve the quality and thus solve the problem.

According to Johnson (1994), an organization that demands quality and staff development, policy formulation and planning will determine the allocation sampler for the training and strategic planning is not only focused on training needs now, but also training in the future. Strategic planning will result in a strategic training plan, and it can be use to predict the future training needs based on employee needs and demands of consumers.

Blanchard and Thacker (1999) also pointed out that continuous training is not a specialized activity, but the way people behave with the knowledge that all employees ultimately have. Johnson (1994:18) describes that the quality of work could indirectly increase their involvement in the organization. Thus, training can be a tool for achieving quality as recommended by the Stoner *et al.* (1995:338)

Communication

Communication inextricably linked in the quality process, yet some executives find it difficult to tell others about the plan in a way that will be understood. An additional difficulty is filtering. As top management's vision of quality filters down through the ranks, the vision and the plan can lose both clarity and momentum. Thus, top management as well as managers and supervisors at all level serve as translators and executors of top management's directive. The ability to communicate is valuable skill at all levels from front-line supervisor to CEO.

According to Drucker (1974), a true guru of management thought and practice, “the communication gap within institutions and between groups in society has been widening steadily to a point where it threatens to become an unbridgeable gulf of total misunderstanding”. Having said that, he provides an easily understood and simple approach to help communicate the strategy, vision, and action plans related to TQM. Communication is defined as the exchange of information and understanding between two or more persons or groups. According to Schmit and Finnigan (1993), the factor of communication because it helps to allow confidence to others as well as provide encouragement and share the risks. Apart from that, what needs to be in communication is the willingness to listen and learn. According to Apgar (1999), who is able to compete, is an informative, operated by voice, involving two-way communication between employees and management and between organizations with the consumer. Informational means sharing of information developed through the communication process more flexible, informal, mutual respect for each other and focus on priority wise member. Communication by Evans and Dean (2003) is the key to quality improvement as it involves staff to share information through the delivery of a symbolic message as suggested by Stoner *et al.* (1995)

Teamwork

According to Rukly (1999), teamwork can unite the entire staff of the organization in the success of quality improvement. In this spirit practiced through cooperation, commitment and participation of staff in the overall quality improvement program initiated by the organization. Therefore, it involves the concerted action of employees, through their role in providing skills, assessment and experience to a particular task.

Teamwork process that resolves the problem of whether small or large, are able to produce innovations that cannot be considered on an individual basis. In terms of physical labor, teamwork is important to the TQM process as it builds self-confidence, improve communication and break the bonds of dependency on the organization (Oakland, 1995). In addition, Schmit and Finnigan (1993:85) consider that teamwork can evaluate the performance of an employee. Besterfield *et al.* (2003), pursuant there to, teamwork can promote an increase in communication and a co-worker can act as mentors. Teamwork involves face-to-face interactions among members. According to Robbins (2003), it represents a high quality and good performance of an organization as the team dominated by the requirement to implement, achieve and produce a product.

Proposed Conceptual Model

The review from theoretical and empirical literatures indicates that the above issues have been widely studied. However, only a certain organizations and institutions had completely implemented it while others only adopt a portion of this theory, and yet has organization does not totally implement TQM in their organization. The recent literatures had suggested the critical success factors of TQM and its implementation on various sectors. Hence, the management commitment and leadership, continuous improvement, total customer

satisfaction, employee involvement, training, communication and teamwork seems to be an indicator for organization to apply a structured approach system and methods and it provides impact on the organization performance. This is based on the review from previous studies; the research presents a proposed conceptual model to study the relationship of implementation of TQM critical success factors in higher education institution and its impact on the institutions performance. The model is shown in Figure 2.

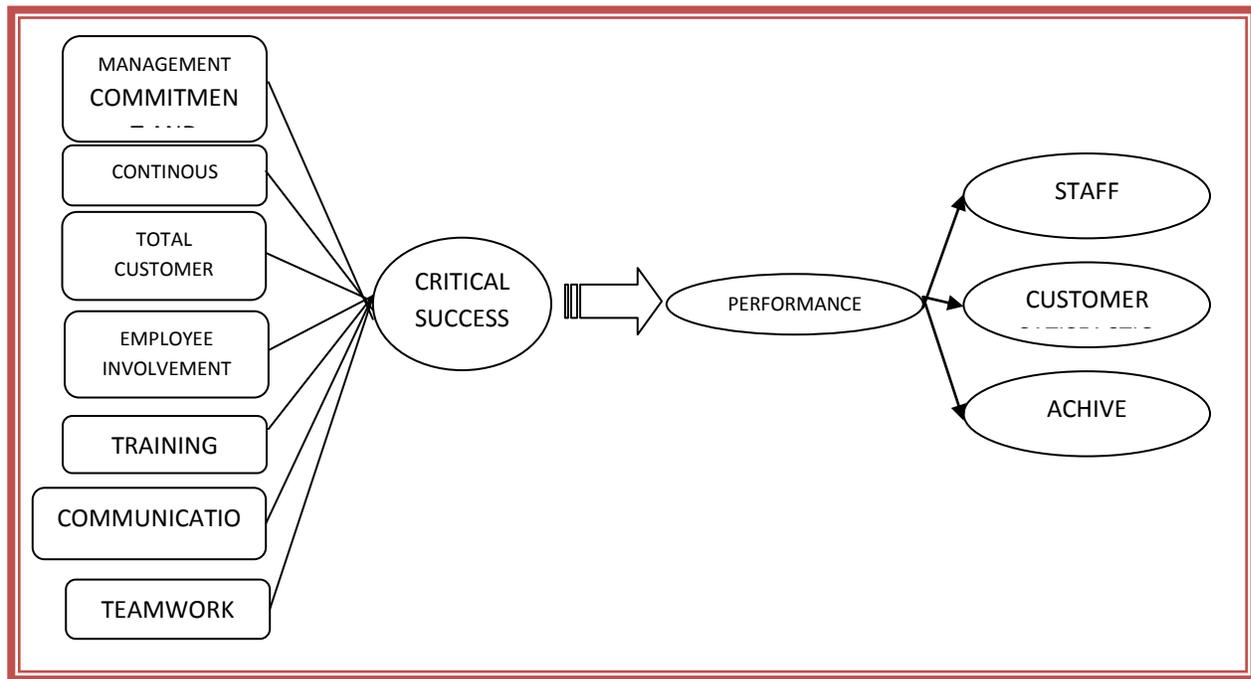


Figure 2: Proposed Conceptual Model

Conclusion

The victory of institutions depends on their management strategy on how to identify, classify, analyze, and react to the effective approach. Although there are more total quality management critical success factors researchers have carried out in various industries, but it is obvious that they are trying to refine the findings of the previous studies. This study reveals that TQM will leave an excellent impact on the institutions goal’s and creates value in enhancing the economic value. Even though the implementation of TQM brings at wide range of changes in organization, there are lacks of adoption of this approach in several organizations. In conclusion, the proposed conceptual model represents the critical success factors of TQM and its implementation on higher education institutions. It also concludes the impacts on how TQM approach impacts on institutions performance.

Acknowledgement

The authors would like to thank to the Faculty of Management and Human Resource Development, GUP Innovative and Encouragement Research Grant (MOHE) and UTM Johor Bahru.

References

Becket and Brookes(2000). *Quality Management Practice in Higher Education- What Quality are we Actually Enhancing, Journal of Hospitality, Leisure, Sport and Tourism Education, Vol 7.*

Deming, W.E. (1982). *Quality, productivity and competition position.* MIT Institute for Advanced Engineering Study, Cambridge.

Drucker, Peter (1974). *Management: Tasks, Responsibilities, Practices.* New York: HarperCollins
Evans, J.R and Lindsay, W.M (1999). *The management and control of Quality.* New York ,West Publishing.

Fynn,B.B (1992). *Managing for Quality in the U.S. and in Japan.* Interfaces,22(5),pp.

George Holmes and Gerald Mc Elwee, *Total Quality Management in Higher Education: How to Approach Human Resources Management.*

Ihtesham us Rehman (2010). *Implementation TQM including a UKAS and ISO 9001 system in academic organization.*

Lakhal, L., Pasin, F., and Limam, M. (2006). *Quality management practice and their impact on performance.* *International Journal of Quality & Reliability Management.* 23(6), pp. 625-646.

Muraid Ali and Rajesh Kumar Shastri (2010). *Implementation of TQM in Higher Education, Journal of Business Management.*

Mete B.Sirvanci (2004). *Critical Issues for TQM implementation in Higher Education. The TQM Magazine, Vol 16.*

Oana Maria Rezeanu(2011), *Implementation of Quality Management Higher Education.*

Sha'ri M. Yusuf and Elaine Aspinwall (2000), *TQM implementation Issue: Review and case study, International Journal of Operation and Production Management, Vol 2*