

THE ROLE OF KNOWLEDGE MANAGEMENT IN APPLYING TOTAL QUALITY MANAGEMENT: THE CASE OF SAUDI ARABIAN UNIVERSITIES

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ABSTRACT

The purpose of this study is to investigate the impact of knowledge management (organizational structure, organizational culture, leadership role, and information technology) in the applying total quality management in Saudi Arabia universities. Simple random sample was drawn from the population of this study, which include all the universities in Mecca area. The results show that there is a significant impact for knowledge management (KM) factors in applying total quality management (TQM). Also, the universities do not provide updated technology means and appropriate self-learning within the university. The study recommends that the universities should concern with employing the knowledge management in applying total quality management, and by the adoption of the top management of universities to apply knowledge management as an input to develop and improve individual and organizational performance.

Keywords: Knowledge Management (KM), Knowledge Management Factors, Total Quality Management (TQM)

INTRODUCTION

Saudi Arabia universities are seeking to apply total quality management (TQM) in order to survive and compete through the development of management processes and the improvement of quality performance, in order to save time and effort and to reduce the cost of operations, which help them achieve their practical and scientific goals. They also seek to apply knowledge management (KM), as it is the mean through which they can extract the information stored in the human mind or in computers. Moreover, Saudi Arabia universities aim at exploiting the skills and experience of the organization members through teamwork, and the role of leadership in explaining the vision to employees as exemplary model for them. In addition, educational institutions aim at providing the right information at the right time, and activating communications traffic in the institution, to achieve the objectives of the institution and the competitive advantage and thereby ensure the survival and the existence in completion to support and improve decision-making process.

In Saudi Arabia, as in other world countries, the competition have not been confined to the traditional narrow standard, but exceeded it by the entering of the international organizations to compete in the local market. Therefore, the quality of services provided in educational institutions is one of the most important factors affecting the competitiveness and sustainability level.

According to Himmoud (2010), globalization and technological knowledge revolution produced, at the beginning of this century, the emergence of a set of concepts and entrances in the field of public administration. Such as total quality management and knowledge management, which lies in the development of knowledge and skills gained in the hands of employees in a timely and easy as possible to take advantage of them in getting the highest levels of achievement. [7]

The knowledge and quality concepts have become the engine that drives the competitiveness at the present time. The knowledge management constitutes an important intellectual development with a great value that cares about employees who engaged in cognitive activities and those with distinct competencies and capabilities who works in mentally in the organization. [6]

The application of knowledge management requires the availability of a range of elements, such as the prevailing organizational culture to welcome the change, and the organizational structure to be appropriate for the knowledge management so that lead to more autonomy in decision-making and helps teamwork. The organizational culture must be able to include many aspects of knowledge management as well as the leadership to encourage the adoption of knowledge management.

Based on finding more efficiency and innovation in a changing world, the total quality management represents an exemplary model for the education sector if properly applied to ensure the productivity and reduce costs. In line with this proposal to follow the new trend in the field of management, this study attempts to shed light on the modern concept of management because of its importance and sensitive role in the education sector to be a starting point in other organizations; in order to form, over time, points of mutual influence that include all organizations. The research problem is represented in the notion that this modern concept is not used optimally in the education sector in Saudi Arabia.

LITERATURE REVIEW

Total Quality Management (TQM) Concept

The concept of total quality management (TQM) is considered among the most intellectual and philosophical concepts that captured the broad attention by researchers and administrators who deal in particular in the development of production and service performance in various humanitarian organizations. According to the diversity perceptions of different thinking and backgrounds of researchers and writers, there were many definitions for total quality management (TQM).

Zikmund defined (TQM) as an organization-wide effort, which includes all employees, suppliers and customers to try to have a continuous improvement of products and services' quality to meet the customer's expectations. [14]

Jablonski defined (TQM) a collaborative form of business performance depends on the joint capacity for both management and employees in order to improve the quality and increase the productivity on an ongoing basis through the working groups. [8]

From the researcher viewpoint, the total quality management (TQM) means the continuous process of development to the administrative operations by raising the performance and the level of production. It is also the excellence in service and the absence of defects in order to save time and effort, to reduce costs, and to raise the quality level proportional to consumer or the customer's desires.

TQM has begun to have the interest of researchers who primarily focused on the study of the effectiveness of TQM in achieving the goal that to reduce the administrative costs and improve the performance to get the customer satisfaction. Since the beginning of the eighties of this century, researchers have begun conducted studies in different environments in order to identify the impact of the application of total quality management on the performance of organizations that actually apply. Most of these studies have found that the application of

total quality management has a positive impact on the performance of the organization that applies.

It is also known that the TQM, as a strategy for transformation or organizational change, is a way to improve the administrative process that aims ultimately to achieve the quality and increase the productivity without any new resources. This is based on the theory that the more involvement of employees in identifying organizational goals are, the greater their commitment towards these goals will be.

TQM encourages the commitment and building of team spirit, and achieving better quality results by giving incentives to increase the success. TQM is based on statistical methods in quality control in order to meet customer needs, and by a constant work in the organization horizontally and vertically to improve the internal and external operations.

Aqhili(2001) concluded that the primary objective of total quality management is customer satisfaction, by meeting the requirements and needs, and make this as a major concern to everyone who works in the organization. Hence, we can say that the TQM seeks to provide a product or service according to the customer's requirements in terms of quality, cost, time. In addition, adapt to technical, economic and social variables, in order to serve the achievement of the required quality and the excellence in performance and service through the continued development and improvement for the product or service. [2]

Universities that wish to apply TQM within its departments have to meet several requirements. From the most important requirements are the following:

1. Administrators' conviction with the concept of quality and commitment to apply it in an educational institution.
2. Disseminating organizational culture of quality among staff in the institution.
3. Continuing education and training for all individuals in the organization.
4. Coordinating and activating the communication between the different departments and sections.
5. The participation of all individuals in improving the quality.

Knowledge Management (KM) Concept

Knowledge management field has recently emerged to represent a radical shift in the nature of the work of business organization. This came in their efforts to achieve knowledge creation, exchange and provided at the appropriate time and place by increasing the use of information technology and connecting people with each other in the electronic networks in order to help them exchange ideas, information and expertise in faster and easier ever before. The prominent and the great interest with the knowledge and the emergence of the term Knowledge Management (KM) during the eighties was not a shock and a surprise to the organizations. Despite the fact that a lot of organizations and departments were not paying the required attention to this topic in a clear and explicit manner, yet the issue of knowledge management (KM) has undergone a natural evolution gradually until it reached its current form, which is not yet complete.

knowledge Management (KM) is the systemic complementary process to coordinate the activities of the organization in light of the acquisition, creation, and saving of knowledge, in addition to the participation in its development and replication by individuals and groups seeking behind the achievement of key organizational goals. These goals are range of activities and processes that help organizations to generate, obtain, select, use, organize, and

disseminate knowledge, and then work on transfer knowledge (including the data, information, experiences, attitudes, and abilities) into products (goods and services). [10]

Al-Ali (2006) identified knowledge management (KM) as the process by which the collection and use of accumulated experience from anywhere in the business, whether in the documents, data bases, or in the minds of employees are used to add value to the organization through innovation, application, and integration of knowledge from unprecedented ways". [1]

Saudi Arabia universities that wish to apply knowledge management (KM) within its departments have to meet several requirements, including:

1. **Organizational structure:** by creating a suitable environment for the application of knowledge management. In this context, certain forms of organizational structures may appear more appropriate including the Horizontal Structure, Lattice Structure, and Inverted Structures that is considered to the customer as the most important person, and become a center point with the head of the organization points. It is also consider the transformation from the individual work patterns to teamwork, the transition from centralized systems to the decentralized systems, and transformation the hierarchical multi-level structure to the horizontal one. [4]

2. **Organizational Culture:** Is represented in the values and beliefs that drive human behavior of the personnel involved in the organization. For instance, the way individuals deal with each other, how to interpret the actions of others, and as one supporting factors to the essential core of knowledge management in the organization. That is to say, cultural values must be appropriate and compatible with the principle of continuing to learn, and should be encouraged to work as one team, share ideas, help others, and represent a framework that directs the behavior of individuals while working. Such as the adoption of the organization to certain valuable as submission to laws and regulations, customer care, and improve effectiveness and efficiency. The organization that is driven by a culture of knowledge should be a participatory culture in order to enhance information flow freely/. [5]

3. **Leadership:** the leader must be characterized by essential attributes such as the ability to explain the vision of others and be a role model to them. It is an interactive process occurs between the personality of the leader and his personnel, and brings them together within a common goal they are trying to achieve. [9] The features of leadership are highlighted in its ability to influence the personnel without relying on legal powers, but rather through persuasion and follow the motivational methods that contribute to the achievement of the common objectives for all. [3] The leader must also have the ability to link this vision in more than substance, work to build a shared vision with others, hear and assess their reaction to his vision, and re-developed it whenever is necessary. The participative leadership theories and the theory of self-leadership are the most suitable and in line with required style of leadership for knowledge management. [11]

4. **Information Technology:** through providing appropriate information in a timely manner, supporting decision-making process, and improving and revitalizing communications traffic of the organization. IT is interested in innovative, modern, and advanced technological methods in processing of information and knowledge from computers and a wide scale network of information. In order to get, store, and re-use the information to develop, update, and access to targets at high speed and high performance in a sophisticated world of enormous competition. [12] Modern information technology offers a lot of possibilities for knowledge management, such as information network, the internal network, the browser

software, data stores, and refinery data, which facilitates and speeds the knowledge management in the organizations. [13]

RESEARCH METHODOLOGY

The study relied on data collected using a survey tool (questionnaire) that has been applied to achieve the purposes of the study, and to examine the hypotheses of the study as the following:

The main hypothesis is: there is no statistically significant impact of knowledge management in the organization on the requirements of total quality management application.

Population and Sample of the Study

The researcher constructed a questionnaire distributed to the population of the study, which is Saudi Arabia universities. The choice of 180 employees from three universities, (King Abdul Aziz University, the University of Jeddah, Umm Al Qura University) as a sample of the study. These universities hold a certificate to apply the standard of quality management (ISO 9001) so the sample of the study has been chosen from them.

The data analyzed by statistical packages for social science software SPSS where 180 questionnaire have been distributed to the respondents in the study sample, 165 have been returned, and 18 have been ruled out as their answers are incomplete. This means that the total questionnaires that has been under study are (147) questionnaires.

Study Instrument Validity and Reliability

Then, the researcher extracted the internal consistency coefficient 92% by using the alpha Cronbach equation in order to confirm the validity of the questionnaire. The questionnaire contains set of questions related to the measurement of the impact of knowledge management application on the requirements of total quality management application. By dividing, the organization's performance to several directions represented in the conviction of those responsible to quality, dissemination of organizational culture pertaining to quality among staff, the education and training for individuals, activating the communication between departments and divisions, and finally the participation of all individuals in improving quality.

Results Analysis

The results in the table Number (1) show that universities in Saudi Arabia apply KM (mean :3.68) and TQM (mean : 3.94) in their activities.

Table 1

	Mean	Standard Deviation
KM	3.68	0.5658
TQM	3.94	0.6472

Hypothesis Testing

The results in the table number (2) show that there is significant positive correlation between KM and TQM ($R = 0.63$) also there is significant impact for KM in TQM ($R^2 = 0.397$).

Table 2

	TQM		
	R	R ²	Sig.
KM	0.63	0.397	0.00

Based on the results in table (2) the null hypothesis was rejected and the alternative hypothesis is accepted, where the level of statistical significance value is less than allowable error that is specified value (0.05).

RESULTS

The researcher came to many of the theoretical and practical results. Among the most important results that universities provide classrooms equipped with all technologies, provides training programs for staff, and enjoy seeing the message clear and achievable goals. In contrast, the universities (study sample) do not provide modern technological means and appropriate self-learning within the university. The decisions are taken in a way that is non-participatory, the lack of excellence completions and judgment on the quality of graduates, and the lack of knowledge of university administration and faculty members of the importance of the application of (TQM).

CONCLUSION

Through research, it showed that among the bases of success of total quality management application in the organization is managing the factors of the knowledge management. The researcher recommends that the universities should concern about the implementation of (KM) and the application of (TQM) with more importance. And by the adoption of the senior management of universities to apply (KM) as an input to develop and improve individual and organizational performance, and working to increase its capacity for innovation and creativity to achieve (TQM). Moreover, establishing the concept of (KM) to university employees by holding training courses that explain to staff the importance of applying (KM). Also by creating administrative units which apply (KM) at universities belonging to the senior management, providing technical infrastructure environment necessary and appropriate for (KM), providing modern technological means for self-learning, making excellence competitions to judge the quality of graduates from universities, and making decisions within the universities in a participatory manner.

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