



## THE CHALLENGES OF TOTAL QUALITY MANAGEMENT ON EDUCATION QUALITY IN UAE

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### **Abstract:**

Today, educational institutions all over the world are facing many challenges to deliver high quality education for students. Total quality management (TQM) represents a set of practices to sustain quality in service deliver for modern organization. The aim of this study is to investigate the effect of total quality practice on education quality in UAE universities and colleges. This study used quantitative approaches and SEM modeling technique to investigate the multiple regression effect of TQM practices. The empirical evidences provided in the study will help leaders in higher education institutions to improve the education process significantly. The result of this study indicates that educational institutions need to practice all principles of TQM such as customer focus, leadership, engagement of people, quality process, continuous improvement, decision making, and relationships management to achieve high education quality. This study recommends that universities in U.A.E should establish a a quality framework based on TQM principles with a continuous following-up and monitoring to application of TQM on the long-term.

**JEL:** M11, I21, I22

**Keywords:** total quality management (TQM), education quality, quality factors

### **1. Introduction**

Higher education Institutes, especially in developing countries are struggling to overcome the challenges of quality assurance. According to the UNESCO's World Conference on Higher Education (WCHE), which was held in 2009 in Paris, there are

eight new challenges in higher education, some of these challenges are quality assurance, academic profession, and teacher education performance (Commonwealth of Learning, 2011), where these challenges could be controlled through the application of Total Quality Management (TQM).

Quality in higher education is the major concern among researchers (Azam and Moha Asri, 2015; Tham et al., 2017; Udriyah et al., 2019). Managing quality in higher education in a multicultural population with different approaches is not only challenging but an uphill task. Moreover, higher education institutions play an important role in building a good men and women for future, while the quality of education process is very important to achieve progress and development in the country. To achieve quality in education effectively, universities and colleges must adopt the principles of TQM (Ghnaim, 2013; Haque et al., 2014; Rachmawati et al., 2019; Tarofder et al., 2019).

The educational sector in U.A.E is viewed as the supplier for new skills and people with knowledge to support the growth in the process of economic and social development in this country. The educational sector in U.A.E needs to follow the example of successful organizations world-wide and embrace quality management to face the challenges and competition from international universities inside and outside UAE (Essa, 2012). However, without practicing TQM it would be hard for UAE colleges to achieve quality in education process (Brown and Marchal, 2008; Azam et al., 2014; Haur et al., 2017; Tarofder et al., 2017; Katukurunda et al., 2019). According to Antony and Preece (2002), TQM is a constant improvement by a self-assessment, where the performance is compared to an excellence model in order to find the gaps and suitable ways to fill these gaps and this could be accomplished in the higher education. Therefore, it is essential to understand how the principles of TQM affect education quality and which principle is the most influential to achieve this goal.

This study covers total quality management in educational environment and higher education sector; also discuss the foundations of total quality management in universities, a review of the most significant models and theories applied in academic environment.

## **2. Literature Review**

This study is focused principally on the implementation of TQM in the education sector and evaluating the effect of TQM principles on the quality of education process in UAE educational institutions. Therefore, the study explored impact of TQM factors such as customer focus, leadership, engagement of people, quality process, continuous improvement, decision making, and relationships management on education quality of two institutions, the first one is University College for Mother and Family Sciences (UCMOTHER), the second one is Higher College of Technology - Sharjah Women's Colleges (HTC-SWC). In addition to that, the main challenges facing higher education with regards to quality achievements are demonstrated in this study.

Higher education is considered as one of the most important factor of development and economic growth. Higher education is the source of information and communication technologies revolution, because it is directly linked to development and sustainability of technology (Shibli and Nadi, 2008; Jayasuriya and Azam, 2017; Dewi et al., 2019; Nguyen et al., 2019).

Interest in education has been increased by the regional competition and the globalization in education by the beginning of the third millennium, where the quality system was considered as the main key to make the education more successful (Abdul and Najah, 2016; Maghfuriyah et al., 2019; Pushpakumara et al., 2019). Institutions that provide education characterized by quality to its members were considered as institutions that make students eager for teaching and learning process and encourage them to participate actively in development of their nations (Wahba, 2006; De Silva et al., 2017; Kuruwitaarachchi et al., 2019; Pambreni et al., 2019).

Based on a group survey conducted by Noura et al., (2014), the target group was asked if they were able to achieve their higher education degree personally, without governmental support. The result showed that over 50% of the responses agree that they wouldn't be able to pursue their higher education goals, if the government hadn't provided the means for building quality and affordable educational options and providing full or partial scholarships.

The National Unions of Students of Europe (2014) sets the following standards of quality in higher education:

- 1) **The Control of Quality:** It indicates the both formal and informal procedures of verification that institutions used them to observe the quality and the standards to a satisfactory and as intended standard.
- 2) **The Enhancement of Quality:** It refers to the process of changing activities positively for ensuring a constant enhancement and improvement in the institutional provision quality.
- 3) **The Assessment of Quality:** It refers to the external evaluation process that an external body of the quality of educational provisions in institutions undertakes it, particularly the quality of the experience of students.
- 4) **The Culture of Quality:** It is the process of creating internal high quality in the educational institution with full assessment of educational techniques used in courses and the implementation of study results. Moreover, Quality Culture could be considered as the capacity of the institution program to improve the quality assurance in the institution day to day work.

It is concluded that the issue of quality in higher education in the glob and particularly in the Arab region takes a high priority, where improving the quality of education was one of the objectives that the educational institutions seek in the various fields and phases, particularly since the Arab countries nowadays are more willing to provide high quality education for everyone. Hence, it is necessary to focus on developing teaching performance and teacher's skills and improving the curriculum in Arabic universities as well as the teaching methods, the calendar and the learning environments. Consequently, teachers are the most important element within the

context of the process of improving the quality and type of education (Shibli and Nadi, 2008).

Achieving quality in higher education sector is considered as one of the most major challenges has affected universities and higher education institutions until today. Communities at various levels and forms are facing many challenges which affect the process of development and evolution. These challenges did not happen coincidentally but as a result of scientific, technological, economic and social developments. Consequently, it was necessary for the educational institutions to play its role as a pioneer of adapting quality of service; many universities in developed countries have adopted the principles of TQM and considered it as a primary objective to meet educational market challenges (Abdul and Najah, 2016).

Although many studies have confirmed the benefits and successes of the philosophy of TQM in the higher education, others confirmed the existence of some failures and problems that face applying the TQM in higher education sector. Furthermore, some other studies have emphasized the possibility of applying this concept successfully in higher education, but there are some condition should be fulfilled to be successful in dealing with the challenges and obstacles facing the process of applying TQM.

For example, Majed et al. (2006) found that educational institutions and organizations of all kinds face many difficulties when applying TQM at any stage. The most common difficulties of failure include the following:

- 1) Accelerate the Organization to achieve rapid results.
- 2) Imitation and simulation of the experiences of other organizations.
- 3) To take the decision to apply before preparing the environment to be accepted.
- 4) Lack of sufficient appreciation of the importance of the human element.
- 5) Follow regulations, policies and practices that do not comply with the TQM.
- 6) Addressing the beginning of the application for large participation.
- 7) Neglecting the balance between short- and long-term goals.

In the same context Iman (2016) pointed to the existence of a number of obstacles facing the application of TQM in Jordanian public universities.

- There is no link between the university and the labor market.
- Prescription methods of selection of faculty members.
- Weak financial support for scientific research.
- Some academic leaders are not convinced of the importance of applying TQM.
- Reliance on the delivery of knowledge on traditional methods and indoctrination.

This study assumes that most Arabic universities and U.A.E in particular lack the elements required to implement TQM completely, as a result of numerous regulatory obstacles and wrong policies of senior management lead to failure in applying TQM. Due the rising demands of better quality higher education by students and whole society, universities and colleges becomes facing the same pressures that the business sector has been facing for long time. Thus, the quality assessment must consider the

quality of achievement of students as well as teachers, administrative staff, the infrastructure of the university, curriculum, and finally learning outcomes.

### **3. Research Methodology**

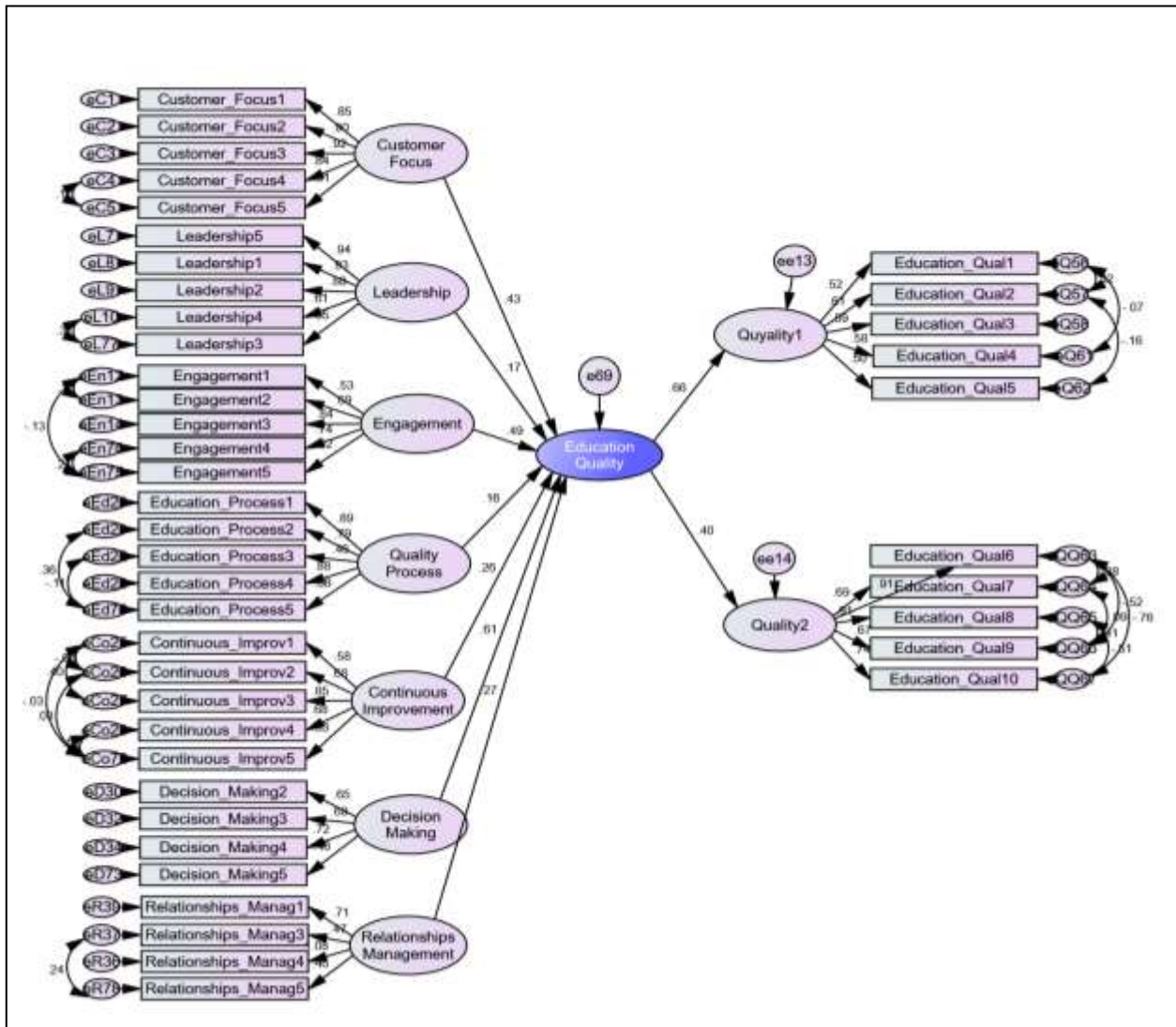
This study used a quantitative method based on Structural Equation Modeling (SEM) to measure the multiple regression effect of TQM factors in Education quality. The population defined in this study consists of individuals represents university staffs, students, and lecturers in two selected institutions as mentioned above. Data was collected using questionnaires and analyzed using SPSS software. The number of valid questionnaires equal 392.

#### **3.1 Analysis and Discussions**

In this section, the study specifies how the factors of TQM: Decision Making Process, Customer Focus, Leadership, Education Process Approach, Continuous Improvement, Relationships Management, and Engagement of people are related to one another (e.g., direct or indirect effects, no relationship, and spurious relationship).

Moreover, in this section, the researcher explains how these factors are correlated with the quality of education outcome in University College for Mother and Family Sciences (UCMOTHER) and the College of Technology - Sharjah Women's Colleges (HTC-SWC). The exact nature of these relationships is specified in the final structural model.

After modeling the measurement models and measuring the data in the measurement model of each of the independent variables and the dependent variable (Education Quality). The steps of constructing the measurement models of three variables into a structural model include several steps to increase the model fit. Figure-1 shows the final structural model and the strength of effect of TQM factors on education quality.



**Figure 1:** The final structural model showing the strength of effect of TQM factors on education quality

The results of SEM analysis to this model showed a strong association between the factors of TQM (decision making process, customer focus, leadership, education process approach, continuous improvement, relationships management, and engagement of people) and the education quality). All correlation are greater than (0.30), a standard threshold for considering a significant effects between these variables, where all correlations are statistically significant ( $p \leq 0.000$ ) as shown in the final structural model.

The summary of correlations is shown in Table 1. This table indicates that all regressions between TQM factors and education quality is significant (Sig.  $\leq 0.05$ ) and statistically reveals an considerable multiple regression effects. The highest effect is found between decision making and education quality.

**Table 1:** Non-standard regression weights

Dependent variable		Independent Variable	Estimate	S.E.	C.R.	Sig.
Education Quality	<---	Customer Focus	.150	.031	4.820	***
Education Quality	<---	Leadership	.050	.022	2.308	.021
Education Quality	<---	Engagement	.182	.037	4.983	***
Education Quality	<---	Quality Process	.058	.026	2.237	.025
Education Quality	<---	Continuous Improvement	.110	.035	3.105	.002
Education Quality	<---	Decision Making	.287	.055	5.266	***
Education Quality	<---	Relationships Management	.126	.034	3.767	***

Table 2 shows the strength of standard regression weights between TQM factors and education quality. It is found that all regressions are statistically significant and moderate.

**Table 2:** Standard regression weights

Dependent variable		Independent variable	Regression ( $\beta$ )
Education Quality	<---	Customer Focus	.431
Education Quality	<---	Leadership	.167
Education Quality	<---	Engagement	.495
Education Quality	<---	Education Process	.164
Education Quality	<---	Continuous Improvement	.255
Education Quality	<---	Decision Making	.611
Education Quality	<---	Relationships Management	.270

Furthermore, RMSEA of about .08 or less would indicate a close fit of the model in relation to the degrees of freedom. Reading the data from the model fit summary, RMSEA = 0.065  $\leq$  0.08. Therefore, the structural model of the study indicates a very close fit of the model in relation to the degrees of freedom

#### 4. Conclusions

This study introduced the concept of TQM and examines the application TQM principles in University College for Mother and Family Science (UCMFC) of Ajman, and Higher College of Technology Sharjah Women's Colleges (HTC-SWC)

It is found that all the requirements of TQM are generic and are intended to be applicable to any organization including universities and colleges, regardless of its type or size, or the products and services. The challenges such as lack teaching skills, knowledge and abilities of the graduates from higher education institutions is the result of inability to apply TQM effectively within higher education environment. Some related concepts to TQM may not correspond with the university culture. Furthermore, the researcher believes that there is a group of common and repeated errors in many organizations that delay the implement of TQM such as the following:

- 1) TQM as a program must be applied and affect the future of the organization.
- 2) The administrative frustration because the lack of access to tangible results in a short time when applying TQM.
- 3) Not taking into consideration the importance of customer satisfaction.

- 4) The elements of the administrative structure often are complex and dominated by the bureaucratic controlled system, thereby hindering the collective participation factor which represents one of the basics of TQM.
- 5) The lack of planning for operations and intensive training programs based on the basic needs of the organization.
- 6) The organization's absolute satisfaction about the nature of the current performance and of what has been achieved which is a negative incentive to positive change.

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