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TESTING THE RELATIONSHIP BETWEEN TOTAL QUALITY MANAGEMENT PRACTICES AND PERFORMANCE - AN APPLIED STUDY AT GIRNE AMERICAN UNIVERSITY

Abstract:

Universities and institutions of higher education have not had transaction of competing for market share. However more recently, the trend is changing and to survive both private and public institutions must not only attract and retain a sizable number of students and staff but also provide qualitative educational services. In order to survive in the market, Total Quality Management practices already being applied in the corporate world is gradually finding its way into higher education management. This empirical research examines the relationship between total quality management (TQM) practices and performance at Girne American University (GAU). Five determinates of TQM practices were identified which includes Leadership, Strategic quality planning, Customer focus, Training, and Employee Involvement. The quantitative data were obtained through a survey of 118 students at GAU. This study supports the hypotheses that there is a different in outcomes when TQM is adopted at university. In addition, there is a positive relationship between TQM practices and university performance level.

Keywords:

TQM, TQM and Higher Education, TQM Practices, University Performance

JEL Classification: M19, I23

Literature Review

In the ensuing paragraphs it is presented a succinct review or existing literature on Total Quality Management as well as extent literature on the subject mater in this research. It begins by providing a brief history of TQM, its core practices as well as its emergence in the higher education sector. Furthermore, the review of the literature on the performance of institutions of higher education is focusing on universities. Finally, it is demonstrated that undertaking this research and its finding will fill an important gap in the literature.

Total Quality Management (TQM)

In the 50th, the term and principles of TQM were introduced to the field of business by Edward Deming a famous American scholar. However the idea and principles of total quality management were not accepted within the United State of America at that time. On the other hand, as Green & Winn, 1998 stated; this idea warmly received and used by businesses in Japan to recruitment and to change the passive image of Japanese products and services. As the 1980th globalization began to improve in the United States of America, it led to the application of the total quality management approach in the US organizations and these organizations began to identify the importance of TQM (Cangemi, 1993, Green & Winn, 1998). It is further indicated that "these organizations were no longer operating in only local national markets, they began to transition into successful multinational companies and began to adapt in different markets around the world through applying TQM", (Green & Winn, 1998).

According to Hansson (2003), Total Quality Management (TQM) has been described and defined by different scholars and schools of thought in multiple different ways. Some of the prominent definitions which exist include the definitions of Dale et al, (2001) who described TQM as an embodiment of different contextual concepts and ideas with a shared aim of creating and assuring quality in business and service processes. Another definition of note is the definition of Shiba et al, (1993) in which they suggested that TQM is a robust but "evolving system" which comprises "practices, tools, and training methods for managing organizations in a rapid changing context". However, Hansson (2003) noted that the most comprehensive, widely encompassing and broadly including of these various definitions is the definition offered by Hellsten and Klefsjo (2000) in which they define TQM as "a management system in continuous change, which consists of values, techniques and tools. The overall goal of the system is increased customer satisfaction with reduced amount of resources."

TQM and Higher Education

The main dimensions of higher education that should be assessed for quality in higher education as Green (1994) stated are the process producing graduates to meet the human resource needs of organizations and pushing forward the frontiers of knowledge through research (Green, 1994). While Murad & Rajesh (2010) believed that the major dimensions of education quality is as follows:

Consistency: specification in educational processes applying zero defect and quality culture approaches, as well as limitations in achieving consistent standards and conformity to those standards.

Fitness to purpose: through feting customer specifications, minimum-based fitness for purpose and customer satisfaction.

Value for money: through adopting efficiency and effectiveness.

Transformative: education is a sustainable process of transformation that which is includes empowerment and enhancement of the educational service customer.

Currently there are accreditation schemes and institutions. These have what they call a model or criteria. One can find it in ABET or SACS, however they do not offer a methodology unless a set of requirements that a university has to conform or comply with. Nowadays, universities implement structures and procedures to comply with the requirements but without any order, sequence, or structured effort. Accreditation is not a ranking system, but is a peer-review process that assures the quality of post-secondary education (ABET, 2010). Furthermore, it is a review of the quality of higher education institutions and programs. In the U.S. accreditation is seen as the process through which students, families, government officials and the press can confirm that an institution or program provides a quality education (CHEA, 2010).

In addition, there are other models such as ISO 9000, or Malcolm Baldrige National Quality Program. These models also provide a set of requirements to obtain a certification in the first case and to compete for an award in the second case. However, none of them have any implemented methodology. Such organizations are to figure out if they can certainly implement it or not. Finally Sallis (2002) believed that the problem with awards is that rests of them are annual award. With only one winner annually it is likely that its impact will be limited to large corporations, and applying TQM is not an imposition and it cannot be done to organization or for organization. To apply TQM in educational institution, the institute itself has to introduce it. An acceptable method is to start to do works correctly at the beginning and to continue all the time, rather than occasionally checking if the firm's work has the correct direction or not.

TQM practices

A review of the literature showed that scholars hold certain principles as fundamental to the successful implementation of TQM systems. According to Sila& Ebrahimpour (2002) during the period 1989 to 2000, 347 researches have been studied the TQM to investigate and measure their critical factors and principles and identified 25 major factors. In addition, Green & Winn (1998) reiterated the 14 points listed by the founder of the TQM concept Edwards Deming, as guidelines to the effective implementation of the TQM. Table (1) shows the TQM practices and factors according to the authors' view in different sectors.

In order to determine the TQM practices and its impact on GAU performance, five basic pillars of TQM has been identified for this study through literature review:-

1. Leadership
2. Strategic quality planning
3. Customer focus
4. Training
5. Employee Involvement

1-Leadership

University leadership is probably the most important factor for the TQM success. Leadership is important in influencing groups within organizations and mobilizing resources. An

effective leadership promotes the strategic direction of the organization to achieve customer satisfaction and business results (Jaafreh& Al-abedallat, 2013). It was also found that a competent leader would be able to execute the important critical factors of TQM implementation more effectively (Das et. al., 2011). Puffer & McCarthy (1996) suggested a framework for leadership to adopt TQM and argue that "top management's ability to create a vision and promote change is at the heart of TQM process activities".

Through monitoring the leadership, the TQM process shows that accountability collaborates with the program. Hence, a leader in charge of TQM activity ensures that all benefits are constantly being implemented in order to motivate TQM executives to carry out their roles and to certify that TQM objectives are met (Green & Winn 1998).

2-Strategic Quality planning

Strategic planning process for TQM is always helpful in implementing and practicing TQM principles effectively (Sajjad & Amjad, 2011). Strategic Planning allows organization to set clear objectives and allocate resources for the most important things. “Strategic Quality Planning is a structured process for establishing long-range quality goals, at the highest levels of the organization, and defining the means to be used to reach those goals”(Juran & Gryna,1993). Juran believed that quality should not just happen; however, it has to be planned. To assist managers in planning quality, Juran developed an approach that called Strategic Quality Management(SQM). SQM is a three-part process based on staff at different levels making their own unique contributions to quality improvement (Sallis, 2002).

3-Customer focus

A customer focus is not by itself a condition for ensuring total quality. TQM organizations requires fully worked out strategies for meeting their customers requirements. Education faces a vivid challenge in its relationships with its customers. Customer focus aspect does not involve providing the requirements of the external customers. According to Sallis (2002), colleagues within the organizations are also customers, and rely upon internal services of others to do their job effectively.

An organization must develop customer relationship to measure customer needs and expectations, to involve customers in quality improvement and to determine customer satisfaction (Prajogo & Sohal, 2003; Sila & Ebrahimpour, 2005). According to Anderson et al, (1994), Customer satisfaction is the degree to which an organization's customers continually perceive that their needs are being met through an organizations products and service.

4-Training

In order to ensure the active participation and contribution of employees to the successful adapting of TQM practices, they need to be trained and educated. According to Juran (1993), training should be provided to all employees and in all levels in the organization. The employees' level of knowledge can be improved depending on the organization's training and education program.

Training refers to the need to ensure that all of the staff is doing their jobs according to approved standards, and also to bring them up to speed with current developments in their job related fields. As Green & Winn (1998) stated, this is not confined to workers. In fact, it is applicable to an organization's training programs for management teams, administration teams, staff and customers.

5-Employee Involvement

Employee Involvement, if implemented successfully, would change the relationship between individuals and the organization they work for. It also views employees as business partners (Zakuan et al, 2012). Lawler (1986) argued that, employee involvement is a set of management practices that extend decision-making power, business information, technical and social skills, and rewards for performance to the lowest levels of the organization.

University performance

Sila (2007) stated that TQM is used as a multidimensional approach to measure performance where both financial and non-financial measures assume equal importance for organizations. Performance measures serve to align a university's efforts to the achievement of its mission and objectives. As part of a university's evaluation and control program, they quantifiably monitor important characteristics of the university's services and the performance of the individuals and processes that create them.

Financial as well as non-financial performance are used by many scholars to measure performance (Choi & Eboch, 1998; Flynn et al., 1995) while others like (Wilson & Collier, 2000; Terziovski & Samson, 1999) considered customer satisfaction to accrue from adopting TQM to measure performance. In this research we will focus on the customer satisfaction to measure performance at GAU.

Table (1): TQM practices and factors according to different authors

	Authors	Practices and Factors of TQM																		Sector of Study
		Leadership/Top Management	Customers Focus &	HRD	Teamwork	Process Management	Supplier Quality Management	Training	Strategic Planning	People Management	Employee Improvement	Employee Relation	Quality assurance	Benchmarking	Public responsibility	Continuous Improvement	Communication &Information	Supplier Relationship	Work environment	
1	Jaafreh &Al-abedallat (2012)	*	*			*	*		*			*								Banking Sector in Jordan
2	Zakuan, et al (2012)	*	*		*			*			*					*	*			Higher Education Institutions in Australia
3	Amjad & Sajjad (2011)	*	*	*					*				*	*	*		*			Telecom Services Sector of Pakistan
4	Malik & Khan (2011)						*	*									*			Manufacturing Industry of Pakistan
5	Malik et al (2010)	*	*								*			*				*	*	Small and Medium Enterprises in Pakistani
6	Arumugam, & Mojtahedzad (2011)	*	*		*	*	*	*												Automotive Industry in Iran
7	Salaheldin (2009)	*					*	*												Small and Medium Enterprises in Qatar
8	Macinati (2008)	*				*	*													National Health Service in Italian
9	Al-Khalifa & Aspinwall (2008)	*	*		*	*		*												Manufacturing Industry of UK
10	Prajogo & Sohal (2003)	*	*			*			*	*							*			Manufacturing and Service Firms in Australia
11	Brah et al (2002)	*	*			*	*										*			Industrial Company Singapore
12	Rahman (2001)	*	*			*			*	*							*			Small and Medium Enterprises in Australia

Research Methodology

The research combines the qualitative and quantitative method. Two instruments were used to collect the data, namely; a survey questionnaire and semi-structured interviews. The questionnaire focused on identifying the elements of TQM practice and their relationship to GAU's performance. Descriptive case study of samples of GAU students were used, and the research population consisted of 118 GAU students. Questionnaire findings were analyzed through the use of the SPSS program and the data were analyzed using Mean, Std Deviation, and Pearson Correlation. In addition, the interview method is used to support the findings and to have a better understanding of TQM practice and their relationship to GAU's performance.

Significance of the Research

First of all, this research is expected to make a contribution to both the university practice and academic knowledge. Secondly, it bridges a research gap by presenting the significant relationship between TQM practice and GAU's performance and also offers a solid foundation for future academic research in North Cyprus. Thirdly, from the practical perspective, this study could be used to find opportunities for improvement of the university. The critical success factors and barriers to TQM practice were illuminated and better understood. Predictable elements of university performance were revealed, thus allowing managers to better allocate resources across the university. Fourth, from the result of the investigation of the obstacles to the practice of TQM, other universities could avoid the same error, and could have a more successful organizational change through TQM practice. This research will be the first step in building the relationship and modeling TQM principles for GAU, to improve its overall quality.

Research Purpose

The main purposes of this research are as follows:

1. To assess the level of TQM practices applied at GAU.
2. To assess the limitation in applying TQM practices at GAU.
3. To assess the significance relationship between adapting TQM practices and GAU performance.

Research questions:

There is a wide rang of practical research supporting a strong and direct relationship between the application of Total Quality Management and amendment to organizational performance (e.g., Hassan et al., 2012 ; Idris, 2011; Malek et al., 2010; Samson & Terziovski, 1999; Easton & Jarrell, 1998; Lemak et al., 1997; Shetty, 1993). However, only a few studies have tried to test the relationships between TQM practice and performance in the education sector (e.g., Oduwaiye et al., 2012). Previous empirical studies were conducted in developed countries but there is no research available on this issue in North Cyprus. The research problem could be determined through the following questions:

1. What is the level of TQM practices at GAU?
2. Does the university try to apply the major constituent practices of TQM?
3. What is the relationship between TQM practices and performance at GAU?

Research Hypotheses:

Many researchers measured the relationship between TQM and organizational performance and the majority (Jaafreh & Al-abedallat, 2012, Malik, et al 2010, Zu, 2009, Kaynak, et al 2005, Kaynak, 2003, Sila, & Ebrahimpour 2005) found a positive relationship between TQM practices and organizations performance, also between TQM and other variables such as product quality and performance, customer satisfaction, quality driven, increasing financial performance and reducing organizations cost. Nevertheless, (Nair, 2006; Agus, 2003) have not found a relationship between TQM and organizations performance. During this research it is attempted to test the significant relationship between TQM practices and performance at GAU. Depending on the research questions the following hypotheses will be stated:

H1: There are statistical differences in how TQM practices are adopted at GAU.

H2: There are significant relationships between TQM practices as measured by Leadership, Strategic quality planning, Customer focus, Training, Employee Involvement and performance at GAU.

Data Analysis and Research Findings

1- Descriptive Statistics for TQM Practices Variables

Table (2) shows the results of descriptive statistics of TQM practices used in this study. The results indicated that the mean of the TQM practices ranged from (3.792) to (2.714). Leadership has the highest mean (3.792) while Customer Focus has the lowest mean (2.714). At the same time, the mean for Strategic Quality Planning, Training, Employee Involvement are (3.294), (3.061), (2.740) respectively. The majority of means for all TQM practices are near to the scale midpoint which means that most respondents share similar opinions toward TQM practices. Also the SD is less than one which means that the variations in respondent's opinions were small. According to above results there is a difference in how TQM practices are adopted at GAU. Also the University depends on leadership and strategic quality planning to create and improve the quality level at GAU more than other practices. This result supports our first hypothesis which is: there are statistical differences in how TQM practices are adopted at GAU.

Table (2): Results of descriptive statistics of overall TQM practices

TQM practices	Mean	Std. Dev
Leadership	3.792	.624
Strategic quality planning	3.294	.742
Customer focus	2.714	.818
Training	3.061	.648
Employee Involvement	2.740	.747

2- Relationship between TQM Practices and GAU performance

The relationship between TQM practices and performance at GAU was examined by using Pearson correlation coefficient, and the second hypothesis was tested simultaneously.

Table (3): Correlation between TQM practices collectively and performance at GAU

	GAU Performance	N
TQM Practices	.420**	118

**** Correlation is significant at the 0.01 level (2-tailed).**

The table (3) shows the relationship between all TQM practices collectively and GAU's performance. As shown in table (3) there is a positively significant relationship between all TQM practices collectively and GAU's performance and the correlation coefficient is (.420**) which is significant at level 0.01. According to this result if the university wants to develop and improve its performance in order to achieve competitive advantages in the education sector it has to focus on adopting TQM practices and it can be said that TQM is a strong factor in the education process.

Table (4): Correlation between TQM practices and performance at GAU

	Leadership	SQP	Customer focus	Training	Employee Involvement	performance
Leadership	1					
SQP	.466**	1				
Customer focus	.503**	.623**	1			
Training	.268**	.336**	.434**	1		
Employee Involvement	.111	.187*	.263**	.306**	1	
performance	**.207***	**.300****	**.477****	**.172**	**.260****	**1**

**** Correlation is significant at the 0.01 level (2-tailed). N= 118**
**** Correlation is significant at the 0.05 level (2-tailed).**

Table (4) illustrates the correlation coefficients between TQM practices and performance at GAU. As shown in this table, correlations between majority of TQM practices are significant at 0.01 and 0.05 levels, the highest correlation coefficient (.477**) is for Customer Focus, while the lowest correlation coefficient (.207*) is for Leadership which is a normal situation. This is because one of the objectives that universities try to achieve is creating a supporting environment to satisfy and create value for their customers. Also the role of university leadership is unique and all efforts toward this objective are very essential.
On the other hand, it is clear that there is only one insignificant relationship between training and GAU's performance that does not affect the relationships between all practices collectively. These findings support the second hypothesis.

Conclusions and Recommendations

The term Quality from the perspective of education encompasses economic, social, cognitive and cultural factors, which is perceived as an integral feature of the educational process and its results. Through providing high quality educational services, educational institutions play an important role in the development of the national economy and the society as a whole. This research is in support of the fact that TQM practices have serious implications on an educational at institute's performance. Also there is no clarified model or method to determine and measure TQM practices and criteria at GAU. Through interviews with students it was noticed that the biggest limitation and threat is finding job opportunity after finishing university and the students want to be a part of decision making process at university especially in opening a new department. These issues negatively affect the enthusiasm of students which is a corner stone in education process and its quality. The major findings of this research include the fact that a difference in adopting TQM practices at GAU, the relationship between TQM practices like: Leadership, Strategic quality planning, Customer focus, Employee Involvement and university performances is significantly proven. While the relationship between training and a university performance was not proven. Based on the findings of this research, the following outcomes and suggestions are listed:

1. The research recommend that GAU should apply TQM model or criteria in higher education like Malcom Baldrige standards, ABET or SACS criteria.
2. It is recommended that GAU creates and develops academic programs according to the needs and wants of society and markets.
3. Despite current training courses it is recommended that GAU should open specific tanning courses for academic staff and employees.
4. It is recommended that the university should focuses on customers through developing customer relationship management programs.
5. It is recommended that GAU follow a scientific approach to measure the university's performance.

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