Factors Affecting the Readiness of Higher Education Institutions' Environment for the Establishment of TQM in Oman

Dr. Farzaneh Yarahmadi
Assistant Professor- University of Buraimi, Sultanate of OMAN
dr.farzaneh.y@gmail.com

Dr. Hesham A.E. Magd
President/Vice Chancellor- University of Buraimi, Sultanate of Oman
hmagh@uob.edu.om

ABSTRACT
Total Quality Management (TQM) has grown in so many industrial organizations but in today's world it is playing a crucial role in educational field. TQM process is considered as a modern system in the field of quality, after quality assurance, quality control and ISO in the construction sector (Rabah, 2015). The objective of this study is to study the challenges and obstacles faced by HEIs and to examine the extent to which the environment of higher education sectors in general and Oman in particular is suitable for the implementation of TQM principles. To achieve this goal the author attempts to evaluate the factors affecting the readiness of higher education institutions environment for the establishment of comprehensive quality management in Oman. In this study, the seven principles of TQM: continuous improvement, commitment, realism, customer focus, collaboration, learning and benchmarking is discussed in order to improve the willingness of such institutions for the establishment of TQM.

Keywords: Higher Education in Oman, principles of TQM.

1. Introduction
TQM originally started in Japan and was developed gradually in the U.S. Undoubtedly, quality as a vital factor towards globalizations is one of the most important factors in the success of organizations in national, regional and global markets. The process of globalization of markets and the necessity of competition is creating new models of quality management. Total Quality Management (TQM) is a philosophy, theory and methodology derived from its quality management systems. TQM (TQM) process is considered as a modern system in the field of quality, after quality assurance, quality control and ISO in the Construction sector (Rabah, 2015). It is a way of running an organization that is based on quality and participation of all stakeholders and aims to achieve long-term success through customer satisfaction and benefit of all stakeholders. The objective of this paper is to study the challenges and obstacles faced by HEIs and to scrutinize the extent of factors to which the environment of higher education sectors in general and Oman in particular is suitable for the implementation of TQM principles. To achieve this goal the author attempts to evaluate the factors affecting the readiness of higher education institutions environment for the establishment of comprehensive quality management in Oman.

2. TQM in higher education
For last decades , the intense competition from an increasing number of strong competitors, technology advancement, demographic diversity, privatization and internalization in education have led many institutions to find the solution in adopting the new management approach known as TQM (TQM). TQM (TQM) has grown in so many industrial organizations but in today's world it is playing a crucial role in educational field. TQM concept for educational community commenced in 1990 when Oregon State University adopted the quality management philosophy and has experienced great success in improving its administrative process (Winn and Green, 1998). During the past few decades, there have been an increasing number of global universities and colleges. Higher educational systems as the most significant investment of human resources plays a major role in the society . Quality of higher education is considered to be one of the most important aspects of human resource development, creation of knowledge and social strength for any country. In today's world there is a significant funds allocated for higher education system in every countries. Given the importance of higher education system and its role in the economic, social, cultural and
political community, it is necessary to improve the quality of educational systems and take basic measures for preventing loss of human capital and material. TQM concept which applied to higher education has an effect on the following level of education: – Physical facilities (buildings, sport complexes, open field etc.), – Academic infrastructure (laboratories, library, documentation, communication, information infrastructure etc.), – Curriculums, – Examinations and evaluation systems, – Supplying academic and administrative personal and their improvement systems, – Research and publication, – Institutional development plans (strategic planning), – University - industry - society relations(Signal et al(2016).

3. TQM in Oman

The educational history of the Sultanate of Oman has undergone rapid development. In 1970, there were three primary schools in the country with less than 1,000 students and no college or university (Al Shmeli, 2009). Today, there are more than 62 higher education institutions run by private and public sector offering various programmes. The total number of students in Higher Education in Oman in 2009 is approximately 80,000 (Al Shmeli, 2009). Oman has a young, fast-growing higher education sector. Higher education institutions are owned and governed by a variety of entities, including the Ministry of Higher Education, the Ministry of Man Power, the Ministry of Defense, the Ministry of Health, and the Ministry of Commerce and Industry, other governmental entities, and private owners (OAC, 2006). His Majesty Sultan Qaboos Bin Said emphasized the quality of higher education in his 2006 annual address to the Council of Oman, specifically for private institution and other institution in general. His Majesty required that "these educational institutions should provide high quality education for students in order to advance scientific and applicable skills(MHE, 2006)”. As the result of a need for qualified professional to implement the aims and objectives of the development, the government has given significant attention to education (Baporikar and Shah, 2012).

In recent decades, HEIs has witnessed a significant growth accompanied by an increase in the number of students and academic members, but it is has been noticed that this expansion has not been matched with an improvement in the quality of education, even though higher education was still the main progress of any nation ( Bin tareaf, 2009). The concept of quality in education is an administrative process to achieve the objectives of the market and students, that it includes all the functions and activities of the institution, which increases the satisfaction of stakeholders, and improves the level of institution locally and globally (Omrani and Salem Walaykh , 2011).Nowadays, there are immense challenges from global competition and sophisticated students, particularly with regard to their changing needs in higher educational institutions (Al-Tarawneh and Mubaslat, 2011). The above reasons, along with other factors have forced HEIs to adopt quality systems and in order to achieve this goal, several quality tools and techniques have been used, and quality management has proved to be among the most effective quality techniques. Some of the factors that made the policy makers in HEIs to think are: declining quality of graduates, increasing competition and growing mandates for accountability by accreditation associations, legislature, and funding bodies (Ariff et al., 2007).

The Ministry of Higher Education using a different range of procedures since the opening of its first private higher education institution in Oman with regard to quality issues related to education in the higher education private sector (MoHE, 27 March 2013). For example, most of higher education institutions have academic affiliation agreements with international universities, primarily with Western universities in the USA and Europe (MoHE, 22 March 2013). As a result, the educational private sector has experienced the launch of multiple quality programs. But a number of Omani literature reviews have confirmed over the last few years that quality in the higher education system needs significant improvement. These reviews disclose most of the HEIs are eager about implementing quality management programs, but these institutions have still not made the improvements required to satisfy Omani stakeholders (Al-Lamki, 2002, 2006; Al Harthey, 2011). Although there are efforts made by private sector institutions to establish quality departments but there is an urgent need to review the current affiliation agreements with Western academic institutions, and quality management of private Omani HEIs (OAAA, March 2011; September 2012; November 2012). Al Mahdhoori et al. (2015) in his paper made an attempt to investigate the challenges of implementing quality management within Omani private universities and colleges. In this study, it was discovered that all the HEIs from different parts of the world have the same challenges for the implementation of successful quality management. Of course, there are also slight differences in the obstacles depending on context. In Oman, the results showed five major obstacles facing quality management implementation within private HEIs. Those
obstacles were: a lack of qualified human resources, a lack of quality training, increasing administrative and academic workloads, excessive paperwork, and ineffective academic partnerships with foreign HEIs. Based on the above discussion this paper focused to review the factors affect the readiness of higher education institutions on the implementations of TQM and to encouraged the adoption of TQM (TQM) in Oman.

4. Obstacles of implementing TQM

Several studies shows that the major obstacles for successful implementation of TQM include, 1. Lack of management commitment 2. Poor vision and plan statement 3. The government influence 4. Lack of highly qualified professionals 5. Lack of knowledge about the self-assessment mechanisms 6. Resistance of institutional assessment/change. 7. Poor co-ordination between employees and departments 8. Lack of interest in training 9. Expectation of immediate results 10. Instability of leaders and departments 11. Rigid organizational structures 12. Lack of clarity about role and responsibilities 13. Lack of employees’ commitment (Pushpa 2015). The OAAA has now published over 20 quality audit reports. However, the production of these reports has not been without its challenges. Initially, there was a strong resistance from most HEIs against making the reports public. This was primarily due to cultural reasons as the public is used to reading articles and reports that only praise the performance of Omani HEIs.

5. Overview of the Principles of TQM

In recent decades the implementation of TQM programs has been studied by a number of scholars with different prospective. Curry and Kadasah (2002), McAdam and Jackson (2002), Curry and Magad (2003), Wiklund et al. (2000), Yang (2004), Juran (1988; 1994), Ramberg (1994), Hill and Wilkinson (1995), Ross (1999), Evan and Lindsay (2001), Powell (1995), Bennett and Kerr (1996), Hermel (1997), Harari (1993) and Eskildson (1994) have explored the issues with different points of views. There are many existing principles for TQM but the organizations select and implement the principles according to their environment. Deming is best known in the United States for his 14 key Points principles which are the foundation of TQM for significantly improving the effectiveness of a business or organization such as: Create constancy of purpose towards improvement, adopt the new philosophy, cease dependence on inspection, move towards a single supplier for any one Item, improve constantly and forever, institute training , institute leadership, drive out fear, break down barriers between departments, eliminate slogans, eliminate management by objectives, remove barriers to pride of workmanship, institute education and self-improvement and, the transformation is everyone’s job. Many of the principles were philosophical. Deming urged that to achieve the highest level of performance, the organization requires more than a good philosophy. He believes that the organization must change its approach and adopt new ways of doing business. His 14 points of principles create a challenge for many organizations to figure out how to apply them in a meaningful way (Rose 1999). Saraph, Benson & Schroder, (1989) stated 8 principles for successful implementation of TQM which are: Role of divisional top management and quality policy, role of the quality department, training, product and service design, supplier quality management, process management, quality data and reporting, and employee relations. Flynn, Schroeder & Sakakibara, (1994) stated 7 critical factors for the success of TQM. These are top management support, quality information, process management, product design, workforce management, supplier involvement, and customer involvement. It is very obvious that the factors developed by Flynn et al. (1994), is very similar to the preceding instrument that was developed by Saraph et al. (1989). Zeitz et al. (1997) has stated six crucial factor for TQM: Management support, the use of data and information, supplier relationships, improvement of staff, focus on the customer and, monitor. Other studies by Powell (1995), Ahire, Golhar, and Waller (1996), Black and Porter (1996), and Zeitz, Johannesson, and Ritchie (1997) shared the common TQM factors in their models, although different in the terminologies. The role of top management, customer satisfaction orientation, teamwork structures, employee empowerment, employee involvement, employee training, product/service design, supplier management, continuous improvement, process management/operating, quality improvement measurement systems, quality data and reporting, planning, benchmarking, SPC (statistical process control), corporate quality culture, and strategic quality management are the factors stated by the above authors. These studies support the viability of the holistic approach and are more comprehensive in nature. According to the critical success factor of TQM, every
organization should pay attention to its activities and environment to select an appropriate set of principles. This study is to develop and evaluate the principles affecting the readiness of higher education institution environment for the establishment of TQM in Oman.

6. Overview of the Principles of TQM in Oman

According to the plan of Omani Higher Education Quality Management System report (2006), there are set of broad principles for an effective quality management system and 12 goals have been identified. The following goals summarize the minimum requirements for the development of a total quality management system designed for the Omani higher education sector. The goals are: 1. Educational Frameworks 2. Standards for Higher Education Providers 3. Standards for Student Learning 4. Provider Quality Audit 5. Provider Licensing and Accreditation 6. Program Licensing and Accreditation 7. Appeals 8. Foundation Program Quality Assurance 9. Research Training Quality Assurance 10. Teaching Quality Assurance 11. National Quality Management Information 12. General Capability and Capacity. Each goal with a number of specific objectives must be consistent with certain principles: Comprehensive & integrated, international recognition, cooperation, enhancement and assurance, sustainable Omanization, peer review, sound decisions, role modeling and efficiency. To comply the above motioned goals and objectives, the higher education institutions environment which consist of all stakeholders have to develop the culture of understanding and implementing the concept of TQM under certain indicators and factors.

This study presented few principles in comparison with other studies in Oman and help in evaluating the readiness of HEIs for comprehensive quality management. These principles are: Continuous improvement, commitment, realism, customer focus, collaboration, learning and training and benchmarking. As mentioned previously, there are many existing principles for TQM but the organizations select and implement the principles according to their environment.

Continuous improvement: is one of the important characteristics of TQM, so that sometimes there is synonymous concept between TQM and continuous improvement of an organization. TQM is a system for continuously improving the products and services offered to customers through ongoing improvement in response to continuous feedback. Quality education needs to be focused in ensuring progressive intellectual capacity building. The continuous improvement and would offer more excitement and challenges to students and lecturers as compared to a traditional learning environment.

Commitment: Every stakeholders needs to be involved in improving quality. All of them have to understand the benefits of TQM as without their knowledge and participation, there is no chance of recovery for quality management. Before every stakeholders, the three levels of management (Top, Middle, low) needs to be committed to change and improvement of the quality as top level management are the vital point in every institution and their commitments are much necessary for the improvement of the institution (Barandoost, 2000). After the commitment of senior management, middle management commitment must come into existence. Obviously middle managers have an important role; they must convinced supervisors and employees and encourage and motivate them for their commitment in implementing a comprehensive quality management. Thus, the entire staff will be motivated in implementing the quality management.

Realism: The other principle which HEI’s are adopting these days is realism. This principle is difficult to institutionalize, because every employee/faculty in an higher education institution holds different opinions and ideas about how things should be done. Therefore, the facts are to be given due consideration by the management while making decisions on improving quality. Decisions should be based on facts obtained through data collection and statistics. For this reason, this type of attitude to management is called realistic management.

Customer focus: In today’s world, customer satisfaction is considered as an important measure to evaluate the quality of the work. As the concept of “customer” is very important and the idea of customer focus was recognized in every industries and businesses, the HEIs need to recognize the importance of treating students and parents who seek services from their organizations. Customer focus is an off shoot of quality program for any organization. Linda (1998) defined customer focus as an organization’s understanding of customers’ attitudes, knowledge, and actions that served to align products and services with the customer’s definition of quality. In addition, if HEIs are focusing on students as being part of the knowledge supply
chain, they need to better enable them to keep their knowledge up-to-date in a rapidly changing environment through TQM.

**Collaboration:** According to this principle, an HEIs must focus, first and foremost, on its suppliers and customers. In a TQM organization, everyone is both a customer and supplier; this concept emphasizes “the systematic nature of the work in which all are involved”. In other words, teamwork and collaboration are essential. In order to succeed, teamwork is one of the factors towards TQM. Teamwork leads to better and more appropriate solutions to the problems. In fact, teamwork is the key towards the growth of intellectual workers and suppliers. In TQM, collaboration and employee engagement can be done in the following ways: The suggestion system , and team-building.

**Learning and Training:** Learning refers to adapting to change, which leads to new goals and approaches. There is a common proverb in Japanese companies that says, inclusive quality education begins and ends with education and learning (Askaltz, 1991). Learning must include senior managers, middle managers, supervisors and all employees. The overall objectives of the learning include: become familiar with their duties and responsibilities, identify customers and become familiar with their needs, promote knowledge, become familiar with new instruments due to technological progress, become familiar with the concepts of TQM and continuous reminders as well as their knowledge and skills of staff in the use of statistical tools and techniques of TQM (Rajabbeigi, 1995). As managers are responsible for the training of their employees, therefore their information must be up to date and regularly participate in in-service training. When an organization adopts a new philosophy to improve its products and services, the team workers have to be trained to be comfortable with change and not to fear becoming involved with improvement efforts.

**Benchmarking:** Benchmarking is a tool toward the achievement of effectiveness in operations. According to Williams (2005), benchmarking process consists of identifying outstanding practices, processes, and standards in other organizations and adapting them to one’s own organization. The benchmarking process follows four steps, such as (1) Forming a planning team, which initially identifies what is to be benchmarked, identifies comparative organizations, and determine data collection methods; (2) Collecting data internally on its own work methods and externally from other organizations; (3) Analyzing the data to identify performance gaps and the cause of differences; and (4) Formulating and implementing an action plan that will result in meeting or exceeding the standards of others (Aaron et al. 2013). In general it can be said that the seven principles of continuous improvement, commitment, realism, customer focus, collaboration, training and benchmarking is creating TQM in other words, the sum of six above mentioned principles generated TQM.

7. **Conclusion**

This study concluded that many private HEIs faced many obstacles towards implementing comprehensive quality management systems including Oman. Although there are many efforts made by private sector institutions to establish quality departments such as many educational institutions try to overcome the problems in understanding the obstacles towards total quality management success. In order to overcome the obstacles that have been indicated and for the readiness of HEIs environment for implementing TQM, variety of principles have been evaluated concerning the successful implementation of quality management. Although studies have shown the principles of quality management can be highly effective in the educational sector, the organization environment must be well-matched and compatible with the required changes towards TQM. In other hand to ensure the effectiveness of quality management practices, every stakeholders in the organization should be committed to the work and involved and empowered. The adequate training and workshops programs must be provided to ensure that there is efficient and effective work quality systems. The concept of teamwork should be developed and encouraged by the management and there should be a ground for the continues improvement. It must be taught that the change will not come overnight; as previously stated, HEIs comprehensive quality management methods requires appropriate readiness of the environment in order to integrate the appropriate quality philosophy and techniques into an organizations. It should be noted that TQM must be promoted and not forced on the employees. Finally use of benchmarking, and research on TQM philosophies and program can enhance the success rate. The overall conclusion of this paper is to highlight the general principles of TQM and to point out how this approach has been and can be used to improve the quality of an academic institution. Continuous improvement and learning should be an integral part of the whole system and its processes. This study
suggested the factors of TQM and its implementation on HEIs. As a result, continuous improvement, commitment, realism, customer focus, collaboration, learning and benchmarking seems to be indicators for organization to apply a structured approach system and methods and it provides impact on the organization performance for the implementation of TQM, whereas there is a need of carrying more empirical study for future endorsement.

References


Ariff, M., N. Zaidin and N. Sulong. (2007). TQM Implementation in Higher Education; Concerns and Challenges Faced by the Faculty. In the proceedings of the .12th International Conference on ISO 9000 and TQM, Republic of China, 9-11 April.


**Authors’ Backgrounds**

**Dr. Farzaneh Yarahmadi** is currently Assistant Professor at University of Buraimi in the Sultanate of Oman. She holds a Ph.D in Business Administration. Her area of specialization is International Marketing Communication. She has over 10 years of overseas academic, administrative, and corporate experience. She is an active multi-disciplinary researcher and has published several articles in refereed academic journals internationally.

**Dr. Hesham Magd** has fifteen years of combined experience in traditional and nontraditional university teaching, academic training, community development, academic administration, curricula design, organizational change and development, distinguished research and scholarly writing, resulting in Honors, awards and recognition for academic excellence and outstanding achievement. He is the author and coauthor of substantial publication records in published international journals and conference proceedings in the field of Quality management, ISO 9000 and Entrepreneurship. In addition, he serves on several international journal editorial boards and helped in developing and launching journal database platform in the Middle East. In his previous appointments throughout the world and current institution, he has been the driving force behind strategic institutional development during the time of profound change in the Higher Education. He has developed centers of excellences in supply chain management and entrepreneurship. Hesham has broad knowledge of the UK, USA, Middle East University Systems, Quality and accreditation systems (AACSB, ABET, OAAA, NCAA…), Budget control, faculty development and significant experience of University senior management and a public profile at senior academic level within the sector and also experienced in practical business through his involvement with business ownership, start up and organizational presidency board members and vice president position.