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## Organizational Culture, TQM, and Business Process Reengineering: An Empirical Comparison

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### Introduction and total quality management

Organizational culture has long been acknowledged to be important to the success of an organization. It is increasingly evident that top management must have an explicit focus on the development and maintenance of their organization's culture. Total quality management (TQM) can create a culture and it is that aspect of TQM that managers must focus on. The purpose of this paper is to explore organizational culture and TQM. We evaluate the extent to which TQM tends to affect the presence of specific cultural elements by comparing the impacts on an organization's culture of TQM contrasted with an alternative management initiative, reengineering. The resulting cultures are related to the probability of success with efforts to improve processes. The conclusion is that improvement success is more likely where the cultural elements of a customer focus, continuous improvement and employee involvement are stronger, and that those elements are likely to be stronger where TQM is practiced.

There have been a variety of definitions of TQM put forth. The Criteria for the Baldrige National Quality Program provide a definition and serve as the framework for this study. The Criteria describe a quality organization as one operating with certain underlying core values and concepts including customer-driven quality, involved and active leadership, continuous improvement and learning, employee participation and development, fast response, design quality and prevention, a long-range view, management by fact, partnership development, corporate responsibility and citizenship, and a results orientation (Department of Commerce, 1998). The Criteria are designed to provide a framework for determining the extent to which the core values are present in an organization (Garvin, 1988). The Criteria also reflect the best current management experience as they are updated each year as a result of the experience of experts evaluating the best organizations.

Culture is an element of most thinking about TQM (Batten, 1994). In May 1990, the Conference Board summarized the key concepts and terms with regard to TQM as including a cultural change that appreciates the primary need to meet customer requirements, implements a management philosophy that acknowledges this emphasis, encourages employee involvement, and embraces the ethic of continuous improvement. As part of the same report the Conference Board specified TQM as including mechanisms of change such as training and education, communication, recognition, management behavior, teamwork and customer satisfaction programs and management behavior that includes acting as role models, use of quality processes and tools, encouraging communication, sponsoring feedback activities and providing a supportive environment (Conference Board, 1994). These elements

are included in the Baldrige Criteria. For example, Category 1 of the Criteria, Leadership, stresses the personal involvement of the senior leaders of the organization in: reviewing activities, recognition, communication, training and evaluation, and improvement cycles. The category on Human Resources Management deals with employee development, training, rewards and recognition, work systems, benefits and services provided to employees.

There are initiatives generally described as a part of a TQM effort that directly lead to creating a culture with very specific characteristics that support change and improvement. These initiatives as outlined in the Baldrige Criteria include: participative management and openness (supported by encouraging employee involvement, empowerment, the use of teams, education and training, and extensive communication), a rational approach (fact-based decision making, clear mission, objectives, statistical tools and statistical process control, evaluation and improvement cycles, etc.), flexibility (customer focus, continuous improvement), and integrity (emphasis on values, public responsibility).

#### Process management

The category of the Criteria dealing with Process Management, which is described as the focal point within the Criteria for all key work processes, describes the central requirements for efficient and effective process management including effective design, a prevention orientation, evaluation and continuous improvement, linkage to suppliers, and overall high performance.

Quality practitioners and theorists have always been concerned with the concept of continuous improvement. One of the fundamental concepts is the use of feedback loops at every step of the process and an environment that encourages constant evaluation of results and individual efforts to improve. Continuous improvement is emphasized by Deming (Deming, 1982), Juran (Juran and Gyrna, 1993), and Crosby (Crosby, 1979), and is emphasized throughout the Baldrige Criteria. Kaizen, or continuous improvement (Imai, 1986), is the most commonly mentioned component of the Japanese quality movement.

This emphasis on continuous improvement has led to TQM being characterized as limited by incremental or gradual improvement( Cross et al., 1994; Hammer and Champy, 1993). However, quality has always been concerned by the need to move to a different level of performance, perhaps driven by technology or other changes in the environment. The Baldrige Criteria emphasize this "breakthrough thinking" (Department of Commerce, 1998) and innovation. It is also the reason for the emphasis in the quality literature on breakthrough (Harrington, 1991). As one example, [Eastman Chemical](#), a 1993 Baldrige winner, named its quality effort: Breakthrough Quality Management/ Business Process Reengineering (Krause Organization, 1994).

Process improvement is clearly an element of TQM and process improvement is not limited to small, incremental, improvements.

#### TQM and process reengineering relationship

Process reengineering is defined as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality service, and speed" (Hammer and Champy, 1993).

Examples used (Hammer and Champy, 1993) to support the concept often deal with specific processes. For instance, the IBM Credit Corporation's process for evaluating leasing deals describes how analyzing the roles of all the participants in the process and redesigning the process with information systems support led to dramatic improvements in cycle time and cost. The important elements of the work involved a fresh look at the entire process, a perception of what it was feasible for information systems to provide, and a clear view of the requirements of the process. It is this definition and such an approach that this study is concerned with.

The literature includes a variety of approaches to defining the relationship between total quality management and its process focus with reengineering. They range from proponents of one ignoring the other or asserting that the other is a failure or dead (Cross et al., 1994). Some suggest they can coexist (Davenport, 1993) and recommend that as processes are reengineered they should be turned back to the small teams working to hold the gains through statistical process control and incremental improvements that they characterize as TQM (Cross et al., 1994).

It is interesting that many of the successful applications of reengineering described by its proponents are in organizations practicing TQM. Hammer and Champy (1993) use the IBM Credit Corporation as well as Ford and [Kodak](#), as examples, and the Ford example is also used by Omachonu and Ross (1994). All are companies with long-running TQM efforts.

The differences and similarities are summarized in one reengineering book (Hammer and Champy, 1993, p. 49) as shown in Table I.

They both include a focus on process flows across functional boundaries. They both include a focus on the customer and work to define the current process and identify problems. There is a major apparent difference in the quality focus on continuous improvement versus the reengineering goal of the best that can be conceived. This difference is mitigated or eliminated by the inclusion of "breakthrough" in TQM as described earlier. The elements of TQM that are missing from reengineering are continuous improvement, a focus on people, participation of "insiders", and teamwork and it is these elements

that make up the central difference between the two approaches. This difference seems to be better understood as more analyses of reengineering failures are completed. There is increasing focus on the effect reengineering has on employees (Champy, 1995) and what is required of management to stabilize the process and maintain gains.

On November 26 1996, The Wall Street Journal reported that Michael Hammer and other leaders of the reengineering movement forgot about people. Hammer was quoted as saying "I wasn't smart enough about that ... and was insufficiently appreciative of the human element" (White, 1996).

The key difference seems to be in that TQM focuses on people and their involvement and receptivity to continuous change is central to TQM, while reengineering focuses on technology and a fresh start. These differences are found in the organization's culture.

#### Method, analysis and results

A survey was used to determine the presence of the specific cultural elements of a customer focus, employee involvement, and continuous improvement. The survey was also used to determine if there was a focus on TQM, if there was a process improvement effort, and if the organization practiced reengineering. The questionnaire has 39 questions of which five ask for information about the respondent, 11 ask for the respondent's impressions of the practices employed (Is there a formal quality improvement effort? Is process improvement a success?, etc.) and the remaining questions call for a response ranging from very satisfied to very dissatisfied with a number of aspects of the organization. Key executives were also surveyed with regard to their perception as to the success of improvement efforts.

This questionnaire was completed by middle and first-level managers or professional staff in Connecticut and in Luxembourg. A total of 220 employee questionnaires were obtained representing 123 organizations. A determination was made on the presence or absence of TQM and reengineering in those organizations with the results shown in Table II.

The overall hypothesis was that an effective TQM initiative would lead to the development of an organization culture with specific elements and that culture would support successful process improvement. In contrast, organizations practicing reengineering would not develop such a supportive culture and would be less likely to experience process improvement success. The responses were analyzed using factor analysis to determine the extent to which the responses to the questions hypothesized as indicating the presence of the three cultural elements were operating as groups and that the groups were stronger where TQM was present than where it was not, or where reengineering

was present. The results supported the hypothesis as suggested by the information in Table III which relates positive responses to certain selected questions that seemed to be operating as representatives of each of the groups with the presence or absence of TQM and reengineering.

The results also tend to support the hypothesis that process improvement would be more successful where these cultural elements were present. Over 70 percent of the responses from organizations practicing TQM reported success with process improvement and this went up to over 74 percent for the organizations with TQM and no reengineering.

## Conclusion

We have defined TQM and reengineering as alternative management initiatives, the key difference being the focus on people that is a major element of TQM. TQM is defined as a broad management initiative as described by the Criteria for the Baldrige National Quality Program. Reengineering is defined as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality service, and speed" (Hammer and Champy, 1993). The study shows that specific elements of culture are stronger in organizations practicing TQM than where there has been a reengineering effort. The study also suggests that there is more likely to be success where these cultural elements are present.

The links between culture and performance, and specifically success with improvements, deserve additional research. There are also additional cultural elements to be identified and explored, including such aspects as an orientation to group and team membership, and knowledge sharing, and their relation to organizational change and success.

The results of this study underscore the importance of organizational culture and suggest that TQM provides a way to build a culture that supports improvement. Top managers must focus on this role for TQM. Too often the need for quick returns on the effort leads to a focus on the "tools" and specific improvements and this emphasis can work against developing a supportive culture. Reengineering is an example of this phenomenon. Frustration with the time it takes to carry through on a TQM initiative caused firms to try reengineering, which, with its emphasis on outsiders and specialized personnel, works against employee confidence and involvement. There are indications in the data that suggest this impatience, and the results demonstrate that implementing reengineering can erode positive elements in the culture. This is probably best addressed by ensuring that process improvement efforts are initiated early in any TQM initiative and utilize TQM concepts such as employee involvement and good communications.

This study also supports the idea that TQM provides a framework for building an organizational culture that will equip an organization to continuously learn and improve. TQM, as it has evolved, increasingly focuses on all aspects of the organization, including a holistic view of the employee, and, as a result, provides an approach to building a culture consistent with success. Top management must explicitly address the development of their organization's culture.

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### **Illustration**

Caption: Table I; TQM and reengineering - differences and similarities; Table II; Presence or absence of TQM and reengineering; Table III; Selected mean scores