

## QM PRACTICES IN PROJECT MANAGEMENT

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### Abstract

The tools and techniques of TQM have helped organizations to move towards the path of continuous improvement. Different functions of the organization have benefited through TQM activities. Project Management is no exception. A project is generally a temporary endeavour. Therefore, the tools of TQM have not been fully exploited in Project Management due to short term perspective.

While each project management system may make use of hundreds of procedures and manuals and thousands of standards, however, there is not much empirical research that demonstrates a link between quality management practice and better project management performance. The paper aims to discuss the experience gained through real-life mega-projects to identify different activities of the project which could be benefited through TQM.

### 1. Contribution of quality to the Project Management performance

Quality is now universally accepted as a major concern for every organization. Although over the past three decades, numerous quality management theories, philosophies, practices and tools have been designed, it has only been in recent times that information regarding the extent and nature of their contribution to organizational performance has come into picture. Saraph *et al.* (1989) developed key factors of quality management and operating measures to estimate them. Furthermore, Flynn *et al.* (1994) provided a detailed procedure for conducting reliability and validity analysis of the developed measure.

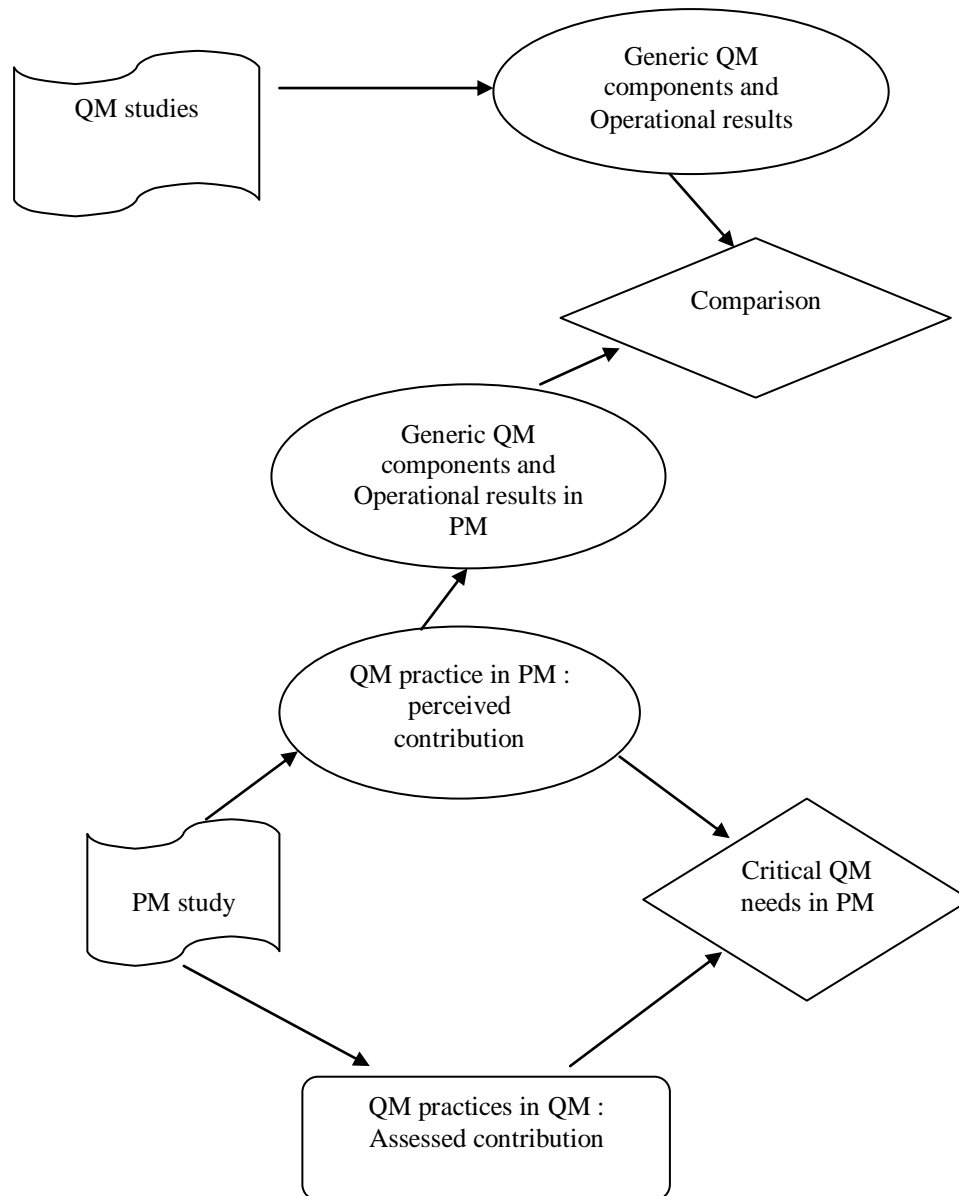
However, there is not much empirical research that demonstrates a link between quality management practice and better project management performance. We synthesize information on project management (PM) tools/ practices from the data collected from various surveys, with theories and findings on quality management (QM) components and their operational results, from empirical studies.

### 2. Link between QM practices and PM performance

The specific findings of the survey point out to certain critical quality needs of the project management process as identified by this study:

- Improvement of “process control” (control of trends and deviations) and “process control analysis” is likely to improve process stability (extent and frequency of plan changes)
- Improvement of training, whose currently reported usage was relatively not so high, is likely to improve all outcome oriented variables.
- The importance of the human resources development (here training), on quality oriented operational results.

- The influence of management commitment (here quality management), on the practice of training and customer focus.
- No direct effect of management commitment (leadership) on operational results



**Figure : 1 (Overview of the research approach)**

From a methodological perspective, the analysis reported here suggests that most of the QM components in the manufacturing and other areas such as project management or logistics are equivalent, at least from a generic viewpoint. Accordingly, similar indicators can be used to describe them, regardless of the specific area of the empirical research. This is particularly true for “supplier management”, “benchmarking” and “training”, which are perceived by QM researchers as universal quality oriented practices of major importance in any application area and deserve to be investigated accordingly. Two exceptions were found “information” and “operational results”. These have to be described by indicators specific to the application area.

### 3. Integrating QM and PM

Quality management (QM) has been the purview of operations management for repetitive processes, where project management (PM) is applied to temporary endeavors to create unique products or services. Any convergence of thought between PM and QM has been focused on using PM to implement a total quality management culture or on assuring the quality of the project outcomes and deliverables. However, for project-based organizations, where the project is the basic form of organization for its operation, PM is of itself an ongoing, repetitive operation to which at least some of the QM practices could apply. By considering both disciplines in terms of the fundamental principles of customer focus, teamwork and continuous improvement, it can be shown that by instituting a formal project management methodology and instituting basic PM techniques, project-based organizations are fulfilling the principles of quality.

QM has been an area of operations management that has been most successful here repetitive processes dominate. In contrast, PM is applied to temporary endeavors to create unique products or services (Project Management Institute, 1996). Any convergence of thought between PM and QM has been focused on using PM to implement a total quality management culture (cf. Gupta and Graham, 1997; Milosevic and Daim, 1997; Sink, 1998), or on assuring the quality of the project outcomes and deliverables (cf. Barkley and Saylor, 1994; Ryser, 1996; Shenhar et al., 1997).

Even though the purpose, time-line and deliverables vary from project to project, projects generally follow the same life cycle, particularly within an application area (e.g. construction, product development and military procurement). Often, organizations provide template project plans as starting points for project teams. In this manner, a project management methodology may be viewed as an operational process. As such the vision of QM principles being utilized in PM situations becomes relevant and advantageous. To manifest this view, three principles of customer focus, teamwork and continuous improvement have been considered as “conceptual glasses” by Orwig and Orwig (1998).

#### 3.1 Customer Focus

Dean and Bowen (1994) suggest that customer satisfaction is the crucial requirement for long-term organizational success and that achieving consistent satisfaction requires concentration on customers' needs from the entire organization. This sentiment is echoed by Grant et al. (1994, p. 31), who state that QM “view(s) long-term profitability as an outcome of serving customers rather than a driving force”. In his theoretical framework, Hardie (1998) discloses that whether quality is defined as “conformance to requirements” or “superiority to competitors”, good quality will have a positive impact on customer satisfaction, which should lead to increased market share. Successful organizations give high priority in understanding and responding to current and future customer needs. Bossert (1990) opined that quality function deployment (QFD) helps focusing on customer requirements, teamwork and communication, thereby improving product quality. Burchill and Shen (1995) and Shiba *et al.* (1993) stated that the goal of QFD is to move from the invisible or vague feelings of the customers to clear, grounded customer requirements that serve real customer needs. Many organizations have the ability to “lock in” on customer specifications, focusing on the customers' project requirements rather than determining customers' needs and expectations (Barkley and Saylor, 1994). If customer satisfaction is defined as a ratio of expectations to deliverables, then it becomes obvious that project teams must address both areas.

### 3.2 Team Work

The emphasis on teamwork among unlikely collaborators has profoundly impacted operations management. According to Dean and Bowen (1994) teamwork is the collaboration between managers and non-managers, between functions and between customers and suppliers. The first type of teamwork is based on the familiar assumption that non-managerial employees can make important contributions to organizations when they have the power and necessary preparation. Teamwork among functions is based on the notion that organizations as systems cannot be effective if subunits emphasize their own outcomes over those of others. The principle of teamwork with customers and suppliers is based on the perceived benefits (e.g. synergy, loyalty) of partnerships. These types of collaboration are common in project-based organizations. Cleland (1994, p. 73) suggests that a project consists of a combination of organizational resources pulled together on an ad hoc basis and serves to "bring a wide range of experiences and viewpoints into focus [as well as] promote participative and professional management".

Project organizational units are often described as "teams", drawing team members from various areas within and outside of the organization. Creating a team and having teamwork (i.e. team building) are not necessarily synonymous, however. Anderson et al. (2005) suggest that the creation of a cooperative and learning organization facilitates the implementation of process management practices, which when implemented, support customer satisfaction and organizational survival through continuous improvement of practices, products and services. The extent to which a project manager fosters teamwork, then, impacts the achievement of customer satisfaction and continuous improvement. The literature on team building is overwhelming. In the context of a project, specific PM techniques allow a project manager to lay the groundwork for productive collaboration, by developing a common view of the project and engendering accountability for the work to be done.

Shores (1990) provided a framework that incorporates and inter relates participative management, quality function deployment (QFD), statistical quality control and management commitment. Seng (1989) described the importance of understanding philosophies, methods and techniques in holistic sense for effective implementation of improvement plans in complex environment. Kenneth and Gary (1991) demonstrated based on example how training improves productivity, product quality and competitive position. Karl and Motiska (1962) emphasized that quality improvement requires team effort and in excellent organizations teams are an integral part of an organization's decision-making process. Kinlaw (1992) explained a team-based approach to improve the quality at every level recriminations. These debriefing assessments may trigger action items for PM methodology improvements.

Hauser and Clausing (2008) have observed in their study the issues of quality and customer attributes as the most important factors to be taken care of in any quality improvement programmes. Harrington (1987) combined total business management, total cost management, total productivity management, total quality management and total technology management into a methodology called Business Process Improvement (BPI). The rationale behind is to eliminate errors, minimize delays, maximize use of assets, and promote understanding, to gain competitive advantage. Harrington identified five phases for BPI and inter linked them, as given in Figure 2.2

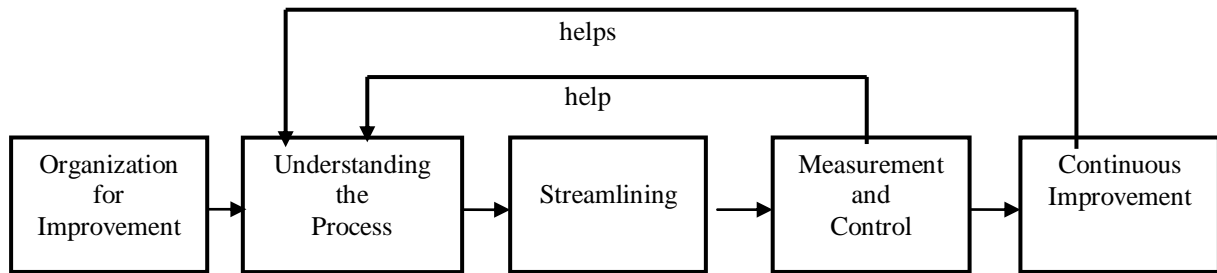


Figure 2: Five Phases of Business Process Improvement

**4. Conclusion:** It is considered prudent to have in place a project management system with a robust quality management system entwined with it right from the stage a project is initially conceptualized. This may prove to be of great value both for the project management team and the project owner as this will generate a level of confidence in them. Generally, what needs to be checked are all project deliverables right from the stage of project feasibility report through project closure report. Each important deliverable from a project needs to have an in-built quality checks. Thus, a requirement document or project specific quality plan is the minimum requirement. A weekly, fortnightly or monthly progress report may alone not suffice the requirement.

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