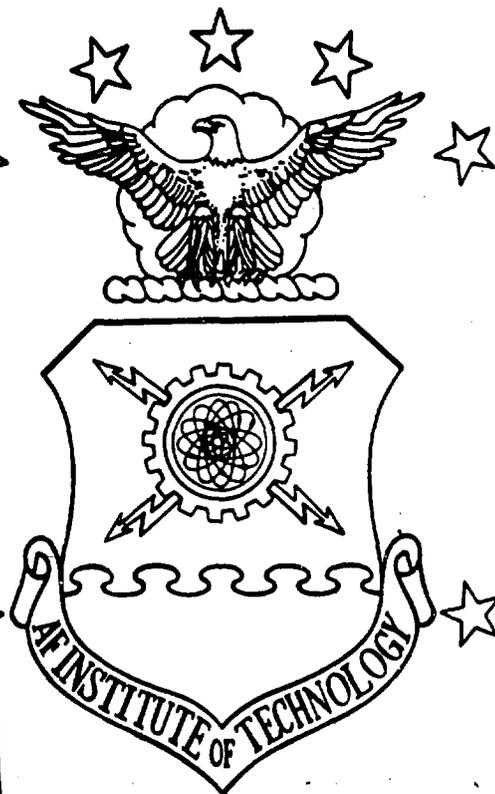


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A DELPHI STUDY OF
PERFORMANCE APPRAISAL PRACTICES
OF MALCOLM BALDRIGE AWARD
WINNING ORGANIZATIONS

THESIS

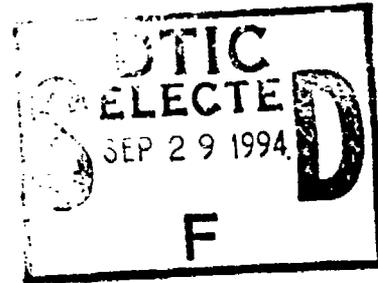
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Wright-Patterson Air Force Base, Ohio



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A DELPHI STUDY OF PERFORMANCE APPRAISAL PRACTICES
OF MALCOLM BALDRIGE AWARD
WINNING ORGANIZATIONS

THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

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September 1994

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Preface

The purposes of this thesis is to benchmark the performance appraisal practices of Malcolm Baldrige Award winning companies. The thesis is concerned with two views of performance appraisal: the traditional view and Total Quality Management view. The need for the research in this area results from the differences in these views regarding the performance appraisal. Since the participating organizations are all recognized as successful TQM organizations, this research could provide organizations which implement Total Quality Management with insight into designing a performance appraisal system tailored for this environment.

The research was conducted using the Delphi technique. The Delphi technique used a series of questionnaires, which involved an expert from each of the participating organizations. We would like to gratefully acknowledge the efforts of the experts who responded to our questionnaires. Their enthusiasm and quick responses made this research possible.

We would also like to thank our advisors, Lieutenant Colonel Rodney Rice and Dr. Guy Shane, for their patience and insight throughout the research process. They were always available when we needed help, but allowed us the freedom to discover what it meant to conduct research.

Last but most importantly we would like to thank our wives, Kristi Courtois and Tamara Yockey, for their support throughout the Air Force Institute of Technology

program. Many hours were spent preparing for classes and working on this thesis.

Without their patience and understanding, we wouldn't have made it.

Daniel J. Courtois
David L. Yockey

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Abstract

Total Quality (TQ) is a philosophy that is currently being incorporated by organizations throughout America. TQ philosophers maintain that Total Quality can be achieved only if organizations change their cultures, including the traditional view toward the role of the performance appraisal. These experts maintain that the traditional performance appraisal doesn't promote process improvement, empowerment and team building as TQ prescribes.

This thesis is a Delphi study of the performance appraisal practices of Malcolm Baldrige National Quality Award winning companies. The study attempts to describe the performance appraisal practices of 10 companies who have successfully implemented TQ. The existence of traditional and TQ appraisal characteristics is measured and the performance appraisal techniques of the organizations are benchmarked. The study determines that, with little exception, these companies still employ many traditional approaches to their performance appraisals, but have altered some practices by incorporating new techniques to promote process improvement, employee empowerment and team building. The unique practices and characteristics of these organizations are presented.

A DELPHI STUDY OF PERFORMANCE APPRAISAL PRACTICES OF MALCOLM BALDRIGE AWARD WINNING ORGANIZATIONS

I: Introduction

Background

Total Quality Management (TQM) is the single most important management methodology available today to achieve and maintain a competitive edge (Spenley, 1992:10). Total Quality Management seeks to achieve total customer satisfaction by operating on the principle of long-term, gradual and continuous improvement of an organization's processes. Traditional, Western management, on the other hand, places emphasis on short-term rewards, results rather than processes, and parochial rather than systemic views towards operations (Liberatore, 1993:62).

It is critical that organizations who aspire to implement TQM realize that to do so requires a significant cultural change. Culture, or corporate systems, can be defined as "the procedures and policies that, when combined with employees, equipment, methods, materials, suppliers and customers become the dynamic processes of doing business" (Liberatore, 1993:61). Successful incorporation of TQM requires those at all levels of an organization to realize that TQM is a different methodology and that the elements that mold the culture, or the corporate system, must change in order to facilitate the attainment of TQM.

General Issue

To be able to make the transition to TQM, Saylor submits that all people must be “empowered and encouraged to be creative in an effort to achieve continuous improvement in their workplaces. They must be allowed to make any changes that are necessary to perform the work and improve the system” (Saylor, 1992:27). This cultural change of employee empowerment and focus on long-term improvement must begin with the leadership of the organization.

An element which leaders must consider in establishing the TQM environment is the way employees approach their jobs, and an element which can impact the way members approach their jobs is the performance appraisal. The performance appraisal is a technique for measuring employee actions against standards of performance (Plachy, 1991:57). Because the performance appraisal identifies standards of performance, the organization communicates to its employees, via the appraisal, the behaviors, actions, and performance elements that are looked upon favorably by the organization. For this reason, it is the opinion of the researchers that the contents and purposes of the performance-appraisal can have an impact on an organization's corporate culture and its transformation into the TQM environment.

Problem Area

There are those who believe that the use of performance appraisals is not consistent with the principles behind TQM. W. Edwards Deming, for example, cites evaluation of performance by merit rating or annual review as one of Western management's Seven

Deadly Diseases which prevents organizations from entering the TQM environment.

Deming maintains that evaluating performance by these means “nourishes short-term performance, annihilates long-term planning, demolishes teamwork, and nourishes rivalry and politics” (Deming, 1986:101).

According to Bowman, performance ratings should be abolished because they conflict with the search for quality. The problem with the performance appraisal is that it focuses on the end results and assumes employees are responsible for those results. TQM, on the other hand, recognizes that all work is part of an overall process (Bowman, 1994:131). This means that there is an understanding that the subunits of an organization interact as a system, thus the performance of a subunit (as well as the individuals within it) cannot be accurately evaluated as an independent function. The focus needs to move from the individual to the overall system since over 95 percent of all quality problems are system-related, not caused by the individual (Scholtes, 1993:351). With regard to the performance appraisal, Scholtes supports these points by maintaining that the performance appraisal is based on the erroneous assumption that the reviewer, or rater, can distinguish an individual’s contribution from the other influences contributed by the overall system. The system is always dynamic and variable and those forces within the system impact the performance of the individual. (Scholtes, 1993:356)

Research Approach

This study applies the Delphi technique methodology to describe how organizations who have been nationally recognized for TQM excellence make use of the performance

appraisal. All ten organizations who participated in this research are former winners of the Malcolm Baldrige National Quality Award. In 1987, the Reagan Administration established the Malcolm Baldrige National Quality Award to "promote quality awareness, understand the requirements for quality excellence, and share information about quality strategies" (Nakhai and Neves, 1994:33). Organizations throughout the nation have realized the importance of applying the Baldrige criteria to their business processes. In fact, organizations requested over 230,000 copies of the Baldrige guidelines in 1992 (Brown, 1993:2).

The Delphi technique is a method of eliciting and refining group judgments. Anonymous responses of group members, usually comprised of experts in a certain area, are "obtained by a systematic exercise conducted during the course of several iterations" (Dalkey, 1969:v). The Delphi methodology is appropriate for this study for two main reasons. First, there are very few winners of the Baldrige Award to date. Since there are few participants in this research, it is possible to gather the needed data from the participants via written correspondence over several iterations. Second, since this study investigates one element of an organization, the performance appraisal, it is possible to solicit the participation of one expert in this area from each organization.

It is the researchers' intent that the information derived from this study will be used by organizations, including those in the Department of Defense, to provide a benchmark for their performance appraisal practices through comparison with the practices that are used by organizations demonstrating quality improvement. Benchmarking is the process of continually comparing and measuring an organization's processes with those of business

leaders to gain information which will help the organization take action to improve its performance (American Productivity and Quality Center, 1993:4). Because the process of benchmarking involves continuous comparison and measurement, it is a methodology which is well-suited for use in the TQM environment. Delphi and benchmarking will be discussed in more detail in Chapter III.

Research Problem

Total Quality experts such as W. Edwards Deming maintain that the performance appraisal is incompatible with TQM. This viewpoint seems to be in conflict with the majority of the available literature on this topic which views the performance appraisal as a necessary tool to ensure desired performance measures are being met. The objective of this research is to determine the extent to which the performance appraisals of successful TQ organizations are in agreement with Deming's assertion that the appraisal is one of Western management's Seven Deadly Diseases.

Investigative Questions

This research uses the Delphi technique to answer the following investigative questions:

1. Based on the available literature, what are the elements and uses of performance appraisals?
2. What are the differences between the traditional and the TQ-oriented approaches to the performance appraisal?
3. What characteristics of the performance appraisal are currently in use in the TQM environment?
4. Which characteristics are viewed as most significant by the organizational experts?

Limitations and Scope of Research

The scope of this research is limited to the performance appraisal systems of Malcolm Baldrige Award winners. It does not include other elements of these organizations' human resource management programs, nor does it address other elements of their overall business practices. Additionally, this research is not intended to prescribe how to implement a performance appraisal system. Rather, it is intended to offer a description of the performance appraisal practices of successful Total Quality (TQ) organizations.

Because this research is aimed at identifying the performance appraisal practices of Malcolm Baldrige Award winners, it may provide a benchmark for other organizations wishing to evaluate and improve their own appraisal systems. It is the opinion of the researchers that the information derived from this study could be of benefit to most organizations who have a desire to follow the TQM movement.

Summary

This chapter provided the basic rationale behind this research. Since the elements and implementation of an organization's performance appraisal can have an impact on shaping employee behavior and corporate culture, most organizations desiring to enter the TQM environment, including the United States Air Force and other branches of the Department of Defense, can benefit by learning the practices of the best TQ companies in America. Chapter II reviews the literature pertaining to issues such as the use, design, and elements of the performance appraisal, and Chapter III discusses the Delphi technique and benchmarking methodologies relevant to this study. Chapter IV analyzes the answers

from the Delphi study as well as the answers to the questions posed to the experts themselves. Chapter V discusses the conclusions, recommendations for further study, and any further limitations.

II: Literature Review

Introduction

This literature review is partitioned into two major segments. The first section addresses general literature pertaining to performance appraisal systems. This includes literature on the purposes of performance appraisal systems, elements of the appraisal, the goals of performance appraisal systems, and rater accuracy and training. The second section reviews more recent literature regarding the performance appraisal and its compatibility with the Total Quality Management philosophy.

Performance Appraisal Systems

A definition of the performance appraisal which the researchers have chosen for the purposes of this research is "is a technique for measuring employee actions against standards of acceptable performance" (Plachy, 1983:57). This section addresses purposes of appraisal systems, elements of the appraisal, goals of appraisal systems and rater accuracy and training.

Appraisal Purposes and Elements. The performance appraisal is a widely used tool in American businesses and other organizations. It is used for a variety of purposes such as feedback, personnel actions, promotion, wages and salary, layoffs, employee development, and placement. The critical requirement of an effective performance appraisal is that its elements be linked to both the goals of the organization and employee development. (Sausser, 1980:12)

In 1984 the American Management Association surveyed 588 members of its Human Resources, Finance, Marketing and Information Systems divisions to identify the most common purposes for the performance appraisal (Moen, 1989:62). The results of this survey are shown in Table 1. The results can be broken into three sections. According to this survey, the primary purpose the performance appraisal serves is determining monetary compensation. Although secondary to compensation-related purposes, both counseling and training and development achieved about the same response. Interestingly, less than half of the respondents said they used the appraisal for promotion purposes.

Table 1, Common Purposes for the Performance Appraisal (Moen, 1989:62)

Purpose	Percent of those responding
Compensation	85.6%
Counseling	65.1
Training and Development	64.3
Promotion	45.3
Staff Planning	43.1
Retention/Discharge	30.3
Validation of Selection Technique	17.2

Five basic elements of an effective appraisal include: 1) having measurable objectives for each position; 2) making performance appraisal a continuous, year-round objective; 3) linking the process to positive development; 4) educating appraisers about performance appraisal purposes and practices (Sahl, 1990:55); and 5) giving the employee the opportunities to review and, if desired, appeal the performance rating (Daley, 1992:40). Although some research identifies other elements, most include these five. Additionally, recent court decisions have set legal bounds on various aspects of performance appraisals.

They include: 1) the rating method must be shown to be job-related; 2) the content of the rating method must be developed through job analysis; 3) raters must be able to consistently observe the ratee's performance; 4) ratings must not be based on subjective or vague factors; 5) racial, sexual, or other biases may not influence ratings; and 6) ratings must be collected and scored under standardized conditions (Holley, 1976: 463).

With regard to the types of data used in the performance appraisal, Sauser describes two general categories of data that raters commonly use to evaluate employees—hard and soft criteria. Hard criteria are contained in the records of the organization. These include quantity and quality of employee output, absences, overtime, reprimands, and so forth. Hard criteria, which on the surface may seem reliable, may not be because of factors such as inaccurate or biased record keeping, or because the employee's output and other performance metrics that are used as a basis for evaluation may be influenced by factors that are out of his or her control. These factors can include seasonal variation, inconsistencies in input materials, and problems within the overall processes of the organization. Additionally, the more the employee performs in a supervisory capacity, the less hard criteria are directly attributable to him or her. Soft criteria, on the other hand, are usually more subjective in nature and are typically found in a scale or mark-the-box format. These include factors such as attitude, communication skills, and leadership ability. These criteria are dependent upon the rater's impressions and, as such, are also subject to bias and distortion (Sauser, 1980: 13).

Goals of Performance Appraisal Systems. The explicit goal or purpose of a performance appraisal system is to accurately measure employee performance (Plachy, 1983:58). The implicit purposes of a performance appraisal system are less evident. Organizational effectiveness is the ultimate purpose for an organization. To accomplish this end, performance appraisal systems have two general categories of purposes. These include administrative and behavioral purposes.

Administrative purposes are those actions the organization takes to improve employee performance (Pierson, 1980:145). Administrative purposes include granting or withholding raises and identifying those who deserve promotion, or those who need training. These administrative applications affect behavior based on their power to reward or punish an individual. Most performance appraisal systems are used in this manner.

Behavioral purposes, on the other hand, attempt to encourage the individual to bring change about himself without the threat of organizational action. Dr. Ralph M. Pierson says, "Even though behavioral purposes are those the individual must effect, the organization has a great deal of interest in them. Its concern is that employee job behavior changes for the better" (1980:146). Both behavioral and administrative purposes are related to one another but they are distinct. They both have an overall goal to increase organizational effectiveness, but the means to accomplish these ends are different. Appraisal systems must consider each of these purposes separately to design an effective performance appraisal system (Pierson, 1980:145).

As mentioned previously, the use of performance appraisal systems by organizations is quite common. Studies have shown that managers are generally satisfied with their performance appraisal systems and they feel these systems help the company meet organizational goals (Guzzo and others, 1985:277). In fact, managers attribute several factors to effective performance appraisal systems. These include improving performance and productivity, identifying training deficiencies, and identifying promotable employees (Dmitroff and Dwyer, 1976:353). Whatever its intended purpose, the well-designed performance appraisal system can contribute to an organization's effectiveness (Plachy, 1991:51).

General Types of Performance Appraisal Systems. Although there are many different types of performance appraisals used by organizations, most can be grouped into four general categories based either on their method of appraising or their method of ranking employees.

Appraisal Methods. The first two categories of performance appraisal systems are the traditional and the collaborative. The traditional approach uses a quantitative scale to rate employees' performance compared to organizational objectives (Taylor and Zawacki, 1976:290). The traditional approach also uses one-way communication, where the supervisor or the organization sets the standards. In other words, standards of performance are not mutually agreed upon between supervisor and employee. Proponents of this approach argue that traditional rating systems used within this approach are effective and free from difficulties when used with reasonable judgment (Taylor and Zawacki, 1976:292).

Unlike the traditional approach which is concerned with performance in comparison to a standard, the collaborative approach advocates a system where the human development of the employee is the major concern. Its proponents argue for more communication with subordinates. This communication focuses on joint goal setting. Employees are much more involved under the collaborative approach than under the traditional approach, which ignores the effect of the performance appraisal on the individual (Taylor and Zawacki, 1976:291).

Ranking Methods. The other two categories of performance appraisal systems are based on their method of ranking employees. These categories are the norm-referenced ranking system and the criterion-referenced approach. The norm-referenced system is "where a person is compared, not with respect to performance objectives, but rather with reference to how the average or norm performs in the organization" (Morano, 1979:306). This approach is similar to curved grading scale in a college class. Under the curved grading scale approach, students are rated average if they perform at the level of the majority of the students in the class. They are not evaluated based on preestablished criteria. Rather, evaluation depends on how everyone else performs. Since the average may differ from class to class, one shortfall of this system is that average performance in one class may be either exceptional or failing in another. Another shortfall of this approach is that this type of evaluation may not comply with the legal requirement of standardized scoring within an organization.

Under the criterion-referenced approach, however, people are compared with the performance objectives of their jobs. To continue the classroom analogy, it is

conceivable that under a criterion-referenced system, all students in a classroom could receive an "A" and equally conceivable that all could receive an "F". This is because performance is based on a preestablished, fixed set of standards.

When applied to performance appraisals, the norm-referenced system results in a majority rating of average, while the criterion-referenced approach could result in a high number of superior or inferior ratings of employees (Morano, 1979:307)

Rater Errors, Accuracy, and Rater Training. One of the main criticisms of performance evaluations is that they are subject to rater errors such as halo and leniency effects. Halo effect occurs when a rater tends to allow overall assessments of a ratee to be unduly influenced by his or her evaluation of just a few factors. For example, say an employee presents a good personal image and is articulate. A rater may be so impressed by these attributes that his or her evaluation of this employee may be based solely on these criteria. Another common form of the halo effect is the first impression. A positive or a negative first impression can influence a rater's opinion of an employee to the point where the employee's actual performance is secondary in the eyes of the rater. Additionally, outstanding or poor performance on one occasion can also sway a rater's opinion of a subordinate. Leniency effect, on the other hand, occurs when raters tend to give a disproportionate number of favorable ratings to employees (Holley, 1976:458). Leniency errors tend to occur more frequently under the criterion-referenced approach.

Cronbach developed five performance appraisal accuracy indicators. The first, evaluation accuracy consists of the average of a rater's ratings across all behaviors and across all ratees, thus reflecting how he or she interpreted the rating scale. Second,

differential evaluation describes the rater's ability to judge deviations in a ratee's performance from his or her normal, overall performance. Third, stereotype accuracy describes how well the rater's judgment coincided with the mean overall rating for all raters. Fourth, differential accuracy indicates how well a rater discriminated among dimensions, or elements of performance, across and among ratees. Finally, overall accuracy is the overall comparison of the rater's judgment to the standard. Again, this implies that the standard is known or can be determined by expert raters (Cronbach, 1955:177-193).

Rater training has received much attention by researchers. This area of research has been concerned with the impact of training on reducing rater errors and improving accuracy. Smith reviewed 24 studies on the effects of rater training on the psychometric quality and accuracy of performance reviews (Smith, 1986:22-40). By synthesizing the data, Smith found that certain training formats were effective in reducing halo and leniency errors while others were not. For example, lectures were found to be as effective as group discussion in reducing halo effects but were ineffective in reducing leniency errors. His reason for this was that mere rater awareness of what halo errors were was sufficient whereas group discussions were necessary to reduce leniency errors.

It is important to have a performance appraisal system that strikes a balance between promoting the overall goals of the organization and facilitating employee development.

Instead of acting as an incentive to stimulate workers to greater performance, many performance appraisals actually have the opposite effect. They tend to discourage and disgruntle employees when the latter see little link between performance and reward. (Morano, 1979:307)

Proponents of the Total Quality Management philosophy tend to agree with this statement. They maintain the appraisal is being used as a tool to ensure production goals are met rather than a tool to encourage employee improvement and development. The following sections review Total Quality Management (TQM) and its compatibility with the performance appraisal.

Total Quality Management and the Performance Appraisal

TQM Overview. Over the past decade, the Total Quality Management movement has been embraced by organizations throughout the United States. In fact, TQM has been said to be the single most important management methodology available today to achieve and maintain a competitive edge (Spencer, 1992:10). To understand the view many TQM proponents have regarding the performance appraisal's compatibility with TQM, this section outlines the principles behind the TQM philosophy and reviews alternative methods for evaluating employee and organizational effectiveness.

The TQM process attempts to eliminate traditional Western management views and practices that focus on short-term results, emphasize the product, not the process, and performance evaluation based on individual performance. TQM is based on the principles of long-term, continuous improvement, emphasis on the process rather than on the product, and the importance of the group or team over the individual (Liberatore, 1993:62). This radical departure from the traditional American management style has presented a challenge to managers. The successful implementation of TQM requires

managers at all levels to reexamine their roles and to develop new skills and methods in order to adopt this new paradigm (Cartin, 1993:4).

However, it has been easier for managers to encourage TQM awareness than it has to successfully create a cultural shift by incorporating TQM throughout the organization. This means that managers have learned the "rhetoric of Total Quality and have adopted programs to infuse TQM into their organizations, but few have appreciated the profoundly different approach it requires of those who must lead" (Schoites, 1993:349). This approach is different because TQM places importance on long-term, continuous improvement while focusing on total customer satisfaction. To take this approach requires management to assume a systems perspective of the organization. In other words, all departments of the organization must be viewed as being interrelated and interdependent parts of an overall process rather than being separate functions (Cartin, 1993:14).

W. Edwards Deming, arguably the pioneer of the Total Quality movement, developed his *14 Points for Continuous Improvement*, which can be considered the backbone of TQM. These are briefly listed in Table 2 on the following page. A more detailed description of Deming's 14 Points is contained in Appendix A.

In addition to his 14 points, Deming identified *seven deadly diseases* that plague American organizations and prevent TQM from being fully realized (Walton, 1986:36; Deming, 1986:100). They are briefly listed in Table 3 on the following page. A more detailed description of these seven deadly diseases can be found in Appendix B.

Table 2, Deming's 14 Points (Deming, 1986:23-96)

1. Create constancy of purpose and management commitment
2. Adopt the new philosophy
3. Understand Inspection
4. End the practice of awarding business based on price tag alone
5. Improve constantly
6. Institute training
7. Institute leadership
8. Drive out fear
9. Break down barriers between staff areas
10. Eliminate slogans and targets for the workplace
11. Eliminate quotas and Management by Objectives (MBO)
12. Remove barriers to pride in workmanship
13. Institute education and training
14. Take action to accomplish the transformation

Table 3, Deming's Seven Deadly Diseases (Deming, 1986:97-153)

1. Lack of constancy of purpose
2. Emphasis on short-term profits
3. Evaluation by performance, merit rating, or annual review
4. Mobility of management
5. Running a company on visible figures alone
6. Excessive medical costs
7. Excessive costs of warranty fueled by lawyers that work on contingency fee (Deming, 1986:23-96)

Deadly Disease Number Three. For the purposes of this research, the emphasis is on the third Deadly Disease, *evaluation by performance, merit rating or annual review*.

Deming identifies several problems with performance appraisals. First, as stated previously, appraisals foster short-term performance rather than long-term planning. This is because appraisals focus on short-term results-oriented performance metrics rather than

contributions to improvement on a systemic level. Second, they are destructive to the person being reviewed, since the traditional "carrot-and-stick" evaluation criteria inhibit employees from presenting a different point of view or making process-improving suggestions for fear that by doing so, it may appear that he or she is doubting management's abilities. Third, appraisals are detrimental to fostering teamwork as workers compete for ratings and compensation. Fourth, employees are reluctant to help a coworker with his or her goals because it takes away from one's own goal achievement. Fifth, appraisals focus on the end product, not the process. This is a key point because workers will concentrate on meeting whatever it is on which they are being evaluated, usually something quantifiable such as a quota. Because the emphasis is on the end result, they will not devote time to improve the process. Deming submitted that employees fall within a distribution whereby all but a small number will lie within the control limits, or within the system as he termed it. He stated that trying to rank order those performing within the system is impossible because the performance of anyone is a combination of many forces of the system itself. (Deming, 1986:101-120)

In the same fashion as Deming, Scholtes offers seven arguments against the performance appraisal (Scholtes, 1993:354). First, the performance appraisal undermines teamwork because its focus is most likely on individual performance. Second, the appraisal encourages employees to work around the system for personal gain rather than to improve the system for the benefit of the organization. He contends that the fallacy behind the appraisal is the belief that the rater can distinguish the individual's contribution from all of the other influences within the system. This is rarely possible, which casts

doubt on the fundamental accuracy of the appraisal itself. Scholtes maintains that “distorting the numbers, a form of creative accounting aimed at looking good rather than doing well is rampant in American business” (Scholtes, 1993:354). Third, appraisals use measurement criteria that are unreliable and inconsistent. This is primarily due to the presence of the rater’s subjectivity and lack of rater training. Fourth, appraisals encourage an approach to problem-solving that attempts to point the finger at those in the system. Scholtes states that the major difference in problem-solving between Japanese and American managers is that Japanese managers ask, *why?* while their American counterparts ask, *who?* Fifth, appraisals tend to establish safe goals in an organization. Workers will be measured against goals that are easy to meet and they will create an illusion of challenge around those easy targets. Consequently, if everyone in the organization is striving toward these easy targets, the organization is bound by a ceiling of mediocrity. Sixth, appraisals create cynics and wasted resources. Managers’ expectations can have a tremendous impact on worker performance. A manager’s perception of a subordinate’s performance can result in a self-fulfilling prophecy, a situation in which a person will behave or perform to a level which the rater expects, a perception later communicated via the appraisal. Additionally, when the completed appraisal is inconsistent with how a worker feels he or she performed, responses such as frustration, lower job satisfaction, or mistrust can develop (Moss, 1989:59). Seventh, appraisals are used to perform several managerial functions in one, yet are inadequate to perform any one of them. Scholtes lists uses such as promotion identification, feedback, a directional tool, career development, and training need verification (1993:353-359). Moen submits

that for many organizations, the unstated purpose of the performance appraisal is control of the employees. This reflects a management style that discourages intrinsic motivation, self-esteem, and teamwork (Moen, 1989:62). Finally, Bowman states that performance appraisals are widely-used because "they are the easy way out: they do not require anyone to address the problems employees face" (Bowman, 1994:130). This statement is consistent with Deming's argument that appraisals tend to focus the attention on the employees when it comes to problem solving rather than focusing on systemic factors that could be the problem. Bowman goes on to say, "The process should be diagnosed, not the employees blamed" (Bowman, 1994:130).

Possible Solutions. If the performance appraisal is in conflict with the foundation and principles of Total Quality Management as this literature suggests, how then can an organization's performance (and those within it) be evaluated?

According to Deming, the first and most critical step is to provide education in leadership. He maintains that leadership must move from the performance appraisal system to an appraisal of the performance of the system. Every person should know the purpose of the organization (the system) and how his or her role ties into that purpose. Thus, once people know their impact on other elements of the system, they can take control of the processes and improve those that are inhibiting the system's performance, rather than have the previously mentioned carrot-and-stick controls that are externally imposed upon them. Deming also suggested that organizations more carefully select people in the first place. If this were to occur, the performance appraisal would not be

needed to determine if an employee was fit to remain employed, which would enable the supervisor to assume more of a developmental, coaching role. (Deming, 1986:101)

So, if performance appraisals don't exist within an organization, how can feedback, promotion, compensation and development be managed? Scholtes suggests the following four guidelines. First, employee feedback is to improve, not control, and should be ongoing and timely. Feedback sources can include peers, internal and external customers and suppliers as well as supervisors. Second, compensation (including bonuses) should not be based on factors beyond an employee's ability to influence, such as quotas. It should be based on the accumulation of skills and responsibilities, experience, seniority and the organization's success (such as profit sharing). Third, candidates for promotion should be identified based on the requirements of the higher position and how an individual's capabilities and training match those requirements. Fourth, training is a critical part of TQM. Like feedback, training is an ongoing process and both managers and employees must subscribe to this philosophy if TQM is to be fully implemented (Scholtes, 1993:359).

Scholtes offers two alternatives to performance appraisals, both of which are disconcerting to managers because they are radical changes to traditional Western management practices: 1) Managers must change the way they think.

Until managers let go of their obsession with the individual worker and understand the importance of systems and processes, they will not enter the quality era. Without this change in mindset, managers will continue to look for alternatives that are no different than the ones they are trying to replace. (Scholtes, 1993:360)

2) Just stop doing it. He says that a way to develop alternatives to the appraisal is by *debundling*. He equates an all-in-one performance appraisal to a fragile cart carrying too far a heavy load. Managers must remove "each piece of baggage and build for each, a separate vehicle designed specifically for that function" (Scholtes, 1993:360-361).

Daley offers another alternative called a developmental appraisal. His reasons for the need to transform the existing appraisal process coincide with those previously discussed. He states that most concerns are that the performance appraisal be developed from judgmental processes. Developmental appraisals, however, are not susceptible to this and may actually enhance the TQM process. This approach is intended to focus on the training and skills essential to be successful in TQM. Developmental appraisals take an employee's basic competence for granted--they are not instruments to determine those who must be weeded out. As a result, this places critical emphasis on the recruiting function to ensure that the right people are hired in the first place since evaluating employee competence is not a function of the developmental appraisal. From there, developmental appraisals focus on developing the employee and adding to the employee package (Daley, 1992:46). This appraisal produces two main results. First, the employee is intimately involved with his or her own professional development. Second, this can have a positive psychological and intrinsically motivational effect on the employee. Barriers between employees and management are broken by the process of ongoing feedback which is centered around the employee's development. This facilitates a feeling of mutual trust and eliminates the intimidation of win-lose, carrot-and-stick appraisal processes (Daley, 1992:45).

Table 4 is a comparison of approaches to the performance appraisal under the traditional management versus the quality management environments (Bowman, 1994:132). The idea conveyed in this table is that organizations must make their appraisal systems reflect their guiding values. If an organization wants to take on the TQ approach to doing business, it needs to have an appraisal system that will reinforce the ideals behind TQM. Having an appraisal system that reflects the criteria in the Quality Management column should facilitate the organization's emergence in the TQ environment. Bowman maintains that if organizations will not do away with appraisals, they should at least change the way they are designed and administered. If organizations are going to use appraisals, they must be designed and administered in a way that encourages the behaviors that are consistent with TQM.

Table 4, Comparison of Performance Appraisal Approaches

Criteria	Traditional Management	Quality Management
Guiding value	Attribution to individual	Attribution to the system
Information basis	Individual behavior; conformance to the system	Work group participation; continuous improvement of system
Rating scale	Five or more scale	Three scale categories
Primary goals	Control; documentation	Development; solving problems
Supervisory role	Supervisor as judge	Supervisor as coach; peers as colleagues
Leadership practices	Directional; evaluative	Facilitative; coaching
Appraisal frequency	Occasional	Frequent
Degree of formality	High	Low
Reward practices	Individual orientation	Group orientation

Douglas McGregor addresses the issue from the manager's point of view. He submits that the main problem with the performance appraisals is the reluctance of managers in administering them. He suggests a new approach of *analysis versus appraisal*. The main difference of this approach is that it rests on the belief that the employee knows more than anyone else about his or her own capabilities, strengths and weaknesses. This lends to the application of mutually derived appraisal measures. He adds that ratings, aptitude, and the superior's necessarily limited knowledge of an employee's performance yields, at best, an imperfect picture. Therefore, the proper role of the supervisor under this approach is one of a coach--helping his or her subordinate, and "is the role the employee wants and one that the manager prefers" (McGregor, 1972:134-137).

Barriers to Eliminating Performance Appraisals. A major barrier to eliminating performance appraisals is that appraisals are an established tool in Western management. Management, in general, likes appraisals because they are an easy way out. Appraisals do not require managers to identify and solve the problems employees face. Appraisals are based on the assumption that problems relating to performance can be attributed to the individual. Once managers complete the appraisal, their jobs are done and the responsibility for improving quality and performance is placed on the subordinate. (Bowman, 1994:129-130)

Bowman identified three other reasons why it is difficult to do away with the appraisal. First, in traditional management circles, it is assumed that everyone cannot meet standards, therefore, ratings need to be placed on subordinates to justify the allocation of scarce resources, namely raises and promotions. If only a few can receive raises or promotions,

there must be a system in place to justify the reasons behind those that receive them.

Second, appraisals support the view that it is necessary to keep subordinates under control. Since management has that control, they are reluctant to relinquish it. Third, appraisals induce fear in the subordinate and stifle open communication between manager and subordinate. This results in a lack of suggestions or alternatives, which further cements management's belief that the appraisal is the best way to control what is going on.

Summary

The above suggestions for developing alternative methods for fostering a TQM environment serve as a starting point to managers. The main challenge for managers is to release the old paradigms of American management and develop TQ processes for their organizations. Because so many organizations have embraced the TQM philosophy, there is great potential for an organization to develop effective TQ approaches by learning what other organizations are doing. An effective tool to use for this purpose is called *benchmarking*. Benchmarking and its applications as it pertains to this research are discussed in Chapter III, Methodology. Additionally, Chapter 3 discusses the Delphi method and the specific research design of this study.

III: Methodology

Introduction

As the literature review suggests, there are conflicting opinions regarding the appropriate use of performance appraisals in organizations. Some believe performance appraisals enhance the performance of the organization while others, such as Deming, believe performance appraisals hinder long-term performance. The goal of this research is to describe or benchmark performance appraisals in use by companies using the Total Quality philosophy and to gain consensus among experts in these companies on the important uses for performance appraisals under Total Quality.

The purpose of this chapter is to outline the design of the Delphi study as it applies to this thesis. First, we discuss the background of benchmarking and of the Delphi method (including why it was used for this study), then we discuss the specific research design used to answer the research and investigative questions.

Benchmarking

Because we are attempting to describe performance appraisal and identify best practices of performance appraisals within TQ organizations, benchmarking is a goal which is an appropriate application for the results of this study. Benchmarking is a systematic and continuous measurement process of comparing an organization's business process against those of business process leaders to gain information which will help the organization take action to improve its performance (APQC, 1993:4). Simply stated,

benchmarking is "the comparison of a given business function across companies. It is designed to allow managers to understand how their functional performance compares with that of other companies, particularly those that excel in that function" (Pryor, 1989:28). For example, Xerox used benchmarking to adapt L.L. Bean's warehousing and distribution processes to its operation (Pryor, 1989:28). Since the study employs a systematic measurement process to compare performance appraisal practices in business leading TQ organizations, organizations can use the information provided in this study for benchmarks to improve their TQ environments. The benefits of benchmarking and the appropriate category of benchmarking to apply to this data are discussed below.

Benchmarking's Benefits. There are three very important benefits to benchmarking. First, the results obtained from benchmarking can motivate those within an organization to adopt the new process. This is because there is proof that it already works somewhere else. Second, resistance to change may be lessened because these ideas for improvement came from another organization. Also, there is often inertia built up in old processes, which encourages people to continue in their old habits. Showing them that different methods are being used successfully elsewhere can provide incentive to change. Third, benchmarking enlarges peoples' experience base and increases knowledge. The more alternatives that an organization explores the better its' chances of finding a competitive edge in the industry it operates (Evans and Lindsay, 1993:145).

Categories of Benchmarking. There are three main categories of benchmarking. The first, strategic benchmarking, involves comparing different market strategies with their impact on market success. The second, operational benchmarking, focuses on specific

functional operations such as engineering, manufacturing or distribution. The third category, business management benchmarking, focuses on specific support functions of an organization. These can include management information systems, marketing or human resources. (Pryor, 1989:29-30) Because this study focuses on a support function, performance appraisal in human resources, business management benchmarking is the appropriate method to use with the results of this study. It should be noted that the researchers do not use the results of this research effort to perform any type of benchmarking. Rather, the data is presented in such a fashion as to make benchmarking easier for any organization that wishes to do so

The Delphi Technique

The Delphi technique was chosen for this study because it is well suited for eliciting the opinions of experts. It was developed by the Rand Corporation in the 1960's to develop long-range technical forecasting. Delphi is "a method to systematically collect, evaluate, and tabulate independent opinion without group discussion" (Tersine and Riggs, 1976:51). This technique replaces traditional, face-to-face group decision making processes with an iterative approach through the use of several rounds of questionnaires. The intent is to eliminate the disadvantages associated with group decision making processes. Since the goal of the study is to systematically describe the performance appraisal practices in successful TQ environments and to elicit the opinion of organizational experts on the use of performance appraisal in these environments, the Delphi technique is appropriate for

this study. The disadvantages of group decision making and the advantages/limitation of the Delphi method are further explained in the discussion that follows.

Disadvantages of Group Decision Making. Having a group of experts in a face-to-face decision making process has three major disadvantages. First, there is a tendency for a dominant individual (by virtue of status, reputation, or simply a strong personality) to emerge and assume control or leadership of the group. This individual may guide or steer the group in a direction which all members may not want to go. This can stifle creativity and eliminate from consideration alternatives that may lead to other possible solutions. Second, if there is more than one good idea presented, the chosen solution is usually obtained through compromise rather than consensus. In choosing the best alternative, members may be persuaded by who suggested the idea rather than on the merits of the idea itself. Third, the interpersonal dynamics of face-to-face group decision making may stifle the development of alternatives because some members may be hesitant to offer a suggestion because to do so may require him or her to justify or defend the proposition. (Tersine and Riggs, 1976:51)

Advantages of Delphi. The Delphi technique has several advantages over traditional group decision processes.

Anonymity. The identities of the participants are not revealed. This enables one to change his or her opinion without fear that others view him or her as indecisive. One can also object or disagree without the fear of being judged by the others. Additionally, anonymity reduces the *halo effect*, a situation in which the opinion of a dominating participant is given more weight or credibility by the others. Finally, there is less

occurrence of the *bandwagon effect*, a situation in which there is a tendency to simply go along with the group. This is because a participant does not know what the other participants' opinions are at the time he or she is giving a response. (Tersine and Riggs, 1976:51)

Less Confrontational Because a participant's views are isolated from the rest, confrontation is eliminated. Only after all responses in a round of questions have been tabulated are the participants furnished with limited feedback on the responses. This process is continued on an iterative basis over several rounds until consensus or convergence is reached.

Many Uses The Delphi technique is a tool which is well-suited for uses in both the private and public sectors. Although the Delphi method was originally used for long-range technical forecasting, Delphi has been used in many disciplines including the health care, retail, computer, and engineering fields as well as in government sectors such as education, municipalities and the military.

Limitations of Delphi There are several limitations to the Delphi technique. First, selection of the participants must yield a panel that is both qualified and motivated. The fundamental principle of Delphi is to solicit the responses of knowledgeable individuals. Additionally, the participants must be committed to being a part of the study until its end. Because the Delphi is an iterative process, the study can last for months. All participants must be available for the duration. Second, Delphi is not well suited for routine decision making. Because Delphi is very time consuming, its use should be limited to unstructured problem solving. Third, since Delphi is not conducted in a face-to-face forum, geographic

dispersion may be a problem. Mailings, facsimiles (Fax's) can be misrouted or lost, resulting in time. Finally, since time deadlines for Delphi's can extend months into the future, the priorities placed on them may be low (Tersine and Riggs, 1976:56). Selection of qualified participants is discussed later in this chapter.

Research and Investigative Questions

This study attempts to: 1) identify the performance appraisal techniques in use by the "best" TQ companies and 2) elicit the opinions of the experts in these companies on what are the most important uses of performance appraisal in a TQ environment. As stated in Chapter I, the researchers' consider winners of the Malcolm Baldrige National Quality Award to be among the best TQ organizations, due to the rigorous requirements that must be met in order to win the award. The objective of this study is to identify how successful organizations bridge the gap between the traditional performance appraisal practices and appraisal practices that are tailored to the Total Quality philosophy. To answer this research question, several investigative questions must be answered. They are outlined below:

1. What are the elements and uses of performance appraisals?
2. What are the differences between the traditional and TQ-oriented approaches to the performance appraisal?
3. Which characteristics of the performance appraisal are currently in use by leading TQ organizations?
4. Which characteristics and uses of performance appraisal are viewed as most significant by the organizational experts?

Selected Organizations

Because this study attempts to describe the performance appraisal practices of companies successful in the TQ environment, one of the key selection criteria is that they have demonstrated TQ success. Since the Malcolm Baldrige Award is a nationally recognized award for quality and has a rigorous selection process which includes personnel and human resources it was used as the selection criterion. All companies winning the award in the past eight years were contacted and Ten companies agreed to participate in this study. The companies were from the transportation, marketing, service and manufacturing sectors. Geographic distribution varied from operating within one community to multinational operations. The size of the companies varied from 450 employees to over 100,000 employees. One company contained both union and non-union employees while the other nine companies were comprised solely of non-union employees. Table 5, below, provides a description of the characteristics discussed above. It should be noted that the expert from organization F was not able to participate after round one due to relocation: therefore, organization F is only included in round one responses.

Table 5, Organizational Characteristics

Organization	Geographic Dist.	Size (employees)	Business focus
A	Multi-state	7000	Manufacturing
B	Multi-state	3000	Service
C	Multi-state	450	Sales and Marketing
D	Multi-national	100,000	Transportation/Service
E	Multi-national	8000	Manufacturing
F	Multi-national	105,000	Manufacturing
G	One Site	2600	Manufacturing
H	Multi-National	85,000	Service/Manufacturing
I	Multi-national	96,000	Service/Manufacturing
J	Multinational	850	Manufacturing

Selection of Experts

The use of the Delphi technique requires soliciting responses from experts. The experts for this study are all human resource or quality improvement professionals employed by each of the ten Malcolm Baldrige National Quality Award winning companies. Personnel and quality professionals were chosen based on their familiarity with both performance appraisal systems and TQ. The participants' mean years of personnel and performance appraisal experience is 13 years, with the range being 2.5-23 years. TQ experience for all participants was based on years with the organization and the organizations' experience with TQ. The range was from 2.5 to 12 years.

Development of Data Gathering Instruments

Respondents were sent, via electronic facsimile transmission (FAX), a series of three questionnaires over a three-month period. The primary objectives in developing the questionnaires were to 1) identify the extent to which the organizations used traditional performance appraisal practices; 2) identify the extent to which the companies employed TQ philosophies in their appraisals; 3) identify what the respondents viewed to be the key elements of the performance appraisal in a TQ environment. The first two objectives required the collection of responses to both open-ended questions and responses to questions based on a five-point Likert scale ranging from "strongly disagree" to "strongly agree". Objective three required data that can be used to weight the elements based on their relative importance to the experts' organizations and personal opinions. Except for questionnaire 1 and the Likert Scale questions in questionnaire 2 (these were developed

from the literature review) the questionnaires were developed based on responses obtained in previous rounds of questions. Each iteration was designed to further define the use of performance appraisals in a TQ environment. The questionnaires for rounds 1, 2, and 3 are discussed below and are included as Appendices C, D and E, respectively.

Round One Questionnaire The first questionnaire sent to the respondents attempted to ascertain the extent to which various traditional and TQ-oriented performance appraisal techniques exist in these organizations. The criteria used to measure this variable were developed based on an exhaustive review of the literature on both performance appraisals and the TQ philosophy. Respondents were asked to evaluate characteristics of their performance appraisal processes against characteristics of traditional performance appraisals using a standard 1-5 Likert measurement scale, with 1 representing strongly disagree or non-existent and 5 representing strongly agree or existent. The scaled questions asked whether respondents agreed that various characteristics of traditional performance appraisal existed within their organizations. The characteristics were selected based on what the researchers identified as consistent themes throughout the literature relating to performance appraisal in other than TQ environments. These included evaluation criteria, uses, formats, compensation policies and so on.

The first questionnaire also asked numerous open-ended questions regarding the characteristics of the respondents performance appraisal processes and the total quality initiatives that the organizations are using. These were focused on getting an initial impression of various aspect of the organizations performance appraisal in the TQ

environment. The areas questioned included process improvement, empowerment, team performance.

Round Two Questionnaire The second questionnaire included a second round of questions and summary information of the participants' responses to the first round of questions. Since the response to the scaled questions in round 1 indicated a high degree of agreement on the use of traditional practices within the appraisal, a set of Likert scaled questions was included in round two to measure the extent to which TQ characteristics were being used in the performance appraisals. As in round one the questions were developed based on what the researcher deemed as consistent themes throughout the literature on performance appraisal under TQ. These characteristics included focus, evaluation criteria, goals. Also, because of the high degree of consensus on round one, the respondents were requested to prioritize the various techniques/practices that were identified in round one in terms of their significance to TQ practices. The content and uses of the appraisals were broken down into various elements and became the basis for the third round of questions.

Round Three Questionnaire Third round weighted responses were used to develop a scale of performance uses the experts judged most important for companies TQ environments. Additionally a number of scaled responses were used to clarify responses from previous rounds.

Testing the Data Collection Instruments

Prior to sending out each questionnaire it was presented to members of the faculty to evaluate the clarity and focus of the questions. Content validity was also assessed via faculty review as well as a review of prior research. Additionally, the content of the first round instrument was validated by a human resource professional of a local company.

Reliability was assessed by measuring the internal consistency of the various scaled responses. The measure used to assess internal consistency was Cronbach's coefficient alpha. Reliability is a measure of internal consistency from one set of measurements to another. For example, two sets of measurement on the same variable for the same individual may not have exactly the same value; however, repeated measurements of a series of individuals will show some consistency. Cronbach's coefficient alpha can be used to estimate the reliability coefficient (SAS, 1985:212). In other words, Cronbach's alpha was used measure the extent to which the scaled questions in round one measure the existence of traditional appraisal characteristics. In round two Cronbach's Alpha was used to measure the extent to which the scaled questions in round two measured the existence of TQ related characteristics. The results of this analysis of the traditional and TQ constructs are contained in Tables 6 and 7, on the following pages.

The overall Cronbach Coefficient Alpha for the traditional appraisal variables in the test is .84052. This alpha is significant at the .05 level. It can be concluded at the .05 level that the items listed provide measure of the existence of the criteria traditional appraisal. In other words, the scaled questions appear to be a reliable (internally consistent) measure for the construct traditional appraisal. The Cronbach coefficient alpha for the TQ related

questions is .8965. Again this is significant at the .05 level and it would appear the question provide a reliable measure for the criteria TQ appraisal.

Table 6, Cronbach's Alpha for Traditional Appraisal Constructs

Cronbach Coefficient Alpha

for RAW variables : 0.840522
 for STANDARDIZED variables: 0.845594

Question:	ALPHA
Q1. Measurable Objectives are established for each employee	0.824345
Q2. The appraisal process is linked to employee development programs	0.834386
Q3. Our organization has established education programs to effectively train raters about the appraisal processes	0.849001
Q4. Our organization has established education programs to effectively train raters about the appraisal purpose*	0.829785
Q5. Our appraisal process is linked to reward decisions	0.825553
Q6. Our appraisal process is linked to promotion decisions	0.824242
Q7. Our appraisal process is linked to layoff decisions	0.813223
Q8. Our appraisal process is linked to dismissal decisions	0.832296
Q9. Our appraisal process is used as a tool for improving performance	0.835556
Q10. Our appraisal is used as a tool for improving productivity	0.839220
Q11. Our appraisal is used as a tool for facilitating employee training	0.835332
Q12. Our appraisal is used as a tool for facilitating employee development	0.826584
Q13. Our appraisal is used as a tool for identifying promotable employees	0.811069
Q15. Our appraisal measures individual performance	0.839991
Q17. Our appraisal is designed to evaluate performance in terms of contribution to the end product	0.838389
Q18. The performance criteria in the appraisal is tied into and consistent with overall goals of the organization	0.838114
Q20. Appraisal ratings are specifically tied to performance based on written job descriptions	0.842105

Table 7, Cronbach's Alpha for TQ Appraisal Constructs

Correlation Analysis

Cronbach Coefficient Alpha

for RAW variables : 0.869565
for STANDARDIZED variables: 0.881692

Question:	ALPHA
IT1. Our organization rewards/compensates based on team performance	.858624
IT2. Team performance is a criterion which is rated on our performance appraisal	0.870977
IT3. Continuous employee improvement is the goal of our appraisal	0.865457
IT4. Promoting continuous process improvement is a goal of our appraisal	0.871156
IT5. Our organization rewards individuals based on individual appraisal ratings	0.871875
IT6. Our organization focuses on the performance of the system vs. performance of the individual	0.867976
IT7. Our appraisal is used mainly as a source of feedback to the employee to improve employee performance	0.854084
IT8. Compensation is based on an accumulation of skills	0.865966
IT9. Compensation is based on an accumulation of responsibilities	0.859383
IT10. Compensation is based on the organization/department success	0.851423
IT11. Our appraisal takes an employee's basic competence for granted	0.877316
IT12. Our appraisal could be characterized as a coaching instrument	0.868864
IT13. The organization compensates based on team performance	0.857464
IT14. The organization rewards based on team performance	0.861436
IT15. Performance goals are established by teams	0.851605
IT16. Participation in process improvement teams is an important element in the organization's appraisal	0.859228
IT17. The organization's appraisal is used for future-oriented purposes	0.860764
IT18. The organization's appraisal is used to reflect on past performance	0.884954
IT19. The ratee is encouraged to review the completed appraisal before it becomes a matter of record	0.863677
IT20. Throughout the organization, raters interpret the rating procedures uniformly	0.868814
IT21. Our performance appraisal measures group or team performance	0.856482
IT22. My organizations appraisal philosophy is representative of Demings third "deadly sin"	0.872815
IT23. Our appraisal is conducive to fostering employee empowerment	0.867650
IT24. Our appraisal is designed to evaluate performance in terms of contribution to process improvement	0.855592

In addition to these measures, the Delphi technique has several inherent characteristics which improve its reliability and validity. "Delphi technique is a general methodology for achieving a reliable consensus of opinion from a group of experts." (Tersine and Riggs, 1976:56) The Delphi technique employs three features which increase validity and reliability. These three features are: 1) anonymity; 2) controlled feedback; and 3) statistical group response. Methods to ensure anonymity include the questionnaire. These serve as ways of reducing the impact of a dominant individual. The second feature, controlled feedback, involves conducting the exercise in a sequence of rounds between which a summary of the results of the previous round are communicated to the participants. This is a device used to facilitate convergence of responses. The third feature, use of statistical definition of the responses, is a way of reducing group pressure for conformity. (Dalkey, 1969:16) The Delphi technique should provide results that are reproducible (Dalkey 1969:12).

Summary

This thesis employs the Delphi method to describe and benchmark performance appraisal uses of successful TQ organizations. The Delphi approach is an accepted research methodology for gaining consensus among experts. Benchmarking is also an accepted approach to identify "best practices" of organizations. As stated earlier, "benchmarking should not be limited to organizations within the same field or industry. In Chapter IV, the data obtained using the Delphi procedure is presented and analyzed. Chapter V presents the results of the Delphi study.

IV: Findings and Analysis

Introduction

This chapter is divided into three main sections. The first section analyzes the data from the three rounds (the data for round one, two, and three are presented in appendix's G, H, and I respectively). The second section provides a summary of the data provided by organization J, which does not use performance appraisal in its organization, and therefore was not able to respond to our questionnaires, but did provide information on its organizations' practices. Finally, section three presents the data from this study to answer the four investigative questions that were posed in Chapter I. The 10 organizations that participated in the study are referred to as Organizations A through J. It is important to keep in mind Organization A has no written performance appraisal for its non-exempt (wage earning) employees as per its union contract. The responses from Organization A refer to its appraisal system for its exempt (salaried) employees.

Analysis of Scaled and Weighted Questions

The scaled questions from rounds one, two, and three were divided into two categories. The first category contains those items designed to measure the existence of traditional practices toward performance appraisal. Although this category may contain constructs espoused by TQ experts, the items in this category were expressed prior the popularization of TQ. The second category contains constructs identified primarily with the TQ movement.

Traditional Appraisal Constructs. Table 8 below contains the traditional appraisal constructs, along with the mean and standard deviation (SD) for each construct. The summed values for all constructs are also presented. Figure 1, on the following page, is a histogram of all responses in the category regarding the traditional approaches to the performance appraisal. This histogram represents the frequency of each rating, based on the 1 (strongly disagree) through 5 (strongly agree) Likert scale. Since all questions were posed in such a manner that a response of 5 is always a positive response, it is apparent by looking at the histogram that the overwhelming number of responses were either *agree* or *strongly agree*. This indicated that these organizations still incorporate the traditional methods of using the performance appraisal.

Table 7, Traditional Appraisal Constructs

Construct	Mean	SD
Q1. Measurable Objectives are established for each employee	4.22	1.09
Q2. The appraisal process is linked to employee development programs	4.33	1.32
Q3. Our organization has established education programs to effectively train raters about the appraisal processes	3.22	1.39
Q4. Our organization has established education programs to effectively train raters about the appraisal purposes	3.55	1.23
Q5. Our appraisal process is linked to reward decisions	4.11	1.45
Q6. Our appraisal process is linked to promotion decisions	4.11	1.16
Q7. Our appraisal process is linked to layoff decisions	3.66	1.66
Q8. Our appraisal process is linked to dismissal decisions	4.55	1.33
Q9. Our appraisal process is used as a tool for improving performance	4.77	.44
Q10. Our appraisal is used as a tool for improving productivity	4.55	1.01
Q11. Our appraisal is used as a tool for facilitating employee training	4.22	1.09
Q12. Our appraisal is used as a tool for facilitating employee development	4.44	1.01
Q13. Our appraisal is used as a tool for identifying promotable employees	2.66	1.58
Q15. Our appraisal measures individual performance	4.77	.44
Q17. Our appraisal is designed to evaluate performance in terms of contribution to the end product	3.77	1.39
Q18. The performance criteria in the appraisal is tied into and consistent with overall goals of the organization	4.66	.71
Q20. Appraisal ratings are specifically tied to performance based on written job descriptions	3.11	1.32

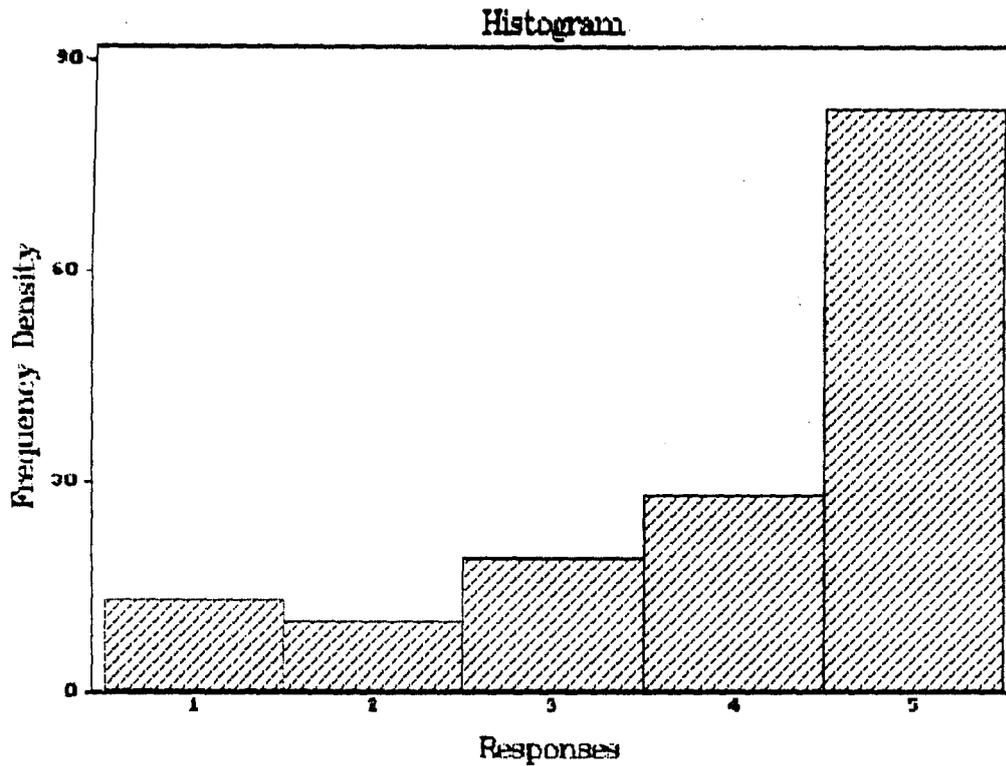


Figure 1, Histogram of Traditional Appraisal Constructs.

TQ Appraisal Constructs. These constructs are primarily the product of the second round of questions. However, items 14, 16, 19, and 33a from the first round of scaled questions were added to the TQ appraisal category. These are presented on the following page as items 21, 22, 23 and 24 in Table 8. This table contains the TQ appraisal constructs, along with the mean and standard deviation (SD) for each construct. Figure 2 is a histogram of all responses in the TQ related appraisal category. Notice there is much greater dispersion in the responses to the TQ related questions, possibly indicating that the organizations do not use the same methods.

TABLE 8, TQ Appraisal constructs

Construct	Mean	SD
IT1. Our organization rewards/compensates based on team performance	3.5	1.07
IT2. Team performance is a criterion which is rated on our performance appraisal	3.5	1.5
IT3. Continuous employee improvement is the goal of our appraisal	4.375	1.06
IT4. Promoting continuous process improvement is a goal of our appraisal	3.75	1.04
IT5. Our organization rewards individuals based on individual appraisal ratings	3.62	1.69
IT6. Our organization focuses on the performance of the system vs. performance of the individual	2.62	.91
IT7. Our appraisal is used mainly as a source of feedback to the employee to improve employee performance	3.5	1.31
IT8. Compensation is based on an accumulation of skills	2.75	1.28
IT9. Compensation is based on an accumulation of responsibilities	3.75	1.58
IT10. Compensation is based on the organization/department success	3.25	1.17
IT11. Our appraisal takes an employee's basic competence for granted	2.62	1.19
IT12. Our appraisal could be characterized as a coaching instrument	3.62	1.19
IT13. The organization compensates based on team performance	3.5	1.20
IT14. The organization rewards based on team performance	4.0	1.07
IT15. Performance goals are established by teams	2.87	1.25
IT16. Participation in process improvement teams is an important element in the organization's appraisal	3.62	.92
IT17. The organization's appraisal is used for future-oriented purposes	3.75	1.17
IT18. The organization's appraisal is used to reflect on past performance	3.12	1.46
IT19. The ratee is encouraged to review the completed appraisal before it becomes a matter of record	4.0	1.86
IT20. Throughout the organization, raters interpret the rating procedures uniformly	3.12	.64
IT21. Our performance appraisal measures group or team performance	2.62	1.06
IT22. My organizations appraisal philosophy is representative of Demings third "deadly sin"	2.5	1.41
IT23. Our appraisal is conducive to fostering employee empowerment	3.75	1.28
IT24. Our appraisal is designed to evaluate performance in terms of contribution to process improvement	3.5	1.20

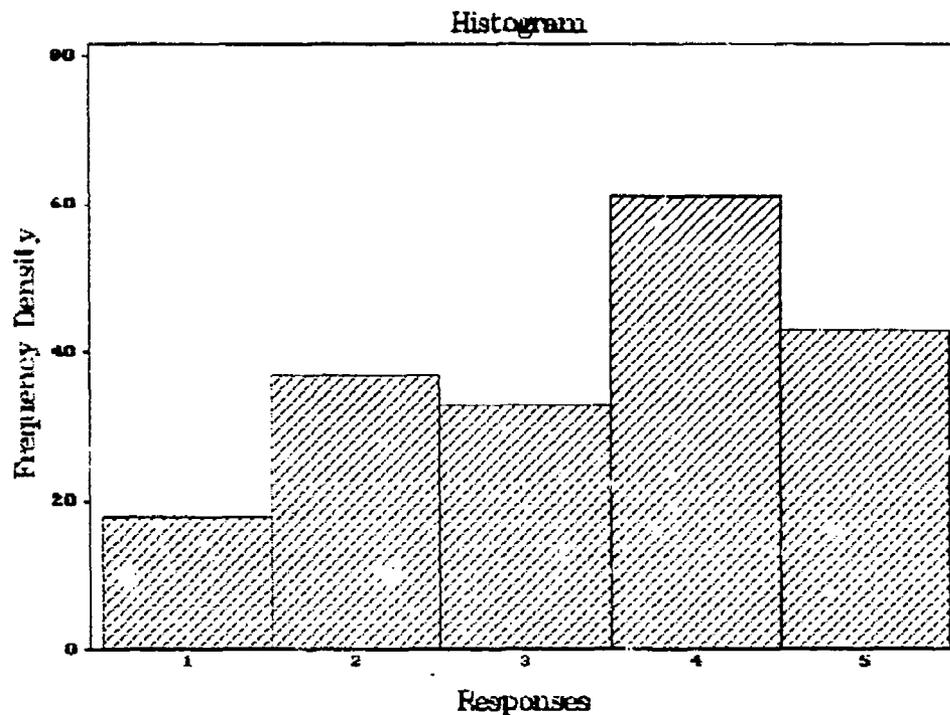


Figure 2, Histogram of TQ appraisal constructs

Analysis of Weighted Questions. The weighted questions from rounds two and three of the study served two purposes. The first purpose was to evaluate, in order of importance, how these organizations actually used the performance appraisal. This measure was strictly descriptive. The second purpose was to identify the experts' (respondents') opinions as to the best uses of the performance appraisal in the TQ environment.

The responses were analyzed using summary statistics. For the purpose of describing the organizations' existing uses of the appraisal, the mean and range were developed for each construct. These are depicted in Table 10.

For the purpose of identifying the respondents' viewpoints on how the appraisal should be used in a TQ environment, the mean and range were also calculated; however the

variability of the responses was also used to determine the degree of consensus among the respondents. For the purposes of this study, any question that had a range of greater than 15 was determined not to have gained consensus. Accordingly, those questions were included in round three in an attempt to gain consensus of the experts. Additionally, any one use had a mean of less than 8 was deemed to be an insignificant use of the appraisal in a TQ environment and was not included in round three. Satisfaction of both the criteria were required for inclusion in round three. The responses in round three regarding the experts' opinions of the best uses of performance appraisals in a TQ environment are included in Table 11 on the following page.

Table 9, Round Two Weighted Responses

Construct	Organization	Expert
Our Appraisal is	Mean/range	Mean/ range
Used for determining promotable employees	9.375(0-20)	8.13(0-20)
Used for making layoff decisions	4.375(0-10)	1.25(0-5)
Used for making dismissal decisions	6.25(0-15)	3.75(0-15)
Used for future development of the ratee	16.25(5-70)	32.5(10-70)
Used to categorize the ratee based on past performance	3.75(0-10)	0.00(0-0)
Used for making compensation decisions	18.75(0-50)	8.75(0-20)
Used to foster teamwork	3.75(0-10)	8.13(0-15)
Used to foster employee empowerment	5.00(0-15)	10.62(0-20)
Used to evaluate performance based on objective criteria	13.750(0-30)	15.00(0-40)
Used to evaluate performance based on subjective criteria	12.5(0-35)	6.675(0-15)
Used to justify compensation	6.25(0-15)	5.00(0-10)

Only the five uses below met the criteria to warrant their inclusion in the third round of questions. All other possible uses not only met the criterion for achieving consensus, they also satisfied the criterion for being an insignificant use of the performance appraisal in a TQ environment.

The experts were asked to reevaluate the five possible uses that are included in Table 10 below. Instead of having 100 points to allocate, they had only 50 points to allocate in round three. This enabled a more direct comparison of the third round results with the second round results since the number of points per question was roughly the same.

Table 10, Round Three Weighted Responses.

Construct	Response	
The best uses of the appraisal in a TQ Environment are....	Mean	Range
Used for determining promotable employees	3.75	0-10
Used as a tool for future development of the ratee	20.63	5-35
Used for making compensation decisions	12.5	5-25
Used to foster teamwork	5.31	0-12.5
Used to foster employee empowerment	6.56	0-20

Organization J Data

Organization J has 850 employees throughout all operations. It is non-union and dispersed to three sites located both nationally and abroad. Organization J's system is based on Dr. W. Edward Deming's belief that most employees are doing their very best to

contribute to the departments' and companies' mission. Further, the company realizes that any variation in performance among employees may be due to factors outside of the employees control and are not necessarily attributable to differences in individual competence. We cannot accurately measure performance due to normal variation in factors beyond the control of the employees. The remainder of the discussion on Organization J is directly from information provided by Organization J's expert.

Organization J abolished its traditional performance appraisal system in 1986, because they believed it was: 1) not working; and 2) did not conform with Dr. Deming's philosophy. In order to take the fear out of performance evaluation, they have no rating system to measure employee performance. They focus on employee development, continuous learning, and constant improvement.

Organization J does have an employee feedback mechanism that is a two-way communication system that takes place between the manager and the employee. There are basically two outputs: one is a job description that lists major on-going job responsibilities, and identifies the internal and external customers who receive the products or services the employee produces; the other output is a Personal Action Plan, which is described below. Job Descriptions are really statements of mutual expectation between the manager and the employee. They should be changed after a major change in responsibility but such changes do not necessarily mean a change in grade level is required. This process is used for non-production employees only.

Personal Action Plans are primarily the responsibility of the employee. The employee and the manager complete this part of the process through discussion of options that

would assist the employee in further development courses/seminars. Our intent is for managers to provide suggestions to employees that would help them improve their performance as part of their overall development. The employee ultimately writes and owns the plan that has been negotiated with the manager.

Organization J has not suffered from the abolition of the performance appraisal. Employees were happy to see the rating system removed because it was perceived as a tool that induced fear. Also, employees are highly motivated and take ownership for quality.

For discipline problems, Organization J uses a progressive discipline model, first verbally communicating the concern, then documenting when improvement does not occur, and lastly specifying an improvement period if, or when, failure to improve may result in termination. A zero increase at the annual salary review may be recommended. To quote Organization J's expert, "We have seen favorable results even when the problems have been serious. Our managers have done a good job of working with employees to improve performance rather than trying to weed them out."

The compensation system is divided into two programs. One for non-production employees and one for production employees. It follows the theory that since all employees are contributing their best, they will receive the same dollar increase as their peers. Upon the managers' recommendations, employees will receive an annual wage increase based on a percentage of the midpoint of their grade.

Organization J does differentiate performance to some degree. They have an exceptional performer increase that was intended for the 5% of the population who

continuously exceed expectations. Employees are recommended by their managers and reviewed at the senior staff level for approval of an exceptional performer increase at the time of our yearly salary forecasting. Exceptional performer increases are set at 50% to 100% of the added to other yearly raises. According to the Organization J expert, the difficulty has been in defining the exact steps an employee must take to be designated as exceptional.

Managers may recommend promotion from one grade to another based on increased responsibility or performance. Promotional increases can occur anytime during the year. Organization J does not have sales quotas or incentives. Executives are also on straight salary and have no special perquisites (perks) in benefits or compensation packages.

Organization J says its system works because of constancy of purpose. It establishes four over-arching corporate objectives each year that drive their short-term plan. The short-term objectives complement the long range strategic plan and consequently there is great visibility for employees about what is important. Everyone is able to identify his or her part in the whole, and to have objectives that their work group can control through their performance. They feel that the system provides sufficient direction to employees on what is required for quality performance.

Answers to Investigative Questions

This section discusses the results of this study in terms of how they relate to the four investigative questions that were posed in Chapter I.

Investigative Question Number 1: *Based on the available literature, what are the elements and uses of performance appraisal?* The list of elements and uses of performance appraisal are presented in detail in Chapter II; however, Tables 12 and 13 below contain a summary of the elements and uses of performance appraisal found in the literature review. These tables contain the generic elements found in the literature and represent those elements and uses which are not designed specifically for TQ environments. Table 11 depicts the most common uses (purposes) of performance appraisal while Table 12 represents the elements of performance appraisal.

Table 11. Common Purposes for the Performance Appraisal (Moen, 1989:62)

Purpose	Percent of those responding
Compensation	85.6
Counseling	65.1
Training and Development	64.3
Promotion	45.3
Staff Planning	43.1
Retention/Discharge	30.3
Validation of Selection Technique	17.2

Table 12. Elements of the Traditional Appraisal

Criteria	Traditional Management
Guiding value	Attribution to individual
Information basis	Individual behavior; conformance to the system
Rating scale	Five or more scale
Primary goals	Control; documentation
Supervisory role	Supervisor as judge
Leadership practices	Directional; evaluative
Appraisal frequency	Occasional
Degree of formality	High
Reward practices	Individual orientation

The definition of performance appraisal is "a technique for measuring employee actions against standards of acceptable performance" (Plachy 1983:57). The five basic elements of the appraisal are: 1) measurable objectives for each position; 2) making performance appraisal a continuous, year-round objective; 3) linking the process to positive development; 4) educating appraisers about performance appraisal purposes and practices (Sahl, 1990:55); and 5) the employee should be afforded the opportunity to review and, if desired, appeal the performance rating (Daley, 1992:40). Although there are other research efforts that identify other elements, most include these five.

Investigative Question Number Two: *What are the differences between traditional and TQ-oriented performance appraisals?* The primary differences between traditional and TQ oriented performance appraisals can be identified by comparing the scaled questions of round one to the scaled questions in round two. These questions were developed based on a review of the literature. Table 13, on the following page, presents a comparison of the performance appraisal approaches in a traditional organizational setting versus a TQ environment. The primary differences between the two approaches deal with focus. For example, the traditional approach focuses on control and documentation as the primary goals, while the TQ approach aims for development and problem solving. Additionally, the TQ approach attempts to remove any elements which would induce fear in the individuals being rated. It focuses on the future (what the employee can become) not the past.

Table 13, Comparison of Performance Appraisal Approaches (Bowman, 1994:132)

Criteria	Traditional Management	Quality Management
Guiding value	Attribution to individual	Attribution to the system
Information basis	Individual behavior; conformance to the system	Work group participation; continuous improvement of system
Rating scale	Five or more scale	Three scale categories
Primary goals	Control; documentation	Development; solving problems
Supervisory role	Supervisor as judge	Supervisor as coach; peers as colleagues
Leadership practices	Directional; evaluative	Facilitative; coaching
Appraisal frequency	Occasional	Frequent
Degree of formality	High	Low
Reward practices	Individual orientation	Group orientation

Investigative Question Number Three: *What characteristics of the performance appraisal are currently in use in the TOM environment?* The answer to this question lies in the data which was presented previously in this chapter. First, this section addresses the characteristics identified in the scaled responses to the questionnaires followed by the weighted responses and open-ended responses. The open-ended questions are divided into traditional, TQ, and other characteristics of the participant organizations.

Scaled Questions. The primary goal of the scaled questions used in this research was to identify the respondent organizations' degree of concurrence with traditional and TQ appraisal constructs developed from the literature review. Figure 3 contains the mean values for the traditional appraisal constructs that appeared in round one measured by the Likert scales. There is a high degree of agreement on most of these items. The mean for the composite of these constructs is 4.22, indicating a high degree of agreement on the existence of traditional appraisal approaches within these organizations. The only mean

response below 3 (neither agree or disagree) addresses the use of appraisal to identify promotable employees. All other responses were above three, which relates to a high degree of agreement on the use these traditional appraisal constructs by the participating organizations.

Figure 4, on page 56, depicts the mean values for the TQ appraisal constructs measured by the Likert scales. There is a less of agreement of the existence of these constructs currently in practice by the participating organizations. The mean for the composite of these constructs is 3.4 which does not seem to indicate a high degree of agreement on the TQ appraisal constructs among these organizations. The histogram showing the frequency of each score for each question can be found in Figure 2 on page 60. When comparing this histogram to the histogram of the traditional appraisal constructs, it is apparent that the use of the TQ constructs (as evident by a construct's receiving a response of 5 (strongly agree) is less conclusive than it is for the traditional appraisal constructs.

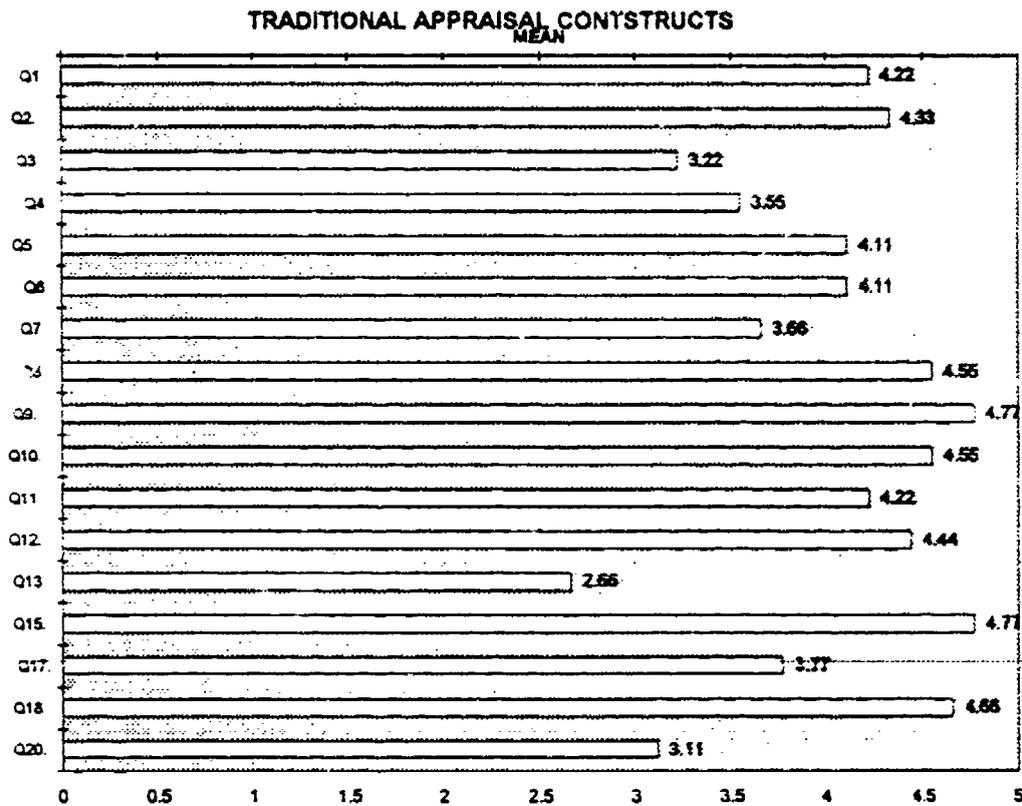


Figure 3, Average Response to the Existence of Traditional Appraisal Constructs from Round One

The questions below correspond to the values on the Figure above.

Q1. Measurable Objectives are established for each employee
Q2. The appraisal process is linked to employee development programs
Q3. Our organization has established education programs to effectively train raters about the appraisal processes
Q4. Our organization has established education programs to effectively train raters about the appraisal purposes
Q5. Our appraisal process is linked to reward decisions
Q6. Our appraisal process is linked to promotion decisions
Q7. Our appraisal process is linked to layoff decisions
Q8. Our appraisal process is linked to dismissal decisions
Q9. Our appraisal process is used as a tool for improving performance
Q10. Our appraisal is used as a tool for improving productivity
Q11. Our appraisal is used as a tool for facilitating employee training
Q12. Our appraisal is used as a tool for facilitating employee development
Q13. Our appraisal is used as a tool for identifying promotable employees
Q15. Our appraisal measures individual performance
Q17. Our appraisal is designed to evaluate performance in terms of contribution to the end product
Q18. The performance criteria in the appraisal is tied into and consistent with overall goals of the organization
Q20. Appraisal ratings are specifically tied to performance based on written job descriptions

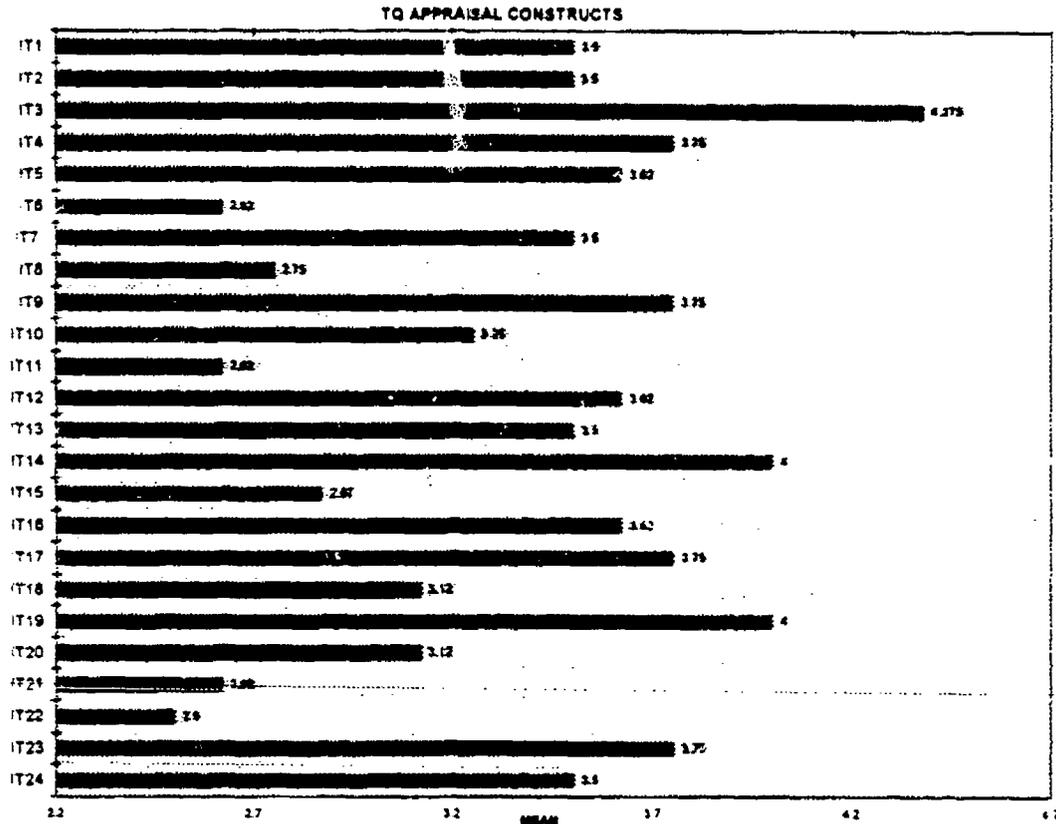


Figure 4, Average Response to the Existence of TQ Appraisal Constructs from Round Two

The questions below correspond to the values in the Figure above.

IT1. Our organization rewards/compensates based on team performance
IT2. Team performance is a criterion which is rated on our performance appraisal
IT3. Continuous employee improvement is the goal of our appraisal
IT4. Promoting continuous process improvement is a goal of our appraisal
IT5. Our organization rewards individuals based on individual appraisal ratings
IT6. Our organization focuses on the performance of the system vs. performance of the individual
IT7. Our appraisal is used mainly as a source of feedback to the employee to improve employee performance
IT8. Compensation is based on an accumulation of skills
IT9. Compensation is based on an accumulation of responsibilities
IT10. Compensation is based on the organization department success
IT11. Our appraisal takes an employee's basic competence for granted
IT12. Our appraisal could be characterized as a coaching instrument
IT13. The organization compensates based on team performance
IT14. The organization rewards based on team performance
IT15. Performance goals are established by teams
IT16. Participation in process improvement teams is an important element in the organization's appraisal
IT17. The organization's appraisal is used for future-oriented purposes
IT18. The organization's appraisal is used to reflect on past performance
IT19. The rater is encouraged to review the completed appraisal before it becomes a matter of record
IT20. Throughout the organization, raters interpret the rating procedures uniformly
IT21. Our performance appraisal measures group or team performance
IT22. My organization's appraisal philosophy is representative of Deming's third "deadly sin"
IT23. Our appraisal is conducive to fostering employee empowerment
IT24. Our appraisal is designed to evaluate performance in terms of contribution to process improvement

Weighted Questions. The weighted scale of interest here attempts to measure how these organizations are actually using performance appraisals, later weighted scales will assess the experts' opinions of the best uses of performance appraisal in the TQ environment. Figure 5, below, is a graphical depiction of the mean weights for each use of the performance appraisal.

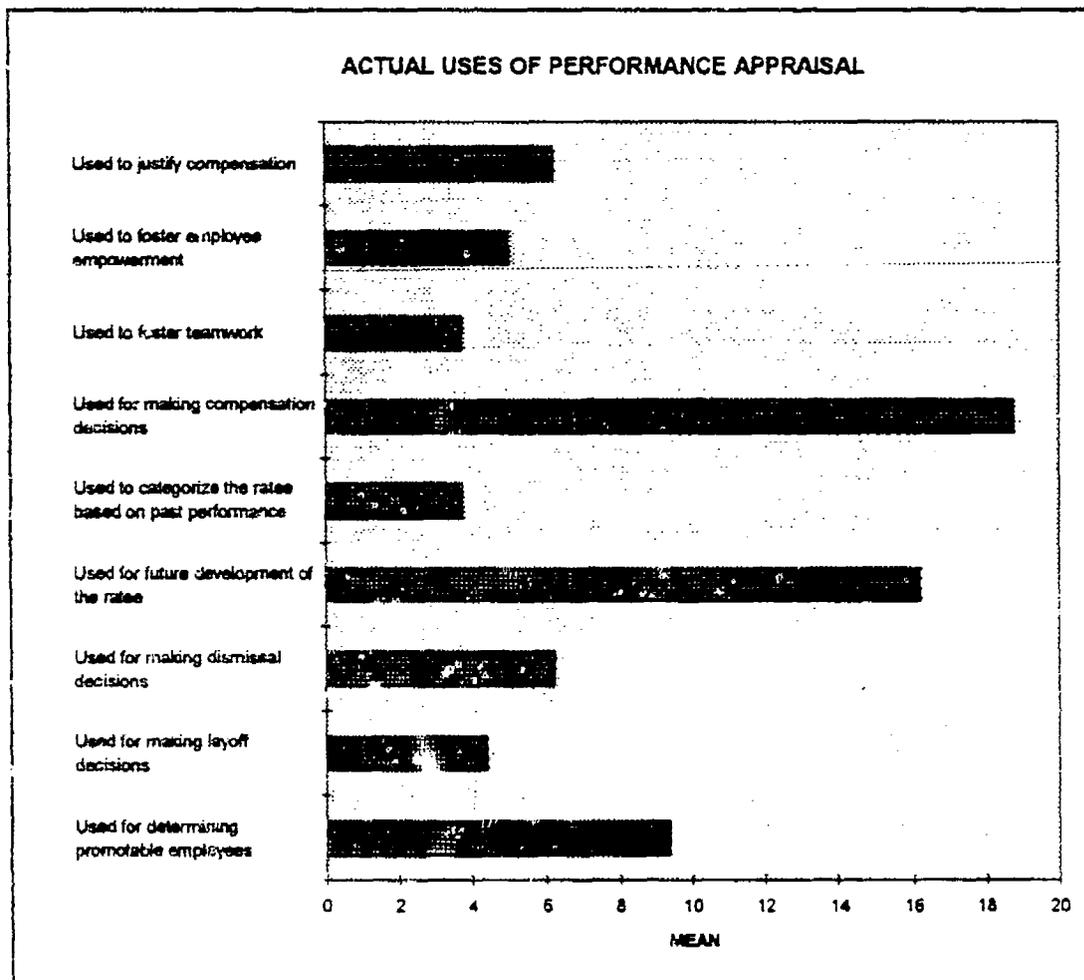


Figure 5, Mean Weights of Actual Uses of the Performance Appraisal

These data indicate that the use of the appraisal for future development and compensation decisions are the categories with the two highest scores. Using the appraisal for future development is consistent with what the proponents of TQ supports, while using the appraisal as a means to determine compensation is not consistent with TQ expert views.

Open-ended Responses. The open-ended responses contains information which can be classified as characteristic of the traditional appraisal and the TQ appraisal. Additionally, there are a number of characteristics of the organizations' appraisals which are not directly attributable to either category.

The characteristics of the traditional appraisal exhibited by the organizations include the use of standardized forms, use of forced scales (a numerical rating), use of certain evaluation criteria, use of the appraisal to hold individuals accountable, and the use of appraisals to compensate individuals for individual performance.

All organizations, with the exception of organizations I and J, use standardized appraisal forms to evaluate employee performance. According to TQ proponents, this could inhibit the employees from developing their own goals for development and improvement. Additionally, three of the organizations used forced scales in their performance appraisal. Although TQ proponents recommend the use of a three categories (below standard, quality performer, exceptional performer) the organizations using rating scales normally used a four or more categories in their scales.

A number of organizations in the study used traditional appraisal criteria in their performance appraisals. Individual employee output, leadership ability, personal image,

and communication were evaluated by a majority of the organizations, while absences, overtime, reprimands, philanthropic activities, were included in three or more of the organizations in the study.

When asked about the philosophies, goals, and practices of their organizations (round one, questions 31 and 33b), three of the respondents expressed terms which indicated their performance appraisal was used to assess individual performance and hold individuals accountable for performance and development. Additionally, two of the organizations based pay increases solely on individual performance, while three organizations use individual performance partially to determine pay increases.

Although most of the respondents identified characteristics of their organizations' appraisals which were arguably traditionally oriented, they also exhibited a number of characteristics which were attributable to the TQ philosophy of the performance appraisal. These characteristics include employee collaboration on performance goals, evaluation criteria based on teamwork and performance in teams, reward based on organization/team performance, evaluation based on process improvement, and focus on employee development.

Seven of the organizations in this study indicated that individuals were involved in determining performance goals used in appraisals. Only one organization indicated that the supervisor determined performance goals 100 percent of the time. The fact that individuals participate in setting performance goals is indicative of an appraisal promoting employee development.

The evaluation criteria for a number of the organizations included categories for measuring performance on teams and team works. Additionally, three of the organizations in the study stated that reward/recognition was based on team or department performance as opposed to individual performance alone. Another evaluation criteria which appears to promote TQ is the evaluation of process improvement. Several respondents included process improvement as one of the areas assessed in their performance appraisal.

One of the major goals for performance appraisal expressed by a number of respondents was the focus on employee development in the performance appraisal. For example, some of the comments portrayed the appraisal as being "strictly development based and does not rate performance", and "the assessment is done on. provided a platform for setting future goals." This focus on employee development is future-oriented (as opposed to measuring the past) and is consistent with the goals of TQ.

The final category of open-ended responses includes information that is characteristic of the majority of the participant organizations in the study, but is not solely attributable to either the traditional or TQ appraisal philosophies. These characteristics include: all of the organizations use annual review periods, except for organization J, which uses a 6-month period for non-exempt employees; seven of the organizations use different appraisal systems for managerial versus line employees; all of the organizations have performance feedback systems; seven of the organizations provided less than 4 hours training to raters regarding the appraisal process; and all of the organizations provided less than four hours of training to employees regarding the rating and development process. Of these characteristics the one that stands out is the small amount of training given to both raters

and rates regarding the appraisal training process. In fact, when asked what changes would they like to see with regard to their appraisals three respondents indicated they would like to see more emphasis on training individuals on the day-to-day use of the process.

Investigative Question Number Four: *Which characteristics and uses are viewed as most significant by the expert practitioners?* To answer this question we used two series of weighted questions to assess what the experts viewed as the most important uses of performance appraisal in the TQ environment. The first series was asked in the round two questionnaire and the mean responses are depicted in Figure 6, on the following page.

From these responses, the uses receiving the lowest weights and a high degree of consensus were eliminated from consideration for the third round and the remainder of the alternatives were included in the round three questionnaire. The data from the round three responses is represented in Figure 7 on page 63. From the results in Figure 7 it is apparent that future development was identified as the most important use for performance appraisal. In fact, all but one of the respondents identified employee development as what they thought was the most important use for performance appraisal. The second and third most important uses for performance appraisals are to make compensation decisions and to promote employee empowerment, respectively.

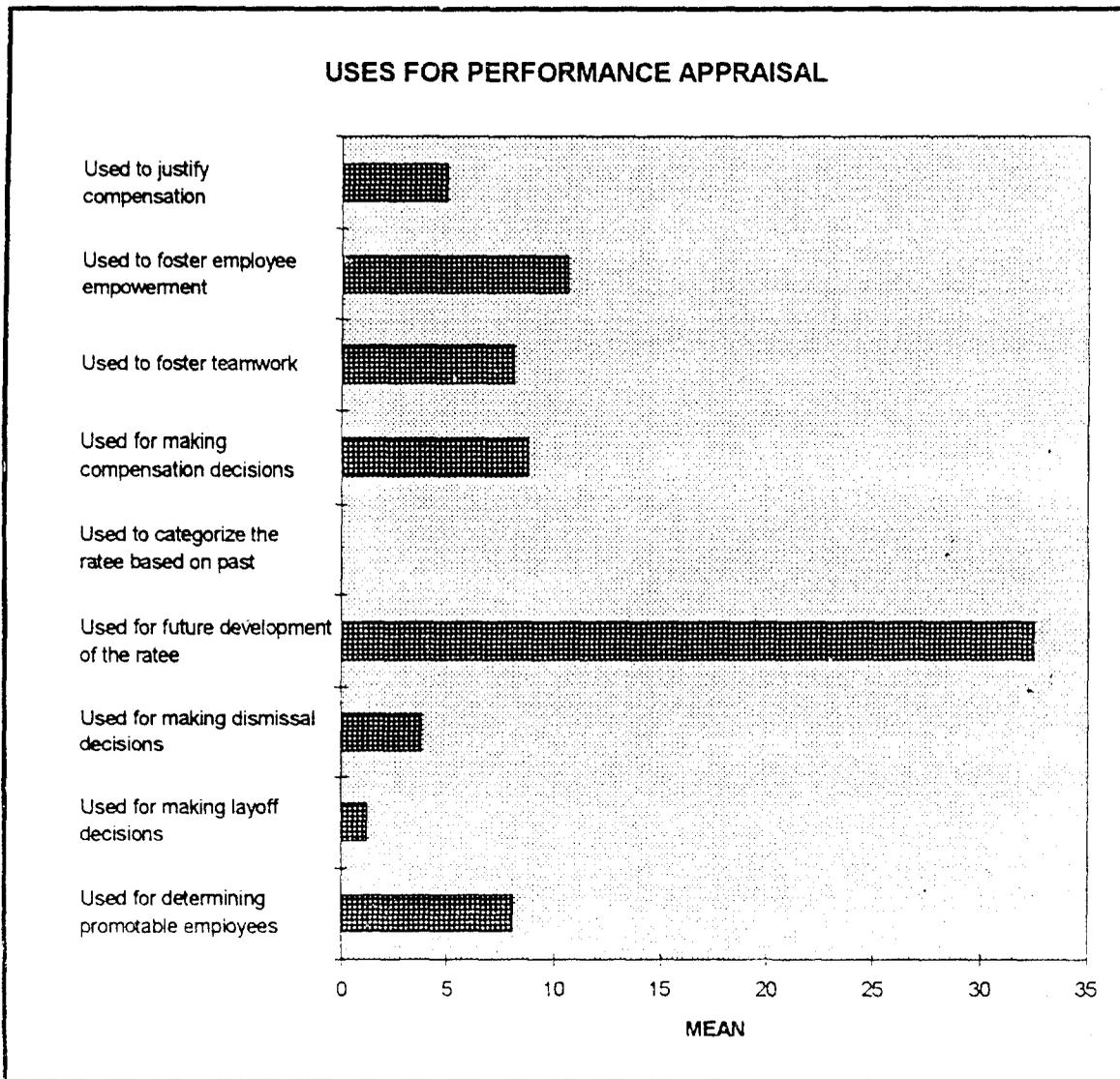


Figure 6. Round Two Expert Opinion on Uses for Performance Appraisal

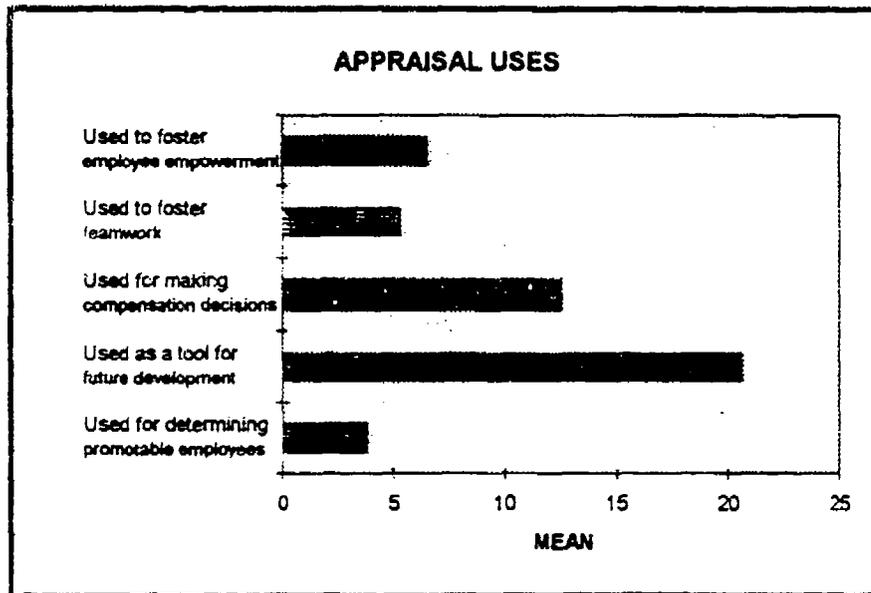


Figure 7, Round Three Expert Opinion on Uses for Performance Appraisal

Conclusion

It would appear that, with one exception, the organizations in this study use characteristics of the both performance appraisal philosophies and TQ philosophies to design and implement performance measurement in their organizations. Additionally no two organizations appear to integrate the two philosophies in the same manner. Chapter V addresses how the analyzes used to answer the investigative questions also answers the research question identified in Chapter I. Possible routes for future research are also presented.

V: Conclusions and Recommendations

This chapter begins by answering the fundamental question of this research effort which is, if quality experts such as W. Edwards Deming maintain that that the performance appraisal is incompatible with TQM, how do organizations that have been recognized for TQM excellence use and view the performance appraisal? The answer to the research question is presented in terms of what Traditional, TQ and other characteristics were found in the organizations. The chapter will then conclude by offering recommendations for further research.

Answer to the Research Problem

Existence of Traditional Appraisal Practices. The scaled questions on traditional appraisal practices (from round one of the Delphi study) show agreement that these organizations, except for Organization J, do use traditional appraisal techniques. These include but are not limited to using forced ratings scales, linking compensation to performance appraisal, and linking promotion to performance appraisal. This is further evidenced by the consensus on the use of traditional appraisal criteria such as individual output and more subjective criteria such as personal image and ability to communicate, which more than half of these organizations include as evaluation criteria. Furthermore, the appraisals in the majority of the organizations are specifically used to hold individuals accountable and reward personnel based on individual performance, both of which are not directly consistent with the TQ related literature regarding performance appraisals.

Although these organizations use traditional appraisal practices, most organizations cited

either insufficient rater training or a lack of training altogether as a major problem with their appraisal systems.

Existence of TQ Related Practices. On the other hand, these organizations do incorporate a number of practices which are consistent with the literature on TQ. There was a significant range in the responses of the scaled questions in round two of the Delphi study which contained the TQ constructs. This indicated that there were differences among organizations concerning the existence of performance appraisal elements that are related to TQ philosophies. This range was also evident in the open-ended responses; however, the open-ended responses contained a number of attributes which were relatively consistent among the organizations and consistent with the TQ philosophy. These included joint determination of performance goals, team/department performance-based compensation, evaluation based on team/group performance, and established feedback policies. Additionally, most organizations have adapted their appraisal formats in accordance with TQ proponents' recommendations. These changes include reducing the number of rating categories, elimination of ratings and scales altogether, and stressing the use of more objective criteria with the inclusion of mutual goal setting between supervisor and employee. Most important, however, the overriding theme of these organizations was that the major focus of the performance appraisal is to further the development of the employee. This was also in agreement with what the experts in these organizations viewed as the best use of the performance appraisal in a TQ environment (from rounds two and three of the Delphi study). Table 14 on the following page contains a summary of the TQ related characteristics.

TABLE 14, Various Techniques for Appraisals in a TQ Environment

<p>Use of unique performance criteria including:</p> <ul style="list-style-type: none"> -dedication to customers (internal/external) -quality of output -initiating process improvements -versatility (team participation) -reliability
<p>Goals of the performance appraisal including:</p> <ul style="list-style-type: none"> -to recognize contribution through performance planning, intensive feedback, and review. -to empower employee performance and development; empower to generate action in service of their commitments -to align individual performance with department/function/division/company goals -to hold all individuals responsible and accountable for performance and development -to promote employee development and not track a report card; not used to drive salary promotion or selection
<p>Techniques to promote team performance and process improvement include</p> <ul style="list-style-type: none"> -bonus system based on performance as a team as opposed to individual -team reviews and compensation -recognition based on team accomplishments -team member input is sought on appraisals -process management as well as results are included in appraisals -individual and team define the specific performance parameters/goals -appraisal/assessment is done only to provide a platform for setting future goals -strictly development-based appraisals which do not rate performance -forward looking vs. backward looking
<p>Empowerment techniques include:</p> <ul style="list-style-type: none"> -set expectation at beginning of year and turn employee loose to accomplish goals -measured as initiative on appraisal form--comments on employee discovering and solving problems/improving processes
<p>Other techniques include:</p> <ul style="list-style-type: none"> -more narrative formats, thereby eliminating or reducing forced rating scales -established measurement criteria -management training on evaluating for TQ

To summarize, the organizations that participated in this study incorporate traditional appraisal practices; however, they all incorporate various characteristics in their appraisals which are consistent with the TQM philosophy, a practice that underscores Bowman's assertion that if organizations continue to use performance appraisals, they must adapt

them to reflect the different environment of TQM. Organization J is the notable exception as they have eliminated their appraisal in accordance with Deming's guidelines. Another exception may be Organization C which uses appraisals almost exclusively for the future development of employees.

By comparing the results of a 1984 survey of how members of the American Management Association use the appraisal (located in Table 1, page 9) with how the Baldrige Award winning companies actually use the appraisal (located in Figure 5, page 57), it is apparent that the appraisal still plays a large role in making compensation decisions. However, the use of the appraisal for future development of the employee seems to be more important today than it was in 1984. Using the appraisal to make promotion decisions appears to have the same importance today as it did in 1984.

By comparing the results of the 1984 survey to the organizations' experts' opinions as to the best uses for the appraisal in a TQ environment (located in Figure 6, page 62), it is apparent that using the appraisal for future development of the ratee takes on far more importance than using the appraisal for making compensation decisions and for making promotion decisions. Additionally, the experts' opinions place more importance on the use of the appraisal to foster employee empowerment and teamwork when compared to how their organizations currently use the appraisal for those purposes.

Recommendations for future research

This study has attempted to describe the performance appraisal practices of companies that are successful in the TQ environment. It has not, however, attempted to assess the impact of these appraisal systems in terms of infusing TQM principles into the culture of

the organization. This may be an area of interest for future research. Another avenue for future research might be identifying how the employees in these companies view the appraisal practices of their organizations. A third avenue for future research could be identifying possible differences between the ways TQ companies and non-TQ companies view and use their performance appraisals. Finally, a fourth possibility for future research in this area may be to identify what members of organizations (both managers and employees) view as the most important characteristics of the performance appraisal to foster employee empowerment and TQ. This research has shown that there are significant differences in the way these companies implement the performance appraisal. Research to identify which performance appraisal characteristics are most effective may also be beneficial.

Conclusion

The results of this study appear to be mixed. The participating organizations exhibit characteristics of both the traditional and TQ appraisal philosophies. The common theme derived from this study's results is that these organizations have attempted to infuse elements into their performance appraisal systems to reflect the different working environment that must exist under the TQM philosophy. These common elements include using the appraisal for the purpose of employee development, making use of joint goal-setting, eliminating rating scales, incorporating structured feedback programs, and making objective criteria consistent with overall organizational goals and customer needs.

The results of this study provide support for the notion that even though organizations may be required to administer performance appraisals (due to overall corporate policy or

by Congressional mandate as is the case with the military and other governmental agencies), the performance appraisal can incorporate elements that will support the TQ process.

APPENDIX A: Deming's 14 Points (Deming, 1986:23-96)

1. *Create constancy of purpose and management commitment.* Businesses are social systems whose purpose is to serve its customers and employees. In order to do this, management must make a long-term commitment to invest in innovation, training and research. The traditional emphasis on short-term profits has taken its toll on American business.
2. *Adopt the new philosophy.* The Western system is based on Scientific Management principles, which has led to quotas for performance measurement and, as a result, has fostered adversarial work relationships. Adopting this new philosophy requires a customer-oriented approach and cooperation between labor and management.
3. *Understand inspection.* Quality by inspection encourages defectives because it is up to someone else down the line to catch mistakes. Workers must be responsible for their own work to prevent defectives from being introduced into the system. Quality doesn't result from inspection. Rather, it results from improvement in the process.
4. *End the practice of awarding business based on price tag alone.* Purchasing functions should seek the best quality and work to achieve it with a single supplier for any one item in a long-term relationship.
5. *Improve constantly.* American management has typically viewed improvement on a large scale basis of innovation. The focus should be on continuous, small, incremental improvements that reduce causes of variation and permit stability.

6. *Institute training.* Employees must have the proper tools and knowledge to perform well and it is the responsibility of management to provide these. This also enhances worker morale by showing that the organization is committed to worker development.
7. *Institute leadership.* The job of the supervisor is to lead. They should be coaches, not policemen. Leadership can eliminate fear and promote teamwork.
8. *Drive out fear.* When employees are afraid to ask questions or take a position, the hope for process improvement is lost. Also, fear resulting from organizational instability, such as the threat of losing one's job, causes short-term thinking and suboptimization.
9. *Break down barriers between staff areas.* Different departments often compete against each other. When their goals conflict with the overall goals of the organization, they do not work as a team and cannot foresee problems. When this is the case, one department's goals may be to the detriment of another.
10. *Eliminate slogans and targets for the workplace.* These are superficial and do not motivate a worker toward an organization's goals.
11. *Eliminate quotas and Management by Objectives (MBO).* Numerical quotas reflect short-term perspectives and do not encourage long-term improvement. The typical MBO system focuses on results, not processes.
12. *Remove barriers to pride in workmanship.* People essentially want to do a good job and are frustrated when the system inhibits them from doing so. Poor supervisors, poor training and development, faulty equipment and defective materials must not be part of the system.

13. *Institute education and training* This type of education refers to self-development and learning.

14. *Take action to accomplish the transformation.* This requires much effort.

Management must be committed to making this happen. It involves management's freeing themselves of the old paradigm of American management and concentrating on "moving and refreezing" this cultural change throughout the entire organization.

APPENDIX B: Deming's Seven Deadly Diseases (Deming, 1986:97-153)

1. *Lack of constancy of purpose.* If a company lacks constancy of purpose, it has no long-range plans for staying competitive. Therefore, both managers and employees are insecure and concentrate on short term results in an attempt to justify their positions.
 2. *Emphasis on short-term profits.* This undermines productivity, continuous improvement and quality.
 3. *Evaluation by performance, merit rating or annual review.* This nourishes short-term performance, builds fear and demolishes teamwork. Performance appraisals focus on the end product, not the process and not on leadership to help the employees. Since evaluations are primarily made on an individual basis, teamwork is stifled. Deming also maintains that a fair rating is impossible because one's performance is affected by many factors, most of which are systemic, and consequently, out of the employee's own control.
 4. *Mobility of management.* Job-hopping managers do not understand the processes within the organizations in which they work. Since a manager's "life span" within a job is short, long-term planning is not a priority. Consequently, short term objectives that will provide quick, dramatic results are the focus.
 5. *Running a company on visible figures alone.* Managers must consider the intangibles that contribute to the bottom line such as customer satisfaction, pride in workmanship, or morale. These have far-reaching affects and should be considered by management.
- Deming's deadly diseases 6 and 7 pertain expressly to American business.
6. *Excessive medical costs.*
 7. *Excessive costs of warranty fueled by lawyers that work on contingency fee.*

APPENDIX C: Delphi First Round

This questionnaire is the first of three rounds of questions. Its purpose is to provide us with general information pertaining to your organization and your performance appraisal system. Please keep in mind that we are interested in the appraisal practices used for evaluating nonmanagerial employees and first-level supervisors. This round of questions will be completed by several experts, such as yourself, and the results will be compiled and redistributed to you in a subsequent survey round. Your input is critical to our research. Please complete this round of questions as accurately as possible. Your responses will be anonymous and will only be used for the purposes of this research effort. Please return these questions via fax no later than seven calendar days after receipt. Because we understand that faxes occasionally get "lost" during the transmittal and routing, we will get in touch with you after the seven day period to make sure you received it. Our fax number is (513) 476-7988. Thanks again for your participation.

A. General Information:

Name: _____

Organization: _____

1. Approximately how many employees are in your company?

2. Are your employees represented by a union?

3. How is your company distributed geographically? (circle those that apply)
 - a. within one community
 - b. more than one community
 - c. within one state
 - d. more than one state

4. What is your organization's mission? (choose those that apply)
 - a. service
 - b. manufacturing
 - c. transportation
 - d. other (please specify) _____

5. What is your experience in the following areas (in years)?

Personnel or Human Resource Management in general. _____
Training and Development _____
Total Quality Management _____
Performance Appraisal Systems _____

6. What is your current position?

7. How long have you held it?

8. What are your primary responsibilities?

B. Performance Appraisal Related Issues as They Apply to Your Organization:

Please use the following scale for questions 1 through 20 of this section (circle one):

1	2	3	4	5
strongly disagree		neither agree nor disagree		strongly agree

1. 1 2 3 4 5 Measurable objectives are established for each employee.
2. 1 2 3 4 5 The appraisal process is linked to employee development programs.
3. 1 2 3 4 5 Our organization has established education programs to effectively train raters about performance appraisal processes.
4. 1 2 3 4 5 Our organization has established education programs to train rater about performance appraisal purposes.
5. 1 2 3 4 5 Our organization's appraisal process is linked to reward decisions.
6. 1 2 3 4 5 Our organization's appraisal process is linked to promotion decisions.
7. 1 2 3 4 5 Our organization's appraisal is linked to layoff decisions.
8. 1 2 3 4 5 Our organization's appraisal is linked to dismissal decisions.
9. 1 2 3 4 5 Our performance appraisal is used as a tool for improving performance.
10. 1 2 3 4 5 Our performance appraisal is used as a tool for improving productivity.
11. 1 2 3 4 5 Our performance appraisal is used as a tool for facilitating employee training.
12. 1 2 3 4 5 Our performance appraisal is used as a tool for facilitating employee development.
13. 1 2 3 4 5 Our performance appraisal is used as a tool for identifying promotable employees.
14. 1 2 3 4 5 Our performance appraisal measures group or team performance.
15. 1 2 3 4 5 Our performance appraisal measures individual performance.
16. 1 2 3 4 5 Our appraisal is designed to evaluate performance in terms of contribution to process improvement
17. 1 2 3 4 5 Our appraisal is designed to evaluate performance in terms of contribution to the end-product (such as production quotas).

1	2	3	4	5
strongly disagree		neither agree nor disagree		strongly agree

18. 1 2 3 4 5 The performance criteria as evaluated with your appraisal is tied into, and consistent with, the overall business goals of the organization.

19. 1 2 3 4 5 Our performance appraisal is conducive to fostering employee empowerment.

20. 1 2 3 4 5 Appraisal ratings are specifically tied to performance based on written job descriptions.

21. Do you use a standardized appraisal form? yes / no

22. What is the typical reviewing period in your organization (i.e., annually)?

23. Does your organization have different appraisal systems for managerial versus line employees? yes / no If yes, please briefly explain the differences.

24. Are the performance appraisals collected in a centralized location? yes / no

25. Are standardized scoring scales used? yes / no. If yes, please briefly describe.

26. Do you have a structured performance feedback policy? yes / no. If yes, please explain.

27. Please state the typical type of performance goal used in your organization.

28. Please break down your appraisal format in terms of forced scales versus narrative.

Forced scales: _____%; Narrative: _____%

29. Please specify who typically determines the performance goals that are used in your organization's appraisal(s).

Supervisor determines the goals _____% of the time; employee _____% of the time;

standardized, corporate goals _____% of the time.

30. Are the following criteria evaluated in your performance appraisal? (circle yes or no)

- a. employee output: yes / no
- b. absences: yes / no
- c. overtime: yes / no
- d. reprimands: yes / no
- e. philanthropic activities: yes / no
- f. personal image: yes / no
- g. leadership ability: yes / no
- h. ability to communicate: yes / no
- i. others, please specify:

31. If you could express the philosophies goals and practices of your performance appraisal in terms of a "mission statement", what would it be?

34. In what ways does your performance appraisal foster employee empowerment?

.

.

35. In what ways does your performance appraisal foster teamwork?

36. In what ways does your performance appraisal facilitate process improvement?

.

.

37. How has the current performance appraisal design changed in comparison to the appraisal before your company made its transition into the Total Quality Management environment?

38. In your opinion, in what ways are your current performance appraisal policies and practices consistent with the principles of Total Quality Management?

39. What changes would you like to see with regard to your performance appraisal?

C. Additional Comments and/or Suggestions:

Appendix D: Round Two Questionnaire

Delphi Study Round Two

The purpose of this round of questions is to provide you with feedback on round one responses, and to further define the performance appraisal under TQ. Section 1 contains the feedback on round 1 responses. Section 2 contains scaled questions and a rank order question investigating preferred TQ performance techniques. It is designed to further define TQ appraisal approaches. This questionnaire should take no more than 15 minutes of your time. Please return the last three pages.

SECTION 1: Round One Feedback.

Below is a table containing the results of the scaled responses obtained in round one. The second table is a depiction of the responses to the yes/no responses. Also included is a histogram of the responses to the scaled questions.

TABLE 1: Traditional Appraisal Constructs

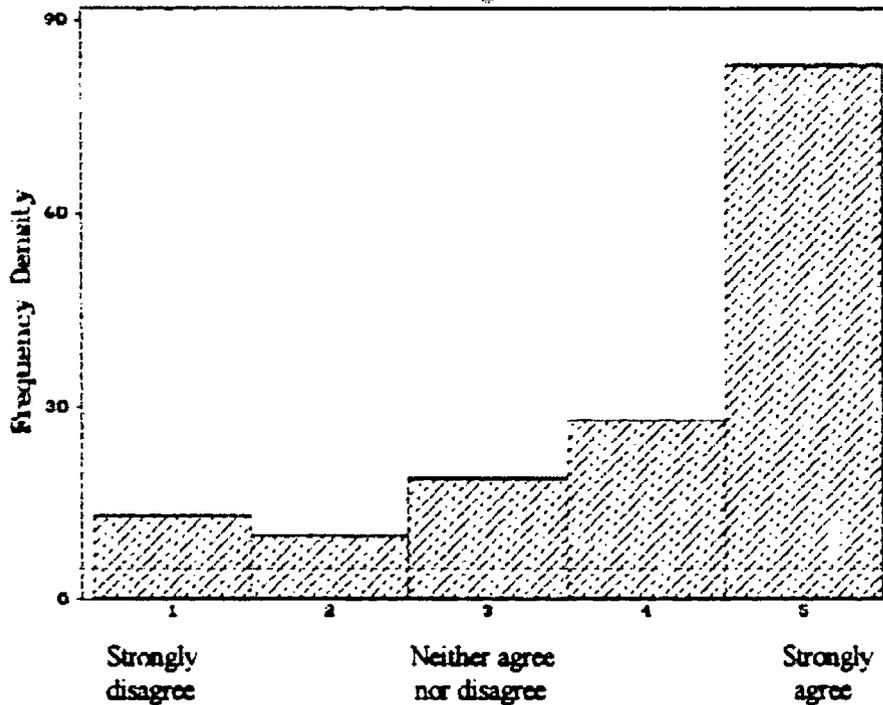
Construct:	Mean/Stan Dev.:
Measurable objectives are established for each employee.	4.22/1.09
The appraisal process is linked to employee development programs.	4.33/1.32
Our organization has established education programs to effectively train raters about performance appraisal processes.	3.22/1.39
Our organization has established education programs to train rater about performance appraisal purposes.	3.55/1.23
Our organizations appraisal processes is linked to reward decisions.	4.11/1.45
Our organizations appraisal process is linked to promotion decisions.	4.11/1.16
Our organizations appraisal is linked to layoff decisions	3.66/1.66
Our organizations appraisal is linked to dismissal decisions	4.55/1.33
Our performance appraisal is used as a tool for improving performance	4.77/.44
Our performance appraisal is used as a tool for improving productivity	4.55/1.01

Our performance appraisal is used as a tool for facilitating employee training	4.22/1.09
Our performance appraisal is used as a tool for facilitating employee development	4.44/1.01
Our performance appraisal is used as a tool for identifying promotable employees.	2.66/1.58
Our performance appraisal measures individual performance	4.77/.44
Our appraisal is designed to evaluate performance in terms of contribution to the end product (such as production quotas).	3.77/1.39
The performance criteria as evaluated with your appraisal is tied into, and consistent with, the overall business goals of the organization.	4.66/.71
Appraisal ratings are specifically tied to performance based on written job descriptions.	3.11/1.45
TOTAL:	4.26/1.32

TABLE 2: answers to yes/no questions

Question:	Response: Yes/No
Do you use a standardized appraisal form	7/1 (1 uses form for nonunion only)
Are performance appraisals collected in a centralized location?	7/2
Are standardized scoring scales used?	6/3
Do you have a structured performance feedback policy?	8/1
Are the following criteria evaluated in your performance appraisal?	
-employee output	8/1
-absences	5/4
-overtime	3/6
-reprimands	3/6
-philanthropic activities	3/6
-personal image	5/4
-leadership ability	9
-ability to communicate	9

Histogram of Round One Data
Histogram



The constructs in the table 1 measure the existence of traditional performance appraisal practices in the various organization participating in the study Table 2 also measures traditional appraisal policies/practices. The histogram is a summary of the responses across all the scaled questions. Based on these responses it is evident that most of the companies use many traditional approaches to performance appraisal; however, it is also evident from the responses to the open ended questions that most organizations in the study employ other techniques to foster the TQ environment and promote employee empowerment. A summary of the various approaches is outlined in table 3 on the following page.

TABLE 3: Various Techniques for Appraisal Under TQ

<p>-Use of unique performance criteria including:</p> <ul style="list-style-type: none"> -dedication to customers (internal/external) -quality of output -initiative (i.e. process improvement) -versatility (team participation) -reliability
<p>-Unique goals of performance appraisal including:</p> <ul style="list-style-type: none"> -to recognize contribution through performance planning intensive feedback and review. -to empower employee performance and development. Empower to generate action in service of their commitments -to align individual performance with department/function/division/company goals -to hold all individuals responsible and accountable for performance and development -to promote employee development and not track a report card --not used to drive salary promotion or selection
<p>-Techniques to promote team performance and process improvement include</p> <ul style="list-style-type: none"> -bonus system based on performance as a team as opposed to individual -team reviews and compensation -recognition based on team accomplishments -team member input is sought on appraisals -process management as well as results are included in appraisals -individual and team define the specific performance parameters/goals -appraisal/assessment is done only to provide a platform for setting future goals -strictly development based appraisals which do not rate performance -forward looking vs. backward
<p>-Unique empowerment techniques include:</p> <ul style="list-style-type: none"> -Set expectation at beginning of year and turn employee loose to accomplish goals -measured as initiative on appraisal form --comments on employee discovering and solving problems/improving processes
<p>-Other techniques include:</p> <ul style="list-style-type: none"> -more narrative i.e. fewer forced scales -established measurement criteria -management training on evaluating for TQ

B. This section attempts to evaluate your organization's uses for your performance appraisal. In **column A**, please assign a weight to each based on how your organization actually uses the performance appraisal. You have 100 points which to allocate in each column. If your organization does not use the appraisal for one of these purposes, you should assign it a weight of zero. Otherwise please assign a weighting factor to each question based on the degree to which the appraisal is used for each. You may assign any amount of points to each potential use as long as you only allocate 100 total points for each column. In **column B**, please assign a score in this same manner based on your expert opinion of how appraisals in the Total Quality environment should be used.

A	B	
1. _____	_____	Used for determining promotable employees
2. _____	_____	Used for making layoff decisions
3. _____	_____	Used for making dismissal decisions
4. _____	_____	Used for future development of the ratee
5. _____	_____	Used to categorize the ratee based on past performance
6. _____	_____	Used for making compensation decisions
7. _____	_____	Used to foster teamwork
8. _____	_____	Used to foster employee empowerment
9. _____	_____	Used to evaluate performance based on <u>objective</u> criteria
10. _____	_____	Used to evaluate performance based on <u>subjective</u> criteria
11. _____	_____	Used to justify compensation
100	100	Total

Please list any other uses that you feel should be incorporated into the third round of questions. Provide a numerical weight for it based on the instructions above, but DO NOT include this weight in the scales above

C.

1. Please briefly describe the factors that are considered in making promotion decisions and the relative importance of each

2. Please state how much formal training raters receive regarding the appraisal and the rating process

3. Please state how much formal training the ratees receive regarding the appraisal and the rating process

4. Additional Comments/Suggestions:

Appendix E: Delphi Questionnaire Round Three

A.

The purpose for this section is to attempt to gain consensus on these questions that appeared in round two. Only the responses that have not gained consensus of the participants' opinions are included. You have 50 total points with which to allocate. The higher the number allocated, the more important its use is in a TQ environment. Rank order these uses for the appraisal based on your expert **opinion** of the best uses of the appraisal within a TQ environment. In this section, we want to know your opinion, not the way it's used in your company.

- _____ Used for determining promotable employees
- _____ Used as a tool for future development of the ratee
- _____ Used for making compensation decisions
- _____ Used to foster teamwork
- _____ Used to foster employee empowerment

50 Total

B.

Please respond to the following questions based on the scale below.

1	2	3	4	5
strongly disagree		neither agree nor disagree		strongly agree

1. 1 2 3 4 5.....Our organization uses peer ratings as opposed to supervisor ratings
2. 1 2 3 4 5.....Our organization uses peer ratings in addition to supervisor ratings
3. 1 2 3 4 5.....Performance goals are mutually agreed upon between rater and ratee

Appendix F: SAS program for computing Cronbach's Alpha

Program for Traditional Appraisal Questions

```
options linesize=80;
data test3;
infile thesis1 missover;
input q1 1 q2 2 q3 3 q4 4 q5 5 q6 6 q7 7 q8 8 q9 9 q10 10 q11 11 q12 12
      q13 13 q14 14 q15 15 q16 16 q17 17 q18 18 q19 19 q20 20 q33a 21;

proc means mean stdev;
  var q1 q2 q3 q4 q5 q6 q7 q8 q9 q10 q11 q12 q13 q14 q15 q16 q17 q18 q19
      q20 q33a;

Proc corr alpha;
  var q1 q2 q3 q4 q5 q6 q7 q8 q9 q10 q11 q12 q13 q15 q17 q18 q20;
```

Program for TQ Appraisal Questions

```
options linesize=80;
data rtest3;
infile round2 missover;
input it1 1 it2 2 it3 3 it4 4 it5 5 it6 6 it7 7 it8 8 it9 9 it10 10 it11 11
      it12 12 it13 13 it14 14 it15 15 it16 16 it17 17 it18 18 it19 19 it20 20
      it21 21 it22 22 it23 23 it24 24 it25 25-26 it26 27-28 it27 29-30 it28
      31-32 it29 33-34 it30 35-36 it31 37-38 it32 39-40 it33 41-42 it34 43-44
      it35 45-46 it36 47-48 it37 49-50 it38 51-52 it39 53-54 it40 55-56 it41
      57-58 it42 59-60 it43 61-62 it44 63-64 it45 65-66 it46 67-68;

Proc corr alpha;
  var it1 it2 it3 it4 it5 it6 it7 it8 it9 it10 it11 it12 it13 it14 it15
      it16 it17 it18 it19 it20 it21 it22 it23 it24;
```

Cronbach's alpha for Traditional Constructs

Correlation Analysis

Cronbach Coefficient Alpha

for RAW variables : 0.840522
 for STANDARDIZED variables: 0.845594

Deleted Variable	Raw Variables		Std. Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
Q1	0.611847	0.824345	0.630255	0.828328
Q2	0.407493	0.834386	0.433300	0.838440
Q3	0.158916	0.849001	0.171271	0.851245
Q4	0.489590	0.829785	0.498228	0.835153
Q5	0.557214	0.825553	0.567026	0.831621
Q6	0.600914	0.824242	0.603860	0.829708
Q7	0.725204	0.813223	0.711404	0.824037
Q8	0.444765	0.832296	0.403919	0.839912
Q9	0.528681	0.835556	0.525708	0.833748
Q10	0.288758	0.839220	0.336003	0.843280
Q11	0.379988	0.835332	0.430851	0.838563
Q12	0.580096	0.826584	0.597838	0.830022
Q13	0.759592	0.811069	0.777618	0.820480
Q15	0.287971	0.839991	0.108563	0.849945
Q17	0.344634	0.838389	0.313082	0.844405
Q18	0.318893	0.838114	0.272502	0.846384
Q20	0.290823	0.842105	0.266148	0.846692

Cronbach's alpha for TQ appraisal constructs

Correlation Analysis

Cronbach Coefficient Alpha

for RAW variables : 0.869565

for STANDARDIZED variables: 0.881692

Deleted Variable	Raw Variables		Std. Variables	
	Correlation with Total	Alpha	Correlation with Total	Alpha
IT1	0.670937	0.858624	0.668317	0.871322
IT2	0.281690	0.870977	0.375143	0.879356
IT3	0.408988	0.865457	0.370519	0.879480
IT4	0.176449	0.871156	0.173977	0.884657
IT5	0.273507	0.871875	0.217169	0.883533
IT6	0.304771	0.867976	0.368366	0.879537
IT7	0.760582	0.854084	0.801656	0.867543
IT8	0.391187	0.865966	0.435328	0.877737
IT9	0.583046	0.859383	0.580702	0.873762
IT10	0.891484	0.851423	0.905887	0.864534
IT11	-0.024956	0.877316	-0.009098	0.889335
IT12	0.285422	0.868864	0.330148	0.880556
IT13	0.679857	0.857464	0.674265	0.871155
IT14	0.564138	0.861436	0.576244	0.873885
IT15	0.854525	0.851605	0.830967	0.866702
IT16	0.650373	0.859228	0.654470	0.871709
IT17	0.628764	0.860764	0.600698	0.873208
IT18	-0.174153	0.884954	-0.190778	0.893843
IT19	0.493197	0.863677	0.452945	0.877260
IT20	0.267522	0.868814	0.279447	0.881899
IT21	0.754310	0.856482	0.802928	0.867507
IT22	0.191848	0.872815	0.120662	0.886033
IT23	0.335907	0.867650	0.310549	0.881077
IT24	0.742279	0.855592	0.762087	0.868673

Appendix G: Presentation of Round One Data

Delphi, Round One. The round one questionnaire gathered information for several purposes. The first section gathered general information about the organization and the participants. This information was summarized in Chapter III. The second section consisted of 20 questions that generated responses from a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). These questions attempted to ascertain the extent to which the participating organizations used the traditional approaches to their appraisals. The final section comprised of open-ended questions. The purpose for these questions was to gain more descriptive information about the participants' appraisals.

The responses for questions 1 through 20 were based on the following Likert scale:

	1	2	3	4	5
	strongly disagree		neither agree nor disagree		strongly agree
Question	Organization				
	A	B	C	D	E
	F	G	H	I	
1. Measurable Objectives are established for each employee	5	5	4	3	5
2. The appraisal process is linked to employee development programs	5	5	5	2	5
3. Our organization has established education programs to effectively train raters about the appraisal processes	4	5	4	1	4
4. Our organization has established education programs to effectively train raters about the appraisal purposes	4	5	4	1	5
5. Our appraisal process is linked to reward decisions	5	5	1	5	5
6. Our appraisal process is linked to promotion decisions	3	4	2	4	5
7. Our appraisal process is linked to layoff decisions	3	5	1	1	5
8. Our appraisal process is linked to dismissal decisions	5	5	1	5	5
9. Our appraisal process is used as a tool for improving performance	5	5	5	4	5
10. Our appraisal is used as a tool for improving	5	5	5	4	5

productivity									
11. Our appraisal is used as a tool for facilitating employee training	5	4	5	3	5	2	4	5	5
12. Our appraisal is used as a tool for facilitating employee development	5	5	5	2	5	4	4	5	5
13. Our appraisal is used as a tool for identifying promotable employees	3	2	1	1	5	1	3	5	3
14. Our appraisal measures group or team performance	3	2	3	1	4	3	2	4	2
15. Our appraisal measures individual performance	4	5	4	5	5	5	5	5	5
16. Our appraisal is designed to evaluate performance in terms of contribution to process improvement	5	3	2	2	5	3	3	4	4
17. Our appraisal is designed to evaluate performance in terms of contribution to the end product	5	2	1	4	5	4	4	4	5
18. The performance criteria in the appraisal is tied into and consistent with overall goals of the organization	5	5	4	5	5	5	3	5	5
19. Our appraisal is conducive to fostering employee empowerment	4	4	1	3	4	1	4	5	5
20. Appraisal ratings are specifically tied to performance based on written job descriptions	1	4	1	3	5	5	3	3	3

21. Do you use a standardized appraisal form? yes / no

yes: All organizations except the two below

no: Organizations I and J

recommended: Organization A (union employees aren't required appraisals)

22. What is the typical reviewing period in your organization (i.e., annually)?

All organizations who use appraisals have annual review periods except for Organization G which uses a six-month period for non-exempt employees

23. Does your organization have different appraisal systems for managerial versus line employees? yes / no If yes, please briefly explain the differences.

yes: Organization:

A: union-represented employees don't have appraisals
scales are different

E: management has management responsibilities included

F: different values are measured and managerial reviews focus on the future

D: the rating scale is different between the two; also, different performance measures are used for managerial employees

G: exempt employees have added managerial responsibilities

H: manager adds promotability and more detailed career planning and development

24. Are the performance appraisals collected in a centralized location? yes / no

All organizations responded yes except for Organizations A and I

25. Are standardized scoring scales used? yes / no. If yes, please briefly describe.

Yes: Organization

E: uses a 4 point scale with 1 being the highest

D: 7-point scale for managers and 4-point scale for non-managers

H: 4-point scale

All others: No

26. Do you have a structured performance feedback policy? yes / no. If yes, please explain.

Organization

No: C

Yes: H: supervisor and employee work through the formal appraisal and must reach consensus

E: quarterly, documented

B: quarterly, documented

A: supervisors are trained to be coaches

D: computer tracked, documented

G: not mandatory for all line workers

F: must receive

I: done annually with appraisal

27. Please state the typical type of performance goal used in your organization.

Organization:

B: no response

C: sales, goals

D: practical, valid, and fair (productivity standards)

A: development due dates, quality and completion metrics, revenue, cost reduction, budget performance

E: narrative, specific

I: complete state goal per cycle, six sigma, and quality standards

G: attainment of production goals

F: multifaceted based on numerous factors

H. completed objectives by preestablished due dates, percentage improvements

28. Please break down your appraisal format in terms of forced scales versus

Forced scales: % Scales/ Narrative %:

Organization

- A: 0/100
- B: 50/50
- C: 0/100
- D: 30/70
- E: 10/90
- F:
- G: 50/50 (exempt); 90/10 (non-exempt)
- H: 0/100
- I: 0/100
- J: N/A

29. Please specify who typically determines the performance goals that are used in your organization's appraisal(s).

Supervisor determines the goals % of the time/ employee % of the time/ standardized, corporate goals % of the time.

Organization

- A: 50/50/100
- B: 50/50/0
- C: 0/0/0
- D: 100/0/0
- E: 10/80/10
- F: 50/50/100
- G: 100/0/0
- H: 50/50
- I: 50/50/100
- J: N/A

30. Are the following criteria evaluated in your performance appraisal ? (circle yes or no)

- | | | | | |
|------------------------------|-----|-----------------|------|-------------|
| a. employee output | yes | x x x x x x x x | / no | x |
| b. absences: | yes | x x x x x | / no | x x x x |
| c. overtime: | yes | x x x | / no | x x x x x x |
| d. reprimands: | yes | x x x | / no | x x x x x x |
| e. philanthropic activities: | yes | x x x | / no | x x x x x x |

- f. personal image: yes x x x x x / no x x x x
- g. leadership ability: yes x x x x x x x x / no
- h. ability to communicate: yes x x x x x x x x / no
- i. others, please specify:
- technical skills x
 - dedication to customers x
 - integrity x
 - teamwork x x
 - quality of output x
 - initiative x
 - job knowledge x
 - goal achievement x
 - versatility x
 - reliability x

31. If you could express the philosophies goals and practices of your performance appraisal in terms of a "mission statement", what would it be?

Organization:

F: no response

G: to recognize contribution through performance planning intensive feedback and review.

H: provide feedback for employee to use in continuously improving performance

I: none

D assesses and reward performance of the individual employee

A: to empower employee performance and development; empower to generate employee action in the service of their commitments

B: no response

E. to align individual and team performance with department, function, division, and company goals; to hold all individuals responsible and accountable for performance and development, to focus on personal contribution to meeting the organization's objectives

C based on employee development and does not track a report card or direction, ratings are not used and the appraisal does not drive salary promotion or selection (at least not directly), this process is based largely

- f. personal image: yes x x x x x / no x x x x
- g. leadership ability: yes x x x x x x x x x / no
- h. ability to communicate. yes x x x x x x x x x / no
- i. others, please specify:
- technical skills x
- dedication to customers x
- integrity x
- teamwork x x
- quality of output x
- initiative x
- job knowledge x
- goal achievement x
- versatility x
- reliability x

31. If you could express the philosophies goals and practices of your performance appraisal in terms of a "mission statement", what would it be?

Organization:

- F: no response
- G: to recognize contribution through performance planning intensive feedback and review.
- H: provide feedback for employee to use in continuously improving performance
- I: none
- D: assesses and reward performance of the individual employee
- A. to empower employee performance and development; empower to generate employee action in the service of their commitments
- B: no response
- E. to align individual and team performance with department, function, division, and company goals; to hold all individuals responsible and accountable for performance and development; to focus on personal contribution to meeting the organization's objectives
- C based on employee development and does not track a report card or direction, ratings are not used and the appraisal does not drive salary promotion or selection (at least not directly), this process is based largely

- I: We are a pay for performance company -- always has been and forecasted to be so. Deming's philosophy was considered in 1983 when we designed our TQM approach and was rejected. We still are a pay for performance company.
- G: We measure performance and contribution and base our reward system on that. However, we also have a bonus system that is heavily based on the divisions performance as a team. Nearly all our employees, exempt and non-exempt are bonused. Additionally we're now heavily into self directed work teams and are using a consulting firm to work towards team reviews and compensation. I do not expect we will totally move away from individual assessment and compensation.
- H: Team performance and participation is part of both goals and evaluation. Recognition is almost entirely devoted to team accomplishments.
- F: No response
- D: There is merit in Deming's statement however, our corporate culture is such that it places great emphasis on individual initiative and performance we have moved towards objective standards of performance where possible. These are not as debatable and not a managers judgment that is more liable to bias. We may move towards teams in the future, but that does not fit us that well yet.
- E: Our appraisal system assesses individual performance and contribution. Specific conformance objective are established and are formally assessed annually. Merit pay is based upon the annual performance numerical rating for each individual; however, individuals participation, interaction, and contribution on teams is assessed. Team member input is sought on appraisal. Process management along with end results are included in appraisals. Individuals and teams define the specific performance parameters and goals. Regular open honest communication is the key to stifling fear. The Quarterly progress reviews accomplish this, through face-to face interaction between the employee and their manager.
- B: Performance rating/annual review only a small part of an overall process called the Personal Performance Platform. The platform emphasizes link between individual and UCS goals, teamwork, empowerment, development
- A: We don't use ratings during the coaching conversation. The conversation begins with an assessment of actual vs. planned results. The assessment is done only to provide a platform for setting future goals for both the employee and supervisor.
- C: It is strictly development based and does not rate performance. We are interested in the continuous improvement of our work force. We tend to look forward instead of backward when we hold personnel development interviews.

-J: N/A

34. In what ways does your performance appraisal foster employee empowerment?

Organization:

- A: Teams are empowered to make changes
- G: The initiative segment of the appraisal often invokes comments on the employee discovering and solving problems or gaining new knowledge and skill.
- I: Sets expectation for outputs at beginning of year and turns loose the employee to deliver.
- F: The appraisal document does not factor into this. It is determined on the ability of the manager to foster empowerment, teamwork process improvement. Also, on the wants of the manager have these qualities in their departments.
- B: Management and associates jointly set objectives. The manager keeps an ongoing record which employees can see at any time.
- A: Builds a better working relationship between supervisor and employee as the emphasis is on coaching. It is a fact-based assessment.
- E: Employees define specific measurements and goals.
- C: Encourage employees to take on greater responsibilities
- D: Reflects the job.

35. In what ways does your performance appraisal foster teamwork?

Organization:

- H: Goals, measurements, recognition and rewards depend on team participation.
- G: The versatility segment speaks specifically to the employees flexibility in working with others.
- F: No response.
- I: Some objectives may be team created.

- B: In areas where individuals work as a team, objectives reflect accountability for team performance
- E: Team member input is assessed in the appraisal.
- C: Ratings are not used so there is no competition for individual performance
- A: Teamwork is one of the values that is assessed. Performance on a team is often cited as an accomplishment of a plan.
- D: Probably does not.

36. In what ways does your performance appraisal facilitate process improvement?

Organization:

- H: Teams work on improving their process
- G: Only indirectly, we have a large number of quality improvement teams at Organization G a part of the QPI Process is to list the steps of the process being revised/alterd then data to show cause and effect analysis and changes being made in the process. These are presented to large management forums, and participants are recognized for there contribution in their appraisals
- F: No response
- I: Some objectives may specify reduction in cycle times, reduced errors, etc., which would drive process improvement activities.
- A: The personal Performance Platform was developed by a PIT. In many cases employees' objectives are based on process improvement participation
- E: Process management is part of the appraisal. Every individual is part of a process
- C: Look at process improvement on as it pertains to continuous improvement
- B: Participation on a PIT is cited as an accomplishment
- D: Feedback is given in an attempt to focus on the future.

37. How has the current performance appraisal design changed in comparison to the appraisal before your company made its transition into the Total Quality Management environment?

Organization:

F: None

G: No response

H: Much more emphasis on teams and on customer (internal and external)

I: Now tied into corporate priorities/objectives. Measurement tools and targets established at beginning --more objective. elimination of box scores. More narrative w/employee input and review.

B: Reduced rating categories from 5 to 3. More focused on feedback for employee development. More focus on group goals

E: Teamwork, process management and customer focus have been added to the appraisal. Employees have more input

C: Did away with ratings in order to be consistent with Dr Deming's philosophy

A: Did away with ratings and forced scales. Conversation is in the context of comparing the actual results to the planned for the purpose of improving in the future

D: Have tried to be more objective by using performance standards

38. In your opinion, in what ways are your current performance appraisal policies and practices consistent with the principles of Total Quality Management?

Organization:

F: Established measurement criteria (i.e. goals) feedback, and problem solving and recommendations for improvement

G: Key elements of the appraisal form address factors which are essential to quality--factors like quality of work (accuracy, reliability, and thoroughness of completed assignments) job knowledge, productivity (quickly, efficiently, and on time while maintaining a high level of quality, planning and organization, communication and achievement of goals. The measurement of quality of work of our people, using these factors, appear quite consistent after TQM.

H: Deliberately aligned to support: continuous improvement, employee

participation, recognition of TQM behavior, customer orientation, process leadership and Improvement.

- I: Has measure and targets,, involves employees, assigns employee objectives w/corporate goals, focuses on quality as one of the outputs
- B: The current system is constantly scrutinized to see where process improvements can be made
- E: Incorporation of teamwork, process management, customer focus, quality, involvement , and empowerment
- C: See response to question 37.
- A: Management by fact, use of quality tools/measures,
- D: Have employees and managers evaluate and critique the review criteria

39. What changes would you like to see with regard to your performance appraisal?

Organization:

- F: Remove form for non exempts due to higher goal involvement and the barrier it caused between the two groups. More focus on managing performance on a day to day basis.
- G: We are working towards including team based compensation, plus peer reviews. We are told that both have to be careful though out before implementation
- H: More management training in use of appraisal system (currently only 2 day course).
- I: More disciplined application across all manager/departments.
- B: Considering eliminating the actual assignment of a rating as part of the appraisal process
- G: Current system of a formal, on-line system is too bureaucratic
- C: Reduce complexity of forms
- A: Better coaching and comm skills (listening and speaking)

D: More emphasis on training managers and employees on the review process and to discuss performance. More emphasis on development and future performance.

C. Additional Comments and/or Suggestions:

Organization:

G: In 37 years of HR work I have never met a HR professional who thought they had a perfect appraisal system. The best I have ever seen is one where the emphasis is on constant communication between management and employee. The form is not the big factor more than how it is carried out.

Appendix H: Presentation of Round Two Data.

Delphi, Round 2. The round two questionnaire consisted of questions that reflected the literature regarding the performance appraisal in a TQ environment. The questionnaire began by soliciting responses based on the same Likert scale that was used in the first round. The second section of the questionnaire dealt with the uses of the performance appraisal. In this section, the participants were asked to rank, in order of importance, 1) how their organizations actually used the performance appraisal; and 2) what they believed to be the best uses of the appraisal in a TQ environment. There were eleven choices and each participant had 100 points to allocate for each of the two questions addressed in the previous sentence. The third section of this round consisted of open-ended questions that sought descriptive information regarding promotion decisions, and the extent of rater and ratee training regarding the performance appraisal. The data that follows is a summation of Delphi, round two response.

The data that follows is a summation of Delphi, round 2 responses.

The responses for questions 1 through 20 were based on the following Likert scale:

1	2	3	4	5
strongly disagree		neither agree nor disagree		strongly agree

Question	Organization									
	A	B	C	D	E	F	G	H	I	
1. Our organization rewards/compensates based on team performance	4	4	2	2	4	x	3	5	4	
2. Team performance is a criterion which is rated on our performance appraisal	5	4	4	1	4	x	1	4	5	
3. Continuous employee improvement is	4	5	5	4	5	x	5	5	2	

the goal of our appraisal										
4. Promoting continuous process improvement is a goal of our appraisal	3	5	5	3	5	x	3	3	3	
5. Our organization rewards individuals based on individual appraisal ratings	4	5	1	5	4	x	5	4	1	
6. Our organization focuses on the performance of the system vs. performance of the individual	4	2	3	2	3	x	1	3	3	
7. Our appraisal is used mainly as a source of feedback to the employee to improve employee performance	5	4	4	2	5	x	2	4	2	
8. Compensation is based on an accumulation of skills	3	1	2	1	4	x	4	4	4	
9. Compensation is based on an accumulation of responsibilities	3	5	4	1	5	x	5	5	2	
10. Compensation is based on the organization/department success	4	4	3	2	5	x	2	4	2	
11. Our appraisal takes an employee's basic competence for granted	2	1	4	2	4	x	4	2	2	
12. Our appraisal could be characterized as a coaching instrument	4	3	5	4	5	x	2	4	2	
13. The organization compensates based on team performance	3	4	2	2	5	x	3	4	4	
14. The organization rewards based on team performance	5	4	3	2	5	x	4	4	5	
15. Performance goals are established by teams	4	4	1	2	4	x	2	4	2	
16. Participation in process improvement teams is an important element in the organization's appraisal	4	5	3	2	4	x	4	4	3	
17. The organization's appraisal is used for future-oriented purposes	5	4	4	4	5	x	2	4	2	
18. The organization's appraisal is used to reflect on past performance	4	1	2	5	3	x	5	3	2	
19. The ratee is encouraged to review the completed appraisal before it becomes a matter of record	5	5	1	5	5	x	5	5	1	
20. Throughout the organization, raters interpret the rating procedures uniformly	4	2	3	3	3	x	3	4	3	

Construct

Organization

(how it is actually used/expert opinion of how it should be used in a TQ organization)

Our appraisal is....	B	A.	C	I	E	D	H	G	F
used for determining promotable employees	0/0	10/5	10/1 0	0/0	20/1 0	5/10	20/2 0	10/1 0	x
Used for making layoff decisions	0/0	5/0	0/0	10/5	5/5	0/0	5/0	10/0	x
Used for making dismissal decisions	0/0	5/5	0/0	10/5	10/5	5/0	5/0	15/1 5	x
used for future development of the ratee	10/4 0	10/2 0	70/7 0	5/25	5/10	5/50	20/3 0	5/15	x
Used to categorize the ratee based on past performance	10/0	0/0	0/0	10/0	0/0	0/0	10/0	0/0	x
used for making compensation decisions	50/2 0	15/1 0	0/0	25/2 0	10/1 0	25/0	20/1 0	5/0	x
used to foster teamwork	0/10	10/1 0	5/5	5/5	5/10	0/10	0/0	5/15	x
used to foster employee empowerment	5/10	15/2 0	5/5	5/5	5/10	0/0	0/20	5/15	x
used to evaluate performance based on objective criteria	10/1 0	10/1 0	0/0	10/2 0	30/4 0	25/1 5	10/1 0	15/1 5	x
used to evaluate performance based on subjective criteria	10/1 0	10/1 0	0/0	10/5	10/0	35/1 5	10/1 0	15/5	x
used to justify compensation	5/0	10/1 0	10/1 0	10/1 0	0/0	0/0	0/0	15/1 0	x

others: NONE

C.

1. Please Briefly describe the factors that are considered in making promotion

decisions and the relative importance of each.

Organization:

- I.
 1. past performance and accomplishments
 2. managers rating of readiness for promotion
 3. Employee assessment on key criteria established by sr. mgmt.
 4. EEO status code
 5. Need development opportunities for key employees

- A. below are equally important
 - Knowledge skills, abilities
 - Diversity profile
 - Visibility
 - cultural fit with higher m

- C. Relative accumulated skills/knowledge
 - Leadership ability
 - Current Performance
 - Right job for the person (development assignment)

- B. In most cases, promotions are a result of an internal job posting process. All available positions are first posted within the company. Any employee is eligible to post for any position. An internal application is completed, submitted, and reviewed by the employment manager and the hiring manager to determine eligibility. A current performance appraisal is submitted with the application, as well as other resume-type information. Both current and previous work experiences are taken into consideration when reviewing these internal applications. Several of our jobs are set up as "progression" jobs. Certain skills are identified and when those skills are achieved, the individual progress or is promoted to the next level. These promotions are attained based on time in position, achievement of certain proficiency level, and not a posting process.

- E.
 - 30 technical skills
 - 20 Soft skills (verbal/written comm.)
 - 15 leadership
 - 10 Teamwork cooperation
 - 10 contribution to goals
 - 5 performance ? others
 - 5 ability to perform at next level
 - 5 Part performance

- D. This depends on the type of job. For non-exempt jobs if meet minimum qualifications, a formula is used where tenure = 50% and performance = 50%. For exempt and managerial jobs, job relevant experience and education/training are both highly important. For some non-exempt jobs, performance and tenure serve to rank order candidates and then experience and education/training determine which one of the top ranked candidates is selected.
- C. 1. Qualification for job
 2. Performance
 3. probability success in job
 4. Leadership
 5. Education
 6. Past ability to grow
- H. Track record (performance)
 Experience variety
 Personal goal
 Teaming capability

2. Please state how much formal training raters receive regarding the appraisal and the rating process.

Organization:

- I. Zero
- A. 3-4 hour/year
- C. 4 hours -new supervisors
 2 hour update every third year
- B. Formal classes are available
 One day on writing appraisal and administering performance mgmt process.
 one day on coaching and providing feedback
- D. most none. some get a little as part of a management practices class.
- E. Appraisal training is a core topic in required annual training for all managers
 Managers receive 16 hours initial training in writing performance plans with measurable objectives, evaluation , and face to face feedback with employees
 Annually each manager receives 4 hours of refresher training With each change in the appraisal system, Managers receive 2 hours of training on the new system requirements

H. 1/2 day

G. 1-2 hours a year

3. Please state how much training the ratees receive regarding the appraisal and the rating process

Organization:

I. Very little

A. 2 hours/year

C. 2 hours

B. 4-6 hours self-paced on writing defining objective for themselves and others

D. None

E. One hour annually by supervisors

H. 1/2 day

G. zero

4. additional comment/suggestions

Organization:

C. Organization C at the time of the Baldrige award was a full integrated car company with approximately 10,000 employees. Since 1992 Organization C is a sales marketing org. w approx. 450 employees. Eng. and Mfg. are now under GM.

D. I had to interpret what some of the uses in section b meant and how they differed from each other. For example, how are 6 and 11 different. and what does 5 mean.

E. Performance systems should accommodate empowerment and teamwork not be used as a tool to implement them. Employees should assist and contribute to defining performance objectives.

Appendix I: Presentation of Round Three Data.

Delphi Round Three. This round consisted of two sections. The first section sought to gain consensus on the questions from round two regarding the participants' expert opinions on the best uses of the appraisal in a TQ environment. Only the questions that did not achieve consensus from the previous round are asked again. The second section of this round consisted of three questions regarding peer ratings and mutual goal-setting. These questions generated responses based on the same 1 through 5 Likert scale that was used in the first two rounds.

A. The purpose for this section is to attempt to gain consensus on these questions that appeared in round two. Only the responses that have not gained consensus of the participants' opinions are included. You have 50 total points with which to allocate. The higher the number allocated, the more important its use is in a TQ environment. Rank order these uses for the appraisal based on your expert opinion of the best uses of the appraisal within a TQ environment. In this section, we want to know your opinion, not the way it's used in your company.

Construct	Organization								
	A	B	C	D	E	F	G	H	I
Our appraisal is used for determining promotable employees	5	5	5	0	5	x	10	0	0
Used as a tool for future development of the ratee	10	25	30	35	5	x	15	30	15
Used for making compensation decisions	10	10	5	15	25	x	15	10	10
Used to foster teamwork	5	5	5	0	5	x	5	5	12.5
Used to foster employee	20	5	5	0	10	x	5	5	12.5

empowerment									
-------------	--	--	--	--	--	--	--	--	--

B. Please respond to the following questions based on the scale below.

1	2	3	4	5
strongly disagree		neither agree nor disagree		strongly agree

Construct	Organization								
	A	B	C	D	E	F	G	H	I
Our organization uses peer ratings as opposed to supervisor ratings	1	1	1	1	2	x	1	3	1
Our organization uses peer ratings in addition to supervisor ratings	1	1	1	1	4	x	2	5	4
Performance goals are mutually agreed upon between rater and ratee	5	5	5	5	5	x	3	5	5

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Vita

Daniel J. Courtois was born on 5 June 1963, in Oconto Wisconsin. He attended the Oconto public school system and graduated from Oconto Senior High School in 1981. He then attended the University of Wisconsin from 1981-1983, upon which time he entered the United States Marine Corps. While in the Marines he attended classes at Embry Riddle Aeronautical University in Oak Harbor Washington and earned his Bachelor of Science Degree in 1989. Upon receiving his degree he was accepted for a commission in the United States Air Force and attended Officer Training School at Lackland AFB, TX in 1989. From Lackland AFB he was assigned to Loring AFB Maine and performed duties as a Maintenance Officer. While assigned to Loring AFB he completed the Aircraft Maintenance and Munitions Officers Course at Chanute AFB, IL; and deployed to Saudi Arabia in support of Operations Desert Shield, Desert Storm, and Southern Watch. In 1993 he was selected to attend the graduate logistics management program at the Air Force Institute of Technology. Upon graduation he will be assigned to Los Angeles AFB as an Acquisition Logistics Manager for the satellite ground control network.

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Captain David L. Yockey was born on 9 August 1965. He is from Hamilton, Montana. After receiving a Bachelor of Science Degree in Finance from the University of Montana in 1988, he attended Officer Training School at Lackland Air Force Base, Texas. He then attended the Aircraft Maintenance/Munitions Officer Course at Chanute Air Force Base, Illinois. Upon graduating from the course, his first assignment was at Norton Air Force Base, California from January of 1990 to May of 1993. During his tour at Norton, he was assigned to the Aircraft Generation Squadron, the Equipment Maintenance Squadron, and the Component Repair Squadron. Captain Yockey entered the School of Systems and Logistics, Air Force Institute of Technology in May of 1993. Following graduation, he will be assigned to the C-17 System Program Office at Wright-Patterson Air Force Base, Ohio.

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

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1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE September 1994	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE A DELPHI STUDY OF PERFORMANCE APPRAISAL PRACTICES OF MALCOLM BALDRIGE AWARD WINNING ORGANIZATIONS			5. FUNDING NUMBERS	
6. AUTHOR(S) Daniel J. Courtois, Captain USAF David L. Yockey, Captain USAF				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air Force Institute of Technology, WPAFB OH 45433-6583			8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GLM/LAR/94S-9	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) Total Quality (TQ) is a philosophy that is currently being incorporated by organizations throughout America. TQ philosophers maintain that Total Quality can be achieved only if organizations change their cultures, including the traditional view toward the role of the performance appraisal. These experts maintain that the traditional performance appraisal doesn't promote process improvement, empowerment and team building as TQ prescribes. This thesis is a Delphi study of the performance appraisal practices of Malcolm Baldrige National Quality Award winning companies. The study attempts to describe the performance appraisal practices of 10 companies who have successfully implemented TQ. The existence of traditional and TQ appraisal characteristics is measured and the performance appraisal techniques of the organizations are benchmarked. The study determines that, with little exception, these companies still employ many traditional approaches to their performance appraisals, but have altered some practices by incorporating new techniques to promote process improvement, employee empowerment and team building. The unique practices and characteristics of these organizations are presented.				
14. SUBJECT TERMS Performance Appraisal, Total Quality Management, Malcolm Baldrige Award, Total Quality, TQ, TQM, Personnel, Performance Measurement, Delphi.			15. NUMBER OF PAGES 128	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	