

Importance of Knowledge Management on Total Quality Management: A Review

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Abstract: This paper discusses the importance of knowledge management on total quality management (TQM). Effective use of knowledge in quality management increases the success of the efforts of quality improvement. Unless the defects in business are eliminated, the quality knowledge obtained will not be useful. In the event that there is no infrastructure processing the quality knowledge in a usable form, the feedback will get very difficult. Principally, the organizational processes ensuring the synergic combination of data and information tracking capacity of information technologies and innovative and developing capacities of the employees should be addressed within the scope of quality management. Knowledge transfer ensures continuous improvement in total quality management.

Key words: Knowledge management • Quality • Management • Knowledge transfer • Improvement

INTRODUCTION

In a dynamic economic and global environment the organization have to focus them on sustaining a competitive advantage in the industry. By achievement of sustained success the company can satisfy key driver of the company, this includes satisfaction of all interested parties such as customer and investor. Quality is the most important element when comes to satisfying customer. Most of the companies are not focusing to their product quality but they more concern to the cost and profit of their product. In short-term situation, the company will survive in the industry, but when comes to sustaining in the long run the firm must have a competitive advantages that will ensure the success of the company. Quality is one of the competitive advantages will lead to company survival. A strategy of high quality leads to a sustainable competitive advantage [1].

Company's enlargement and development are usually paralleled with company's competitive advantages sources and important information that can us as force to drive the company growth and performance also to achieve its goal and mission. By having a variety of resources that can be access by the company, information and knowledge can be assume as the most important and valuable element of the company. This is because the knowledge are conclude all activity and practices that been applied in that particular company such as operation routines, financial projection and

expectation and also include problem solving method, creative and complex processes that not easily be replicated. This can be strengthen as Lee and Sukoco [2] noted that most of organizations not only depend on the successful management of visible asset and natural resources but through monitoring, controlling and supervising of knowledge flow within the organization.

Although knowledge is a critical resource for the organization, Argote *et al.* [3] pointed that transporting knowledge within the organization has proven as slightly problematic challenge in practice. Knowledge cannot been easily taken or successfully shared among competitors. Similar to Esmi and Ennals [4] also stated that no mechanism or theory application for reusing, storing, generating and capturing knowledge within the competitors. According to Wang and Abdul-Rahman [5] stated that organization that gain poor record in the managing of its knowledge and information will results to large lost and cost of variety resources and damaging influence to quality.

From the literature analysis and expert opinion, strengthen that knowledge is one of the unique element of company resources that can be generated as competitive advantages through several step and processes that can enhance the performance of the firm. Knowledge management is a crucial element of generating and keeping the organization's core business in the industry. Nonetheless, knowledge management is not completely applied in the business world. In addition,

there are many new studies about management of company's knowledge and imperceptible blocks of companies. To the authors' knowledge, there are limited research on relationship between information administration and execution of the business organizations [4,6,7]. Hence, this paper surveys the ideas of learning administration and TQM.

Total Quality Management: Total quality management is extensively recognized as a management philosophy. Numerous arguments occur regarding the fundamentals proposed by different researchers and experts in relation to total quality management. These elements do not fully overlap and not all such essentials that compose the total quality management theoretical framework can be called total quality management without management factors being implemented in the organizations where they are based [8]. Total quality management emphasizes to continuous improvement process and practices within organizations to provide higher customer value and meet customer requirements. Helping includes organization operations concentrated on understanding, offering and reacting to clients through strategy concept. Meeting customer needs involves company operations focused on understanding, sharing and responding to customers through marketing concept. Firms receiving and actualizing the marketing strategy are said to show a business orientation and practices [1]. Total quality management is act as a guideline by providing sets of practices that highlights of maintaining quality but in the same time reduce all the unnecessarily cost and source through brainstorming, group discussion, team-based problem solving, benchmarking and also reengineering back the process that will lead to low performance of the companies production.

Wruck *et al.* [9] argue that effective implementation of TQM generally requires major changes in all three components of the organizational rules of the game, namely systems for allocating decision rights, performance measurement systems and reward and punishment systems. TQM enhances the profitability of companies when managers are evaluated by using performance evaluation systems that employ measures of the manufacturing process. Furthermore, Arawati *et al.* [10] identified four important elements of TQM practices namely supplier relations, benchmarking, quality measurement and continuous process improvement.

Organizations make a great effort to produce high-qualified products for their customers. The department of quality management at the enterprises particularly makes this effort as the department of quality management carries out quality control, direction, organization and

planning in the production system. In addition, one of the responsibilities of this department is to determine whether or not the customers are sufficiently satisfied according to the opinions regarding the general targets of the organization [11].

Knowledge Management: In global trends today, knowledge already been seen as competitive advantages and become a crucial element of firms. According to Nonaka and Takeuchi [12] knowledge is a vibrant human process of vindicating individual belief to the truth. Pathirage *et al.* [13] noted that knowledge can be categorized into practical, theoretical, personal, shared and public, internal and external, foreground and background, hard and soft. Nonetheless, tacit is main classification of knowledge.

Nowadays, only with new product the organization can sustain their competitive position which is evident through the increasing revenues and profits [14]. Organization can maximize the ability to meet needs, generates solutions and efficiencies that will provide their business with competitive advantage through knowledge sharing. On the other hand, Miron *et al* [15] stated that innovation is crucial issue for organization seeking to find their place in the market and ensuring long-term survival. At the same time, the development of innovative products and services has become important in order to achieve and maintain competitiveness in global markets [15]. Therefore, the important of innovation is increasing in organization. The management starts to realize that innovation has created advantages and produced dramatic shifts in competitive advantage for a long term. Besides that, the result of innovation will create revenue for the organization.

According to Smith [16] tacit knowledge is information that cannot be found in printed and non-printed material. Tacit knowledge is technical and it is combination of mental models, beliefs, values, perceptions, insights and assumptions. In other word, individuals gain tacit knowledge through informal learning at field. Opposite to tacit knowledge, explicit knowledge is formal, codify and easy to communicate.

An important step to implementation of knowledge is to associate knowledge management to the business targets of the organization. The way of doing is to develop a high level of knowledge management framework pointing out the importance of knowledge in the organization. Creation of a common vision regarding knowledge and shared values within the organization will be effective in success of knowledge management process. Creation of knowledge sharing culture depends on respect within the team, mutual trust and positive

individual and group relations. Identification and establishment of new roles and responsibilities to implement knowledge to the process of the organization is of importance in the implementations process [17].

Knowledge management is related to obtaining, sharing, developing and using knowledge, which creates a value for the organization. Some individual conditions tacit within the company (such as experiences, forecast, ideas and practices) are knowledge hard to formulate and transmit. Other types of knowledge are those easy to access and transmit within the company (database, documents). Knowledge management process is conducted by transforming organization knowledge into the other type of knowledge [18].

By implementing knowledge management most of the companies are assist to create, share and use knowledge more or organized. Knowledge management is to create value, increase productivity and obtain competitor advantages by identification, optimization and control of intellectual assets. Other than that, knowledge management also is fusion of several element such as identification and implementing organizational source to generate competitive advantages and opportunities to improve the performance of the organization. According to Yang [18] noted that to survive and sustain in the industry companies need and knowledge that can transform the information into use knowledge.

Alrawi and Elkhatib [19] had developed a model for knowledge management that shows the differences between knowledge creation, knowledge sharing and knowledge acquisition. The model shows that the early stage of the knowledge management cycle involves the creation, sharing and acquisition of new knowledge to

replace the existing knowledge with new content that can give impact to both internal and external environments. According to Alrawi and Elkhatib [19], creating new knowledge is depend on the culture and the management behavior that regards knowledge as an enabler and contributor to develop long term strategies. Moreover, organization will practice the knowledge management initiatives by embedding, reusing knowledge and also creating dynamic capabilities [19]. After the organization practices the knowledge management initiatives, the utilization will take place. The utilization process can be done through elaboration and thoroughness in order to facilitate innovation, collective learning, individual learning and problem solving (refer Figure 1).

Knowledge Management and TQM: Effective use of knowledge in quality management increases the success of the efforts of quality improvement [20]. Unless the defects in business are eliminated the quality knowledge obtained will not be useful. In the event that there is no infrastructure processing the quality knowledge in a usable form, the feedback will get very difficult. Principally, the organizational processes ensuring the synergic combination of data and information tracking capacity of information technologies and innovative and developing capacities of the employees should be addressed within the scope of quality management [21]. Knowledge transfer ensures continuous improvement in total quality management. There are procedures and standards showing how the operations conducted at the enterprises implementing Total Quality Management. In these procedures, tacit knowledge in the processes has been transformed into explicit knowledge.

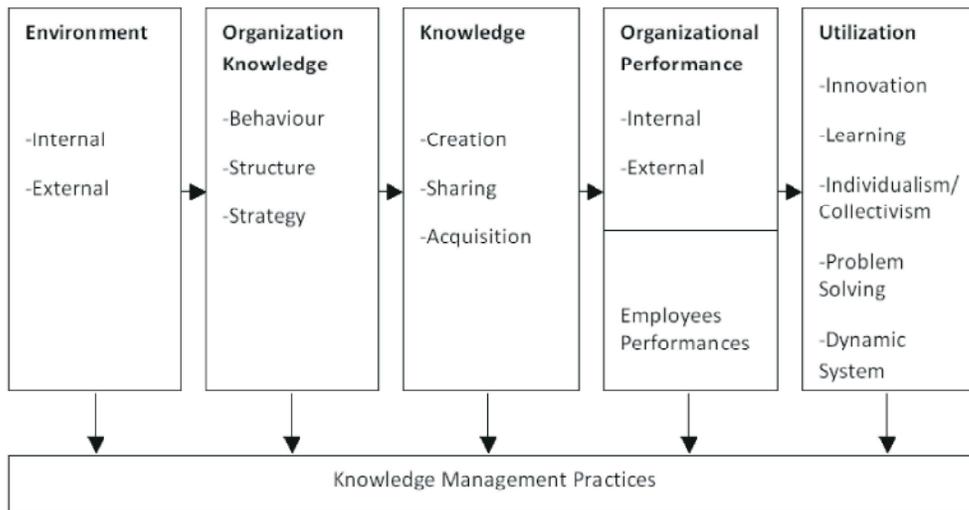


Fig. 1: Knowledge Management Practices Model (Alrawi and Elkhatib, 2009)

Tacit knowledge in the processes of Total Quality Management has not been transformed into explicit knowledge completely. Portability of this knowledge, which is different from ISO 9000 and/or other quality assurance standards, within the enterprise is much easier [22].

During the organization change, the roles of quality management and total quality management are very similar. As Yang [18] argues, knowledge and skills of the employees are benefited more when the employees are strengthened in the quality improvement attempts. As a result, the employees have the opportunity to spread their knowledge within the organization more easily. It indicates that quality management attempts have a direct positive effect on total quality management. Yang [18] emphasizes that there is a strong relation between continuous improvement and reinforcement of labour force. According to the explanations of Synder and Cumming, the organizations are required to obtain information from their past experiences and prevent their mistakes by using this information effectively within the organization in order to adapt to the continuous changes in the markets [23].

The organizational routines seem a significant part of the process of information creation. These routines do not only form a basis for stability but also can be used as a source of change and competitive advantage. The organizational routines can be described implementation of a program or standard to the procedures or scenarios. The main idea in the process management systems is about the change of routines. Thus, improvement is ensured. The main target in the approach of total quality management process is about change. More information can be created as a result of an effective process management. Quality improvements should be conducted as teamwork to include all the departments in the organization [24].

Total quality management changes the culture of the company towards quality management culture. It is very important to realize the work-related activities jointly within this culture. The basis idea underlying total quality management and knowledge transfer is to create a trustworthy atmosphere in the organization by generating social control at a sufficient level [22]. It is necessary to establish an effective structure where knowledge transfer is realized within the organization. The basic characteristics, which should be available in the organization culture to carry out an effective organizational learning, can be hierarchically summarized as continuous learning, explicit and accurate knowledge,

transparency, democratic behaviour and responsibility. Once these elements are provided, knowledge transfer between different groups in the organization will get easier.

CONCLUSION

Knowledge management (KM) comprises a range of strategies and practices used in an organization to identify, create, represent, distribute and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organizations as processes or practices. KM focuses on processes such as acquiring, creating and sharing knowledge and the cultural and technical foundations that support them. These practices are pivotal on the success of TQM implementation.

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