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Рецензент статті  
д.т.н., д.е.н., проф. Рамазанов С.К.

Стаття рекомендована до  
публікації 17.09.2019 р.

УДК 005.8

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### TOTAL QUALITY MANAGEMENT AS A POWERFUL PROJECT QUALITY MANAGEMENT TOOL

The study aims to investigate the characters of Total Quality Management (TQM) as an aspect of main project management tools for project quality management. The significance meaning presented in this paper intends to put the conception of TQM into project management point of view. It is an attempt to provide a useful way to understand an essential project management tool, to explore the combination between project management and TQM in the area of project quality management. The paper also, identifies project management as a controlling stage of process in a project. Fig. 6, ref. 13.

**Key words:** project management, project quality management, total quality management TQM, tqm implementation, managerial technique, managerial tool

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**Statement of the problem in general form.** The activity of project management is one of the most important in the kind, and at the mean time one of the most problematic in controlling project tasks. The condition of adopting quality management requirements, and standards, project managers must implement its reform, transition to a project-oriented type of management, which requires its in-depth analysis, development and application of innovative tools of projects for project quality management such as total quality management TQM.

**Analysis of research and publications and highlighting previously unresolved parts of a common problem.** These days manufacturing enterprises are challenging increasing competition in business environment. Various managerial tools have been introduced such as: Just-in-time (JIT), Material Requirement Planning (MRP), Enterprise Resource Planning (ERP), and Total Quality Management (TQM). TQM supposed to be one of the most powerful tool in present days [3].

Project management, as a specialised management approach including processes of planning, monitoring and controlling any project such as manufacturing type. [9]. Project management process success are based on three main elements; they are Time, Cost, and Quality[8]. Essentially, in the dimension of project process success as shown in figure1; reveals that quality is a key part aspect of any effective project operation. Fig. 1, displays the main elements of successfully project execution process.

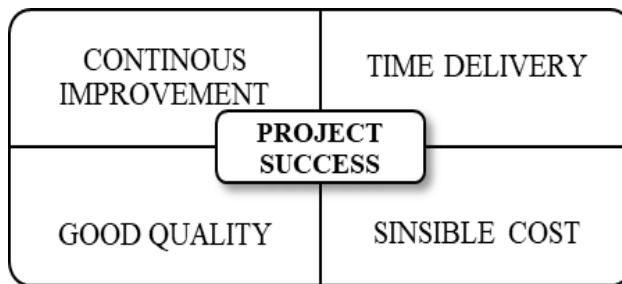


Fig. 1. Dimensions of project success

Source: made by author [11]

The diagram has revealed that the aspect of quality is a stone corner in such process of project success. Clearly, TQM and PM play a crucial roles to conceptual management that applied in enterprises and companies for achieving continuous improvement and organisational performance success [12].

**The purpose of the article.** The purpose of this article is to suggest an analytical framework enfolding the principal relationships between the total quality management TQM aspects of project quality management and the project management itself and to determine existing models of project management with the integration of quality management processes to increase their effectiveness through the implementation of a project-located approach

**Statement of the main research material.** Any project framework supposed to include implementation of quality management systems. TQM main aspects such as: integration, customer-supplier focus, error prevention, employee improvement, and leadership; May form an outstanding base for project management development if integration into organization practices are well applied. The attempt to provide a useful concept developments in the subject of PM, to explore linkages between successful management of projects and TQM needs an establishment of TQM practice basis to guarantee continuous controlling and evaluating project objectives during project life cycle to meet stakeholder's expectations. [11]. Fig. 2, explains the integration relationship that fit and tolerance quality practices into project management.

To conclude, total quality management TQM has been adopted as a modern advanced managerial principle that help and support project strategies within organizational process to ensure quality requirements, thus effectively managing projects.

Organizational activities should be a primary objective within the system of quality management [10]. The quality management system is the process of fulfilling the project requirements. These managerial processes contain main functions of the top management to define quality policy, objectives, and standards for quality elements implementation such as quality planning, assurance, control and improvement within the quality system. Quality planning indicates quality specifications and tools for the project. The quality plan can be enclosed inside project plan.

Where project processes must be ensured. In this case project management has a view of implementing quality management tools and techniques such as Quality Function Deployment and Cause-Effect diagrams. Such tools and techniques can help to understand the ongoing state of process identify the proper approach within all sectors of management.

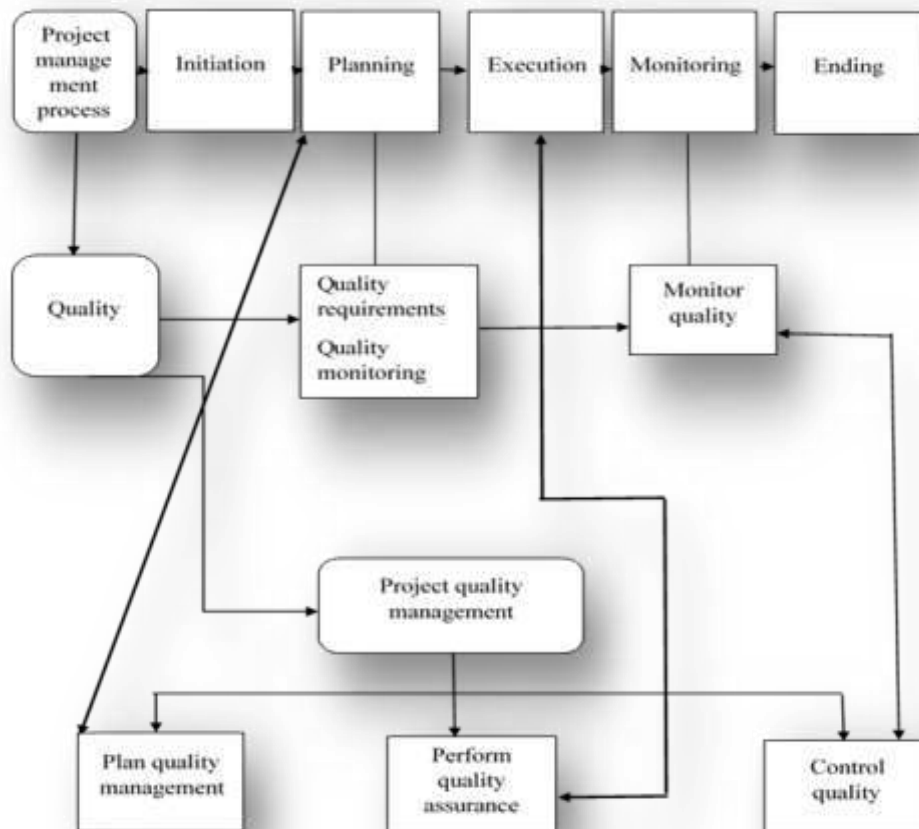


Fig. 2. Quality Management “QM” & Project Management “PM” Combination  
 Source: compiled by author [7, 8]

Another element is the quality assurance which include activities those leading to providing all necessary standards of quality for the project. An essential inspection operation called the quality audits; that concerned to the activities of quality management will take place. Inspection is the basic technique of quality control also. This process of quality control is a technical method to test and check the validity of the products and the management outputs with the standard limits. According to ISO standards, the general rules of quality management systems basic ground in initiating and realizing processes of project management may include: Customer focus, leadership, people involvement, process management, system management, education and training, fact based management, links with suppliers. [6]  
 TQM defined as a management philosophy that involve all company activities.

Most of the famous scholars such as Deming, Juran, and Crosby, consider the comprehensive meaning where to achieve quality in all aspects that involve human resources (ex. Leadership, employee, customer, and supplier...etc.) [4]. ‘TQM focuses on the quality of management system, not the management of quality’ [13]. The

philosophy based on adopting quality aspects which should cover all areas of the organization [5].

The classical development of total quality management approach from quality control through basic quality management system in result of quality certificates is cleared in fig. 3.



Fig. 3. Development of quality management concept

Source: compiled (assembled) by author [3]

The author introduce a suggestion called 'Five phases of quality in organization' [2], represented in Figure 4.

The above fig. 4, presents what so called the quality life cycle including several levels of actions and reactions to each phase leading to ultimate implementation of quality management system in the organisation.

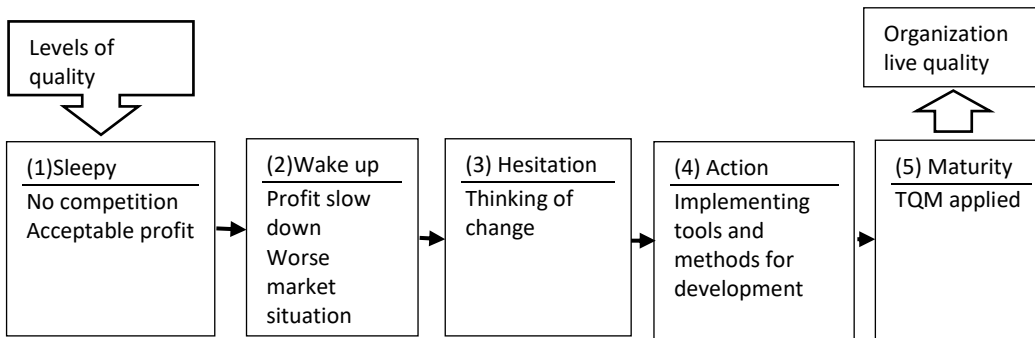


Fig. 4. phases of quality in organization

Source: developed by author [2]

A basic elements of Stages of TQM implementation would be shown in form of two forms of drawn models as below in fig. 5 and 6.

These levels toward TQM implementation; Inspection: measure the qualities of an item and contrast them with its specifications, Quality Control: monitoring process performed with an input circle to the production line, Quality Assurance: a set of implemented procedures in quality which are structured entirely to ensure that no zero-defect, and Total Quality Management: concerned on quality and dependent on the support of each one to accomplish consumer satisfaction and organisational improvement. Furthermore, the process of TQM implementation have to pass through another steps of implementation stages such as training, planning, evaluation, implementation, diversification tell TQM destination. Next fig. 6, explore these stages with general explanations.

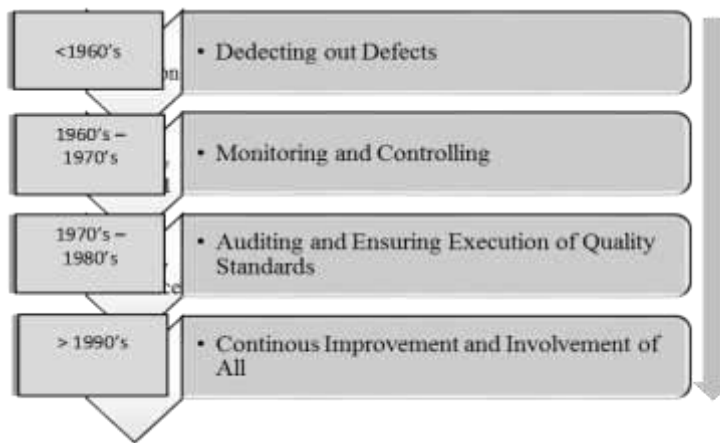


Fig. 5. Evaluation of Quality Concept  
Source: developed by author [2]

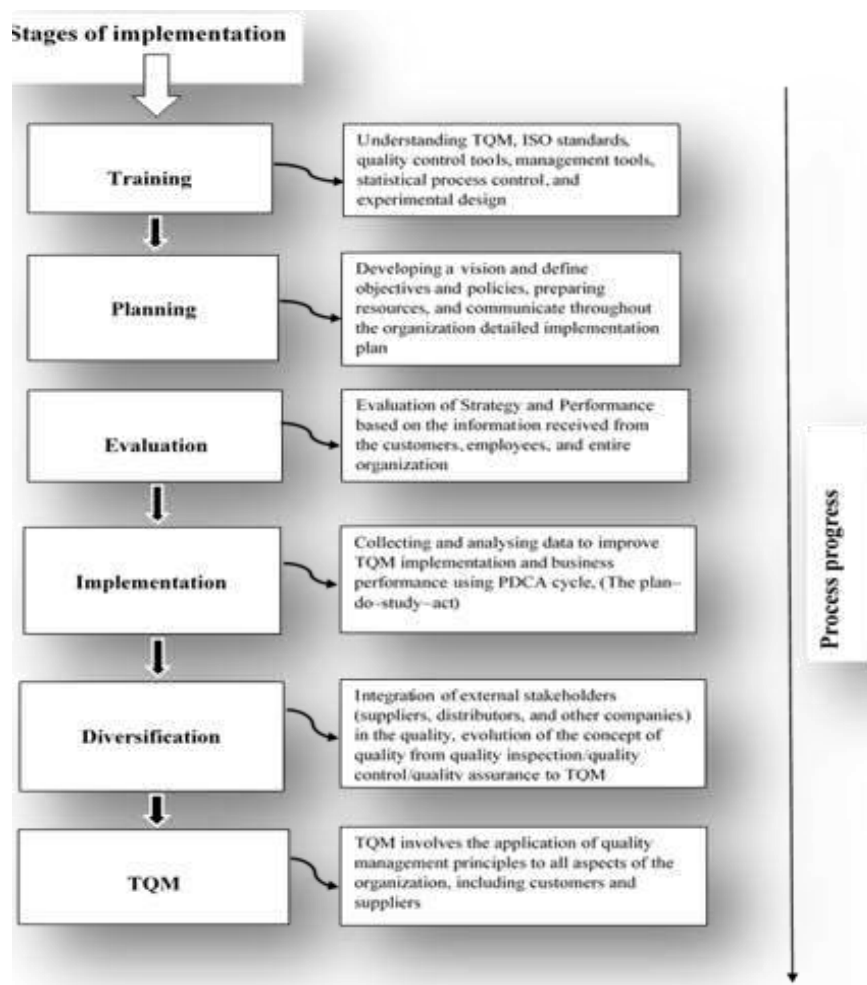


Fig. 6. Stages of TQM implementation  
Source: developed by author [2]

The primary requirements of these stages are to decide the key steps to TQM execution in which the majority of the above points are one of the crucial necessities to fruitful usage of TQM.

**Conclusion.** The present paper looked to analyse the effect of TQM practices on quality project management. Project Management offers different selections of frameworks that help administrators with different techniques and instruments to be utilized amid venture controlling and execution. Theoretical establishments showed above expected to describe terms of an organization methodology and an organization gadget in the endeavour of the task the project management philosophy. The need to develop an explanation behind certifiable TQM practice where all methodology and tries drew in with the endeavour are associated and managed the fundamental purpose of ensuring that the goals of the assignment are always checked for clearness and authenticity all through the endeavour life cycle. Hypothetical establishments introduced above planned to characterize terms of an administration method and an administration device in the venture the board approach. Nonetheless, this hole in ends needs further research to be demonstrated [1].

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