The effect and the Challenges of Implementing Total Quality Management on Performance of Higher Education Institutions

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Abstract:

This study aims to identify the total quality management and its impact on the efficiency of academic performance in Jordanian universities , through the knowledge level of the application of the principles of total quality management in the University of Jordan, from the viewpoint of its employees (faculty members) and to identify the most TQM principles applied in the university as seen employees faculty members and activating the role of interested and administrators Jordan University , and other universities to apply the principles of total quality management and work on enhancing them as well as to identify the requirements of the overall quality of the educational system and to identify the appropriateness of the education system at the University of Jordan to total quality management . So is the problem of the study in a survey TQM principles applied in the University of Jordan, as perceived by its employees through a four principles of quality requirements in education, follow-up of the educational process, the development of human resources (faculty members), and academic administration decisions. The study found many of the recommendations the most important need to focus senior management in educational institutions on the process of applying the principles of total quality management to improve the system of university education and guide the process of decision-making in

Jordanian universities , especially the University of Jordan in the preparation of the cadres of the Academy are eligible to lead the process of change and the impact on efficiency and productivity to reach the learning outcomes high quality and the need for attention out of total quality management as a specific quality assurance process in organizations that do not aim to profit any service organizations such as educational.

1. Introduction

In the last decades, several factors have contributed to raising public concerns over higher education institutions quality, learning to the emergence of quality management and improvement devices such as performance indicators, accreditations, programmed, and institutional assessment and quality audits, and there have been attempts to import models from the private sector in to higher education institutions (Cardoso, 2010).

This has led to the emergence of a debate on the applicability of quality management principles, methodologies, and tools to the Higher Education sector. As reported in the literature on Higher Education, several voices have been heard about the non – applicability at all of those management theories especially because they derived from industry and had nothing to do with Higher Education ethos (pratasavitskaya and Stensaker, 2010).

Changes in global educational landscape have forced the institutions of higher learning to revolutionize its operation (Sabri & El-Refae, 2006). The imperatives of the conversion are the stringent requirement of the work force environment and increasing in the supply of the quality work force across continent and countries. On top of that, the competitive business environment drove the stakeholders of the educational sector to demand for more reliable, creative, and multi-

skilled & knowledge work force (Quraishi et al. 2010). These have stipulated the higher education institutions to be more concern on quality educational system.

The overall scenario of higher education in Jordan not matches with global Quality standards. Hence, there is enough justification for increased assessment of the quality of the country's educational institutions (Abdel-Qader et al. 2013). Traditionally, these institutions assumed that Quality could be determined by their internal resources, viz., faculty with impressive set of degrees and experience detailed at the end of the institute's admission brochure, number of books and journals in the library, an ultra-modern campus, and size of the end of the endowment, etc., or by its definable and assessable outputs, viz., efficient use of resources, producing uniquely educated, highly satisfied and employable graduates (Ariff, Zaidin & Sulong, 2007).

Improving the performance of higher education institutions is a global concern in all countries in the world (Becket & Brookes, 2006). Among the most important characteristics that distinguish a community from other communities, is its ability to manage institutions and vital programs, not only effectively, but fairly innovative. Linked to the size and quality of services in the founder in HE system – management, that makes the university a letter compass movement thorough the guidelines and university ethics (Currie, Krbec & Higgins, 2005). Any success of its founder is a success in its management, hence the importance of management's commitment to HE institutions to improve the overall philosophy constantly in order of arrival to TQM in universities which need the participation of all to ensure survival and continuity of universities (Al- Khatib, 2011). (UNESCO, 1998) Quality is the heart of education. It influences what students learn, how well they learn and what benefits they draw from their education, also, how the implementing of TQM affect the performance of the academics. This Paper proposes a theoretically model of TQM implementation particularly for higher education sector.

2. Statement of the Problem

A number of environmental forces are driving change within and across countries and their Higher education. These changes have served to put out the issues of total Quality management firmly on the agenda of many Higher Education, total quality management has been undertaken within single national context despite the fact that Higher education is increasingly viewed as an international business. This review questions whether it is time to rethink our current approaches to total quality management in Higher Education.

The study use analytical descriptive approach that based on analysis of literature and administrative thought in the area of TQM for higher education institutions and supports the implementation of TQM concepts in higher education institutions in Jordan as well. Specially, it is hoped that this study will provide an answers to the following inquiries:

1. What is the meaning by TQM in Higher Education?

2. What are the factors that related with TQM?

3. What are the issues of resistance to TQM?

Objectives

There is still no consensus on how best to measure and manage quality within higher education institutions, in spite of many approaches and models have been adopted, because quality is dependent process and the success of any process is dependent on how others are working well, it's more effective to judge quality through a systematic assessment. Correctly manage and implementing the TQM concepts and indicators is one of such measures, which will go a long

way in revolutionized the Jordanian HE sector. Thus, through this study we hope to achieve the following objectives:

1. Provide irrefutable evidence that excellence and quality in HE institutions achieved only with high level Total Quality Managements standards and indicators.

2. Identify the challenges in TQM implementation in HE Institutions.

3. Significance of the Study

The very reason for conceiving this research paper is to help HE institutions to implement the concepts of Total Quality Management (TQM), that is when applied, with strong leadership support, TQM leads to continuous improvement in management systems, processes, products and services, and results in delighted customers and stakeholders. The output of this research paper is geared towards acquainting Higher Education Institutions how to use basic quality tools to manage and improve processes. Once the basic tools are mastered, Higher Education Institutions are able to determine if their processes are capable of meeting customer requirements. If processes are capable, Higher Education Institutions know how standardize the process to assure stable and capable performance. If processes are found to be not, then Higher Education Institutions will know how to use TQM model to being improving the processes so that they meet customer requirements (Dimaano, 2009). Findings of this dissertation will specifically be addressed for benefit to: Administrators, Employees and Research.

Higher Education Sector in Jordan

Higher Education in Jordan commenced by the establishment of Teachers House 'Dar Al-Mu'lemeen' in 1958, with level of two years aiming at preparing qualified teachers to work at

schools which belong to the ministry of higher education. Afterwards, establishment of teachers' houses has succeeded and became known as 'Teachers Institute' which has been developed for 'Community Colleges' in seventies. As for university education, it commenced by establishment of the University of Jordan in 1962, followed by the establishment of Al-Ahliyya Amman University in 1989 as the first private university in Jordan. During the last two decades, the sector of higher education in Jordan witnessed a prominent development as well as progress evidenced by the increasing number of institutions of higher education, enrolled students, faculty members, administrative and academic members; size of expenditure and the financial government support to this significant education sector.

The ministry has paid a special attention to higher education in order to have it at the top of our national priorities. Attention, here in has been mostly focused on monitoring and evaluation of the strategy of higher education and scientific research for the years (2007 – 2012) to maintain a shiny image of higher education and scientific research, its outputs, competitive capabilities; and to admit the largest possible number of our young people into our Jordanian universities according to goals system that is in line with our national goals.

MOHE, 2011) The future strategic goals for the Ministry of Higher Education and Scientific Research is: Improving HE Sector Management; Improving the quality of HE environment; Enhancing scientific research quality and the role of higher institutions; and Providing national quality databases and periodic studies on the HE sector and scientific research in accordance with international best practices. To this end, Jordan has been effecting continuous changes, transformations and developments of HE sector with the aim of achieving quality and distinction. Over the year, HE institutions in Jordan have attempted to strike a balance between academic and vocational education.

Literature Review

Declining quality of graduates, increasing competition and growing mandates for accountability by accreditation associations, legislatures, and funding bodies are among the factors that have "forced" HEIs to focus on quality. In Australia, a senate inquiry has shown a dramatic fall in the quality of teaching standards, student entry -level qualifications, campus conditions and quality of learning experience (Sirvanci, 2004). The inquiry has also shown increases in problems such as student plagiarism, grade inflation and 'soft' marking (Smart, Sim & McMahon, 2001). All the Australian Universities have developed the so called shared features of implementing QA in all aspects of higher education business.

A numbers of Higher Education institutions have tested quality management models originally developed for industry. A key benefit of all the models is reported to be the requirement for institutions or departments to adopt a strategic approach to quality measurement and management (Venkatraman, 2007). Largely limitations related to the applying in a Higher Education context. Continued debates on the role of the students as customer or co–producer in the higher education system, this has impact on the measurement and management of Higher education when using these models industrially developed models (Yeung & Armstrong, 2001).

In 2007 (Brookes and Becket, 2007) made a review of literature on Quality management in Higher Education and come to conclusion a number of environmental forces were driving within and across countries, leading to firm emergence of the quality management issue on the agenda of many Higher Education institutions. The review revealed that the most popular response Higher Education institutions gave was the testing or implementation of quality management models developed by industry (Zabadi, 2013). From the empirical studies reported in the

literature and analyzed by the authors, benefits related to the implementation of models as well as limitations were identified. The benefits included the adoption of a strategic approach to Quality measurement, management, and the identification of Quality enhancement priorities; limitations related largely to the dilemma of applying business models to Higher Education (Salameh, Alzyadat & Alnsour, 2011). Furthermore the authors refer that "the models are reported to have far greater applicability in measuring administrative or service functions within Higher Education institutions rather than the quality of research or teaching and learning".

Challenges on the Implementing TQM in Higher Education

Quality management is not a management approach easily applied to Higher Education institutions, especially because the academic culture of these organizations is quite strong and resistance to its concepts, principles and practices (Hamidi & Zamanparvar, 2008). And this resistance begins with terminology. Terms such as product, client, empowerment or even strategy, not to mention TQM or reengineering do not easily resonate in Higher education institutions. For Massy (2003) "the greatest resistance to quality process improvement comes from professors who think it's just another business–oriented fad. The language of some TQM advocates contributes to this view, customer, scientific method and removal of all forms of waste is sure to raise the hackles of academies" (Badah, 2003).

Pratasavitskaya and Stensaker (2010) mentioned the following factors as reasons for the unsuccessful application of TQM to Higher Education: resistance to change; insufficient administration commitment; high time investment due to personal training; difficulty in applying TQM tools to the higher Education institutions environment; little experience of team leaders

and staff in team–work; the concerns of Higher Education institutions have with their own results not being sufficient enough.

Education is a service which has got clients, and that they, as in any other business, can be satisfied or not. Higher education just likes any other format of formal education as a reflection of the social context (Jaff, 2008). Not surprisingly when we said that its and their institutions suffers and faced huge problems and challenges and threats seriously arose from variables that changed shape of the world and created new world order based on science and technological development acceleration basis, and comprehensive programs for development and modernization guarantees for Arab education institutions the ability to overcome its problem and weaknesses.

Methodology

This section discusses the type of research design, population, and target population, sampling frame, sample, sample size, sampling technique, instruments to be used, and data analysis.

Research Design

A research design is the structure of research. Newing (2010) states that a research design is a general plan or strategy for conducting a research study to examine specific testable research questions of interest. This study adopted descriptive research design. A descriptive study design was used to find out the effect of TQM Practices on the performance of Universities in Jordan. Descriptive research design enabled the study to achieve the research objectives.

Population

The population of the study was all the 11 public universities in Jordan today as per Ministry of education.

Sample and Sampling Technique

The study was adopted census survey technique due the small number of universities in Jordan therefore the sample size consisted of 11 public universities in Jordan today. The respondents in this study comprised of universities administrators, lecturers, and non teaching staff. The respondents were randomly selected. The respondents consisted of one university administrators, one lecturer. This made a sample size of 110 respondents.

Data Collection Procedure

Data collection was carried out by use of questionnaires. The researcher furnished the respondents with an introductory letter issued by the university to instill confidence into the respondents. The questionnaires were not be interpreted due to the assumption that the target population was literate. The researcher issued the questionnaires to the 110 selected respondents on one on one interaction and give guidance where necessary.

Data Analysis

The collected primary data was analyzed using Statistical Package for Social Science (SPSS) version 20. Descriptive and inferential analysis was conducted. Inferential analysis included correlation and regression analysis. Descriptive analysis was used in transforming the raw data into a form that can be easily understood and interpreted such as mean, frequencies and percentages. The study used Pearson correlation coefficient to test the research question.

Correlation coefficient values ranging between -1 and 1 which measures the degree to which two variables are linearly relate with the higher magnitude indicating higher degree of association between two variables. Newing (2010) observed that that a correlation coefficient of magnitude 0.3–0.5 shows a medium linear dependence between two variables while 0.5 to 1.0 shows a strong linear dependence. The study used a regression model to measure the relationship between independent and dependent variables.

Analysis & Finding

Effect of Continual Improvement on Performance

In this section the study sought to determine the influence of use of continual improvement on the performance of the public universities. The score 0.0 to 1.0 represent strongly disagree, the score 1.1 to 2.0 represents disagree, score 2.1 to 3.0 represent neutral, score 3.1 to 4.0 represent agree and score 4.1 to 5.0 represent strongly agree. The study findings in Table 3.1 show that most of the respondents agreed to the statement that continual improvement increased the performance advantage through improved organizational capabilities (mean score 3.62). The findings mean that continual improvement enhanced organizational performance.

Table 3.1: Effect of Continual Improvement on Performance

	Mean	Std. Dev
Improvement increase performance through improved capabilities	3.63	.889
Employing organization wide approach increases performance	3.44	1.023
Providing training increases performance	3.73	.877

Effect of Staff Involvement on Performance

The results of the study show that most of the respondents agreed that involvement leads to innovation and creativity in furthering organizations objectives (mean score, 3.52). The results mean that staff involvement led to innovation and creativity in furthering organizations objectives. The results show that majority of the respondents agreed that staff involvement encourages people to be accountable for their own performance (mean score, 3.62). This means that staff involvement encouraged people to be accountable for their performance.

Table 3.2: Effect of Staff Involvement on Performance

	Mean	Std. Dev
Involvement leads to motivated, committed and involved people	3.62	.908
Involvement encourages staff accountability	3.64	.922
Involvement leads to employee understanding of contribution and roles	3.61	.866

Effect of Leadership on the Performance

Majority of the respondents agreed that good leadership ensured that activities ar evaluated, aligned and implemented in a unified way (mean score, 3.47). This means that good leadership ensured that activities were evaluated, aligned and implemented in a unified way. The study established that majority of the respondents agreed that leadership should ensure miscommunication between levels of an organization is minimized (mean score, 3.63). The

findings mean that leadership ensured miscommunication between levels of organizations was minimized.

Table 3.3: Effect of Leadership on the Performance

	Mean	Std. Dev
Good leadership motivates employees towards goals and objectives	3.61	.911
Good leaders minimize miscommunication	3.62	.885
Good leaders help establish clear vision	3.65	.882

Regression Analysis

The study further carried out regression analysis to establish the statistical significance relationship between the independent variables on the dependent variable which was performance. According to Green and Salkind (2003) regression analysis is a statistics process of estimating the relationship between variables. Regression analysis helps in generating equation that describes the statistics relationship between one or more predictor variables and the response variable. The regression analysis results were presented using regression model summary tables, analysis of variance (ANOVA) table and beta coefficient tables.

Coefficients

The study further determined the beta coefficients of leadership, customer focus, staff involvement and relation verses the performance. Table 3.4 thus presents the significant relationship between leadership, customer focus, staff involvement, and the performance is

positive for all the variables. This demonstrates that the most TQM indicators have positively influenced on the performance of the public universities in Jordan.

Table 3.4: Regression Coefficient

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	-.056	.232		-.243	.000
Continual improvement	.607	.548	.569	1.107	.000
Staff involvement	.967	1.005	.924	.962	.000
Leadership	.607	.548	.569	1.107	.000

The study shows that all the independent variables have positive relationship except with the dependent variable (performance). The findings show that TQM practices factors held constant, the universities performance would decline by 0.056. The results further show that a unit increases in continual improvement will result into a .607 change in performance. According to the results a unit change in staff involvement will result in 0.967 unit change in the performance. The result show that a unit changes in leadership will result into a -0.607 change in performance. The results show that all the variables are statistically significant as the p-values are less than 0.05 ($p > 0.05$).

Model Summary

The researcher conducted a regression analysis to determine the significance relationship of leadership, staff involvement, continual improvement, relation against the performance.

Table 3.5 show that the coefficient of determination is 0.757; therefore, about 75.7% of the variation in the performance is explained by leadership, staff involvement, continual improvement. The regression equation appears to be very useful for making predictions since the value of R2 is close to 1.

Table 3.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870a	.757	.736	.45966

Analysis of Variance

Table 3.6 presents the results of the Analysis of Variance (ANOVA) on the leadership, staff involvement and continual improvement, relation versus the performance.

The ANOVA results for regression coefficients indicate that the significance of the F is 0.00 which is less than 0.05. This indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data). There is therefore a significant relationship between leadership, staff involvement, continual improvement and the performance.

Table 3.6: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.380	7	7.626	36.093	.000b
	Residual	17.114	81	.211		
	Total	70.494	88			

a. Dependent Variable: Performance b. Predictors: Continual improvement, Leadership, Staff involvement

Summary and Recommendations

The study established that respondents agreed that staff involvement leads to motivated, committed and involved people within the organization. Majority of the respondents agreed that involvement leads to innovation and creativity in furthering organizations objectives. The results show that most of the respondents indicated that staff involvement encourages people to be accountable for their own performance. Most respondents agreed with the statement that staff involvement leads to employees eager to participate in and contribute to continual improvement. The study results show that respondents indicated that staff involvement leads to employees understanding the importance of their contribution and role in the organization.

The study established that the use of continual improvement and leadership was directly linked to the performance of the institutions. The study recommends that the management of the institutions of higher learning should adopt continual improvement to be the strategy for improving their capabilities and quick reaction to opportunities and training. The study established that staff involvement was very key for the institutions performance as it resulted in

staff motivation, innovation and creativity and accountability among others. The study recommends that the management of the institutions of higher learning should involve their employees the more as a strategy to enhance the performance of the institutions.

This study was done in the public institutions higher learning in Jordan. Similar studies should be done in other institutions of learning to investigate the effect of TQM on the institutional performance.

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