Implementation of Total Quality Management in Colleges of Physical Education in Jordan

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Abstract

The general purpose of this study was to investigate the perceptions of physical education faculty members regarding the application of TQM principles to colleges of physical education in Jordan. In addition, the study examined the extent to which these faculty members differ in their perceptions and the extent to which differences in perceptions were influenced by rank, educational level and years of experience. The sample consisted of 72 faculty members from four colleges of physical education in Jordan. They completed a 45-item questionnaire covering five dimensions of TQM namely: (1) commitment of top management, (2) employee involvement and teamwork, (3) training and education for quality, (4) strategic planning, and (5) focus on customer satisfaction. The findings of this study indicated that TQM principles were poorly implemented in Jordanian colleges of physical education. In addition, the findings revealed that academic rank, years of experience, and education level did not significantly affect the faculty members' perceptions of TQM implementation.

Keywords: TQM, total quality, physical education, college, Jordan

1. Introduction

The interest in higher education, in both the industrialized and developing countries, is a necessity imposed by the changes that have occurred in most societies all over the world. A few examples of the major changes include population explosion, globalization of economy, lack of resources, political instability, inconsistency in the policies of various regimes, lack of qualified workers, and inefficient educational management system (Haider, 2008).

Additionally, higher education institutions face many pressures and challenges resulting from rapid expansion in student enrolments, shortages of funding, declining quality of graduates, lack of qualified staff and faculty, and increasing competition between various public and private colleges and universities (Ariff, Zaidin, &Sulong, 2007).

These types of challenges and issues promoted many institutions of higher education to review how they provide services to their students. This review also promoted many institutions to explore ways to develop their administrative procedures with the intention of improving efficiency and quality (McMillan, 1998).

In response to the need for improvement in the services and administrative procedures, many institutions of higher education have begun to explore various management processes (McMillan, 1998). Total Quality Management (TQM) is one of the most popular management processes adopted by many institutions (Ritter, 2005).

The applicability of TQM in the educational sector has attracted the interest of many researchers and practitioners (e.g., Becket & Brookes, 2006; Currie, Krbec, & Higgins, 2005; Kwan, 1996; Sabet, Saleki, Roumi, & Dezfoulian, 2012; Salameh, Alzyadat, &Alnsour, 2011; Sirvanci, 2004; Venkatraman, 2007; Zabadi, 2013). They pointed out that institutions of higher education have turned to TQM in order to improve their performance and provide high quality programs and services.

1.1 The TQM concept

Total Quality Management (TQM) is a management approach that seeks to achieve and sustain long-term organizational success by encouraging employee feedback and participation, satisfying customer needs and expectations, respecting societal beliefs and values, and obeying governmental laws and regulations (Charantimath, 2003).

Another TQM definition that carries the same meaning was introduced by Corrigan (1995) who defined TQM as a "management philosophy that builds customer-driven learning organizations dedicated to total customer satisfaction through continuous improvement in the effectiveness and efficiency of the organization and its processes" (p. 61). According to Wilkinson and Witcher (1991), TQM is composed of three terms: ***Total***: meaning that every person is involved including customer and suppliers, ***Quality***: implying that customer requirements are met exactly and ***Management***: indicating that senior executives are fully committed.

TQM is more than a management philosophy; it can be considered a convenient framework used in and by organizations to guarantee a systematic and permanent optimization of the added value in order to maximize the realization of their aims. As a consequence of this proactive approach, all primary, supporting and managerial processes have to be designed in a manner that ensures an optimal (perceived) quality for customers, employees and other stakeholders (De Knop, Van Hoecke, & De Bosscher, 2004).

A number of researchers (e.g., De Knop et al., 2004; Kolarik, 1995; Mawson, 1993; Peters, 1984; Talib, 2013) identify three fundamental components of TQM, (a) focus on customer satisfaction, (b) continuous improvement, and (c) total involvement and commitment. Peters (1984) describes these components as necessary skill packages to move towards an effective, market-oriented (service) organization. However, analyzing recent TQM programs in more detail, some other common features can also be distinguished (De Knop et al., 2004).

These are well described by the "Total Quality Management Inventory" which assembles the essential principles of quality programs of Crosby (1979), Deming (1982) and Juran (1989). They include: focus on the customer, strategic planning, quality measurement and analysis, quality assurance, quality and productivity improvement results, top management leadership and support, and employee training and teamwork.

1.2 Higher education in Jordan

Higher education in Jordan is recognized as a key force for development and modernization. This has caused an increase in the demand for its access, accompanied by a number of challenges.

Higher education institutions in Jordan, as do higher education institutions in other countries, face many challenges, resulting from the advancement of science and technology, economic growth, social changes, and the internationalization and globalization of the world economy, as well as of higher education (Weifang, 1999).

At present, Jordanian higher education enrolls about 398 thousand students in 34 public and private universities and 51 community colleges, under the supervision of the Ministry of Higher Education and Scientific Research which was established in 1985 (Ministry of Higher Education and Scientific Research).

The Ministry of Higher Education and Scientific Research has confirmed its commitment to improving the quality of higher education in Jordanian institutions. The most important accomplishments of the Ministry have been the issuance of the new "Law of Higher Education No. (23), for the year 2009" and "The Jordanian Universities Law No. (20), for the year 2009". Accomplishments also include developing the Management Information System to support University decision-making, strategic planning, and development of higher education infrastructure. In addition, the Higher Education Accreditation Council for both public and private universities is now independent (Chapman, 2011; Ministry of Higher Education and Scientific Research).

Despite these reform efforts to achieve high quality education, many universities and colleges in Jordan still struggle to integrate quality to their management efforts. Khader (2009) stated that "Jordan has missed many spotlights on the road to educational excellence" (p. 1).

Recently, and in response to the call of several researchers for applying TQM principles in universities and colleges, several studies has been conducted in Jordan (e.g., Abdel-Qader, Abu Quleh, Almahyra, & Hindawi, 2013;Al-Tarawneh & Mubaslat, 2011; Badah, 2003; Ibdah, 2010; Sabri & El-Refae, 2006; Salameh, et al., 2011).

For example, Badah (2003) proposed a model of TQM for administrative development in the Jordanian public universities. The proposed model consisted of ten areas including leadership, message of the university, organizational culture, information computerization and analysis, strategic planning, human resources and development, operation management, continual improvement customer satisfaction and feedback.

The researcher examined the proposed TQM model with 508 deans, department heads, and unit managers in eight public universities. The study results showed that the applicability of the proposed TQM model in the Jordanian universities was high. In addition, there were significant differences in the degree of the applicability of the proposed TQM model in favour of the Hashemite University, one of the newest universities in Jordan, over other public universities. The researcher recommended the public Jordanian universities to adopt the idea of TQM and to apply it through creating TQM training units. In addition, he recommended developing the values and attitudes that are necessary to build a kind of deep-rooted culture to ensure the implementation of the TQM processes by all the parties concerned at these universities.

Abd-al-Qader (2004) explored the possibility of implementing the concepts of TQM at Mutah University. The findings of the study revealed that the ability to apply the TQM concepts was high in dimensions of leadership, university mission, strategic planning, teamwork, computerized information system, customer satisfaction, scientific methods, and decision-making.

Sabri and El-Refae (2006) examined the accreditation system of undergraduate Business Administration program in private universities in Jordan, in comparison with the standards of the Quality Assurance Agency in the United Kingdom. The findings suggested that although the arrangements for accreditation in Jordanian private universities were making some progress in determining and assuring quality standards in the Business Administration program, however, they were still inadequate. They recommended that accreditation to be applied to all institutions of higher education in Jordan.

Jaff (2008) investigated the degree of applying Deming principles of Total Quality Management on faculties of educational sciences in private Jordanian universities from the viewpoint of their faculty members. A sample of 106 faculty members participated in this study. The results showed that Deming principles of TQM were practically applied in the colleges of education. The order of these principles differ as ordered by Deming. Also, There were no significant differences between faculty responses attributed to gender and experience.

More recently, Salameh et al. (2011) tried to identify the requirements for implementing TQM in the Faculty of Planning and Management at Al-Balqa Applied University. Their results showed that the adoption of TQM was limited in Arab countries, particularly at higher education institutions. The results also indicated that there was a weakness in training for administrative leadership in the universities and colleges which is essential to the success of implementing TQM. Additionally, there was no concentration on teamwork, continuous improvement and coordination which lead to creativity and innovation.

In their study about the implementation of total quality management on the higher education sector in Jordan, Al-Tarawneh and Mubaslat (2011) found that there was a high awareness from the top management to adapt the TQM concept. The attitudes of the respondents regarding the principles of the TQM were within a high mean. In addition, the results showed that there was a high rational relationship between all TQM principles and the organization performance in Jordanian universities measured in productivity and profitability.

2. Statement of the Problem

To date, and despite the fact that many Jordanian universities and colleges began to adopt TQM principles in the last fifteen years or so, a very few research has been conducted to study the effects of TQM implementation on sport contexts and particularly in colleges of physical education and sport sciences in Jordan. In fact and to the best knowledge of the researcher, no research has been conducted to investigate the application of TQM in the colleges of physical education in Jordan. Therefore, this study aims to explore the adoption of quality management principles in physical education colleges from faculty members' perspective.

The research questions that guided this study are:

1) Has there been an effort to implement TQM at Jordanian physical education colleges?
2) To what extent the principles of TQM are implemented at Jordanian physical education colleges?
3) To what extent do faculty members differ on the basis of their rank, years of experience, and educational level regarding their perceptions of TQM implementation at physical education colleges?

3. Methods

3.1 Participants

In this study, 72 faculty members from the total of 100 faculty members working at the four colleges of physical education in Jordan participated in the study.

Fifty-five of the participants (76.4%) held a doctoral degree and only 17 (23.6%) held a master degree. Their professional experience in ranged from 2 to 32 years ($M = 11.69 \ SD = 8.72$). In relation to their academic rank, 5 (6.9%) hold the position assistant lecturer, 13 (18.1%) the position of Lecturer, 33 (45.8%) the position of assistant professors, 14 (19.4%) were associate professors, and 7 (9.7%) were full professors.

3.2 Instrument

A survey instrument was developed and used to collect data. The survey items were composed and developed in Arabic language based on the review of related research literature of TQM. The survey consisted of three parts. The first part is composed of questions about basic demographic information. The second part is composed of one question "Has there been an effort to implement TQM at your college?" it has four possible answers:(a) major effort, (b) moderate effort, (c) slight effort, and (d) no effort. The third part is composed of 45 items covering five dimensions of TQM namely: (1) commitment of top management, (2) employee involvement and teamwork, (3) training and education for quality, (4) strategic planning, and (5) focus on customer satisfaction.

Each of the items in the survey was rated on a 7-point Likert scale. According to their perceptions of TQM implementation, participants were asked to assign a rating of 1 to 7 (1 meaning "not applied" and 7meaning "very highly applied").

3.2.1 Validity and reliability

Evaluation of content validity was performed through a panel of five expert professors. They were asked to review critique and provide feedback on the survey instrument concerning any need for improvements in wording or additional items. The researcher modified the survey according to the experts' comments.

The reliability analyses of each of the five dimensions of TQM survey was performed using croncach alpha. The results of reliability coeffecients are presented in Table 1.

Table 1: Cronbach Alpha Reliability Coefficients for TQM

Dimension	Alpha
Commitment of top management	.893
Employee involvement and teamwork	.891
Training and education for quality	.912
Strategic planning	.846
Focus on customer satisfaction	.833

3.3 Pilot study

A pilot study was conducted before the actual study. The pilot study was performed on 10 faculty members from the Hashemite University in Jordan. The responses of these participants were used only as a means to test the clarity and understanding of the questions asked in the survey.

3.4 Data analysis

All statistical analyses were carried out using SPSS version 18. Initially, the internal consistency coefficients were examined to ensure the instrument used in this study was reliable for the present sample. Frequencies, means and standard deviations were calculated to describe the sample as a whole. T-test, and one-way analysis of variance (ANOVA) were also used to answer the research questions

3.5 Procedures

The survey was distributed to faculty members in the colleges of physical education in Jordan universities. They were delivered through mails and emails to the participant's email address along with a cover letter introducing and explaining the purpose of the study, stressing the confidentiality of responses and enlisting the response of the participant. Initially, 100 surveys were distributed, and with follow-up phone calls and emails, 72 usable surveys were returned resulting in a 72% response rate.

4. Results

4.1 Research question one

The first research question was addressed by calculating frequencies and percentages to determine the implementation efforts of TQM at Jordanian physical education colleges.

The results presented in Table (2) show that the largest percentage (58.33%) of the faculty members indicated there was no effort or slight effort to implement TQM at their colleges. Only 12.5% indicated that there was major effort to implement TQM.

Table 2: Efforts of implementing TQM as perceived by faulty members (N = 72)

Effort	N	Percentage
Major effort	9	12.50%
Moderate effort	21	29.17%
Slight effort	31	43.06%
No effort	11	15.27%

4.2 Research question two

To answer the second research question, that is to identify to what extent the principles of TQM are implemented at Jordanian colleges of physical education, means and standard deviations were computed.

The results displayed in Table 3 indicated that the principle of commitment of top management had the highest implementation rate (55.86%) and the principle of focus on customer satisfaction had the lowest implementation rate (49.43%).

Table 3: Means, standard deviations and order of TQM principles as perceived by faculty members (N = 72)

Dimension	Mean	Std. Deviation	Percentage
Commitment of top management	3.622	.457	51.74%
Strategic planning	3.613	.491	51.61%
Employee involvement and teamwork	3.538	.589	50.54%
Training and education for quality	3.457	.378	49.39%
Focus on customer satisfaction	3.326	.416	47.51%

4.3 Research question three

The third research question stated,"To what extent do faculty members differ on the basis of their rank, years of experience, and educational level regarding their perceptions of TQM implementation at physical education colleges?"

To answer this research question, means, standard deviation, t-test and ANOVA were computed. The results are presented in tables 4, 5 and 6.

The results presented in Table 4 indicated that there was no significant difference between faculty members holding doctoral degree and those holding a master degree in the perception of TQM implementation.

Table 4: Means, standard deviations and the *t* values of dimensions of TQM according to the variable educational level

Dimension	Education	N	Mean	Std. Deviation	t	p
Commitment of top management	PhD	55	3.6515	.4883	1.001	.320
	MA	17	3.5245	.3304		
Training and education for quality	PhD	55	3.4606	.4022	.138	.891
	MA	17	3.4461	.2945		
Focus on customer satisfaction	PhD	55	3.3061	.4398	-.744	.459
	MA	17	3.3922	.3291		
Employee involvement and teamwork	PhD	55	3.5152	.6168	-.594	.555
	MA	17	3.6127	.5008		
Strategic planning	PhD	55	3.5662	.5209	-1.470	.146
	MA	17	3.7647	.3461		

The results of analysis of variance presented in Table 5 and Table6 show that there were no significant differences related to faculty years of experience and academic rank in extent of implementing TQM principles in physical education colleges.

Table 5: ANOVA results for the dimensions of TQM dimension depending on experience

Dimension	Source	Sum of Squares	df	Mean Square	F	Sig.
Commitment of top management	Between Groups	.141	2	.071	.332	.719
	Within Groups	14.691	69	.213		
	Total	14.832	71			
Training and education for quality	Between Groups	.062	2	.031	.213	.808
	Within Groups	10.063	69	.146		
	Total	10.125	71			
Focus on customer satisfaction	Between Groups	.091	2	.045	.257	.774
	Within Groups	12.184	69	.177		
	Total	12.274	71			
Employee involvement and teamwork	Between Groups	.273	2	.137	.386	.681
	Within Groups	24.406	69	.354		
	Total	24.680	71			
Strategic planning	Between Groups	.058	2	.029	.118	.889
	Within Groups	17.021	69	.247		
	Total	17.079	71			

Table 6: ANOVA results for the dimensions of TQM according to the variable Academic Rank

Dimension	Source	Sum of Squares	df	Mean Square	F	Sig.
Commitment of top management	Between Groups	.428	4	.107	.498	.737
	Within Groups	14.404	67	.215		
	Total	14.832	71			
Training and education for quality	Between Groups	.578	4	.144	1.014	.407
	Within Groups	9.547	67	.142		
	Total	10.125	71			
Focus on customer satisfaction	Between Groups	.246	4	.062	.343	.848
	Within Groups	12.028	67	.180		
	Total	12.274	71			
Employee involvement and teamwork	Between Groups	.678	3	.226	.938	.427
	Within Groups	16.401	68	.241		
	Total	17.079	71			
Strategic planning	Between Groups	2.115	4	.529	2.368	.061
	Within Groups	14.964	67	.223		
	Total	17.079	71			

5. Discussion

The general purpose of this study was to investigate the perceptions of physical education faculty members regarding the application of TQM principles to colleges of physical education in Jordan. In addition, the study examined the extent to which these faculty members differ in their perceptions and the extent to which differences in perceptions were influenced by rank, educational levels and years of experience.

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The results of this study indicate that a full and complete value of TQM may not yet fully appreciated in Jordanian colleges of physical education. This can be concluded from the responses of the majority of the faculty members (58.33%) who indicated that there were no efforts or slight efforts to implement TQM at their colleges. In addition, the mean score that represent the extent of implementing TQM principles are below average (60%) for all dimensions, indicating poor implementation of TQM in physical education colleges.

This result, to some extent, supported the literature acknowledging the difficulty of implementing total quality management (Ritter, 2005). The literature on TQM indicates that TQM movement is lagging behind in higher education and has not been fully realized in academia on a whole (McMillan, 1998).

The poor implementation of TQM in PE colleges could be attributed to a number of reasons. Lack of top management commitment and poor planning are possible factors hindering the implementation of TQM in physical education colleges. According to Hamidi and Zamanparvar (2008) lack of top management involvement and commitment to TQM change is a common reason for TQM failure.

Juran and Gryna (1993) attributed the failure of the quality management initiatives in the West in the 1970s and 1980s to lack of top management involvement in quality management. If top management is not committed to making TQM a top priority, the efforts of those who are committed to TQM will fail to sustain a successful program (Tewari & Dias, 2010).

Lack of proper training and education for quality and lack of involvement are also possible factors affecting the implementation and development of TQM program. In colleges of physical education, the lack of employee involvement and the lack of proper training and education for quality is evident. This present a major obstacle in the implementation of TQM program in physical education colleges. The TQM literature supports the fact that employees at all levels need to become more knowledgeable about TQM and learn how to use TQM to improve their institutions processes and functions (McMillan, 1998). For TQM to be successful in physical education colleges, they must commit to training faculty and staff at all levels. Cebeci and Beskese (2002) affirmed that investment in education and training is vitally important for TQM success.

Another factor that contributed to the poor implementation of TQM in physical educationcolleges could be the lack of focus on customer satisfaction. According to Sewell (1997), serious problems in TQM implementation are likely to happen if there is any attempt to achieve quality without a full understanding of the customers' needs and requirements. Poor quality will eventually produce dissatisfied consumer and a bad reputation among customers.

Several writers and researchers assert that customer satisfaction in TQM is a major success of the quality management effort (Baidoun, 2003; Quraishi, Hussain, Syed, & Rahman, 2010; Sit, Ooi, Lin, Chong, 2009; Toremen, Karakus, &Yasan, 2009). Toremen et al. (2009) consider customer satisfaction as a cornerstone of TQM.

If physical education colleges desire to achieve and maintain quality education, customers (i.e., students, faculty, staff …etc.) satisfaction should play a central role in their TQM program. This requires listening to customers and trying to satisfy their needs and meet their expectations (Baidoun, 2003).

With regard to demographic variables, the findings of this study revealed that academic rank, years of experience, and education level didn't significantly affect the faculty members' perceptions of TQM implementation.

These findings are not in agreement with the results of most TQM research in higher education which consistently report that years of experience, age, gender, academic rank, and level of education have significant relationships with TQM philosophy and principles (e.g., Al-Mallah, 2005; Liu, 1999; McMillan, 1998; Ritter, 2005; Yeung & Armstrong, 2001).

In fact, these findings were not the results expected by the researcher at the onset of the study. A possible explanation for this result could be that TQM was not attempted at the physical education colleges. Another possible explanation is that the nature of work environment in Jordanian colleges of physical education is almost identical. Although they differ in educational level, academic ranks and experience, faculty members have the same kind of work. They teach, conduct research, and serve the community.

6. Conclusions and Recommendations

Based on the empirical results, it is reasonable to conclude that we are some way off from implementing quality management principles within the physical education colleges in Jordan. However, physical education colleges still have the potential to improve the TQM application.

The top management of the physical education colleges should be committed to TQM and should focus on spreading the quality culture and make it responsibility of everyone. Establishing a quality unit can help spread the quality culture through training programs and workshops. Training is needed to enhance the awareness of TQM among the top management of physical education colleges, faculty members and administrative staff.

Although the findings of the current study are limited to Jordanian colleges of physical education and therefore not generalizable, this study still contributes to the higher education quality management debate. In addition, it supports and simulates further research on the implementation of TQM into the Jordanian higher education institutions. A replication of this study using larger sample sizes and greater geographical diversity would be obviously valuable in reexamining the validity of its findings.

The implementation of TQM usually takes three to five years to permeate through the organization and fully take effect (McMillan, 1998); therefore, a set of longitudinal studies would be very helpful in studying the time dimension of TQM implementation. Finally, the principles of TQM should be re-examined to determine if there are aspects of TQM that do not go with the academic and administrative areas of physical education colleges.

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