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MANAGER AND EMPLOYEE RATINGS OF ORGANIZATIONAL ELEMENTS RELATED TO TOTAL QUALITY MANAGEMENT

A

Dissertation

Presented to the

Graduate Faculty of

Liberal and Interdisciplinary Studies

College of Arts and Sciences

United States International University

In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

in Leadership and Human Behavior

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by

Amnart Ano

San Diego, 1997

Abstract of Dissertation

MANAGER AND EMPLOYEE RATINGS OF ORGANIZATIONAL ELEMENTS RELATED TO TOTAL QUALITY MANAGEMENT

by

Amnart Ano

United States International University

Committee Chairperson: Herbert George Baker, Ph.D.

THE PROBLEM. The purpose of the present study was to assess the degree of difference between manager and employee perceptions of the organizational elements of the Department of Physical Education of Thailand and to determine how closely these perceptions were related to the Malcolm Baldrige (TQM) Standards.

METHOD. A Total Quality Management questionnaire was used to collect data. Scores were tabulated, and means were calculated for each subgroup. A scale alpha test was used to test the reliability of the TQM questionnaire and multivariate analysis of variance was performed to test for significant differences between manager and employee perceptions on seven main variables.

RESULTS. The results revealed no statistically significant differences between manager and employee perceptions on the seven main organizational elements (seven dependent variables). The mean score for managers and employees was 4.83 and 4.69, respectively, and the mean for combined manager and employee ratings was 4.76, on a seven-point Likert-type scale.

The ratings were at the neutral or fair level. Thus, both managers and employees see room for organizational improvement with respect to the Malcolm Baldrige National Quality Award criteria. The analyses revealed no significant differences between manager and employee perceptions on the seven main organizational elements. These results indicate that managers and employees hold highly similar perceptions on how closely their organization met the Malcolm Baldrige National Quality Award (TQM) criteria and on the way their organization functions. This should greatly facilitate their working together cooperatively in the day-to-day operations of the Department of Physical Education.

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Approved by:

Herbert George Baker, Ph.D.
Committee Chairperson

September 3, 1997
Date

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Ramona Kunard, Ph.D.
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DEDICATION

To my father, my mother, Miss Sumalee Maneewan,
Mr. Arkhom Jittakornrawanich, Mr. Cy Srithong and my best friend, Mr. Suthep Bootcharearn, Mrs. Cindy Choy, and my family, who contributed to my success in obtaining a doctoral degree.

ACKNOWLEDGMENTS

I would like to express my sincere gratitude to the many who have helped me with my classwork, especially to my committee members, for their patience and help as I completed this dissertation.

To Dr. Herbert George Baker, who has been wonderful as a chairperson, helping to guide me through the maze of requirements from the beginning to the completion of this research. He not only served as my professor in many classes, but he also provided unlimited support and encouragement as I struggled to complete my doctoral degree and research goals. To Dr. John Kantor, for his help and providing me with valuable recommendations for completing this research project. And, to Dr. Russell Cooper, for his patience, help and recommendations for the statistical analysis in addition to the data interpretation for this study.

I would also like to thank the Department of Physical Education of Thailand and all of the administrators and physical education officers, for their cooperation during this research effort and for providing me with subjects for the study.

Finally, I must thank all of my friends for their help. Especially, Dr. Nattaphan Kecharanan and the staff of bilingual Thai professional of the language Institute of Chulalong Korn University who help me to correct and complete the questionnaire in Thai version, and Mr. Sathein Sapapong, for concern and support in collecting the data.

All of these individuals were very helpful in obtaining my research goals.

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Chapter 1
INTRODUCTION

Over the past few years, Total Quality Management (TQM) has become a major business theme for American manufacturing firms desiring to improve their productivity, competitive edge and productivity levels (Wooden, 1994). TQM has gained wide acceptance in the business world as an institutional transformation philosophy. Its success in business and industry cannot be ignored. Higher education can benefit from the triumphant quality revolution which has swept the U.S. Although the private sector adopted quality management strategies earlier than did the public sector (French, 1994), a wide range of public organizations have also joined the trend. TQM has recently attracted a great deal of attention and is now considered a viable management strategy in education (Bax, 1994). The purpose of the present study was to compare managers' and employees' perceptions of the organizational elements of the Department of Physical Education of Thailand related to seven quality dimensions of the Malcolm Baldrige Award criteria.

Background of the Problem

The Department of Physical Education of Thailand is a public organization controlled by the Ministry of Education. It is responsible for the administration, management, and promotion of sports, health, scouts, Red Cross youth, and student

patrols for schools throughout Thailand. There are three general objectives of the Department:

1. Administration and coordination of activities enhancing the development of physical education, health, recreation, sports, sport science, health science, scouting, Red Cross youth, and student patrols.

2. Administration of projects related to the management of physical education, health, recreation, sport science, and health science.

3. Any other projects assigned by the Ministry of Education or the Council of Ministers (Sapapong, 1996).

Recently, a number of activities involving job modification and revision of work relationships have been described as efforts to improve the quality of work life. However, some organizations, such the Department of Physical Education of Thailand, continue to experience many problems. These problems are similar to those faced in Sweden-- absenteeism, turnover, alienation, boredom, employees' failure to work on the right job, and inability to work with new or different tasks when the organization changes its structure (Cohen, et al., 1980). Furthermore, employees are undisciplined in their work. The organization also lacks objective goals and, at times, the external environment exerts great influence upon the organization, including policies of top management and the Council of Ministers (Sapapong, 1996).

Another problem is that employee morale has decreased. Nearly all employees earn low incomes, but pay high costs for daily living. Moreover, it requires extended periods of time for employees to claim their benefits, including bonuses and

compensation for overtime. In other Departments, on the other hand, employees have higher morale than in the Department of Physical Education (Sapapong, 1996). These issues suppress employee devotion to the organization and cause absence from work and an increase in the number of supplemental jobs taken in order to earn more money (rather than focus upon one's actual career).

The problem which exists in other countries is a decrease in the rate of industrial growth. During the last decade in the United States, new waves of concern have been generated about ways for American organizations to remain competitive (Raymond, 1986). Throughout American history, at no time has the need for improved productivity and quality in both manufacturing and service organization been more apparent than it is today. This need is evidenced by the considerable body of research literature which deals with the productivity crisis in America (Ruffner & Ettkin, 1987).

Similarly, the Department of Physical Education of Thailand has faced this crisis both internally and externally, including budgets shrinking at unprecedented rates, programs and services being cut, customer decreases, and plummeting employee morale. As a result, administrators are in search of creative reform through Total Quality Management. Furthermore, in recent years, a competitive era has emerged; quality is important and has become critical in the performance of all organizations. The success of the organization is the ultimate goal of management. Thus, Chief Executive Officers (CEO) and managers are key to the successful management of organizations which adopt and maintain TQM in all areas of the organization.

Statement of the Problem

Research in the application of the Malcolm Baldrige National Quality Award (MBNQA) criteria to the management of public organizations in Thailand has not been carried out. The present study is a step toward correcting that situation.

Purpose of the Study

The purpose of the present study was to compare managers' and employees' perceptions of the organizational elements related to the Malcolm Baldrige criteria (Total Quality Management).

Theoretical Framework

The theoretical roots of Total Quality Management have grown deep into the history of U.S. industrial research. American psychologists have pioneered research into the human relations approach, participatory management, and an understanding of workers and customers. Researchers also include industrial engineers Frederick Taylor and Frank Gilbreth, who redesigned jobs and developed training programs and selection methods to enhance employee efficiency. Thus, there was merging of psychology with applied interests and concerns for increasing industrial efficiency (Muchinsky, 1993).

In May 1990, the International Conference Board summarized the key issues and terminology related to TQM:

1. The cost of quality as a measure of non-quality (not meeting customer requirements) and a measure of how the quality process is progressing.
2. A cultural change that appreciates the primary need to meet customer requirements, implements a management philosophy that acknowledges this emphasis, encourages employee involvement, and embraces the ethics of continuous improvement.
3. Enabling mechanisms of change, including training and education, communication, recognition, management behavior, teamwork, and customer satisfaction programs.
4. Implementing TQM by defining the mission, identifying the output, identifying the customers, negotiating customer requirements, and developing a "supplier specification" that details customer objectives.
5. Management behavior that includes acting as role models, use of quality process and tools, encouraging communication, sponsoring feedback activities, and fostering and promoting a supportive environment (Ross, 1995).

The quality gurus. Ross (1995) stated that "Quality Gurus" are at the root of Total Quality Management. Three "Gurus" have developed the principles of Total Quality Management: Deming, Juran and Crosby. Deming, the best known of the "early" pioneers, is credited with popularizing quality control in Japan in the early 1950s. Today, he is regarded as a national hero in that country and the father of the world-famous Deming Prize for Quality. He developed 14 universal points for management, summarized as follows:

1. Create consistency of purpose with a plan.

2. Adopt the new philosophy of quality.

3. Cease dependence on mass inspection.

4. End the practice of choosing suppliers based solely on price.

5. Identify problems and work continuously to improve the system.

6. Adopt modern methods of training on the job.

7. Change the focus from production numbers (quantity) to quality.

8. Drive out fear.

9. Break down barriers between the departments.

10. Stop requesting improved productivity without providing a method to achieve it.

11. Eliminate work standards that prescribe numerical quotas.

12. Remove barriers to pride of workmanship.

13. Institute vigorous education and retraining.

14. Create a structure in top management that will emphasize the previous 13 points every day.

Juran was invited to Japan in 1954 by the Union of Japanese Scientists and Engineers (JUSE). His lectures introduced the managerial dimensions of planning and organizing and focused upon the responsibility of management to achieve quality and the need for setting goals. Juran defined quality as fitness for use in terms of design, conformance, available, safety, and field use. Thus, his concept more closely incorporates the point--of--view of the customer. Juran developed 10 steps for quality

improvement:

1. Build awareness of opportunities to improve.
2. Set goals for improvement.
3. Organize to reach goals.
4. Provide training.
5. Carry out projects to solve problems.
6. Report progress.
7. Give recognition.
8. Communicate results.
9. Keep score.
10. Maintain momentum by making annual improvement part of the regular systems and processes of the company.

Crosby, author of the popular book Quality is Free, argued that poor quality in the average firm costs about 20 percent of revenues, most of which could be prevented by adopting good quality practices. He developed the following quality principles: Quality is defined as conformance to requirements, not goodness. The system for achieving quality is prevention, not appraisal.

I. The performance standard is zero defects, not "that's close enough".

II. The measurement of quality is the price of non-conformance, not indexes. Moreover, Crosby stated that quality is free because the small costs of prevention will always be lower than costs of detection, correction and failure.

Deming also developed his own 14 quality points:

1. Management commitment. Top management must become convinced of the need for quality and must clearly communicate this to the entire organization by written policy, stating that each person is expected to perform according to the requirement or cause the requirement to be officially changed to what the company and the customer really need.

2. Quality improvement. Form a team composed of department heads to oversee improvements in their departments and in the company as a whole.

3. Quality measurement. Establish measurements appropriate to every activity in order to identify areas in need of improvement.

4. Cost of quality. Estimate the costs of quality in order to identify areas where improvement would be profitable.

5. Quality awareness. Raise quality awareness among employees. They must understand the importance of product conformance and the costs of non-conformance.

6. Corrective action. Take corrective action as a result of steps 3 and 4.

7. Zero defects planning. Form a committee to plan a program appropriate to the company and its culture.

8. Supervisor training. All levels of management must be trained in how to improve their part of the quality improvement program.

9. Zero defects day. Schedule a day to signal to employees that the company has a new standard.

10. Goal setting. Individuals must establish improvement goals for themselves

and their groups.

11. Error cause removal. Employees should be encouraged to inform management of any problem that prevent them from performing error-free work.

12. Recognition. Give public, non-financial appreciation to those who meet their quality goals or perform outstandingly.

13. Quality councils. Composed of quality professional and team chairpersons,

quality councils should meet regularly to share experiences, problems, and ideas.

14. Do it all over again. Repeat steps 1 through 13 in order to emphasize the never ending process of quality improvement.

Thoughtful executives and managers tend to examine new organizational theories and practices with both hope and skepticism. Executives and managers are eager to find new approaches to puzzling and persistent problems, but they are also wary of innovations which all too often promise much and deliver only frustration and disappointment. Managers have learned to ask questions: Is this really a new concept or just a new label for something we already know about? Is this something that will fit my organization? How can I explain it to my colleagues and, especially, my boss or board? (Schmidt & Finnigan, 1992)

These questions are particularly sensible when exploring the concept of Total Quality Management. Although most of the elements of TQM are familiar to American managers, in combination they provide a new way of thinking about managing an enterprise and for applying a new and different culture and tradition.

Achieving a consistently higher quality of products and services for customers requires a significant difference in the way in which managers and employees view their roles, responsibilities, and relationships. TQM involves changes in organizational culture, with greater emphasis on collaboration and teamwork.

There are three conclusions from the theory and practice of TQM by some of American's leading companies and governmental agencies:

1. The current world competitive situation makes the examination of TQM a "must" for any enlightened executive or manager.

2. TQM is deeply rooted in American organizational theory and management practice.

3. The accomplishments of the Baldrige Award winner (and the "also - ran" applicants as well) dramatize the power of the TQM process and American companies' competence to implement it (Schmidt & Finnigan, 1992). The growing momentum of the quality revolution creates some urgency for executives and managers to clearly understand the implications of TQM and to assess its appropriateness for their organizations.

Corporate culture. These needs require changes in behavior. Fifty years ago, Japan and Germany suffered the worst defeats in recorded history, with their values, their institutions and their cultures discredited (Drucker, 1992). But today's Japan and Germany are unmistakably Japanese and German in culture. In fact, changing behavior works only if it can be based upon the existing "culture."

Japan is the best example for other countries in Asia. Japan can work

independently of all non-Western countries, as it has become a modern society. Drucker (1992) noted that the modern Japanese corporations and universities are thoroughly "Western" in form. But they were used as containers, so to speak, for the mutual obligations and loyalties of a clan society (e.g, the lifetime commitment of company to employee and employee to company, or in organization, groups workers of autonomous firms held together as "vassals" by mutual dependence and mutual loyalty). As a result, Japanese companies have become extraordinarily successful in world markets due largely to the business discipline and management process embedded in Total Quality Control. Using a marketing strategy based upon understanding and meeting customer needs with quality products and services, they penetrated one market after another (Schmidt & Finnigan, 1992).

When considering the application of this theory in Thailand, it can be useful because there are minimal differences in culture between Thailand and Japan. Thailand and Japan are in the same geographical region, and the main religion in the two countries is Buddhism. Similarly, TQM can be applied in Thailand in the way it was in Japan for mutual obligations and loyalties of a clan society, such as working together and working as a team, mutual dependence, and mutual loyalty.

Importance of the Study

The present study was important because it is an original study of management in Thai public organizations and was related to the quest for Total Quality Management

in those organizations. Moreover, the study provides an instrument for use by chief executive officers, managers, and employees contemplating the introduction of Total Quality Management, or its progress in their organizations.

The results of the present study provide unique information as contribution to the literature on public organizations; no identical or similar research was found in the review of the literature.

Research Question

The present study addressed the perceptions of managers and employees of the Department of Physical Education of Thailand by assessing the degree of differences between managers' and employees' perceptions of the organizational elements related to Total Quality Management. Thus, the research question was: Do managers and employees differ in their assessment of how closely their organization meets the Malcolm Baldrige criteria?

Scope of the Study

The present study focused on the Department of Physical Education of Thailand. The subjects included 250 randomly selected individuals (60 mangers, 190 employees) employed by the Department of Physical Education of Thailand

Definitions of Terms

The following definitions established a reference point for terminology utilized

in the present study. Other terminologies are defined as they occur in the text.

Managers. Managers are those persons who work as director or assistant director, including the Chief of the Bureau. These managers are authorized by formal or legitimate right to influence others, including the decision making for the overall management process, directed toward the accomplishment of organizational goals.

Employees. Employees are physical education officers having a 3-9 degree position level, including staffing and instructors in the College of Physical Education. These persons were not authorized to command or influence others, including the decision making for the overall management process.

Productivity. Productivity is the efficiency or effectiveness of individuals, groups, organizational units, entire organizations (the Department of Physical Education of Thailand) which results in the output motivation and individual performance to serve people as well as coordination with other organizations.

Customers. Customers are those persons who use any service and participate in any activity offered by the Department of Physical Education of Thailand, including students who attend the Colleges of Physical Education and Sport Schools which belong to the Department of Physical Education of Thailand.

Summary and Organization of the Study

This chapter provided an introduction to the Malcolm Baldrige National Quality Award. Chapter 2 provides a review of the literature pertaining to quality issues in the organization, measuring quality, and the Malcolm Baldrige National Quality Award

related to TQM. Chapter 3 describes the research methods employed in the present study, including the research design and the procedures utilized in the data collection. Chapter 4 describes the statistical analysis relative to the study's purpose. Finally, chapter 5 includes a summary, followed by conclusions, a discussion, and recommendations for the further research.

Chapter 2

REVIEW OF THE LITERATURE

The review of the literature in this study focused on the quality issues in an organization, basic concepts of TQM, measuring quality, TQM in public organizations, and the Malcolm Baldrige National Quality Award. These issues are important to the organization, and can be affected to benefit of the organization if managers or administrators can operate more efficiently.

Quality Issues in an Organization

Ross (1995) noted that Dr. Deming, the best known of the "early" pioneers, is known for his popularization of quality control in Japan in the early 1950s. Today, he is regarded as a national hero in that country and is the father of the world-famous Deming Prize for Quality.

In the 1980s, there was much talk of a productivity crisis within organizations, especially those in the United States. Increased high labor costs reduced the competitiveness of U.S. goods in the international marketplace, when compared with products produced in lower-wage countries, such as Korea and Taiwan (Fisher, et al., 1993). Moreover, the rate of increase in output-per-market-hour slowed dramatically in the 1970s and early 1980s. There was a phenomenal yield in Japan, Italy, France,

and Germany. They had substantially higher rates of productivity growth throughout the 1970s. Only the United Kingdom has experienced a slower growth rate.

Strauss (1974) noted that concern about productivity has prompted a great deal of research and innovation in recent years. In 1986, productivity rose in more than 75% of the industries surveyed by the Bureau of Labor Statistics. In 1987, it rose again in more than two-thirds of the industries. In the early 1980s, when Japanese and German goods were widely acknowledged to be superior in quality to many domestically produced goods, a major concern developed. Customers became increasingly sensitive to quality and U.S. organizations were at a loss as to how to respond. There was a frantic and often unsuccessful rush to copy Japanese management practices in the hope that these practices would automatically raise quality. Since then, a great deal of research, consultation, and management attention has been developed, refined and widely adopted (Dobyns & Mason, 1991). Thus, it is fair to say that there has been a revolution in thinking about quality in organizations. Quality improvement is now recognized as absolutely essential because standing still on quality is tantamount to falling behind one's competitors at home and abroad (Schlicher, 1977).

Quality demands are being imposed not just by the end consumers of manufactured goods but by intermediate consumers as well. Many large organizations now demand that their suppliers have a second quality process for ensuring that quality is a high priority, that it is built into products, and that it is continuously improved (Crosby, 1979). For instance, General Motors Corp. required that Velcro USA not

just meet quality standards for binding tape used in automobile manufacturing but also implement a Total Quality Management process and philosophy (Scherkenbach, 1988). Dobyns and Mason (1991) argued that new concern for quality in the organization is not restricted to manufacturing industries but has taken root in the service sector as well. It can be argued that quality is even more important in that sector because services are rendered to clients in real time. There is no chance to inspect and correct errors before the product reaches clients. The service produced is intangible, and it is consumed the moment it is produced (Fisher, et al., 1993). Furthermore, most quality improvements affect all sectors and are directed toward providing better service to customers, whether those customers are internal or external to the organization or whether the product they require is tangible or intangible.

Some of the new approaches to improving organizational performance have relied heavily upon computer-controlled manufacturing, statistical methods, and new arrangements with suppliers, such as just-in-time delivery systems (Schultheis & Sumner, 1995). However, many approaches emphasize human roles in improving organizational effectiveness, either alone or in conjunction with some of the above methods. Any major change emphasized in productivity or quality impacts employees' jobs and is critically dependent upon employees for success (Huber, 1986).

Quality Defined

Juran and Gryna (1980) stated that an essential requirement of a company's products is that they meet the needs of those members of society who will actually use

them. This concept of fitness for use is universal. It applies to all goods and services without exception. The popular term for fitness for use is quality and a basic definition becomes: quality means fitness for use.

There are many definitions of quality, however. In an organization, two basic approaches can be defined. First, quality can mean conformance to specifications. This means the product or component has zero defects if it is within the tolerances specified in advance (Shing, 1986). For instance, a filled 500- gram box of cereal is acceptable if it contains between 497 and 503 grams of cereal. Note that this measure has no reference to customer wishes. All boxes may be perfectly filled, but if customers want to buy much smaller or much larger boxes of cereal, the perfectly filled 500-gram boxes will not sell (Fisher, et al., 1993). Second, quality is defined as "meeting customer requirements." Polls measure customer satisfaction with the product's features and value. Petrick and Furr (1995) stated that most progressive organization now defines quality as meeting or exceeding customer expectations.

The phrase "total customer satisfaction" is used to incorporate both meeting and exceeding customer expectations over time. Scherkenbach (1988) noted that the foundations of the quality movement were developed in the writings of Deming, who asserted that manufacturing must produce quality rather than attempt to create quality by a final inspection. Deming defined quality as a predictable degree of uniformity and dependability at low costs and suited to the market (Ross, 1995). Juran (1989) defined quality as fitness for use in terms of design, conformance, availability, safety, and field use. An increasingly common definition of product quality is that a product

must conform, in some sense, to a measurable standard or requirement. Garvin (1988) noted that quality is the degree to which a specific product conforms to a design or specification. Crosby (1992) agreed with that, defining quality as conformance to requirements, not as goodness. Gavin (1987) proposed eight attributes of quality: 1) performance , 2) features, 3) reliability, 4) conformance, 5) durability, 6) service ability, 7) aesthetics, and 8) perceived quality. Based upon these attributes, Gavin believed that improving scales of quality allows manufacturers to focus on and compete with individual attributes such as a product positioning and marketing strategy.

Quality Planning

Quality planning is an important step in managing organizations. All levels within organizations require quality planning in order to achieve their goals. Planning is an essential and important process of management. Sibson (1992) stated that planning has always been regarded as part of management. In fact, management has often been defined as planning, direction, and control. Thus, a high degree of planning is done by line managers, with relatively less done by full-time staff planners (Juran & Gryna, 1980). Quality planning would be effective in the organization if line managers could operate all things while remaining on track with their plan. However, quality planning requires strategic planning, especially in human resources management, because human resources are an important component of the organization's operations (Nadler, et al., 1979). The reason why strategic thinking and planning are important in human resources management is because they are vital to

success. Human resources management planning is important to the success of each business. Each human resources management department and each human resources management professional is important. Therefore, the specific advantages of human resources management strategic planning are identifiable. Sibson (1992:2-3) proposed that there are several advantages of human resources management planning:

1. Strategic planning avoids costly emergencies and disruptive surprises that can prevent achieving goals.

2. Planning well is more likely to deal with key issues in a timely manner and avoid major crises. Crises management is costly management and is subject to gross errors.

3. The know-how gained from strategic human resources management planning should result in improved work in human resources management and, ultimately, this should translate to higher employee productivity and greater enterprise success.

4. Strategic planning provides a sense of direction and sets priorities that affect what is done and the focus of work.

5. Planning information also provides a screen against which new proposal can be evaluated, and this often eliminates needless projects.

6. Generally, planning tends to bring relatively more order to work, although there will always be disruption and unexpected events.

7. Even when there are unexpected events that require immediate attention, planning helps the organization get back on track quickly and without wasted motion or unneeded diversions.

8. Human resources management planning work is an essential input into strategic planning for the business overall, particularly in high-tech and people-sensitive businesses.

9. There is educational value to strategic planning work, and the information can be used in the development of the human resources management staff.

10. Strategic thinking and planning provide excitement in work and can be a leadership tool.

In conclusion, quality planning has a great deal to do with change. If the environment surrounding business was unchanging, then there would be little need for planning (Juran, 1988). Due to greater technology, human resources management planning is much more important today than even a few years ago (Fellers, 1992). Because planning is so intimately related to change, it is a key element in the right ways of management of change in the organization.

Quality of Work Life

Quality of work life (QWL) becomes a critical practice and demands more involvement by top management when organizations are faced with many employee problems. In recent years, a number of activities involving job modification and revision of work relationships have been described as efforts to improve quality of work life (Sherman & Bohlander, 1995). Many organizations are faced with employee problems such as absenteeism, turnover, alienation, and boredom. This has led to a number of organizations giving more responsibility to the employees and building team

cooperation in work. Schmidt and Finnigan (1992) defined QWL as the degree to which an organization's culture provides employees with information, knowledge, authority, and rewards, to allow them to work safely and effectively, be compensated fairly, and maintain human dignity in their work.

Sherman and Bohlander (1995) noted that improving an organization's external environment is, to a large extent, beyond an employer's control. However, improving the organization's internal environment is definitely within the realm of an employer's influence. Improving QWL is a major challenge confronting employers today. This challenge stems not only from the need to meet foreign competition, but also from demographic and cultural changes. QWL means that workers perform identifiable complete tasks or create whole products, and that companies eliminate conventional supervision (creating self-supervised autonomous work groups) and, in general, try to foster both greater satisfaction and productivity. French and Bell (1995:243) stated that QWL has been applied to a wide variety of organizational improvement efforts. The common element seems to be an attempt to restructure multiple dimensions of the organization and to institute a mechanism which introduces and sustains changes over time. Aspects of change mechanisms are usually increases in participation by employers in shop floor decisions and increases in problem solving between union and management.

In the 1950s, Davis and his associates began working on ways to change assembly lines to make them more productive and satisfying places to work. The decade also saw a great deal of research on the causes and effects of job satisfaction and

the beginning of systematic employee attitude surveys (Cumming & Worley, 1989).

In the 1960s, the rising concern for civil rights and social responsibility in the United States led to a number of governmental actions, including the Equal Pay Act, Fair Labor Standards Act in 1963 and the Civil Rights Act in 1964. As a result equal opportunity guidelines were developed (Neff, 1968). From these activist roots sprang two distinct phases of quality of work life (QWL) activity. Moreover, other nonprofit centers were established, including the Working America Institute at the University of California, Los Angeles; the Massachusetts Quality of Working Life Center; the American Center for Quality of Work Life; and the Center for Productivity at Texas Tech University (Fisher, et al., 1993).

Cummings and Worley (1989) described two definitions of quality of QWL which emerge during the first major phase of activity. QWL was first defined in terms of people's reaction to work, particularly individual outcomes related to job satisfaction and mental health. Using this definition, QWL focuses primarily upon the personal consequences of the work experience and how to improve work to satisfy personal needs. There are eight criteria for QWL which characterize this individual outcome orientation:

1. Adequate and fair compensation. What pay, fringe benefits, and other compensation are sufficient to maintain an acceptable standard of life, particularly in comparison with other work?

2. Safe and healthy environment. What is the physical and mental working environment? Are the physical conditions unduly hazardous? What are the conditions

affecting employees' health, comfort, and convenience when performing their jobs?

3. Development of human capacities. To what extent is the work simplified, split up, and tightly controlled? To what degree can the job enable the worker to use and develop skills and knowledge and to perform work that is personally meaningful and important?

4. Growth and security. To what extent do job assignments contribute to maintaining and expanding capabilities? How can newly acquired or expanded knowledge and skills be used in future work assignments? What is the possibility of furthering one's potential and advancing one's career in organizational terms which associates, peers, and family members recognize?

5. Social integration. Is there an opportunity to interact with others? Is there freedom from prejudice? Does a sense of interpersonal openness and community or equal opportunity exist? Is there an absence of stratification and the possibility of upward mobility? Is advancement based on merit?

6. Constitutionalism. What are the worker's rights, and how are they protected? To what extent does the organizational culture respect personal privacy, tolerate dissent, adhere to high standards of equity in distributing rewards, and provide for due process? How much dignity and respect is there for the individual? Can the worker give honest opinions and be treated as an adult?

7. The total life space. Is there a balance between work and life away from the job? Is there absence of undue job stress? What is the employee's state of mind? Is there freedom from being upset or depressed both on and off the job?

8. Social relevance. Is the organization seen by the employee as socially responsible in its products, waste disposal, employment practices, marketing techniques, and other activities? Socially irresponsible organizations can cause employees to depreciate the value of their own work and careers (Cummings & Worley, 1989).

A second meaning of QWL defines it as an approach or method. QWL can be defined in terms of specific techniques and approaches used for improving work. It is viewed as synonymous with methods such as job enrichment, autonomous work groups, and labor management committees. This orientation is derived mainly from the growing publicity surrounding QWL projects (Cummings & Worley, 1989).

Today, this second phase of QWL activity continues primarily under the banner of employee involvement, rather than that of QWL. For many organizational development (OD) practitioners, the term employee involvement signifies, more than the name QWL, the growing emphasis on how employees can contribute more to running the organization so that it can be more productive, flexible, and competitive. Within organizations in many countries, there is increasing national concern over productivity and discovering new approaches for enhancing employee involvement in the workplace.

Quality Information System

Information systems is an important issue in all organizations. It is a critical component of Total Quality Management. More and more successful organizations

agree that information technology and information systems serve as a key to their quality success whether in the private or the public sector. Conversely, this component of TQM is frequently the roadblock to improvement in many organizations. In organizations, better quality and productivity may not be the issue. The real issue may be improved

quality of information.

Ross (1995) stated that information systems will become the most important means for companies to create distinctive quality and unique service at the lowest possible cost. Juran and Gryna (1980) noted that, today, the traditional organization is being transformed into the information-based organization, which uses information and information technology to produce significant changes in work patterns. The organization of the past was highly structured and composed of many different functions. In this type of organization, each unit maintained it own information. The organization of the future will have a flexible, changeable structure both in the private sector and in public organizations. Thus, teams consisting of specialists from various functional areas work together on projects which address new market opportunities. Shared information databases link individuals to each other.

Consequently, in the future, mangers in the information-based organization will become responsible for using and managing technology. They will use information technology as a tool to provide effective customer service (Sherman & Bohlander, 1995). In the past, informationquality was concerned mainly with in-plant inspection data. However, products and data in both the private sector and public organizations

are more complex. Programs for controlling quality now span the spectrum of functional departments and emphasis is now placed upon fitness for use rather than conformance to specifications. These changing conditions, coupled with the computer, have resulted in a broader viewpoint toward information quality. This broader viewpoint requires aspects from a variety of functional areas. It also recognizes that information not only consists of data but also other knowledge needed for decision making (Juran & Gryna, 1980).

Management issue-based information system (MIS). Management information systems attempt to provide all management information needs through one integrated system. Juran and Gryna (1980) stated that the concept of management information systems has several characteristics:

1. Information input and output are planned from an overall company viewpoint rather than separate departmental systems or handling each request for information on a case-by-case basis.

2. Information that would ordinarily be maintained in separate departments is consolidated to form what is called a database.

3. There are several different uses for the same input data (this justifies the integrated approach of a database (Juran & Gryna, 1980).

Ross (1995) noted that the concept of MIS can focus upon the customer. Beginning with the customer, integration of processes and information can proceed as follows:

1. Identify the market segment in which you want to compete.

2. Use data collection and analysis to define the customer requirements in the chosen segment.

3. Translate these requirements into major design parameters to develop, produce, deliver, and service the product that meets the customer's requirements. These are the primary functions and activities (process) of the value chain.

4. Complement the primary process with support activities such as planning, finance and accounting, MIS, personnel, etc.

5. Subdivide or "explode" the organization design parameters into the process (functions, activities, etc.) that are necessary to achieve the quality differentiation.

6. Design the information requirements necessary to manage each process and to integrate all processes horizontally.

Computers have become a great entity among organizations. They can be extremely efficient as information systems. However, the planning of computer-based Quality Information System (QIS) can be complex. There are several principles which are generally applicable:

1. Plan the system to receive information in any manner imaginable. Although most of the information will be received on special forms, the system should make it possible to receive and process information by means of a telephone call, letter, or other media.

2. Provide flexibility for meeting new data needs. A cardinal example of this is the failure of reporting in a form which must be revised periodically because someone suddenly discovers a critical need for an additional item of information to be recorded.

3. Provide for eliminating collection of data which is no longer useful, and eliminate reports which are no longer needed. This requires a periodic audit of the use (or lack of use) of data and reports.

4. Issue reports which are readable, timely, and have sufficient and useful details on problem areas which facilitate investigations and corrective action.

5. Prepare summary reports covering long periods of time to highlight potential problem areas and show progress on known problems.

6. Keep track of the cost of collecting, processing, and reporting information and compare this cost to the value of the information.

Quality Circles

The quality circle is an important issue at all levels. Juran (1979) proposed that, before 1940, Japanese quality was so poor that General Mac-Arthur, commander of the occupation forces in Japan after World War II, was faced with a major reconstruction problem in achieving his goal of economic redevelopment. He invited Deming, an expert on statistical quality control, to assist the Japanese by improving their low quality standards. Deming subsequently brought Juran to Japan. He believed, as did Deming, that there must be participative involvement of every Japanese employee in order to bring about the production of high quality consumer goods. It was due, in great part, to the influence of these two Americans that the evolution of the Japanese Quality Circles came about.

Quality circles have been used in Japan since the introduction of quality control

techniques in the 1950s and 1960s by Deming, Juran, and Frigenbaum. It has been reported that Kaoru Ishikawa of Tokyo University integrated these techniques with the theories of American behavioral scientists such as Maslow, McGregor, and Herzberg, and, thus, the quality circle was born (French & Bell, 1995). The quality circle concept is a form of group problem solving and goal setting with a primary focus on maintaining and enhancing product quality (Beardsley & Dewar, 1977).

Hunt (1992) defined the term quality circles as a group of workers and their supervisors who voluntary meet to identify and solve job-related problems. Structured processes are used by the group to accomplish their task. Juran (1989) noted that the various Japanese publications in English use the term QC circle, while organizations in the United States and Great Britain use the terms quality circle, quality control circle, and employee circle. This study uses the term QC circle. However, the terms "quality circle" and "QC circle" have the same meaning. Juran defined the QC circle as a volunteer group of workforce members who have undergone training for the purpose of solving work-related problems. Moreover, justifications for QC circles have been (1) to help solve the organization's quality problems and (2) to provide the workforce with an opportunity to participate creatively in matters relating to their own jobs.

Ross (1995) stated that the most widespread form of an employee involvement term is the quality circle, defined as "a small group of employees doing similar or related work who meet regularly to identify, analyze, and solve product quality problems and improve general operations. Thus, groups of five to ten employees

working on similar or related work who meet together regularly to identify, analyze, and suggests solutions to shared problems are referred to as employee involvement groups and are generally known as quality circles (Qcs).

Juran and Gryna (1980) stated that the quality circle has been successful in Japan. By the end of 1978, approximately seven million workers had undergone the training and participated in project studies. The cumulative projects completed since 1962 (the beginning of the movement) has risen to over 10 million. The financial gains, at an estimated average of about five thousand dollars per project, have been enormous. The effect on product quality has also been significant. In turn, these experiences have enable the workers to become better supervisors and managers.

By 1978, many developed countries of the West had produced no effective quality circles as their means for utilizing the education, experience and creativity of the workforce. Whether or not the quality circle can be adopted by the culture of the West remains to be seen. The limitation is not technological, it is cultured. In the West, cultural resistance arises from two major sources:

1. Managers and engineers are reluctant to delegate to the workforce the functions and authorities to which they themselves have enjoyed so consistently in the past.

2. The workforce does not consider that it has a responsibility to help managers improve the organization's performance.

Moorhead and Griffin (1992) noted that quality circle meetings are almost always held on company premises and company time. One meeting a week is

standard, with each meeting lasting approximately one hour, but variation exists from company to company. During meetings, the circle identifies, analyzes, and solves quality problems in its areas of responsibility. Problems may range from eliminating vandalism to reducing defects in a particular production process. Thus, in order for the quality circle concept to served in an organization, a manager needs to motivate employees to perceive the quality circle process as the core of successful quality improvement projects.

Juran (1989) suggested several important principles about how to implement quality circles:

1. Worker participation in quality circles should be voluntary (However there are some exceptions to this rule).

2. Training and project work must be carried out on compensatory organization time (whether it is during regular hours or overtime depends on local conditions).

3. Training in problem solving must accompany project work.

4. Training must be provided for the supervisors and quality circle leadership as well as for quality circle members.

5. Nominations for the project may come either from workers or managers.

6. Projects should be closely related to the regular jobs of the QCcircle members because the worker is regarded as an expert on his or her job.

7. Choice of projects is a matter of agreement between the QCcircle and management.

8. Final recommendations of the QCcircle must be acceptable to management

before they can be made effective.

Quality Management Leadership

Those persons who take care and respond to an organization make things happen to achieve organizational goals and influence planned change and organizational renewal. Those persons who make changes are managers in the organization (Harris, 1989). Quality management leadership issues in an organization are important in terms of Total Quality Management. Without a genuine hands-on commitment from an organization's managers, TQManagement cannot succeed. Schmidt and Finnigan (1992) stated that the behavior and actions of mangers at all levels provide the necessary leadership, set the proper tone, and demonstrate the examples for successful implementation of Total Quality. It is management's leadership and commitment to Total Quality that lays the foundation upon which the pillars of a TQM strategy can be built.

The senior managers of all of the Baldrige Award winners recognize that the successful implementation of TQM demands explicit affirmation and involvement from all managers of the organization (Hunt, 1992). Each of the senior staff members attended quality training, struggled with the development of their organization's quality policy, and committed the time and effort to work and talk with their employees personally by employing continuous communication, using employee feedback surveys, and setting clear objectives. These senior TQM managers established an expectation that managers throughout their organizations would also exhibit leadership and

commitment to Total Quality (Townsend & Gebhardt, 1992).

The corporate leader plays a pivotal role in the implementation of a TQM program in his or her plant. It is the responsibility of the senior corporate leader to lead, to dream, and to create the future for his or her organization (Hinton & Schaeffer, 1994). The new leader is one who commits people to action, who converts followers into leaders, and who may convert leaders into agents of change. Leaders are vision-oriented in their perspectives. They create new ideas and spend their time "with the paradigms of action; with doing the right thing." Walton (1990) noted that Deming continually emphasized that management must lead the way. Only management can initiate that improvement of quality and productivity.

In successful TQManagement operations, managers continue to be responsible for the functional requirements of their management job. However, the TQM manager must also be more attentive to the capacity of his work group, its functions, and each team member's readiness for participating in Total Quality activities (Godfrey, 1990). Schmidt and Finnigan (1992) suggested that traditional managers must be responsible for (1) establishing a system, (2) making assignments, (3) directing work, (4) setting standards and goals, (5) evaluating performance, and (6) providing training for poor performers or replacing them. When managers do these things, they believe they are creating the most efficient work system possible. However, the experiences of the Baldrige winners and others indicate that there are better ways to accomplish the same tasks. More important is that the TQManagement approach moderates the inherently adversarial relationship between management and employees that is so often part of a

traditional management style (Hart & Bogan, 1992).

Basic Concepts of TQM

Total Quality Management (TQM) has been well known by several names, but it has always had common goals: customer satisfaction and continuous improvement of quality and productivity (Fisher, et al., 1993). The basis of TQM philosophy and process can be stated simply: to design and manage a process that satisfies the customer in an increasingly effective way. In some organizations this way of life is called Total Quality Control (Schmidt & Finnigan, 1992).

Ross (1995) stated that TQM is based on a number of ideas. It means thinking about quality in terms of all functions of the enterprise and is a start-to-finish process which integrates interrelated functions at all levels. It is a system approach that considers every interaction between elements of the organization. Thus, the overall effectiveness of the system is higher than the sum of the individual outputs from the subsystems. The subsystems include all of the organizational functions in the lifecycle of a product, such as design, planning, production, distribution, and field service. Moreover, the management system also requires integration, including a strategy which focuses on and satisfaction, the tools of quality, and employee improvement. Furthermore, TQM has evolved from simple work production systems guided by principles of statistical quality control to a complete management process by the addition of employee involvement strategies, and statistical control training for

employees. There are four key responsibilities of a TQM manager: (1) to provide vision and leadership, (2) to document and standardize the process and empower the worker to carry it out efficiently, (3) to continuously improve the process, and (4) to innovate, introducing substantial change when necessary and feasible (Schmidt & Finnigan, 1992).

The term TQM is integrated from both quality and management. It is management that provides the true impetus for making Total Quality the guiding process of the organization. For that reason it is labelled TQManagement. Hinton and Schaeffer (1994) defined TQManagement as a disciplined approach to keeping everyone's attention directed to the actions they can take to keep the organization on track toward providing greater customer satisfaction.

Principles of TQM

Pascoe (1992) stated that the development of a TQM is based upon a number of new manufacturing and management theories. These new theories are significant because they deviate from the traditional Western view of manufacturing management. Muchinsky (1993) noted that, in The Principles of Scientific Management (published in 1911 by Taylor) these principles were: (1) scientifically designing work methods for efficiency, (2) selecting the best workers and training them in new methods, (3) developing a cooperative spirit between managers and workers, and (4) sharing the responsibility for the design and conduct of work between management and workers. The most famous example of his methods referred to quality management. Taylor

showed that workers who handle heavy iron ingots (pig iron) could be more productive through the use of work rests. Training employees when to work and when to rest increased average worker productivity from 12.5 tons to 47.0 tons moved per day (with less reported fatigue), which resulted in increased wages for workers. The company also drastically increased efficiency by reducing costs from 9.2 cents per ton to 3.9 cents per ton. Taylor's stated, "under our system a worker is told just what he is to do and how he is to do it. Any improvement he makes on the order given to him is fatal to his success. Those in management should also guide and help the workman. Since then, practitioners of Taylor's principles have developed quality control (QC) departments to police the performance of the workforce (Bryce, 1991:5). American management has adopted the principles laid down by Taylor. The following sections provide a review of the principles and practices which are unique to the TQM movement.

Customer satisfaction. The key to the successful organization is not only that the organization has increased their benefits on income, but also has decreased customers' complaints. Ross (1995) noted that Ernst and Young's study (mentioned previously) found that quality performance measures, such as defect rates and customer satisfaction levels, play a key role in determining pay for senior managers in fewer than one in five companies. Profitability is still the king. There is nothing wrong with a focus on cash flow and short-term profits, but long-term profit and market share require at least satisfied customers that are related by a focus on satisfaction. Bryce (1991) stated that the Japanese emphasized customer satisfaction as a core concept to the

organization. Ishikawa has been quoted as saying: "To practice quality control is to develop, design, produce and service a quality product that is most economical, most useful and always satisfactory to the consumer."

Continuous improvement. Continuous improvement is an important factor in all aspects of an organization's activities. Deming developed what is known as the Deming chain reaction: as quality improves, costs will decrease and productivity will increase (Ross, 1995). Furthermore, Deming stressed worker pride and satisfaction rather than the establishment of quantifiable goals. His overall approach focuses on improvement of the process, in the system rather than the worker. This is the cause of process variation.

Hinton and Schaeffer (1994) suggested that the key to success is continued interaction with customers about improvement. When they complete the first survey and take appropriate actions for improvement, it should lead to improvement of total customer satisfaction for the organization. The process takes time, though. It takes time to measure and make improvements, and it takes time for customers to recognize these improvements. Moreover, it requires continuous action, or continually talking to the customers and listening to how they want. Customers must know when the organization has made improvements.

Continuous improvement is achieved upon two elements: innovative product improvement and improvement based upon small changes. Bryce (1991) observed that the Japanese approach to quality improvement is based upon small incremental improvement, while the American approach focuses upon innovation. The Japanese

word 'Kaizen' means improvement and when applied to the workplace means continuous improvement by both managers and workers. Schmidt and Finnigan (1992) agreed that the Japanese have demonstrated the power of Kaizen--the process of continual improvement--the day-by-day, week-by-week discovery of small steps that make the process increasingly more efficient, more economical, and more dependable. Continuous improvement can be accomplished by controlling the manufacturing process, assuring zero defects and measuring the cost of quality (Pascoe, 1992).

Process control. Process control is the set of activities applied to detect and remove special causes of variation in order to maintain or restore stable statistical control. The elements of the control circle are: P (Plan), establishing a plan or standard for achieving the goal; D (Do), enacting the plan, or doing; C (Check), measuring and analyzing the results, or checking; and A (Act), implementing the necessary reforms when the results are not as originally planned. However, the process cannot be completed without the statistical tools. Bryce (1991) noted that Ishikawa, a leader in the quality movement in Japan, provided specific methods for process improvement and statistical process control. Furthermore, Taguchi developed a number of methods, collectively referred to as the Taguchi Methods, which are based upon the role which the design process plays in developing designs that are robust and allow for greater manufacturing variation (Taguchi & Stalk, 1990). The concept of controlling the manufacturing process to provide consistent results was an early development of TQM theories (Bryce, 1991). Schimdt and Finnigan (1992) noted that at the heart of process control is the control circle Deming adopted from Shewhart.

"Deming's PDCA Circle," as shown in Figure 1, can be thought of as the check and the act steps from Deming's (1986) Plan - Do - Check - Act circle applied to product development.

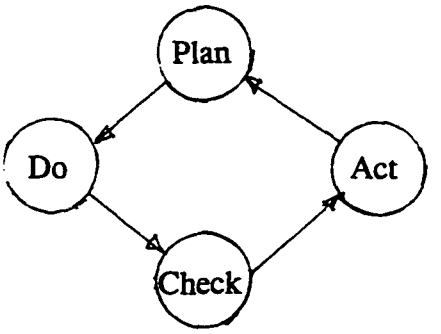

Figure 1

The Deming PDCA Circle

(Source: Schmidt & Finnigan, 1992:51)

Internal customers. Juran (1989) proposed that internal customers are the members of the organization who produce the product. They are often called customers despite the fact that they are not customers in the dictionary sense; that is, they are not the clients. Internal customers include the managers of the affected departments. Their influence upon quality is considerable. Internal customers also include the workforce. Based upon this perspective, quality involvement extends to all employees in an organization because they are the customers for services or products.

Crosby (1979) was concerned with Juran's concepts, and in his quality group training program he stated that every process has a customer; therefore, it is necessary for every process to be performed to satisfy the customer. Consequently, the

relationship between groups within an organization is the next process which becomes a necessary issue within the organization.

Employee empowerment. Recently, employee empowerment has become the most important foundation of organizational development because many organizations are facing competitive demands for lower costs, higher performance, and greater flexibility. Companies are increasingly trying to enhance the participation, commitment, and productivity of their members. Cummings and Worley (1989) stated that employee involvement is a broad term which has been variously referred to as participative management, industrial democracy, quality of work life, and worker empowerment. French and Bell (1995) noted that participants in organizational development programs are not restricted to the elite. It is extended widely throughout the organization. Increased participation and empowerment have always been control goals and prominent values of the field.

Participation of the employee is a powerful elixir. It is good for people and it dramatically improves individual and organizational performance. To empower is to give someone power. This is accomplished by giving individuals the authority to participate, to make decisions, to contribute their ideas, to exert influence, and to be responsible. Hitt (1988) agreed that transforming leadership relies upon empowerment, with power being defined as the capability for doing or accomplishing something. "Empowerment" means to give power to followers. Leaders empower their people by increasing their capability for accomplishing something. This is why participation is such an effective form of empowerment. Participation enhances

empowerment and, in turn, enhances performance and individual well-being. Chief executive officers of some of America's most quality-conscious organizations are quick to point out that the best way to achieve organizational success is by involving and empowering employees at all levels. Some even say that employee empowerment is a revolution which can turn organizations into democratic workplaces. Moreover, the growth and development of the human relations movement involves the concept and practice of participative management (Pati, 1995). "Participatory management rapidly became a catch phase of the 1980s signifying the desire of many American corporations to develop a new style of leadership and employee involvement that better fit today's labor force". Thus, the main driver of TQM is empowerment that focuses upon customers and work outputs. This is accomplished by empowering customers to stabilize and improve the work process and by giving customers the tools to measure progress. For most organizations, this means a transformation of their work culture (Schmidt & Finnigan, 1992).

Quality control. Control is the process employed in order to meet standards. This process consists of observing actual performance, comparing this performance with some standard, then taking action if the observed performance is significantly different from the standard. Fetter (1967) described quality control as a function of two related activities of any productive system. Additionally, the development of general and technical specifications for any product is a decision subsystem related primarily to the marketplace. The character of any good or service is mainly determined by the wants of consumers. However, technical specifications are

determined at least in part by the availability and costs of processes and materials. Thus, the first set of decisions necessary for the control of quality are those of design. Quality control methodologies were developed at the turn of the twentieth century as a means of ensuring consistency in parts built in different locations (Hart & Casserty, 1985).

Juran and Gryna (1980:3) proposed that the control process is characteristic of a feedback loop and involves a universal sequence of steps as follows:

1. Choosing the control subject; i.e., choosing what to regulate
2. Choosing a unit of measure
3. Setting a standard or goal for the control subject
4. Choosing a sensing device which can measure the control subject in terms of the unit of measure
5. Measuring actual performance
6. Interpreting the difference between actual and standard
7. Taking action (if any) on the difference

This sequence of steps can be applied to control anything, such as cost control, inventory control quality control, and so forth. Quality control can be defined as the process through which actual quality performance is measured, compared with the standard, and actions taken on the difference (Crosby, 1984).

Japanese adopt American's quality methods. Following World War II, Japan's quality techniques were primarily limited to the inspection of the end - product. Japanese quality control methods were relatively poor and haphazard. There was a

project initiated in 1945 by the Civil Communications Section (CCS) within the General Headquarters of the Supreme Commander for the Allied Focus after the takeover of Japan. The CCS was responsible for the restoration of the Japanese telephone system. Three American engineers, originally from Western Electric and Bell Laboratories, contributed to the upgrading of Japanese working environments by establishing a testing laboratory and seminars in production management. These CCS seminars were broad in scope but concentrated on factory operation and product quality.

In 1949, based upon the ideas initiated by the three American CCS engineers, the Ministry of International Trade and Industry (MITI) coordinated the development of Japanese Industrial Standards (JIS). Standardization was a key element in the Japanese quality movement.

> The JIS mark certification system...provides an effective means of promoting the use of industrial standards, as well as [a] way to promote the introduction of effective quality control methods at the factory level...to produce a designated commodity stably and regularly in conformity with the respective standards (Garvin, 1988:185).

The key to Japanese competition is the Kaizen strategy. It is the single most important concept in Japanese management. Kaizen is a Japanese term which encompasses the entire Japanese quality process. It includes: Total Quality Control (TQC) or Company Wide Quality Control (CWQC), robotics, automation, quality improvement, just-in-time material scheduling (JIT), and Zero Defects. Four principal elements for quality control Kaizen are: (1) involvement of functions other than manufacturing in quality activities, (2) involvement of all employees (i.e., quality circles), (3) the goal of continuous improvement, and (4) strong customer orientation (Garvin, 1988).

Measuring Quality

Hunt (1992) defined the process of quality measurement as the act of measuring to compare results to requirements and to measure quantitative performance. Measurement involves assigning numbers to things. Height is to assign a number to the distance between a person's head and the bottom of his or her feet with the use of the ruler. Measurement of a child's IQ is the assignment of a number to the sum of the correct responses that he or she makes to a group of standard problems. In terms of measurement quality, measurements should be as precise and as valid as possible (Glass & Hopkins, 1984).

Measurement systems are methods of gathering, assigning, and disseminating information on the activities of groups and individuals within organizations. Data tell how well the organization is performing and detecting and controling deviations from goals (Morris, 1979). For instance, management control systems help to guide each department's or division's activities. Similarly, performance appraisal systems assess individual behaviors with respect to departmental goals (Cummings & Worley, 1989).

Measurement now provides information not only on individual units of products, but also on lost processes and the measuring instruments themselves (Juran & Gryna, 1980). Juran (1989) stated that attaining good quality requires precise communication among customers, processors, and supplies. Such precision is best achieved when one "says it in numbers." To "say it in numbers" requires the creation of a system of measurement consisting of (1) a unit of measure (a defined amount of some quality

feature that permits evaluation of that feature in numbers), and (2) a sensor (a method or instrument that can carry out the evaluation, and state the findings in numbers, in terms of the unit of measure).

The effect of measurement error on product acceptance can be important. Thus, in order to maintain a measurement of quality, the quantification of product characteristics involves:

1. Definition of standardized units called units of measure, which permit conversion of conventional dimensions such as length and mass into forms capable of being quantified (e.g., meter, kilogram);

2. Instruments which are calibrated in terms of these standardized units of measurement; and

3. Use of these instruments to quantify the extent to which the product or process possesses the characteristics under study. This process of quantification is called measurement (Juran & Gryna, 1980).

Error of Measurement

Even when it is used correctly, a measuring instrument may not give a true reading of a characteristic. A difference between the true value and the measured value can occur due to a lack of accuracy and precision.

Accuracy. The accuracy of an instrument is the extent to which the average of a long series of repeated measurements made by the instrument on a single unit of product differs from the true value. This difference is usually due to a systematic error

in the measurement process. In the case, the instrument is said to be "out of calibration" (Juran & Gryna, 1980).

Precision. The precision of an instrument is the extent to which the instrument reports acurate results when making measurement reports on the same product.

Reducing and Controlling Errors of Measuring Quality

Although one may try to avoid error of measurement by correctly using a measuring instrument, error may occur. However, steps can be taken to reduce and control errors in both accuracy and precision. The systematic errors which contribute to inaccuracy can be handled by applying a numerical correction to the measurement data. Therefore, it is preferable to adjust an instrument as part of a calibration program (Juran & Gryna, 1980).

In a calibration program, the measurements made by an instrument are compared to a standard reference of known accuracy. Adjustment is made if the instrument is found to be out of calibration. There are many factors which can be make a calibration program complex, including: (1) a large number of measuring instruments, (2) the need for periodic calibration of many instruments, (3) the need for many reference standards, (4) the increased technological complexity of new instruments, and (5) the variety of types of instruments, i.e., mechanical, electronic, chemical, and so forth (Juran & Gryna, 1980).

In order to reach the objective of quality measurement, one must reduce these causes of error by controlling charts or other techniques. Banker, Batayias and George

(1978) discussed a program for controlling the quality of laboratory measurement in a hospital. A computerized system is used to prepare control charts and other statistical information on a monthly basis for about 170 individual tests. This is one example of measuring quality control.

Multiple Functions of Test Equipment

Early gauges were designed to classify a product as good or bad. Since then, the emphasis on defect prevention and quality planning has demanded that shop test equipment be able to perform additional functions. Juran and Gryna (1980) proposed that there are several new and multiple functions which have given rise to quality information equipment in order to emphasize that their roles are to provide information, such as the following:

1. Indicating. That is, the gauges must show the "reading" along the scale of measurement. These readings become feedback to operators for process control and to inspectors for product conformance decisions.

2. Regulating. In some application it is economical to feed the measurements directly into the process so that the gauge closes the loop and makes the process self-regulating.

3. Recording. Increasingly, the burden of recording measurement data is being shifted from operators and inspectors to instruments, especially designed and to record data. These records are not merely a series of readings expressed in numbers. They include charts showing the data in time progression and relation to tolerances or control

limits.

4. Computing, summarizing, and reporting. A further step is to feed the data into computers. These summarize data and prepare reports for supervisory and managerial review.

Performance Measurement

It is true that today's organizations exist in an increasingly competitive and complex world. Performance measurement can help or hinder an organization's ability to compete, depending upon how measurement systems are developed and utilized (Sink & Tuttle, 1989). To maintain quality in an organization, managers, staff and employees must view measurement as a natural and necessary part of their jobs and their roles in the organization. Thus, in the future, all persons in an organization will be referred to as employees, and managers. In all areas and at all levels in the organization there is a twofold task:

1. Perform and get the job done, and

2. Continuously strive to improve performance (individual, group, system, and organization).

Sink and Tuttle (1989) proposed that it is the role and responsibility of both manager and employee to meet the challenges of new competition. It is consistent with the philosophies espoused by leading authors, consultants, and experts in the areas of productivity and quality management (i.e., Deming, Juran, Ishikawa, Reich).

The essence of management is that one cannot manage that which one cannot

measure. Why is it necessary measure? Drewnowski (1974) stated that to measure is to provide a management team with new insights into why the system performs the way it does, what it can improve and when the system is in control or out of control. However, the most important reason for measuring performance is generally simple. Performance measurement involves in a systematic process of jointly assessing work related achievements, strengths, and weakness. It is the primary human resource management intervention for providing performance feedback to individuals and work groups. Performance measurement represents an important link between goal setting and reward systems. Thomas, et al. (1992) noted that in all kinds of organizations, managers at all levels fall into traps, such as measuring A while hoping for B. They measure the easy things, the most pressing things, the wrong thing; they hope for quality while measuring and controlling only production schedules, and measuring to find those who have performed poorly in order to punish them while ignoring those who have performaned well.

Productivity Measurement

In organizations, productivity is important because it has a major impact upon peoples' life (Pritchard, 1990), especially if it increases the quality of lives. Productivity growth has important effects upon individuals as well. Aside from the quality of life issues, productivity gains lead to better use of time, more leisure time, and are a key to advancement within the organization (Kendrick, 1984). Equally importantly, people like

to be productive. It is a central aspect of self-fulfillment and self-respect (Thomas, et al., 1992).

The importance of measuring productivity. To improve productivity, it is necessary to measure it (Pritchard, 1990). Measuring productivity has an entire host of benefits: improving productivity, inflation control, industry financial health, competitiveness of individual firms, and improvement in quality of life within the organization, there are many reasons why the measurement of productivity is important:

1. It assists in the efficient conduct of operations.
2. It aids in evaluating progress toward improving productivity.
3. It makes it much easier to assess changes in productivity over time.
4. It defines and clarifies expected results and activities better than qualitative descriptions.
5. It helps the image of the organization with a parent organization, with clients, and with external funding sources (Pritchard, 1990).

TQM. in a Public Organization

Although the most widely activated TQManagement effects have occurred in business and industry, it is encouraging to note that state, city, and local governmental organizations have also produced explicit results by following the same TQM principles. This is particularly important because a quality business operates best when it is served by a quality government. It is difficult to imagine operating a successful Total Quality

business in a corrupt or poorly managed country. However, in some countries there is interest in applying TQM in public organizations. Perhaps these countries will experience success similar to the Total Quality movement in the United States (Hunt, 1992).

The efforts and successes of TQManagement in the public sector are particularly impressive because government administrators are under special constraints. Their directives and priorities may shift with changes in the elected political leadership. Furthermore, their power to provide rewards and promotions is often restricted. Finally, the cost of taking a risk and failing can result in a highly publicized disaster. Nevertheless, the principles of TQManagement can better help provide service to the public sector. Additionally, it is often achieved at significantly reduced costs (Schmidt & Finnigan, 1992).

TQM Efforts at the Executive Level

In the United States, the federal government encourages and monitors quality businesses for it own agencies. The "Academy Award" for excellence in business enterprises has been dramatically the Malcolm Baldrige National Quality Award, successful in focusing attention on quality and providing a set of guidelines for helping business organizations assess their levels of excellence.

A powerful result of the Baldrige Award has been the stimulation of many executives and managers to learn about TQManagement and to see its results, through not only speeches and written material, but by attendibg day long workshops with names like

"Showcase Seminars" and "Quality Forums." More than five-hundred-thousand managers have attended these educational events in the past three years. Consequently, this one activity by the federal government, in close partnership with the private sector, has had numerous impacts upon the spread of Total Quality practice throughout the United States (Schmidt & Finnigan, 1992).

Another important contribution by the federal government was a study of organizational quality by the General Accounting Office (GAO). A study was undertaken at the request of Congressman Donald Ritter and twenty-nine other members of Congress to examine the impact of formal Total Quality Management practices on the performance of selected U.S. Companies (U.S. General Accounting Office, 1991). Because the GAO has a solid reputation for integrity and objectivity, its findings have been particularly salient. It is interesting to note that following its study, the GAO started a Total Quality training program for its own managers in the public sector.

Additionally, many Departments have adopted the principles of Total Quality Management within their own organizations. These include the Department of Defense and the Federal Quality Institute. They have not only adopted the principles of TQM for application in their practice, but they have also established their own principles for setting and reaching quality goals. For instance, the FQI provides three services for its colleagues in the government: (1) quality awareness training courses, (2) a list of approved private sector quality experts, and (3) a Quality and Productivity Information Center.

TQM Efforts at the State and Local Levels

One of the most aggressive Total Quality programs for a state has been developed in Arkansas. It began with a community initiative in Batesville in July, 1987. An all-day orientation for local leaders encouraged them to put teams through a training program on quality management. A diverse group of organizations enrolled teams and the training ended with a celebration in which teams presented the results of their improvement projects (Schimdt & Finnigan, 1992).

In February, 1988, Arkansas Governor Clinton attended Batesville's celebration and became convinced that quality management was essential for state government, and recognized that quality management can work in all types of organizational settings. Clinton accepted an offer by Arkansas Eastman for assistance in establishing a quality management program. After several months of quality management planning, six pilot agencies and the governor's office started their quality journey in January, 1990. In August, 1990, an Inter-Agency-Training program was conducted by the government. In the Summer and Fall of 1991, more than ten-thousand state employees received an orientation on quality management. Moreover, the commitment of the state government to quality was further demonstrated by legislation that: (1) assured that no state employee would lose employment due to efficiencies resulting from quality management projects, (2) provided a mechanism to transfer or reallocate funds between agencies made necessary by quality management implementation, (3) established quality management training, and (4) created a quality management base to oversee these activities.

Another example is TQM effects on local government in the city of Madison,

Wisconsin. In May, 1983, Mayor Joseph Sensenbrenner was facing with difficult budget problems, with the citizens of Madison resisting both tax increases and cuts in services. He chose the city's motor equipment division as the first place to test Deming's approach to problem solving. All problems were easily identified by Deming's methods. The outcome of his effort was to cut vehicle turnaround time from nine days to three days and to save $7.15 for every dollar invested in improvements--an annual net savings of $700,00 (Sensenbrenner, 1991). Furthermore, Mayor Sensenbrenner established a quality and productivity Steering Committee. The role of this committee was to oversee quality and productivity (QP) activities and chart a direction which would ultimately lead to the complete organizational transformation of the government. Then they developed the quality improvement mission statement. The current version states:

> The mission of our quality improvement initiative is to introduce, culture, and sustain within all City agencies, the constant and widespread practice of involving employees from all levels of the organization in a meaningful and cooperative team effort which is based on a critical analysis of relevant data, including customer input, for the purpose of continually improving the efficiency and cost effectiveness of City Service (Schmidt & Finnigan, 1992).

TQM in Education

Deming (1986) stated that TQManagement is much less understood in the educational sector. It is generally agreed that TQManagement would benefit American schools, but educators do not know how to go about the process and generate the kind of support school administrators will require. For several years, Deming held an annual seminar aimed at teachers. Many educators have been inspired by his book, Out of Crisis

(Deming, 1986). This book has led educators to try Total Quality in their school operations.

Another event of the TQManagement movement occurred in March, 1991 at an annual convention in New Orleans. The American Association of School Administrators (AASA) held, for the first time, seven sessions devoted to Total Quality in education. All sessions resulted in standing room only and TQManagement became the centerpiece of the 1992 conference (Tribus, 1991).

Cyert (1991), president emeritus of Carnegie Mellon University, told a Los Angles Conference of educators and industrialists that "instead of leading business firms in this [quality] area, the academic institutions, and this includes most business and engineering schools, tend to follow practice, rather than lead it." They believe that the kinds of actions involved in TQM are not the proper business of academic (Cyert, 1991). However, although higher education has been slow to embrace TQManagement, some significant experiments and researches occurring around the country have demonstrated how the TQM approach to education can make a difference. Dhiman (1995) asserted that during the last ten years, TQM has claimed the attention of scholars as a "paradigm worth considering" for managing higher education. The success of TQM in business and industry cannot be ignored. Higher education can benefit from the triumphant quality revolution that in industry. Ther are a number of examples that can be cited.

Goodwin (1995) applied the Malcolm Baldrige National Quality Award to the study of two-year college leaders of public, private, and proprietary associate-degree granting institutions in the United States, Guam, American Samoa and Puerto Rico. The

study examined the extent to which chief executive officers (CEOs) of two-year colleges perceived characteristics of the MBNQA criteria in their institutions by using a Likert - type questionnaire to measure perceptions of MBNQA characteristics. The respondents reported positive ratings for all MBNQA characteristics, with the exception, that being the acceptance of change. The presence of a formal TQM program affected response to Strategic Quality Planning, Human Resource Development and Management, Quality and Operational Results, Customer Focus and Satisfaction, and the Impact of Organizational Change on Campus subscales. No significant effect was found for Leadership, Information and Analysis, and Management of Process Quality.

In some countries, higher education is facing an enrollment crisis as well as reduced funding. Institutions are being asked to do more with less. Add to this the increased demands for accountability plus increased competition for students, and higher education is faced with the same situation American industry faced in the 1980s (Kyle, 1995). Kyle sought to determine if the tools and techniques of TQM could help higher education as it helped American industry. Results did not show a strong relationship between the visionary leader and the Total Quality Culture. The literature and personal interviews with experts suggest that this is affected by a dispersion of leadership throughout the organization. However, proper resources must be allocated to higher education institutions and accurate measurement for progress, such as the Malcolm Baldrige Criteria for Higher Education, must be used to determine if TQM can make higher education more effective and efficient.

The Malcolm Baldrige National Quality Award

The Beginning of the Malcolm Baldrige Award

The idea for a national award for quality was imported from Japan when the nation's Deming Prize proved to be a powerful stimulus for Japanese industries. The importer was Rear Admiral Frank C. Collins. Jr. (Schmidt & Finnigan, 1992), Admiral Collins was executive director of quality assurance for the Defense Logistics Agency. He was deeply impressed with the management practices he saw during his trips to Japan, and he came to appreciate the importance of the Deming prize when a Japanese company took a one-half-page ad in the Wall Street Journal featuring the medal and the following legend: "The most important name in Quality Control in Japan is American"

Admiral Collins took many opportunities to present his idea, first in 1982 to the National Academy of Sciences; second, he approached Bruce Merrifield, Assistant Secretary of Commerce, but was ignored. The next opportunity to present the idea of a national quality award came during the White House Conference on Productivity in September, 1982. Collins, now the Vice President for Quality for the Aviation Corporation (AVCO), he met Grayson, who chairman of the Private Sector Initiatives Panel for the White House Conference (Hart&Bogan,1992). He and Grayson got acquainted and discovered their common ideas on the issue of quality as touchstone for improved competitiveness. Grayson and Collins invited business executives to convene and formed an organizing group in September 1985 in Collins's AVCO office in Washington. Attencees included Debra Owen (American Society for Quality Control

(ASQC), William Crosby and David Kennedy (American Airlines), Charles Mercer (Mc Donnell Douglas Electronics), John Kendrick (George Washington University), and Ray Smock (Ford Motor Company). In their first meeting, the group made two important decisions: (1) to press for a quality award, rather than a quality productivity award, and (2) to develop criteria which would fit both service and manufacturing companies. The group agreed to meet twice a month at the AVCO offices in Washington to develop criteria and establish policies and discuss administering the award. As a result, a spirit of friendship developed during at least fifty meetings held over a period of two years.

Almost immediately after the American Productivity Center's (APC) report was published in September 1983, the ground-breaking White House Conference on Productivity was held. On hand to dedicate the event and its aims were President Reagan himself, Vice President George Bush, Treasury Secretary Donald Regan, White House Chief of Staff Ed Meese, and Commerce Secretary Malcolm Baldrige. The Conference opened thus:

> America is the most productive nation in the world, but its growth in productivity has faltered. Some of the factors contributing to slower productivity growth are within our control and some are not, but it is important that we respond to this challenge (Hart & Bogan, 1992:12).

The report concluded that a public/private sector effort could succeed, if all parties in the process--business, government, labor, and higher education--roled up their sleeves and went to work to find a solution together. In 1987, Congress ignored Fuqua's bill, but Walgren, a Pennsylvania Democrat, picked up the quality award flag and reintroduced Fuqua's bill. On June 8, the House passed Walgren's bill. Support had grown within

the Senate, largely as a result of the energy and salesmanship of Hudiburg of FP &L. Additionally, it was at that point that Baldrige, Secretary of Commerce and an amateur rodeo cowboy, was killed in a riding accident. In the wake of his death, the Senate moved rapidly to rename the award after Baldrige. Passage was swift. President Reagan signed the Malcolm Baldrige Quality Improvement Act into law on August 20, 1987, and a new era in American industry was begun (Hart & Bogan, 1992).

The Goals of the Malcolm Baldrige Award

The Malcolm Baldrige National Quality Award was established to promote the following goals:

1. Helping to stimulate American companies to improve quality and productivity for the pride of recognition while obtaining a competitive edge though increased profits;

2. Recognizing the achievements of those organizations who improve the quality of their goods and services and provide an example to others;

3. Establishing guidelines and criteria which can be used by business, industrial, governmental and other organizations in evaluating their own quality improvement effects; and

4. Providing specific guidance for other American organizations who wish to learn to manage for quality by making available detailed information on how winning organizations have changed their cultures and achieve eminence.

TQM in the Malcolm Baldrige's View

QC (quality control), QA (quality assurance), TQC (total quality control), the list

of quality acronyms, and separate ideologies governing each, constitute a confusing stew of "isms" for the innocent onlooker (Hart & Bogan, 1992). Quality is something everyone thinks they understand; however, this word means different things to different people (such as a quality car or a quality individual). It's sometimes an inexplicable quality. Different quality movements have focused upon different aspects or dimensions of quality.

Edwards (1968) proposed that people in training, marketing, engineering, and service all have their own specific opinions of what quality is, where it begins and ends, and how it may be measured. As the quality movement has grown, defining quality has become more different. However, the Baldrige Award does define it by identifying a full array of areas where organizations will want to be proficient in order to ensure their success and continuous improvement. Moreover, for organizations, Baldrige represents an approach that more and more organizations are turning to in order to create new jobs, new markets, new customers, and new profits. Total quality management in the Baldrige's view is that everyone in an organization work together toward these common objectives. Managers who try to do it all themselves may, like the hero of marathon running, exert themselves remarkably but their final moments may not be famous (Hart & Bogan, 1992).

There are many organizations which can improve their quality by following the Malcolm Baldrige criteria. At Westinghouse, IBM, AT&T, Baxter Healthcare and other organizations, business units have all undertak Baldrige-style quality assessments each year. In 1990, AT&T trained over 1000 senior and mid-level managers to be its own

internal Baldrige examiners. At Xerox, promotions are based, in part, upon a manager's ability to serve as a quality role model to his or her team; the basis for concepts of customer focus and quality leadership identified in the Baldrige criteria. The GTE's Management Education and Training Program has a special course in which it exposes its business unit teams to the Baldrige framework.

Ford Motor Company has tied its fortunes to the quality concept since the 1970s. But with the emergence of the Baldrige standards, Ford successfully implemented it own Ford Total Quality Excellence Award, made to recognize major quality improvements by suppliers. Motorola wants to have the Malcolm Baldrige both ways, having won the award in 1988. IBM, Xerox, and other companies have follwed Motorola's example, by urging external partners to commit to quality as it is understood through the Malcolm Baldrige criteria.

The Malcolm Baldrige Concepts

In 1990, speaking in reference to quality improvement at the Quest for Excellence II Conference, Motorola CEO Robert Galvin proclaimed: "There are only about 15 or 20 things we need to do with the right emphasis and right enthusiasm. Those 15 to 20 things our mega concepts, or critical success factors" (Hart & Bogan, 1992). These are the essential, high leverage activities, the wisdom and sense of the Baldrige criteria distilled to their pure essence. These "things" are not presented in any particular order; there is some overlap. However, taken aggregately, they comprise a "bouquet" of desirable TQM attributes. The Baldrige criteria do not identify which specific tactics to

use or what metrics to adopt. However, the Baldrige criteria clearly advocate specific strategies--principles and systems which have been shown consistently to move organizations in the direction of superior quality. Total Quality Management cannot occur without these essentials. Thus, it is up to individual organizations to flesh out the finer details--the tactics, the hows--of those systems. Refinement of the system through an evaluation/improvement cycle, leaving the door slightly open for innovative approaches, is what drives an organization to the highest levels of achievement. Hart and Bogan (1992) proposed 15 or 20 things as follows:

Involve everyone in the organization	Involve suppliers
Continuously improve	Shorten cycle time
Measure	Develop a vision
Benchmark	Make quality strategic
Integrate	Think systems
Build team	Tie approach to result
Define quality from customer's point-of-view	Empower
	Deploy systems
Educate	Take charge
Plan	Simplify

(Hart & Bogan, 1992:73).

The Malcolm Baldrige Structure

The Malcolm Baldrige structure includes seven major topics, the "pillars" of the

Baldrige Award evaluation:

1. Leadership
2. Information and Analysis
3. Strategic Quality Planning
4. Human Resources Development and Management
5. Management of Process Quality
6. Quality and Operational Results
7. Customer Focus and Satisfaction

The seven pillars of the Baldrige Award. It scoring system is based upon 1000 total possible points distributed among the various categories and items according to their importance in a Total Quality Management system. In the feedback report, applicants do not receive an exact score. Rather, they are told in which of seven "point ranges" their score fell. Range seven (876 to 1000 points) being the highest. No company has yet scored in this range. In fact, all of the winners have come from range six (751 to 875 points) (Hart & Bogan, 1992).

The seven categories and their point values are as follows:

1. Leadership (90 points). This category examines senior executives' personal leadership and involvement in creating and sustaining a customer focus and clear and visible quality values. Also examined is how the quality values are integrated into the organization's management system and reflected in the manner in which the organization addresses its public responsibilities. The leadership category in the Baldrige criteria is composed of four basic dimensions:

I. The personal involvement of senior executives in leading the quality improvement effort;

II. The richness of corporate values and the system in place to measure how well these values have been accepted by employees;

III. How middle-level managers and supervisors have been integrated into quality success; and

IV. The leadership role of the company in the outside community.

2. Information and Analysis (80 points). This category examines the score, validity, analysis, management, and use of data and information to drive quality excellence and improve competitive performance. Also examined is the adequacy of the organization's data, information system, and analysis to support improvement of the organization's customer focus complaints, laws, and regulations. The key dimensions in this category are:

I. What elements do you compare, and how do you select information for comparisons?

II. What is the full scope of comparison data?

III. How do you get reliable information from the organizations or the industry you've selected?

IV. How do you use benchmark information to encourage new ideas and innovation? and

V. How do you improve the benchmarking capability you already have?

3. Strategic Quality Planning (60 points). This category examines the

organization's planning process and how all key quality requirements are integrated into overall business planning. Also examined are the organization's short-term and long-term plans and how quality and performance requirements are deployed to work units. This category seeks the organization's plans for quality and the aspirations for leadership in the market chosen. However, one must beware of the phrase "strategic planning." It is somewhat deceptive, since this category encompasses more than the external environment. It also asks that one examine exactly how goals and plans, or "tactical" objectives, are formed and developed throughout the organization. The dimensions that should be emphasized in this category are:

I. How do we develop our plans, strategies, and goals?

II. What specific action steps do we need to take to achieve superior quality?

III. How can we get everyone in the organization involved in quality planning and working toward the same broad objectives? and

IV. What are our short-term and long-term goals and plans to achieve superior quality and performance?

4. Human Resources Development and Management (150 points). This category examines how the organization develops and relies upon the full potential of the workforce to achieve the organization's quality and performance objectives. Also involved are examinations of the overall human resources management system, employee involvement, quality education and training, employee recognition, performance measurement, and attention to all of the factors which affect employee well-being and morale.

In the Baldrige criteria, there are four basic evaluative dimensions to human resources utilization:

I. Involvement (participation) in quality improvement efforts;

II. Education and training;

III. Recognition and performance measurement; and

IV. Morale and well-being.

5. Management of Process Quality (140 points). This category examines the systematic processes the organization uses to pursue higher quality and organizational performance. This element also examines an organization's operating systems -- specifically, the process directly involved in producing and delivering the goods and services that have been identified through the organization's strategy formulation, as detailed in the Strategic Quality Planning category. Furthermore, it includes the key elements of process management includes design management of process quality for all work units and suppliers and quality assessment. The major dimensions in this category are:

I. How are products and services designed to meet customer requirements?

II. How are manufacturing or service delivery processes controlled?

III.How is the quality of systems, products, and services assessed and improved?

IV. How is the quality of business process, support service, and suppliers ensured?

6. Quality and Operational Results (180 points). This category examines the

organization's quality levels and improvement trends in quality, operational performance, and supplier quality. Also examined are current quality and performance levels relative to competitors. This Baldrige criteria group includes four sections: product and service quality; business processes and support services quality; operational results, including financial data; and supplier quality.

7. Customer Focus and Satisfaction (300 points). This category examines the organization's relationship with customers and its knowledge of customer requirements and of the key quality factors that determine marketplace competitiveness. The Baldrige criteria focus on how the organization determines customer requirements and expectations, how it manages on a customer-to-customer basis, how it uses complaints to improve quality, how measures its customer satisfaction, the trends in its customer satisfaction ratings, and how it compares with other organizations offering similar products or services. Moreover, customer service standards include critical thinking and complaint resolution. On the positive side, satisfied customers will tell three people. On the negative side, dissatisfied customers will tell seven other people. The key to satisfaction is that customers to know that the organization will respond to their problems and spend time communicating with them. This category addresses the following:

I. Does your organization have a system for tracking compliance with service standards? Are results publicized throughout the organization? (For instance, Federal Express uses its internal television network, FXTV, to communicate standards and performance on standards.)

II. Does your organization benchmark and use competitive comparisons when it sets standards?

III. Are appropriate standards deployed to all relevant units?

IV. Are standards objectively measurable? and

V. Are standards assessed and upgraded periodically? Customer contact personnel should be involved in developing, evaluating, and improving the standards they are required to meet (Hart & Bogan, 1992).

Summary of the Study

This chapter presented the review of the literature in the present study. There are five major components in this chapter: Quality issues in an organization, basic concepts of Total Quality Management (TQM), measuring quality, TQM in a public organization, and the Malcolm Baldrige National Quality Award. Quality issues in an organization are associated with quality definition, quality planning, quality of work life, quality information systems, quality circles, and quality management leadership. These issues are important to the organization because they can affect the organization through improvement or development.

Chapter 3

RESEARCH METHODS

This chapter presents the design and research methods employed in the present study, the subjects and variables, the instrumentation, the procedures and pretests associated with data collection and data analysis, and the limitations of the study.

Research Methods

The present study was carried out in the Department of Physical Education of Thailand, using seven categories of the Malcolm Baldrige National Quality Award as the criteria of TQM to study the administration of the organization. Data were collected through the use of an opinion questionnaire (OQ). The structure of the opinion questionnaire was based upon a literature review from The Executive Guide to Implementing Quality Systems developed by Mears and Voehl (1995). The questionnaire was administered to managers and employees within the Department of Physical Education of Thailand.

Research Design

This study was designed to compare the differences between managers' and employees' perceptions of their organizational elements as defined and applied through

the use of the Malcolm Baldrige National Quality Award (TQM) as the criteria. In order to accomplish this study, a Demographic and Opinion Questionnaire was used to acquire the data needed to answer the research question.

Variables

Independent variable. For the purposes of this study, the independent variable was defined as managers and employees who worked within the organization.

Dependent variables. For this study, seven categories of the Malcolm Baldrige criteria served as the dependent variables:

1. Leadership
2. Information and Analysis
3. Strategic Quality Planning
4. Human Resources Development and Management
5. Management of Process Quality
6. Quality and Operational Results
7. Customer Focus and Satisfaction

Subject Selection

The subjects in this study were managers and employees who worked within the Department of Physical Education of Thailand. For the purposes of this study, a subject was considered a manager if he or she worked at one of the following levels: functional manager, associate manager, assistant manager, department or division head, director, and

assistant director. Employees were those who worked at any one of the following levels: physical education officer or an instructor between levels 3 - 9. Additionally, managers and employees were selected by random sampling.

Sample size. Data were collected through the use of a survey questionnaire which was distributed to 150 managers and 350 employees of the Department of Physical Education of Thailand. .

Limitation of the Study

The purpose of the present study was to assess the relationships among the organizational elements of Thailand's public organization (the Department of Physical Education of Thailand) and the organizational elements related to Total Quality Management (TQM) based upon the Malcolm Baldrige National Quality Award Criteria. The sample in this study was assumed to be representative of the Thai population. However, due to the relatively small size and geographic limitations, the results might not be truly representative of all Thai managers' and employees' perceptions.

Instrumentation

Research on managers' and employees' ratings of organizational elements related to Total Quality Management was performed through the use of an instrument developed specifically by a group of experts in TQM for application in this study. The research

instrument was mailed to the Office of the General Director of the Department of Physical Education of Thailand. The questionnaire was then distributed to managers and employees by the general director's officer or the secretary's office. The survey utilized a 7-point Likert-type scale to question the recipients regarding the quality of their Department's organizational elements related to Total Quality Management. The Likert-type scale ranged from one (strongly disagree) to seven (strongly agree). Higher scores indicated greater perceptions of the organizational elements.

Demographic Questionnaire

The first part of the research questionnaire consisted of five questions regarding the demographics of the respondents, including gender, age, position, educational level, and work experience. These questions allowed the researcher to classify the respondents in order to divide them into two groups: managers and employees. Other demographic data were used to support the discussion, conclusions and recommendations in this study.

Opinion Questionnaire

The second part of the research questionnaire consisted of seven major elements and 49 sub-elements regarding the quality of organizational elements. The opinion questionnaire was originally developed by Mears and Voehl (1995). The purpose of these questions was to determine the perceptions of managers and employees of the Department of Physical Education of Thailand and how they related the seven elements of their organization to the Malcolm Baldrige criteria.

Reliability and Validity

Attributes of reliability and validity are essential to all research. These issues were authenticated by the Baldrige Criteria Questionnaire (BCQ), composed of seven categories and 49 items. Thus, the reliability of the survey questionnaire was assured by the experts in the TQM field, Mears and Voehl, (1995) who developed and published the questionnaire. The content validity of the individual survey questions to accurately measure the importance placed on the key components and to assess the effectiveness of a TQM program was determined by a group of experts in TQM. The experts were asked to evaluate each question in terms of its appropriateness in measuring specific subcomponents of each variable (see Appendix B). The validity of the survey questionnaire was assured by subsequently using only those questions upon which all of the judges agreed. In order to ensure the validity of the survey questionnaire, the researcher translated the English version into Thai. The Thai version was then sent to a bilingual Thai professional of the Language Institute of Chulalongkorn University, who translated the Thai version back into English. The original English version and the reverse-translated form demonstrated that the Thai and English versions measured the same concepts. The adjusted instrument, following retranslation, was evaluated by a panel of three bilingual professors. A pretest of the reverse-translated version was conducted with a small group (N=10) of bilingual Thai students at USIU who were asked to answer the same question. The subjects used both the English and the Thai versions. Correlation analysis was performed on the English and Thai sets of responses in order to

reveal any significant differences among the 49 items at the .05 level.

Procedures and Pretest

Research Procedures

A mailed survey questionnaire was distributed to 150 managers and 350 employees within the Department of Physical Education of Thailand. A cover letter (see Appendix B & C) describing the purpose of the research and the potential value of the respondents' information was included with each questionnaire. The questionnaire provided instructions to assist the respondents in accurately complete each section. Moreover, confidentiality of the respondents' responses was guaranteed in the cover letter, while the consent form (see Appendix A) also maintained the anonymity of the respondents.

Pretest

The English version of the questionnaire was translated into Thai by the researcher (see Appendix C). The translated questionnaire was verified through reverse-translation by a bilingual Thai professional from the Language Institution of Chulalongkorn University. The original English version and the reverse-translated form demonstrated that the Thai and English versions measured the same concepts. However, the adjusted instrument, following the retranslation, was evaluated by a panel of three

bilingual professors (N=3) on the staff of the Language Institute of Chulalongkorn University. The panel recommended additional modifications within the Thai questionnaire, in order to make it better conform tocontemporary Thai public organization practices.

A pretest of the reversed version was conducted with a small group (N=10) of bilingual Thai students at USIU who were asked to answer the same question. The same subjects used both the English and Thai versions. Correlational analysis was performed on the English and Thai questionnaire sets of responses. The results revealed no significant differences among the 49 items at the .05 level (Glass & Hopkins, 1984). In conclusion, the Thai and English versions were determined to be equivalent in meaning.

Data Collection

Data were collected from managers and employees within the Department of Physical Education of Thailand. A survey questionnaire was mailed to the "Office of the General Director" of the Department of Physical Education of Thailand. The questionnaire was then distributed to managers and employees by the general director's office through managers and employees in Bangkok and the surrounding suburban areas. The respondents were informed that their responses would remain confidential. There was no time limit imposed during the administration of the survey. Participation in this study was anonymous and completely voluntary. The respondents returned their completed questionnaires directly to the researcher.

Data Analysis

The questionnaires were classified by demographics and position levels, forming two groups of subjects: managers and employees. Statistical analysis of the survey responses was performed to assess the degree of differences between managers' and employees' perceptions of the organizational elements related to the Malcolm Baldrige criteria (TQM). The first analysis was a sub-scale alpha test which examined the reliability of the TQM survey questionnaire. Next, analysis was conducted to determine the differences among seven main elements and sub 49 elements for perceptions of managers and employees in order to identify those elements which closely resemble one another. Testing was conducted using a multivariate analysis of variance (MANOVA). The difference was tested at the .05 level of statistical significance (Diekhoff, 1992).

Summary of the Study

This chapter presented the present study's methodology, instrumentation, research design, variables, subject selection, data collection, and data analysis. The survey instrument used in this study was a Demographic and Opinion Questionnaire. The demographic questions were used to divide the respondents into two groups (managers and employees) and to support the discussion and conclusions in this study. The questionnaire was distributed to 150 managers and 350 employees within the Department of Physical Education of Thailand.

Chapter 4

RESULTS

This chapter is divided into four sections: (1) Demographics; (2) Reliability of the Questionnaire; (3) Tests of the Degree of Differences between Managers' and Employees' Perceptions, including a Description of Means of Managers' and Employees' Perceptions Related to Total Quality Management; and (4) Summary.

Overview

Five hundred questionnaires were distributed to managers and employees of the Department of Physical Education of Thailand. Data from 250 returned questionnaires were entered into a computer for statistical analysis using the Statistical Package for the Social Sciences (SPSS). This chapter reports the results of those analyses.

Demographics

One-hundred-fifty questionnaires were distributed to managers and 350 were distributed to employees of the Department of Physical Education of Thailand. The total number of distributed questionnaires was 500. The questionnaire, which included a demographic questionnaire and an opinion questionnaire, was returned by 67 managers and 199 employees. A returned questionnaire was excluded from the analyses if any

question was left unansewered. The total number of usable questionnaires was two-hundred-fifty (60 managers and 190 employees). As a result, the data analysis was based upon 250 complete and usable questionnaires. Only demographic data on question three -- What is your position? -- were used to classify the level of each respondent for the purposes of the present study. The demographic data are presented in Tables 1 through 4.

Table 1

Distribution of Questionnare Responses and Percentages by Managers and Employees

Participants	Questionnaires Distributed	Returned		Usable	
		N	%	N	%
Managers	150	67	44.67	60	40.00
Employees	350	199	56.86	190	54.24
Total	500	266	53.20	250	50.00

Table 1 presents the data relating to questionnaire responses and percentages. Five-hundred questionnaires were distributed in the present study (150 to managers and 350 to employees). Sixty-seven (44.67 percent) questionnaires were returned by managers, while 199 (56.86 percent) were returned by employees. Of the returned questionnaires, 60 manager questionnaires (40.00 percent) and 190 employee questionnaires (54.24 percent) were determined to be usable in the data analysis. Thus, the total number of usable questionnaires was 250 (50.00 percent

Table 2

Distribution of Subjects and Percentages of Responses by Males and Females within Manager and Employee Groups

Gender	Managers N=60		Employees N=190		Total N=250	
	N	%	N	%	N	%
Male	43	71.67	107	56.32	150	60.00
Female	17	28.33	83	43.68	100	40.00

Table 2 presents the data relating to the distribution of subjects by gender. There were 150 males (60.00 percent) and 100 females (40 percent) in the whole group of subjects for the present study. Among managers, 43 males (71.67 percent) and 17 females (28.33 percent) were included in the present study. Among employees, 107 males (56.32 percent) and 83 females (43.68 percent) were included in this study.

Table 3

Distribution of Subjects and Percentages of Responses by Level of Education within Manager and Employee Groups

Level of Education	Managers N=60		Employees N=190	
	N	%	N	%
High School	--	00.00	--	00.00
Some College of Post-High School	4	6.67	10	5.26
College Graduate	23	38.33	133	70.00
Graduate School	33	55.00	47	24.74

Table 3 presents the data relating to the level of education of the subjects in the present study. Few of the subjects were included in the "some college or post-high school" level. There were four males in the manager group and 10 males in the employee group who had completed some college or post-high school education. There were 23 managers and 133 employees who had completed a college degree. Finally, there were 33 managers and 47 employees who had reached graduate or higher educational levels. These data revealed that most subjects in the whole group had attained the college and graduate school levels.

Table 4

Distribution of Subjects and Percentages of Responses by Level of Work Experience within the Manager and Employee Groups

Level of Work Experience	Managers N=60		Employees N=190	
	N	%	N	%
Less than 2 years	--	00.00	2	1.05
2 to 5 Years	4	6.67	28	14.74
6 to 10 Years	10	16.67	33	17.37
11 to 20 Years	15	25.00	74	27.89
More than 20 years	31	51.67	53	27.89

Table 4 presents the data relating to the number of years of work experience of the subjects in the present study. The data revealed that a much higher percentage of managers (51.67%) had 20 or more years of work experience than did their employee counterparts (27.89%).

Reliability of the Questionnaire

The present study is the first to explore Total Quality Management in a public organization in Thailand, namely, the Department of Physical Education of Thailand, through the use of a TQM questionnaire (Mean & Voehl, 1995). Therefore, it was essential to assess the reliability of the survey questionnaire. The reliability analysis of

each of the seven sub-scale groups (variables) was performed using the Chronbach alpha test. The results of the analyses are presented in Table 5.

Table 5

Reliability of TQM Questionnaire

Subscale of TQM Questionnaire		Alpha
1.	Leadership	.8039
2.	Information and Analysis	.8425
3.	Strategic Quality Planning	.8831
4.	Human Resource Development and Management	.8542
5.	Management of Process Quality	.8826
6.	Quality and Operational Results	.9232
7.	Customer Focus and Satisfaction	.8887

Table 5 presents the data relating to the reliability of the Total Quality Management questionnaire utilized in the present study. The questionnaire consisted of 49 items, divided into seven groups. A subscale alpha test was conducted to test the reliability of each group. The results of the data analysis revealed that the alpha for each group was higher than .80. In other words, there was high reliability on all subscales of the TQM questionnaire.

Differences between Managers' and Employees' Perceptions on Seven Main Elements

This section contains the analyses of managers' and employees' perceptions of organizational elements (seven variables) and the similarities and differences in their perceptions of the seven elements, including a description of means of managers' and employees' perceptions of how closely their organizational elements related to Total Quality Management.

Leadership. A multivariate analysis using Hotellings T was performed to examine whether significant differences existed between managers' and employees' perceptions on the leadership element (Hotellings $T_{(7, 242)} = .031$, $p = .386$).

Table 6

Comparison of Means between Managers' and Employees' Perceptions on the Seven Main Elements (Dependent Variables)

Organizational Elements (TQM) (Dependent Variables)		Managers' Mean	Employees' Mean	Sig.
1.	Leadership	5.11	4.78	NS
2.	Information and Analysis	4.76	4.74	NS
3.	Strategic Quality Planning	5.10	5.12	NS
4.	Human Resource Development and Management	4.71	4.73	NS
5.	Management of Process Quality	4.75	4.65	NS
6.	Quality and Operational Results	4.56	4.36	NS
7.	Customer Focus and Satisfaction	4.79	4.51	NS

Table 6 presents the average means and differences between managers' and employees' perceptions of the seven main TQM elements (dependent variables). A multivariate analysis using the Hotellings T was performed to examine the differences between managers and employees in the seven main elements (seven dependent variables). No statistically significant differences were found for any of the seven main elements.

Table 7

Manager and Employee Mean Scores on the Leadership Element

Organizational Elements (TQM) Leadership		Managers N=60 Mean	S.D.	Employees N=19 Mean	S.D.
1.	Quality responsibilities clearly communicated to employees	5.34	1.702	4.78	1.695
2.	Management trained in quality concepts	5.78	1.403	5.48	1.556
3.	Employees know Department quality goals	4.92	1.465	4.63	1.298
4.	Management visibly involved in developing quality culture in the Organization	4.87	1.255	4.76	1.307
5.	Managers practice quality service	5.68	1.396	5.44	1.405
6.	Adequate resources provided for quality improvement	4.55	1.294	4.08	1.543
7.	Open communication throughout Organization	4.65	1.351	4.26	1.466

Higher mean values indicated greater perceived relation to T.M.
TQM criteria levels: 1 = lowest, 4 = medium, 7 = highest

A multivariate analysis of variance was performed to examine whether significant differences existed between managers' and employees' perceptions of this element. The results indicated a significance of $F = .386$, which is $P > .05$. In other words, there was no significant difference between managers' and employees' perceptions of the element of leadership.

In considering the mean scores of managers' and employees' percepions of how closely leadeship related to Total Quality Management. Table 7 presents managers' and employees' ratings of the seven sub-elements and shows that the lower mean was 4.08 (on element 6) which was perceived by employees and the higher mean was 5.78 (on element 2) which was perceived by managers. There were three sub-elements (elements 1, 2, and 5) which managers and employees both perceived higher than elements 3, 4, 6, and 7. Those perceptions presented at a medium point on a 7-point Likert-type scale. However, managers and employees perceived sub-elements 1, 2, and 5 similarly, as the mean scores were 5.34 and 4.78, 5.78 and 5.48, and 5.68 and 5.44, respectively. In other words, managers and employees perceived the whole organizational element of leadership as meeting Total Quality Management criteria at a medium or fair level.

Information and analysis. For the data relating to the differences between managers' and employees' perceptions of information and analysis, a multivariate analysis using Hotellings T was performed to examine whether significant differences existed between managers' and employees' perceptions of this element (Hotellings $T_{(7, 242.0)} = .056$, $p = .063$).

Table 8

Manager and Employee Mean Scores on the Information and Analysis Element

Organizational Elements (TQM) Information and Analysis		Managers N=60 Mean	S.D.	Employees N=190 Mean	S.D.
8.	Organization reports data on all important dimensions of employee quality	4.90	1.298	4.76	1.505
9.	Data used to analyze manager and employee performance	4.82	1.334	5.00	1.388
10.	Department reports data to employees on all important service dimensions	4.85	1.376	4.77	1.532
11.	Organization analyzes data on customers' view of its quality	4.52	1.157	4.67	1.407
12.	Organization identifies causes of poor quality	4.70	1.344	5.03	1.258
13.	Our organization reports data on-time delivery	4.88	1.391	4.67	1.443
14.	Organization ensures that report data are valid, reliable, consistent	4.65	1.300	4.34	1.424

Higher mean values indicated greater perceived relation to TQM
TQM. criteria levels: 1 = lowest, 4 = medium, 7 = highest

The results shown in Table 6 indicate that there were no significant differences between managers and employees for the whole element of information and analysis and

for the seven sub-elements of information and analysis in Table 8, indicating that managers and employees perceived this organizational element and its sub-elements similarly.

In considering the mean scores of managers' and employees' perceptions of how closely information and analysis related to Total Quality Management, the means scores in Table 8 indicate that managers' and employees' ratings of the seven sub-elements were at the mid-4 range on a 7-point Likert-type scale. There were two sub-elements which employees perceived higher than managers, but no significant difference was found between their perceptions. These were sub-elements nine (Data used to analyze manager and employee performance) and twelve (Organization identifies causes of poor quality). The means for sub-element nine were 4.82 and 5.00, while the means for sub-element twelve were 4.70 and 5.03 for managers and employees, respectively. In other words, managers and employees perceived the whole organizational element of information and analysis similarly as there was no statistically significant differences in the means between managers' and employees' perceptions when a multivariate t-test was conducted and both managers and employees perceived the whole organizational element information and analysis as meeting TQM criteria at a medium or fair level.

Strategic quality planning. For the data relating to the differences between managers' and employees' perceptions of strategic quality planning, a multivariate analysis using Hotellings T was performed to determine whether significant differences existed between managers' and employees' perceptions of this element (Hotellings $T_{(7, 242)} = .023$, $p = .582$)

Table 9

Manager and Employee Mean Scores on the Strategic Quality Planning Element

Organizational Elements (TQM) Strategic Quality Planning		Managers N=60 Mean	S.D.	Employees N=190 Mean	S.D.
15.	Employees are involved in quality planning	5.52	1.200	5.47	1.216
16.	Organization has operation plan to describe quality goals	4.63	1.149	4.85	1.289
17.	Quality plans in effect for all divisions	5.12	1.439	5.15	1.237
18.	Organization uses competitive data from other organizations to develop quality goals	4.92	1.211	4.96	1.343
19.	All managers have information on quality improvement planning	5.22	1.427	5.15	1.294
20.	Planning based on scanning journals and input from contacts inside and outside the Department	4.98	1.334	4.92	1.255
21.	Organization recognizes importance of strategic value at all levels	5.23	1.477	5.15	1.294

Higher mean values indicated greater perceived relation to TQM
TQM criteria levels: 1 = lowest, 4 = medium, 7 = highest

In considering the mean scores of managers' and employees' perceptions of how closely strategic quality planning related to Total Quality Management, Table 9 shows that there were four sub-elements of strategic quality planning which managers

and employees both perceived higher than others. These were sub-elements 15 (Employees involved in quality planning), 17 (Quality plans in effect for all divisions), 19 (Managers have information about quality improvement planning) and 21 (Organization recognizes importance of strategic value of quality at all levels). Each of these sub-elements was perceived by both managers and employees at a level of 5.0 or higher, while the remaining three sub-elements were perceived at a 4-scales range on a 7-point Likert-type scale, indicating that managers and employees perceived the whole organizational element of strategic quality planning as meeting TQM criteria at a medium or fair level.

Human resource development and management. For the data relating to the differences between managers' and employees' perceptions of human resource development and management, a multivariate analysis using Hotellings T was performed to examine whether significant differences existed between managers' and employees' perceptions of this element (Hotellings $T_{(7, 242.0)} = .040$, $p = .219$).

Table 10

Manager and Employee Mean Socres on the Human Resource Development and Management Element

Organizational Elements (TQM) Human Resource Development and Management		Managers N=60 Mean	S.D.	Employees N=190 Mean	S.D.
22.	Quality criteria used in employee performance evaluations	5.02	1.420	4.79	1.539
23.	All employees trained in quality improvement concepts	4.93	1.448	4.84	1.444
24.	Organization rewards employees for quality improvement efforts	4.93	1.313	4.68	1.559
25.	Employees believe in providing top-quality services	5.12	1.379	5.18	1.385
26.	Department collects data on employee morale	4.13	1.467	4.41	1.587
27.	Training effectiveness evaluated	4.43	1.345	4.78	1.466
28.	Department has empowered all employees	4.38	1.415	4.43	1.621

Higher mean values indicated greater perceived relation to TQM
TQM criteria levels: 1 = lowest, 4 = medium, 7 = highest

In comparing the mean scores of managers' and employees' perceptions, Table 10 shows how closely human resource development and management related to Total Quality Management. There was one sub-element of human resource development and management which managers perceived higher than others. This was sub-element 22 (Quality criteria used in employee performance evaluations). There was also one sub-

element of human resource development and management which managers and employees perceived higher than others. This was sub-element 25 (Employees believe in providing top-quality services). Both managers and employees rated this sub-element above the level of 5.0. However, no significant differences were found between the means of managers' and employees' perceptions. Moreover, managers' and employees' ratings of their seven sub-elements were at a mid-4 level on a 7-point Likert-type scale, indicating that managers and employees perceived the whole organizational element of human resource development and management as meeting TQM criteria at a medium or fair level.

Management of process quality. For the data relating to the differences between managers' and employees' perceptions of management of process quality, a multivariate analysis using Hotellings T was performed to examine whether significant differences existed beween managers' and employees' perceptions of this element (Hotellings $T_{(7, 242)} = .016$, $p = .797$).

Table 11

Manager and Employee Mean Scores on the Management of Process Quality Elemet

Organizational Elements (TQM) Management of Process Quality		Managers N=60 Mean	S.D.	Employees N=190 Mean	S.D.
29.	Employee requirements transferred into planning process for improvements	4.52	1.513	4.64	1.773
30.	Organization evaluates processes for improvement	4.28	1.367	4.28	1.534
31.	Customer quality expectations defined	4.80	1.363	4.52	1.371
32.	Cycle times reduced for key processes	4.42	1.369	4.42	1.422
33.	Documents showing quality are kept up-to-date	4.97	1.562	4.89	1.544
34.	Organization uses data from another organization to make process improvements	4.89	1.474	4.67	1.642
35.	All divisions work together to improve quality service	5.37	1.594	5.11	1.641

Higher mean values indicated greater perceived relation to TQM
TQM criteria levels: 1 = lowest, 4 = medium, 7 = highest

The mean scores of managers' and employees' perceptions were examined in order to compare the differences in means of managers' and employees' perceptions of how closely management of process quality related to Total Quality Management. The mean socres of managers and employees shown in Table 11 indicate that there was only

one sub-element of the element management of process quality which managers and employees both perceived higher than others. This was element 35 (All divisions work together to improve service quality). The means for this sub-element were 5.37 and 5.11 for managers and employees, respectively. In other words, managers and employees perceived all divisions work together to improve service quality related to TQM higher than others. There were six sub-elements of management of process quality which both managers and employees perceived at the level of 4.0 or higher, indicating that managers and employees perceived the whole organizational element of management of process quality as meeting TQM criteria at the medium or fair level.

Quality and operational results. For the data relating to the differences between managers' and employees' perceptions of quality and operation results, a multivariate analysis using Hotellings T was performed to determine whether significant differences existed between managers' and employees' perceptions of this element (Hotellings T (7, 242), $p = .484$).

Table 12

Manager and Employee Mean Scores on the
Quality and Operational Results Element

Organizational Elements (TQM) Quality and Operational Results		Managers N=60 Mean	S.D.	Employees N=190 Mean	S.D.
36.	Organization demonstrates improved customer service over last 3 years	4.65	1.436	4.52	1.449
37.	Increase in employee morale over last 2 years	4.50	1.631	4.23	1.620
38.	Customer response time improved	4.57	1.320	4.56	1.362
39.	Operational performance in all divisions improved over last 2 years	4.52	1.444	4.34	1.456
40.	Organization administers finances effectively	4.48	1.490	4.29	1.421
41.	Department sustains good organizational climate	4.57	1.395	4.32	1.420
42.	Organization has had success with new projects and services over last 3 years	4.63	1.377	4.29	1.410

Higher mean values indicated greater perceived relation to TQM
TQM criteria levels: 1 = lowest, 4 = medium, 7 = highest

The mean scores of managers' and employees' perceptions were examined in order to determine how closely quality and operational results related to Total Quality Management. The mean scores of managers and employees shown in Table 12 indicate that the lowest mean score was that of 4.23 which was employees' perceptions of sub-

element 37 (Increase in employee morale over last two years). The highest mean score was that of 4.65 which was managers' perceptions of sub-element 36 (Organization demonstrates improved customer service quality over last 3 years). In other words, managers and employees perceived the whole organizational element quality and operational results as meeting TQM criteria at a medium or fair level.

Customer focus and satisfaction. For the data relating to the differences between managers' and employees' perceptions of customer focus and satisfaction, a multivariate analysis using Hotellings T was performed to examine whether significant differences existed between managers' and employees' perceptions of this element (Hotellings $T_{(7, 242)} = .040$, $p = .212$).

Table 13

Manager and Employee Mean Scores on the Customer Focus and Satisfaction Element

Organizational Elements (TQM) Customer Focus and Satisfaction		Managers N=60 Mean	S.D.	Employees N=190 Mean	S.D.
43.	Customer complaints decreased over last 2 years	4.67	1.298	4.63	1.316
44.	Customer satisfaction data reported by customer groups	4.52	1.172	4.46	1.157
45.	Customers like quality of services	4.70	1.266	4.39	1.406
46.	Department knows customer needs	4.72	1.485	4.39	1.483

Table 13 (continued)

Manager and Employee Mean Scores on the
Customer Focus and Satisfaction Element

Organizational Elements (TQM) Customer Focus and Satisfaction		Managers N=60 Mean	S.D.	Employees N=190 Mean	S.D.
47.	Organization has increased in customers each year	5.10	1.324	4.69	1.257
48.	Organization has customers in all areas of the country	5.08	1.211	4.81	1.344
49.	Customer complaints are quickly resolved	4.72	1.379	4.23	1.645

Higher mean values indicated greater perceived relation to TQM
TQM criteria levels: 1 = lowest, 4 = medium, 7 = highest

In comparing the mean scores of managers' and employees' perceptions of their organizational elements in order to determine how closely customer focus and satisfaction related to Total Quality Management, in Table 13, there were two sub-elements of the element customer focus and satisfaction which managers perceived higher than other sub-elements. These were sub-elements 47 with a managerial mean of 5.10 (Organization has increased in customers each year) and 48 with a managerial mean of 5.08 (Organization has customers in all areas of the country). All other means were at 4 on a 7-point Likert-type scale, indicating that managers and employees perceived that their organizational elements (Quality and Operational Results) met TQM at the medium or fair level.

Summary

This chapter included three main sections: (1) demographics; (2) reliability of the questionnaire; (3) tests of the degree of differences between managers' and employees' perceptions, including a description of means of managers' and employees' perceptions related to Total Quality Management. There were 60 managers and 190 employees who completed and returned usable survey instruments to be included in the present study. Thus, the total number of subjects was 250.

The reliability of the questionnaire was tested because this is the first study to explore Total Quality Management in a public organization in Thailand. Therefore, the analysis of the reliability of the instrument is one method of examining the standard criteria of a survey instrument. Furthermore, the 49 items on the questionnaire were divided into seven groups, each containing seven sub-elements. The results indicated that the alpha for each group was higher than any of its individual subscale alphas and the value of the overall alpha was .80 and higher, indicating that the questionnaire had high reliability.

A multivariate analysis of variance (MANOVA) was used to test the degree of differences between managers' and employees' perceptions of how the seven main elements related to Total Quality Management. A major finding was the similarity of perceptions between managers and employees on how their organizational elements related to TQM. When the grand means of managers' and employees' perceptions on the seven main organizational elements were compared, the results indicated an

average of 4.83 for managers and 4.69 for employees, on a 7-point Likert-type scale. Thus, it is evident that both managers and employees perceived their organizational elements related to TQM at a medium or fair level, and very similarly.

Chapter 5

SUMMARY, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

This chapter presents a summary of the present study, conclusions based on the findings of the study, a discussion, and recommendations for further research. Accordingly, this chapter is divided into four main sections: (1) Summary; (2) Conclusions; (3) Discussion; and (4) Recommendations.

Summary

As the influence of the Asian region on global, political and economic systems grows, the size, technological level and mechanisms of organizations must be rapidly restructured (Simai, 1994:95). These issues have caused the environment within Thai society, especially the organizational culture of public institutions to change. One such institution Thailand is the Department of Physical Education of Thailand. Because of rapid change, this Department continues to experience many problems, including low employee morale, low job satisfaction, lack of quality work, increased absenteeism, and so forth. These problems have caused the organization itself to lack both quality and potential. Total Quality Management can be effective in improving all organizations, especially public organizations in Thailand. However, there is a lack of recent

literature and research in this area. The present study addressed this need.

The present study evaluated manager and employee ratings of organizational elements related to Total Quality Management. A research study was designed which would utilize demographic and TQM opinion questionnaires.

The importance of the present study was its relationship to the quest for Total Quality Management in Thai public organizations. Moreover, the present study was also conducted to provide a guide for administrators, including managers and employees contemplating the introduction of Total Quality Management into their organizations. Thus, the main research question in the present study was: Do managers and employees differ in their assessment of how closely their organization meets the Malcolm Baldrige criteria?

In order to answer the research question, the present study compared manager and employee perceptions of organizational elements using the Malcolm Baldrige National Quality Award (TQM) as a criteria. Then, data analyses were conducted in order to answer the research question. A subscale alpha analysis was used to examine the reliability of the TQM questionnaire. The results indicated that the overall alpha of each subscale on the TQM questionnaire was higher than .80 (see Table 5), indicating that the questionnaire had high reliability. A further analysis examined the degree of difference between manager and employee perceptions of TQM-related organizational elements.

A multivariate analysis of variance (MANOVA) was performed to determine how differently or similarly managers and employees related organizational elements

within the Department of Physical Education of Thailand.

The results of the present study revealed the following.

1. Based upon the Hotellings test, there was no statistically significant difference between manager and employee perceptions of the seven main organizational elements.

2. Both managers and employees rated the organizational elements of the Department of Physical Education of Thailand as meeting the Total Quality Management standards at the medium or fair level, and very similarly.

Conclusions

The present study evaluated Total Quality Management within a Thai public organization (the Department of Physical Education of Thailand) by applying the seven elements of the Malcolm Baldrige National Quality Award (TQM) as the criteria. The purpose of the present study was to compare manager and employee ratings on these seven main elements. Thus, the present study sought to answer the following research question: Do managers and employees differ in their assessment of how closely their organization meets the Malcolm Baldrige criteria?

In general, it is possible to conclude that there were no differences between manager and employee perceptions in their assessment of the seven main organizational elements of the Department of Physical Education of Thailand. These conclusions were supported by the Hotellings test in the multivariate analysis of variance. Furthermore, when considering the ratings of managers and employees with regard to these organizational elements, both managers and employees rated their organizational

elements at at a mid-4 level on a 7-point Likert-type scale (see Appendix B). The mean score for managers was 4.83, while for employees it was 4.69. It must be concluded that managers and employees hold remarkably similar perceptions about their organization.

Discussion

Within a single organization, there are many individuals in various positions completing many different tasks. However, these individuals all belong to the same organization. In addition, they are aware of the organization's policies and are able to perceive their organization's goals. Nonetheless, there is a variety of individuals who work within the organization. Each works on a given level, such as president, director, manager, supervisor or employee. These positions may cause one individual to perceive organizational elements differently than another.

The results of the present study answered the research question posed. There were no significant differences between managers' and employees' perceptions of the seven main organizational elements (seven dependent variables). There are several possible reasons why managers and employees perceived organizational elements similarly. First, the nature of the work culture for managers and employees within public organizations in Thailand is nearly identical, especially in the Department of Physical Education of Thailand. Although they differ in position and tasks, managers and employees work on the same kinds of tasks. Moreover, they work together closely and, usually, they work together in teams. Furthermore, the work culture of the

Department of Physical Education of Thailand influences all members of the organization, their values, beliefs and norms. All members are of one community or one "family" in the organization. They believe and recognize that they are closely related to each other. Therefore, the organizational culture is directed at helping develop values, beliefs and norms appropriate to organizational strategies and the environment. It focuses upon developing a strong corporate culture to keep organizational members moving in the same direction (Cummings & Worley, 1989).

Another notable situation is that employees seem to be empowered by managers, especially when they work as individuals or teams in the absence of a leader manager. This situation usually occurs in a public organization. Thus, employees seem to be "managers" within their own workplace. This situation is similar to what is known as a leadership substitute. Moorhead and Griffin (1992) noted that leadership substitutes take place when individual, task, or organizational characteristics that tend to outweigh the leader's ability are performed capably by an employee without the direction of a leader.

A major finding in the present study was the similarities in the perceptions of managers and employees on the seven main organizational elements (dependent variables). Such congruent perceptions are beneficial to the organization. Managers are more effective because their visions match those of their employees. In any organization, if there is less conflict and/or divisiveness in personnel management, the organization is more successful in developing itself. This is the most important aspect in improving Total Quality Management within an organization. The managers and

employees must be moving in the same direction, working together as a team. Allen, et al. (1995) proposed that the use of teams has become the solution of the1990s for many of the ills in the workplace. Cross-functional teams, continuous improvement teams, teams composed of only organizational members, and teams that include customers or suppliers are all attempts to get closer to the customer and improve employee involvement. This broad deployment of teams emerged as a natural and major component of work environments geared to support Total Quality Management (TQM). Managers should also be closely involved in the improvement of work processes and must provide feedback to top management about team and individual performances. These arguments are related to the present study as there were similarities in managers' and employees' perceptions of the Department of Physical Education of Thailand in that they perceived all seven main organizational elements in the same direction. In addition, based upon the results of the present study, it can be assumed that managers and employees of the Department of Physical Education of Thailand perform their tasks related to TQM, such as working and cooperating together in a team-oriented workplace.

Comparison with Other Studies

Fritz (1993) studied quality assessment using the Baldrige criteria for the non-academic service units in a large university. The purpose of the study was to determine benchmark perceptions, importance and resulting differences in personnel in non-academic departments with regard to the seven areas included in the Baldrige criteria.

The study addressed the following research questions: What are personnel perceptions for each of the seven Baldrige criteria and rewards? How much importance do personnel place on each of the seven Baldrige criteria and rewards? What is the relationship between position (e.g., administrative, managerial, and professional, and support staff), size of department, gender, age, and years in position, and perceptions, importance and differences for each of the seven Baldrige criteria and rewards? A survey instrument was constructed to address personnel perceptions, importance and differences for the seven areas of the Baldrige criteria.

The results of the study indicated that personnel at all levels were found to be interested in improving quality of services within their departments and, therefore, were working toward the Baldrige criteria. Females found greater opportunity for improvement than did males in each of the seven areas of the Baldrige. The present study was similar to that of Fritz (1993) and other studies in that each study has applied the Baldrige criteria. The present study replicated the findings using a different research format.

Goodwin (1995) noted that his study examined the extent to which chief executive officers (CEOs) of two-year colleges perceived characteristics of the Malcolm Baldrige National Quality Award (MBNQA) criteria in their institutions. A Likert-type questionnaire measured perceptions of MBNQA characteristics and the degree to which certain institutional attributes affected subject responses. The results revealed that the respondents reported positive ratings for all MBNQA characteristics. Goodwin's study applied the Malcolm Baldrige criteria and used a Likert-type

questionnaire to measure perceptions as did the present study.

Farmakis (1995) studied the implementation of Total Quality Management and the effect upon organizational climate within two-year colleges. His study was somewhat similar to the present study in that it measured employee perceptions of four factors of organizational climate related to TQM.

The results of the present study are consistent with results from other studies and with the hypotheses that many researchers have proposed concerning managers' and employees' perceptions of their organizational elements relating to Total Quality Management. The present study expanded upon previous research by exploring these issues within a public organization in Thailand (the Department of Physical Education).

However, in comparing the results of the present study to other studies, the present study suggests that the results of other studies present the most positive of TQM effects according to their subjects' responses. Those studies were concerned with the perceptions of members throughout the the organization. The results of Goodwin's study, for example, revealed that personnel at all levels were interested in improving the quality of services within their departments and the subjects reported positive ratings for all TQM characteristics (Goodwin, 1995).

Moreover, Farmakis (1995) noted that TQM affects organizational climate, but that effect varies by institution and according to employee group. Bryant's research employed a case study design to describe and analyze the leadership role of the commitment to Quality Project as defined by the Virginia Department of Education, based on the Xerox Leadership Through Quality Model. The results suggest that the

implementation of quality strategies had a beneficial effect upon participants. All principals experienced a shift in their leadership roles toward increasing their levels of personal leadership power (Bryant, 1995).

Based on those studies, it can be suggested that TQM. has been implemented and expanded within many organizations in the U.S. both in the private and public sectors, for several years. Thus, TQM culture has been adopted among all areas of organizational management. Additionally, increased competitive influence has caused a need for TQM implementation within organizations (Kyle, 1995). TQM in Thai public organizations, on the other hand, has not existed or been expanded within organizations. Moreover, no identical or similar study was found in the review of the literature with regard to TQM implementation in public or private firms.

Although the organizational elements of the Department of Physical Education of Thailand met TQM at the medium or fair levels, other results revealed that managers and employees perceived their organizational elements similarly, indicating that managers' and employees' perceptions met some parts of TQM as consistent with their perceptions. This aspect is good for the unity of members in an organization because all memebers in the organization can easily work together as a team and also can continuously improve as a team.

Recommendations for Future Research

Total Quality Management is important for all levels within an organization. The world environment is always changing; therefore, the study of Total Quality

Management in any organization should be continued in order to help the organization continuously improve due to customer needs and satisfaction. Based upon the findings of the present study, specific recommendations for future research in this area are as follows:

1. Future research using the TQM questionnaire should be conducted between Thailand and the U.S.or among other countries in order to identify TQM differences between the two countries, both in the private and public sectors.

2. Future research using the TQM questionnaire to find implementation of TQM in any public or private organization and to assess TQM performance in order to improve the organization.

3. Questionnaire results could be combined with interviews and observations. This would greatly assist in attributing actual managerial behaviors throughout organizational members for TQM assessment.

4. Readministration of the survey to the Department of Physical Education to measure progress and detect trends.

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APPENDICES

APPENDIX A

CONSENT FORM: ENGLISH AND THAI VERSIONS

Consent for Own Participation

Dear all participants,

I would like you to participate in a research study titled " Manager and Employee Ratings of Organizational Elements Related Total Quality Management." The purpose of this study is to determine the degree of correlation between the seven elements of the Department of Physical education of Thailand and the Malcolm Baldrige criteria by comparing managers' and employees' ratings of the organizational elements related to the Malcolm Baldrige criteria (Total Quality Management). If you decide to answer the questionnaire in the study, your involvement will take no more than 25 minutes to answer the questionnaire. There are no risks or benefits from your participation. because this is simply survey study and not a treatment study. However, your participation in this study will be contributed to the advancement of knowledge regarding management in the Department of Physical Education of Thailand.

Your answer questionnaire is completely voluntary and you will be free to refuse to answer the questionnaire. All information will be kept entirely confidential. Your identity will not be revealed without your written consent.

Do you have any questions?

If you have any questions later, please feel free to contact me.

Amnart Ano

3356 Herman Ave

San Diego, CA 92104 USA Phone (619) 583-8444

Please read the following paragraph, and, if you agree to answer the questionnaire, please sign below.

I understand that any information about my responds obtained this research study will be kept strictly confidential. I do understand that my name and any information about me won't be used and will not tell anyone because it's private.

Participant signature ---------- Date ----------

Investigator signature ---------- Date ----------

Please place your initials hear acknowledging receipt of a copy of this consent form.

คำยินยอมตอบแบบสอบถาม

เรียน ข้าราชการกรมพลศึกษาที่นับถือ

ข้าพเจ้า ใคร่ขอความร่วมมือจากท่าน เพื่อตอบแบบสอบถาม ในการศึกษาวิจัยเรื่อง ผู้บริหารและเจ้าหน้าที่ประเมินค่าความสำคัญของ องค์ประกอบของการบริหารงานในโองการ ว่ามีความสัมพันธ์ต่อคุณภาพรวมของการบริหาร (Total Quality Management) มากน้อยเพียงใด จุดมุ่งหมายของการศึกษาครั้งนี้เพื่อ กำหนดค่าความสัมพันธ์ระหว่าง องค์ประกอบการบริหาร หลัก 7 องค์ประกอบ ของกรมพลศึกษา มีต่อเกณฑ์มาตรฐานของคุณภาพในการบริหาร ของ มอลคอมบอลริด (TQM) เพียงใด โดยท่านจะใช้เวลาในการตอบแบบสอบถามประมาณ 25 นาที แบบสอบถามครั้งนี้เป็นคำถามที่ง่าย และไม่มีผลกระทบกดดันที่เสี่ยงต่อความเสียหายและผลประโยชน์ของท่านแต่อย่างใด

อย่างไรก็ดี ความร่วมมือในการตอบแบบสอบถามของท่านครั้งนี้ จะเป็นประโยชน์ต่อการศึกษา การจัดดำเนินการและการบริหารงานในกรมพลศึกษาเป็นอย่างยิ่ง และท่านมีอิสระที่จะตอบแบบสอบถาม หรือไม่ตอบก็ได้ ข้าพเจ้าขอรับรองว่าข้อมูลของท่านจะถูกเก็บไว้เป็นความลับ

ท่านมีคำถามใดๆ หรือไม่ ถ้ามี โปรดสอบถามไปที่ข้าพเจ้าทันที ตามที่อยู่ข้างล่างนี้

Amnart Ano

3356 Herman Ave

San Diego, CA 92104 USA Phone (619) 583-8444

โปรดอ่าน ข้อความข้างล่างนี้ และถ้าหากท่านยินยอมให้ความร่วมมือตอบแบบสอบถาม โปรดเซ็นต์ชื่อ และลงวันที่ ตามช่องที่กำหนดไว้ให้ด้วย

ข้าพเจ้าเข้าใจแล้วว่า ข้อมูลความลับใดๆ ของข้าพเจ้า จะถูกเก็บไว้เป็นความลับที่สุด โดยจะไม่เปิดเผยต่อผู้ใด ข้าพเจ้ายินดีให้ความร่วมมือในการศึกษาวิจัยครั้งนี้

ลายมือชื่อผู้ตอบแบบสอบถาม..... วันที่ .....

ลายมือชื่อผู้วิจัย .....วันที่.....

โปรดลงชื่อของท่านข้างล่างนี้ เมื่อท่านได้รับใบยินยอมนี้

.....

APPENDIX B

COVER LETTER AND QUESTIONNAIRE: ENGLISH VERSIONS

UNITED STATES
INTERNATIONAL
UNIVERSITY

San Diego • Mexico City • Nairobi

February 6, 1997

Dear Participant,

I am requesting your expertise and assistance in my study of Manager and Employee Ratings of Organizational Elements Related to Total Quality Management. The study will provide information to measure the opinions of managers and employees and determine of how closely they perceive elements of the Department of Physical Education of Thailand meet Total Quality Management (TQM) standards.

It will require only about 25 minute to answer this questionnaire. Responses will be kept entirely confidential. Your cooperation in this research effort is greatly appreciated and will contribute to the advancement of knowledge regarding management organization. It will also result in more effective management practices for the Department of Physical Education of Thailand.

Thank you very much for your assistance in this study.

Sincerely Yours,

Amnart Ano
Doctoral candidate

Herbert George Baker Ph.D.
Dissertation Chairperson

The **Questionnaire**

Instructions: This questionnaire is divided into 2 parts. Please select and circle the suitable answer in both parts.

Part 1. Demographic Questionnaire

1. Gender:

   1 Male 2 Female

   2. Age:

      1 20-30 years 2 31-40 years 3 41-50 years 4 51- or older

3. What is your position?

   1 General Director 2 Vice General Director 3 General Secretary

   4 Director 5 Chief of the Bureau 6 Assistant Director 7 Instructor

   8 PE's Officer

4. What is your educational level?

   1 High School Graduation 2 Some College Graduate of Post High School Training

   3 College Graduate 4 Graduate School

5. What is the length of your work experience?

   1 Less than 2 years 2 2-5 years 3 6-10 years

   4 11-20 years 5 More than 20 years

Part 2: TQM Opinion Questionnaire

This questionnaire asks your opinion about issues regarding quality.
Please circle the one number that best matches how you feel about the statement.

Leadership **In my opinion:**	Strongly Disagree						Strongly Agree
1. Quality responsibilities have been clearly communicated to all employees.	1	2	3	4	5	6	7
2. Management is trained in quality concepts	1	2	3	4	5	6	7
3. Employees know our department quality goals.	1	2	3	4	5	6	7
4. Management is visibly involved in developing a quality culture in the organization.	1	2	3	4	5	6	7
5. Managers practices quality service.	1	2	3	4	5	6	7
6. Adequate resources are provided for quality improvement.	1	2	3	4	5	6	7
7. Open communication exists throughout our organization.	1	2	3	4	5	6	7
Information and Analysis							
8. Our organization reports data on all important dimensions of employee quality.	1	2	3	4	5	6	7
9. Data are used to analyze manager and employee performance.	1	2	3	4	5	6	7
10. The department reports data to employees on all important service dimensions.	1	2	3	4	5	6	7
11. We analyze data on our customers' view of our quality.	1	2	3	4	5	6	7

	Strongly Disagree						Strongly Agree
12. We identify the causes of poor quality.	1	2	3	4	5	6	7
13. Our organization reports data on on-time delivery.	1	2	3	4	5	6	7
14. We ensure that our report data are valid, reliable, and consistent.	1	2	3	4	5	6	7

Strategic Quality Planning

15. Our employees are involved in quality planning.	1	2	3	4	5	6	7
16. We have an operational plan (1-2 year) that describes our quality goals.	1	2	3	4	5	6	7
17. There are quality plans in effect for all divisions.	1	2	3	4	5	6	7
18.We use competitive data from other organizations when developing quality goals.	1	2	3	4	5	6	7
19. All managers of the division have information about quality improvement planning.	1	2	3	4	5	6	7
20. The base of our planning process is scanning journals and input from network contacts inside and outside the department.	1	2	3	4	5	6	7
21. We recognize that the strategic value of quality is important at all levels of the organization.	1	2	3	4	5	6	7

Human Resource Development and Management

22. Quality criteria are used in employee performance evaluations.	1	2	3	4	5	6	7
23. All employees are trained in quality improvement concepts.	1	2	3	4	5	6	7
24. We reward employees for their quality improvement efforts.	1	2	3	4	5	6	7

	Strongly Disagree						Strongly Agree
25. Our employees believe in the seriousness of providing top-quality services.	1	2	3	4	5	6	7
26. Our department collects data on employee morale.	1	2	3	4	5	6	7
27. Training effectiveness is evaluated.	1	2	3	4	5	6	7
28. Our department has empowered all employees.	1	2	3	4	5	6	7

Management of Process Quality

29. Employee requirements are transferred into the planning process for improvements.	1	2	3	4	5	6	7
30. We evaluate our processes for improvement.	1	2	3	4	5	6	7
31. Customer quality expectations are defined.	1	2	3	4	5	6	7
32. Cycle times have been reduced for key processes.	1	2	3	4	5	6	7
33. Documents showing our quality are kept up to date.	1	2	3	4	5	6	7
34. We use the data from another organization for making process improvements.	1	2	3	4	5	6	7
35. All divisions work together for improving quality service.	1	2	3	4	5	6	7

Quality and Operational Results

36. We can demonstrate that we have improved the quality of customer service in the last three years.	1	2	3	4	5	6	7
37. There has been an increase in employee morale in the last two years.	1	2	3	4	5	6	7
38. Our customer response time has improved.	1	2	3	4	5	6	7

	Strongly Disagree						Strongly Agree
39. Our operational performance in all divisions have improved in the last two years.	1	2	3	4	5	6	7
40. We can demonstrate that we administer our finances effectively.	1	2	3	4	5	6	7
41. Our department has always sustained good organizational climate.	1	2	3	4	5	6	7
42. We have had success with several new projects and services in the last three years.	1	2	3	4	5	6	7

Customer Focus and Satisfaction

43. Customer complaints have decreased in the last two years.	1	2	3	4	5	6	7
44. Customer satisfaction data are reported by customer groups.	1	2	3	4	5	6	7
45.Our customers like the quality of our services.	1	2	3	4	5	6	7
46. We knew what the community needs from our department.	1	2	3	4	5	6	7
47. Our organization has increased customers in every year.	1	2	3	4	5	6	7
48. We can prove that we have customers in all areas of the country.	1	2	3	4	5	6	7
49. Customer complaints are quickly resolved.	1	2	3	4	5	6	7

APPENDIX C

COVER LETTER AND QUESTIONNAIRE: THAI VERSIONS

UNITED STATES
INTERNATIONAL
UNIVERSITY

San Diego • Mexico City • Nairobi

6 กุมภาพันธ์ 2540

เรียน ข้าราชการกรมพลศึกษาที่นับถือ

ข้าพเจ้าใคร่ขอความร่วมมือจากท่านเพื่อตอบแบบสอบถามในการศึกษาความคิดเห็นของท่าน เกี่ยวกับการบริหาร ตลอดจนการดำเนินงานในกรมพลศึกษาว่า องค์ประกอบหลักทั้ง 7 องค์ประกอบที่ข้าพเจ้าจะสอบถามนี้ กรมพลศึกษามีการจัดดำเนินการตามหลักของการบริหารในองค์การอย่างมีคุณภาพ ใกล้เคียงกับหลักเกณฑ์ของคุณภาพรวมของมาตรฐานการบริหาร T.Q.M. หรือ Total Quality Management standards เพียงใด

แบบสอบถามนี้ จะใช้เวลาเพียง 25 นาทีเท่านั้น คำตอบของท่านจะถูกเก็บไว้เป็นความลับที่สุด ความร่วมมือของท่านในครั้งนี้ จะเป็นประโยชน์อย่างยิ่งในการศึกษาเกี่ยวกับการจัดดำเนินการ และการบริหารในหน่วยงานต่าง ๆ ภายในกรมพลศึกษา ซึ่งจะส่งผลดีต่อการพัฒนา การปรับปรุง การจัดดำเนินการและการบริหารในกรมพลศึกษา ให้มีประสิทธิภาพดียิ่งขึ้น

ขอขอบพระคุณอย่างสูงในความร่วมมือของท่านมา ณ โอกาสนี้.

ขอแสดงความนับถือ

(นายอานาจ อะโน)

นักศึกษาปริญญาเอก สาขาผู้นำ และพฤติกรรมองค์การ

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<u>คำแนะนำในการตอบแบบสอบถาม</u>: แบบสอบถามแบ่งออกเป็น 2 ส่วน

ส่วนที่ 1 แบบสอบถามส่วนบุคคล: กรุณาใส่เครื่องหมายถูกในวงกลมข้อที่เกี่ยวกับความเป็นจริงของท่าน

1. เพศ o ชาย o หญิง

2 อายุ o 20 - 30 ปี o 31 - 40 ปี o 41 - 5 ปี
o 51 ปีขึ้นไป

3. โปรดระบุตำแหน่งของท่าน
o ผู้บริหารระดับสูงของกรมฯ o ผู้เชี่ยวชาญหรือเจ้าหน้าที่พลศึกษาระดับ 7 - 9
o ผู้อำนวยการ o ผู้ช่วยผู้อำนวยการ / หัวหน้าฝ่าย
o อาจารย์ / เจ้าหน้าที่พลศึกษาระดับ 3 - 6

4. ข้อใดคือระดับการศึกษาของท่าน
o สำเร็จมัธยมศึกษาตอนปลาย o เคยศึกษาในระดับมหาวิทยาลัย/วิทยาลัย
o สำเร็จปริญาตรี o สำเร็จปริญาโท หรือสูงกว่า

5. ท่านมีประสบการณ์ทำงานกี่ปี
o น้อยกว่า 2 ปี o 2 - 5 ปี o 6 - 10 ปี o 11 - 20 ปี
o มากกว่า 20 ปี

ส่วนที่ 2 แบบสอบถามแสดงความคิดเห็น ด้าน TQM

โปรดแสดงความคิดเห็นของท่านโดยวงกลมล้อมรอบตัวเลขที่ท่านคิดว่าตรงกับทัศนะของท่านมากที่สุด

<u>องค์ประกอบที่ 1 ผู้นำ</u>	ไม่เห็นด้วยอย่างยิ่ง						เห็นด้วยอย่างยิ่ง
1. ผู้นำได้ชี้แจงให้เจ้าหน้าที่ทุกคนทราบอย่างชัดเจน เกี่ยวกับความรับผิดชอบในหน้าที่ อย่างมีประสิทธิภาพ	1	2	3	4	5	6	7
2. การจัดการที่มีคุณภาพ ต้องมีการฝึกอบรมให้เข้าใจ ในจุดประสงค์อย่างถ่องแท้	1	2	3	4	5	6	7
3. เจ้าหน้าที่พนักงานของกรมพลศึกษาทุกคนทราบ ว่าจุดประสงค์ของกรมพลศึษาต้องการให้เกิด คุณภาพขึ้น ในทุกหน่วยงานอย่างแท้จริง	1	2	3	4	5	6	7
4. การบริหารสามารถมองเห็นได้ซึ่งเกี่ยวข้องกับ การพัฒนาคุณภาพของวัฒนธรรมในกรมพลศึกษา	1	2	3	4	5	6	7
5. ผู้บริหารจะต้องสร้างคุณภาพในเชิงบริการ ให้เกิดขึ้นอย่างแท้จริง	1	2	3	4	5	6	7
6. เรามีการจัดเตรียมแหล่งทรัพยากรต่างๆ ไว้ เพื่อการปรับปรุงคุณภาพของกรมฯ อย่างเพียงพอ	1	2	3	4	5	6	7
7. เรามีการสื่อสารและประสานงานติดต่อกัน อย่างสะดวกทั่วถึงทุกหน่วยงาน	1	2	3	4	5	6	7

องค์ประกอบที่ 2 การวิเคราะห์ข่าวสาร	ไม่เห็นด้วยอย่างยิ่ง						เห็นด้วยอย่างยิ่ง
8. หน่วยงานของเราต้องรายงานเกี่ยวกับข้อมูลที่สำคัญ ทั้งหมดในเนื้อหาตลอดจนคุณภาพของเจ้าหน้าที่พนักงาน	1	2	3	4	5	6	7
9. ข้อมูลจะต้องใช้วิเคราะห์บทบาทของผู้บริหารและเจ้าหน้าที่ พนักงานทุกคน	1	2	3	4	5	6	7
10. กรมฯ จะต้องรายงานข้อมูลและบทบาทที่สำคัญทั้งหมด ของพนักงานทุกคน	1	2	3	4	5	6	7
11. เราวิเคราะห์ข้อมูลของผู้มาติดต่อกับหน่วยงานตลอดจน ความคิดเห็นเกี่ยวกับคุณภาพการปฏิบัติหน้าที่ ของเจ้าหน้าที่พนักงาน	1	2	3	4	5	6	7
12. เราสามารถชี้แจงสาเหตุข้อบกพร่อง ในการปฏิบัติหน้าที่ของเรา	1	2	3	4	5	6	7
13. หน่วยงานต่างๆ สามารถรายงานข้อมูล เข้าไปในกรมฯ ตรงตามเวลา	1	2	3	4	5	6	7
14. เรารับรองได้ว่าการรายงานข้อมูลของเรามีคุณภาพ และเชื่อถือได้สม่ำเสมอ	1	2	3	4	5	6	7
องค์ประกอบที่ 3 ยุทธวิธีและคุณภาพในการวางแผน							
15. ในการวางแผนที่มีคุณภาพ เจ้าหน้าที่พนักงาน ต้องมีส่วนเกี่ยวข้องด้วย	1	2	3	4	5	6	7

	ไม่เห็นด้วยอย่างยิ่ง						เห็นด้วยอย่างยิ่ง
16. เราได้วางแผนการปฏิบัติหน้าที่ 1-2 ปี ซึ่งได้บ่งชี้จุดประสงค์และความมุ่งหมายเพื่อคุณภาพอย่างแท้จริง	1	2	3	4	5	6	7
17. แผนงานคุณภาพทั้งหลายมีผลสะท้อนต่อทุกหน่วยงานในกรมพลศึกษา	1	2	3	4	5	6	7
18. เราสามารถใช้ข้อมูลจากแต่ละหน่วยงานที่มีคุณภาพมาเปรียบเทียบในการพัฒนาคุณภาพของเรา	1	2	3	4	5	6	7
19. หัวหน้าหน่วยงานทุกหน่วยต้องรับทราบข้อมูลที่ปรับปรุงและมีคุณภาพแล้ว	1	2	3	4	5	6	7
20. มาตรการในขบวนการวางแผนของเราจะสังเกตุได้จากข่าวสารต่างๆ ที่มีเครือข่ายเข้ามาติดต่อทั้งในและนอกกรมพลศึกษา	1	2	3	4	5	6	7
21. เรายึดถือและยอมรับว่าคุณค่าทุทธวิธีเพื่อคุณภาพคือสิ่งสำคัญทุกระดับในกรมพลศึกษา	1	2	3	4	5	6	7
<u>องค์ประกอบที่ 4 การบริหารและการพัฒนาทรัพยากรบุคคล</u>							
22. เราใช้หลักคุณภาพในการประเมินผลการปฏิบัติงานของเจ้าหน้าที่พนักงาน	1	2	3	4	5	6	7
23. เจ้าหน้าที่พนักงานทุกคนจะต้องได้รับการฝึกจนกว่าจะได้รับรองว่ามีคุณภาพแล้ว	1	2	3	4	5	6	7

	ไม่เห็นด้วยอย่างยิ่ง						เห็นด้วยอย่างยิ่ง
24. เรามีการให้รางวัลและชมเชยแก่เจ้าหน้าที่พนักงานที่มีความพยายามปรับปรุงตนเองในการปฏิบัติงานจนได้รับรองว่าเป็นคนมีความสามารถและมีคุณภาพ	1	2	3	4	5	6	7
25. พนักงานของเราเชื่อว่าในการบริการที่ยอดเยี่ยมนั้นต้องมีการเตรียมการอย่างจริงจัง	1	2	3	4	5	6	7
26. กรมฯ เราได้มีการรวบรวมข้อมูลเกี่ยวกับขวัญและกำลังใจของเจ้าหน้าที่พนักงาน	1	2	3	4	5	6	7
27. เรามีการประเมินผลของการฝึกอบรมทุกครั้งว่าได้ผลอย่างไร	1	2	3	4	5	6	7
28. กรมฯ มีการให้อำนาจในการปฏิบัติหน้าที่อย่างเต็มที่แก่พนักงานทุกคน	1	2	3	4	5	6	7

<u>องค์ประกอบที่ 5 ขบวนการจัดการที่มีคุณภาพ</u>

29. หลักเกณฑ์ในการโยกย้ายบรรจุแต่งตั้งเจ้าหน้าที่พนักงานนั้นในขบวนการบริหารต้องได้รับรองว่าเป็นคนที่มีคุณภาพ	1	2	3	4	5	6	7
30. เรามีการประเมินค่าของขบวนการ การรับรองคุณภาพ	1	2	3	4	5	6	7
31. ผู้ที่มาติดต่อในหน่วยงานเรา คาดว่าหน่วยงานเราเป็นหน่วยงานที่มีคุณภาพ	1	2	3	4	5	6	7
32. ในระบบการทำงานของเรามีการรวบรัดตัดตอนแต่มีคุณภาพ	1	2	3	4	5	6	7

	ไม่เห็นด้วยอย่างยิ่ง						เห็นด้วยอย่างยิ่ง
33. เอกสารหลักฐานที่แสดงคุณภาพของเรา ต้องทันสมัย และทันต่อเหตุการณ์	1	2	3	4	5	6	7
34. เราใช้ข้อมูลจากหน่วยงานอื่นมาเพื่อปรับปรุง ขบวนการคุณภาพของเรา	1	2	3	4	5	6	7
35. ทุกกองทุกวิทยาลัยฯ และทุกฝ่ายจะต้องร่วมมือและประสานงานกันเพื่อคุณภาพของการบริหาร	1	2	3	4	5	6	7

<u>องค์ประกอบที่ 6 คุณภาพและผลรับในการบริหารงาน</u>

36. ใน 3 ปีที่ผ่านมาเราสามารถแสดงให้เห็นว่า เรามีคุณภาพในการให้บริการแก่ผู้มาติดต่อขอใช้บริการเรา	1	2	3	4	5	6	7
37. ใน 2 ปีที่ผ่านมาขวัญและกำลังใจของเจ้าหน้าที่พนักงานของกรมพลศึกษาดีขึ้น	1	2	3	4	5	6	7
38. เวลาการตอบสนองต่อผู้มาติดต่อขอใช้บริการของหน่วยงานเรามีการปรับปรุงดีขึ้น	1	2	3	4	5	6	7
39. ใน 2 ปีที่ผ่านมาการดำเนินงานการการปฏิบัติหน้าที่ของทุกหน่วยงานของกรมฯ มีการปรับปรุงดีขึ้น	1	2	3	4	5	6	7
40. เราสามารถแสดงให้เห็นว่าเรามีการบริหารการเงินการคลังได้ผลอย่างมีประสิทธิภาพ	1	2	3	4	5	6	7
41. กรมฯ ได้ส่งเสริมบรรยากาศในการทำงานเป็นอย่างดีกับทุกหน่วยงาน	1	2	3	4	5	6	7

	ไม่เห็นด้วยอย่างยิ่ง						เห็นด้วยอย่างยิ่ง
42. ใน 3 ปีที่ผ่านมาเราประสบความสำเร็จในการบริการโครงการใหม่หลายโครงการ	1	2	3	4	5	6	7

<u>องค์ประกอบที่ 7 แนวคิดและความพอใจของผู้ใช้บริการ</u>

43. ใน 2 ปีที่ผ่านมาการร้องเรียนของผู้ใช้บริการหรือจากที่อื่นลดลง	1	2	3	4	5	6	7
44. ผู้ใช้บริการได้มีการรายงานข้อมูลความพอใจต่อการบริการของกรมฯ โดยกลุ่มของผู้ใช้บริการเอง	1	2	3	4	5	6	7
45. ผู้ใช้บริการพอใจคุณภาพในการบริการของเรา	1	2	3	4	5	6	7
46. เราทราบว่าในแต่ละชุมชน ต้องการอะไรจากเรา	1	2	3	4	5	6	7
47. ในแต่ละปีมีผู้มาติดต่อขอใช้บริการในหน่วยงานต่างๆของกรมฯ เพิ่มมากขึ้น	1	2	3	4	5	6	7
48. เราสามารถพิสูจน์ได้ว่าเรามีผู้มาใช้บริการของหน่วยงานเราอยู่ในทุกพื้นที่ของประเทศ	1	2	3	4	5	6	7
49. กรมพลศึกษามีการแก้ปัญหาการร้องเรียนจากผู้ใช้บริการหรือจากสาธารณะชนได้อย่างรวดเร็ว	1	2	3	4	5	6	7