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Becoming a total quality leader: Developmental experiences of executives responsible for total quality management

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BECOMING A TOTAL QUALITY LEADER: DEVELOPMENTAL EXPERIENCES OF EXECUTIVES RESPONSIBLE FOR TOTAL QUALITY MANAGEMENT

by

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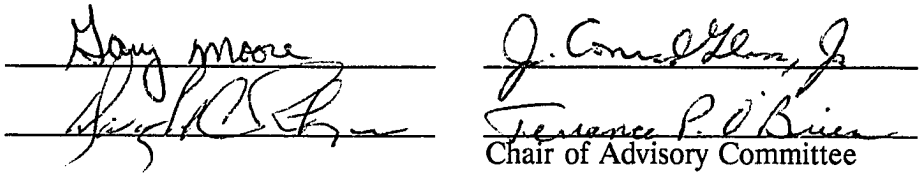

Chair of Advisory Committee

ABSTRACT

FAVORITE, BONNIE BANKS. Becoming a Total Quality Leader: Developmental Experiences of Executives Responsible for Total Quality Management. (Under the direction of Dr. Terrance O'Brien.)

The broad purpose of this research has been to further our understanding of the developmental experiences of total quality leaders. Specifically, this study sought to determine which critical events leaders of exemplary quality efforts believe have contributed most significantly to their effectiveness as total quality leaders. Also, this study sought to determine the specific lessons which these individuals learned from these critical events. The need for this study stems from the recent trend in American business towards the implementation of total quality management (TQM) as a means of increasing competitiveness. As TQM has become more prevalent, there is an increased need to develop individuals who can effectively lead quality efforts.

This study utilized a qualitative approach based on critical event methodology. Telephone interviews were conducted with ten individuals who have led quality efforts in companies which have won the Malcolm Baldrige National Quality Award. The critical events reported by these respondents were sorted into the following categories: challenging projects, role models, benchmarking, training/education, and feedback. The themes of lessons learned comprised commitment, empowerment, conceptual understanding of

quality, team orientation, systems perspective, resourcefulness, and communication.

In most areas, the findings of the current study confirmed earlier research on leadership and executive development, including research on leadership within the context of total quality management. Specifically, this study confirmed that total quality leaders, like executives in previous studies of executive development, benefitted from taking on challenging assignments. Also, the total quality leaders in this study reported having learned significant lessons from observing the behaviors of individuals who served as role models. Next, total quality leaders were found to be especially open to feedback from others. In addition, the lessons that the total quality leaders learned in formal training settings transferred directly to their work environments -- a finding that was not as clear in earlier studies of executive development. Finally, respondents in the current study suggested that commitment to quality and empowerment are linked.

DEDICATION

To my mother,

Cora Smith Banks

and

to my husband,

Lawrence Ray Favorite

My mother gave me roots, but Larry gave me wings.

BIOGRAPHY

Bonnie Banks Favorite was born May 13, 1953 in Onslow County, North Carolina, the youngest of eleven children. Her father was a blacksmith and her mother was a homemaker. Bonnie graduated from Jones Senior High School in 1971 and received a full scholarship to attend Duke University as an Angier B. Duke Scholar. She graduated from Duke with honors in three years, receiving a B. A. degree in psychology in 1974. She also received an M. Ed. degree from Duke in 1976. For five years, Bonnie taught reading in the public schools and adult basic education in a community college. In 1981, she left teaching to become an administrator for a biomedical research firm in Research Triangle Park, North Carolina.

In 1983, Bonnie received a Fellowship for International Understanding and spent a year studying industrial psychology at the University of Manchester Institute of Science and Technology in Manchester, England. She moved to Henley-on-Thames in 1984 to become Development Manager for an Australian-owned firm of organizational psychologists. In that job, she developed assessment centers and training programs to select and develop high-potential executives. Bonnie returned to the United States in 1986, working first as a career development consultant for Right Associates of the Carolinas. She eventually became Vice-President of Human Resources Consulting for Right Associates. Since 1992, Bonnie has

been self-employed as a human resources consultant, specializing in instructional design, program development, and individual and organizational assessment.

Bonnie is married to Lawrence Favorite, an artist. They live and work at 201 Fox Haven Lane, Stokesdale, North Carolina 27357.

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Many friends have supported me in my long struggle to complete this degree. In particular, my friend and colleague, Dr. Paula Berardinelli of the Center for Organizational Research and Education (CORE), has challenged and encouraged me through every phase of my degree program at North Carolina State University. Also, Mr. John Garcia of Right Associates has been my friend and mentor since we met in 1986. There aren't words to

express how much John's generous spirit has enriched my life, both professionally and personally. Finally, Helen Krauss has been my dear friend for more than 15 years. Her unconditional love and support in all areas of my life have been true blessings. Thanks to you all.

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I. INTRODUCTION

During the 1980s and 1990s, American industry has had to contend with increasing pressure from foreign competitors. In response to this pressure, many companies in the United States have implemented major efforts to improve their techniques and processes and to improve product quality. These efforts, collectively referred to as total quality management, are revolutionizing American business.

This is a study of executive development within the context of total quality management. This study is firmly rooted in rich, cumulative research from within the field of executive development which has established that on-the-job experiences directly contribute to leadership effectiveness. At the same time, this study builds on the emerging body of literature which suggests that there are particular skills and perspectives which are required of leaders who seek to lead total quality management efforts. This study seeks to answer the question: what can companies do today to begin to develop the total quality leaders of tomorrow?

Need for the Study

The need for this study stems from trends in American business as well as gaps in the current literature on executive development. First, it is a

fact that total quality management is becoming increasingly prevalent in American business. This trend has been confirmed by both researchers and practitioners. A 1987 Gallup survey of 615 top executives of American companies revealed that these executives identified total quality management as an internal management system which could enable them to strengthen their positions against foreign competitors (Bowles & Hammond, 1991). These executives viewed total quality management as a useful tool that would enable them to support American industry's drive to become more competitive. As recently as 1992, a survey of Fortune 500 companies (American Society for Training and Development, 1992) revealed that 72% of respondents said that quality improvement is a major strategic goal for their companies. The pursuit of quality was once seen as a tool for achieving competitive advantage. Now, as international trade barriers are being removed, American companies are motivated to pursue total quality management in order to survive (Port, 1991a).

American industry's move toward total quality management has created significant changes in both organizational structures and operations. First, with the implementation of a total quality management effort, there is a shift in a company from a focus on short-term, tactical operations to operations which are tied to a long-term business strategy -- the pursuit of quality. Second, the structure of the organization is likely to change from

being highly centralized and hierarchical, the traditional pyramid, to becoming less centralized and flatter. This decentralization is accompanied by a trend toward participative decision-making. As employees are encouraged to take an active role in decision-making within the organization, the roles of supervisors, managers, and top executives must also change. In other words, both customers and employees change their expectations of leadership when an organization embraces the principles and practices of total quality management.

As total quality management continues to gain momentum within American business, the need for effective total quality leaders also continues to grow. It is clear that a total quality leader contributes to the success of a company's quality effort. It is the total quality leader, for example, who can create a vision of quality for the organization and then motivate the workforce of a company to work towards that vision. Also, a total quality leader controls the resources which are necessary to identify and solve quality improvement problems. Finally, the total quality leader can insure that continuous improvement is a priority for every employee in the company. E. M. Baker (1987), Director of Quality Planning and Statistical Methods at Ford Motor Company, has summarized the relationship between leadership and total quality as follows:

> [Management] must provide leadership to create, sustain, and improve organizational capabilities; engender a climate supportive of continuous improvement of organizational process; and nurture the ability and willingness of the workforce to contribute to organizational efforts to improve quality. (p.21)

Therefore, there is a growing consensus that effective leadership is critical to the success of total quality management. However, there is a lack of clarity regarding which leadership skills and perspectives might be most useful to a leader of a total quality management effort. What are these skills and perspectives, and how might these be developed? These are important questions, both conceptually and on a practical level, yet they have not been addressed in the research literature.

There is growing interest among practitioners in the topic of executive development within the context of total quality management. For example, in a 1990 survey (Lewis & Mink, 1992), 251 quality improvement professionals were asked to identify areas in total quality management that they would like to see researched. These practitioners specifically asked for more research on how to prepare managers and technical specialists to assume key leadership roles within total quality management efforts.

Of course, some executive development takes place within graduate schools of business. In response to this growing interest in the development of executives to assume positions of leadership within quality efforts, some

graduate schools of business already have redesigned their Masters of Business Administration programs to incorporate an increased emphasis on quality concepts and practices. For example, the business schools of Massachusetts Institute of Technology, Northwestern University, and the University of Tennessee all have revised their curricula to incorporate total quality management as a high priority. These schools have developed innovative programs to expose students to quality concepts and practices, including internships and forums which are jointly sponsored by companies with award-winning quality efforts (Port, 1991a; Ready, 1992).

However, much of the recent research in the field of executive development is based on the notion that the development of leadership skills and perspectives requires more than formal education. Executive development may also result from the experiences an individual has while on the job, as well as the lessons the individual learns from these experiences. It is becoming increasingly apparent that some developmental experiences offer richer learning opportunities than others. Given that there are some particular aspects to leading within the context of total quality management, it is also possible that some learnings may be especially relevant to the role of the total quality leader. This study fills a gap in the existing research by examining some on-the-job learning experiences of executives responsible for leading successful total quality management efforts.

Purpose of the Study

The purpose of this study is to enrich our understanding of the developmental experiences of total quality leaders. The study is intended to determine which on-the-job experiences contribute most significantly to the success of an individual who is responsible for leading an exemplary quality effort as well as the meaning that the individual attaches to those events. One benefit of this study is that it provides organizations with information which can be used to create internal development programs for individuals to prepare them to be effective as total quality leaders. The findings are also useful for organizations seeking to select individuals from outside for the position of total quality leader because it suggests a list of developmental experiences which may be asked about during the selection and hiring process.

Research Questions

Two research questions are answered in this study: (a) What critical events do leaders of exemplary quality efforts believe have contributed most significantly to their effectiveness as total quality leaders? This question is designed to elicit examples of events, situations, or problems that have taken place over the course of the executives' careers which they believe have

contributed to their ability to be effective as total quality leaders. The responses are in the form of stories or vignettes.

(b) What specific lessons have these individuals learned from these critical events? This question requires the respondents to evaluate what skills or knowledge they feel they gained from having experienced the critical event. It is possible for two different individuals to cite the same event as being critical to their effectiveness, while each may attribute different lessons to that critical event. For example, one individual may believe that successfully turning around a failing business unit taught him or her to be highly goal-oriented. On the other hand, a second individual faced with the same challenge or opportunity may report having learned how to handle pressure well as a result of the experience. The purpose of the second research question is to have the respondents suggest the meanings that they attach to the critical event.

List of Terms

The following list of terms comprises definitions for concepts which appear in the literature on total quality management and executive development.

Continuous improvement. The unceasing pursuit of ever-higher levels of quality of products and processes. Continuous improvement is one of the fundamental aspects of total quality management.

Developmental assignment. A specific, temporary job task or responsibility which an individual undertakes to gain new skills or perspectives.

Developmental experience. Any on-the-job experience that provides an individual with opportunities to learn, change, and grow professionally; for example, job rotations, project management opportunities, and membership on cross-functional teams.

Effective leadership. Leadership that produces movement toward the goals of the organization.

Self-directed learning. The self-motivated and self-managed process whereby individuals initiate opportunities to learn, change, and grow.

Total quality control. A systematic way of improving products and processes which is highly dependent on measurement, emphasizing cost containment, improved scheduling, and manpower development.

Total quality leader. A general label describing any senior executive with major responsibility for leading a company-wide total quality effort. Total quality leaders may be designated by a variety of job titles, such as Director of Quality, Vice-President for Total Quality Management, or Manager of Continuous Improvement.

Total quality management (TQM). An approach to doing business that emphasizes continuous improvement of products and processes with the ultimate goal of enhancing customer satisfaction. TQM typically involves three key ingredients: teamwork among employees, participative management (i.e., shared decision-making between management and employees), and an emphasis on continuous improvement.

Assumptions

In this study, interviews are conducted with individuals who are leading or who have led exemplary quality efforts. During these interviews, the respondents are asked to recall critical events which they believe have contributed to their effectiveness as total quality leaders. For this reason, one important assumption underlying this study is that retrospective, self-reported data is valid as a source of information about developmental career experiences and the lessons learned from those experiences.

A second important assumption of this study is that the individuals who are leading or have led exemplary quality efforts are in fact effective leaders. This assumption is based on the belief that individuals who have had responsibility for leading a quality effort which has been recognized on a national level as being excellent are themselves outstanding in their leadership capability. This assumption is strengthened by the fact that the

criteria on which these companies have been judged to be excellent, i.e., the criteria on which the Malcolm Baldrige National Quality Award is based, include specific requirements in the area of leadership. Therefore, without outstanding leadership, a company cannot win this award. This assumption is necessary because the results of the study are used to suggest which developmental experiences contribute to leadership effectiveness within the context of total quality management.

Limitations of the Study

The primary limitation of this study is that it is based on self-reported, retrospective data. The respondents in the study are asked to recall critical events which they believe have contributed to their effectiveness as leaders of total quality management efforts and to ascribe certain lessons to those critical events. There are a number of possible difficulties inherent in this approach (Brim & Ryff, 1980). Most of these difficulties have to do with the possibility that the respondents may attend selectively to some events more than others, albeit unintentionally. First, in reflecting upon critical events, respondents may give disproportionate attention to a single, vivid, or relatively dramatic life event (for example, a promotion or a transfer). Secondly, respondents may overlook or undervalue a precipitating event taking place prior to the reported event. In doing so,

the respondents may underestimate or even ignore the value of events which actually lead up to the reported event. A third difficulty with the use of self-reported retrospective data stems from the possibility that respondents may overlook minor, subtle events in favor of large events. Finally, by reporting isolated events, the respondents may overlook or minimize the extent to which events interact, perhaps over years of time, before culminating in a larger, discrete event.

In some cases, respondents may misrepresent or fail to report one or more critical events (Goldstein, 1980; Rubin, 1985). For example, a respondent may expand or dramatize the description of his or her role in a key event. Respondents also deliberately may omit events which in fact do have an impact on their effectiveness, particularly if these events involve committing illegal or unethical acts. Finally, respondents may omit important events simply because the time constraints of the interview limit them to discussing only a few events.

In this study, several steps are taken to deal with the potential difficulties with the use of self-reported, retrospective data. First, respondents are encouraged to look over the whole of their careers, not just the past few months or years. Also, they are encouraged to examine a broad range of experiences, including situations, challenges, and problems, not just

discrete events. Finally, to encourage truthfulness, respondents are assured that their answers are confidential.

Summary

American industry is increasingly embracing the concept of total quality management in order to become more competitive. At the same time, many American companies are designating a senior executive to lead their quality efforts. This individual, referred to generally as a total quality leader, is widely recognized as being critical to the success of the total quality effort. However, it is not clear which developmental experiences or lessons learned might contribute to an individual's effectiveness as a total quality leader. This study seeks to increase understanding of the relationship between developmental experiences and leadership effectiveness, specifically within the context of total quality management. This increased understanding is intended to be useful to companies seeking to create internal development programs for individuals to prepare them to become total quality leaders. The findings also are of interest to companies seeking to recruit and select individuals from outside the organization to lead their quality efforts.

II. LITERATURE REVIEW

This literature review brings together two distinct strands of research, the research on total quality management (TQM) and that on executive development. First, a brief overview of the history of total quality management in the United States is presented. This presentation is followed by a description of the Malcolm Baldrige National Quality Award (MBNQA) and its significance in the field of total quality management. Next, research on total quality management is presented, followed by a section which links effective leadership to the success of quality efforts.

The second strand of research, that pertaining to executive development, is also addressed. Particular attention is paid to research which supports the relationship between on-the-job experience and executive development. A final section highlights research which uses an events-based approach to investigate executive development.

Theoretical Framework

There is a wealth of information available on the topic of executive development. There is also a growing body of literature available on the subject of total quality management. However, while numerous studies present perspectives on executive development, almost none of these has

focused on the development of leadership effectiveness within a specific setting or context such as total quality management.

Much of what has been written to date on total quality management can be found in trade publications. This information is largely anecdotal in nature. It is true that informal case studies and expert opinions in these publications support the positive impact of total quality management on bottom-line criteria such as scrap, defects, and cycle times. However, there is very little empirical data available in the research literature to measure other effects such as the influence that total quality management may have on employee motivation or leadership effectiveness (Collard, 1993). Again, although there are many references in the trade literature to the relationship of effective leadership to the success of total quality management, there are few such references in the research literature. In fact, in only a few recent cases does the literature on executive development and that on total quality management overlap. This study seeks to bridge the gap which exists between these two areas of research.

History of Total Quality Management

Quality as a goal was not emphasized in American business prior to the nineteenth century. Until that time, goods were produced in small volume, primarily by artisans, skilled craftsmen or their journeymen, and

apprentices (Garvin, 1988). These individuals were responsible for all aspects of the design, manufacture, and service of their products. In the nineteenth century, however, the American system of manufacturing was developed. This included the use of special machinery to manufacture interchangeable parts in a precise sequence. With the implementation of an assembly-line concept for manufacturing and assembling goods, a need for inspection also arose. Inspection was viewed as a solution to the problem of correcting defects and eliminating poor-quality products. This marked the beginning of an emphasis on the control of quality.

Frederick Taylor's notion of scientific management in the early 1900s was a first key step forward in American industry's evolution toward quality (Taylor, 1947). Taylor recommended a mechanistic approach to manufacturing which emphasized breaking jobs down into small parts, organizing the work force, and assigning each employee to do a repetitive task. In essence, Taylor's approach sacrificed craftsmanship for the sake of efficiency. Also, largely as a result of the implementation of the concepts and practices of scientific management, the control of product quality through inspection became the responsibility of the supervisor or manager.

The development of the field of statistics in the early 1900s was yet another milestone in the history of total quality management. R. A. Fisher, a British scientist, developed statistical procedures for the purpose of

enabling agricultural researchers to develop better methods for growing crops (Port, 1991b). Through the use of these statistical procedures, researchers were able to determine critical interactions among variable factors affecting crops, including different planting times, use of different fertilizers, and various irrigation schedules.

In the 1930s, Walter A. Shewhart, a physicist working for AT&T Bell Labs, built on Fisher's methods and adapted them for application in a factory environment (Garvin, 1988). Shewhart developed the concepts of statistical process control as a means of detecting errors closer to the point of origin in the manufacturing process. He also established a link between daily monitoring of production and quality improvement efforts (Shewhart, 1931). Shewhart's work was also significant in that it motivated both Dr. W. Edwards Deming and Dr. Joseph M. Juran, both of whom later became key figures in the field of total quality management, to devote their professional lives to developing and disseminating the principles and concepts of TQM.

The emerging emphasis on statistical process control in manufacturing led to an increased need for the coordination of efforts throughout organizations to eliminate defects and monitor product quality. Eventually, the tools and techniques of statistical process control were expanded to include the notion of continuous improvement of product quality over time (Lessem, 1991). Although still based primarily on statistical methods and

still emphasizing elimination of defects, the concept of continuous quality improvement continued to gain momentum through the 1950s, although more so in Japan than in the United States (Ishikawa, 1985).

The mid-twentieth century had been a time of great success for the American economy, particularly for American manufacturing. This was especially true within the American automobile industry. In fact, it was the very success of mass production within the American automobile industry that in a sense blinded the United States to what was going on elsewhere in the world (Dertouzos, Lester, & Solow, 1989). Although the concepts of statistical process control were still being used, especially within the manufacturing sector, United States businesses were relatively slow to embrace the broader concepts and techniques of quality improvement. In America, the emphasis was still on using inspection as a means of controlling costs and limiting product defects (Hayes, Wheelwright, & Clark, 1988). By the late 1960s and early 1970s, the Japanese had significantly increased the quality and durability of their goods, including those exported to America. Japan continued to develop her world markets and the American economy ultimately suffered.

American industry at first discounted Japan's increasing competitiveness, suggesting simple explanations for the change. At first, Japan's rise in competitiveness was attributed to the fact that the Japanese

had newer factories. Then, in the 1980s, a series of studies were made which controlled for the age of the factories. Those studies found that even when similar products were manufactured in factories of comparable age, the Japanese products were of a higher quality (Garvin, 1988). A second explanation offered for Japanese industry's increasing competitiveness was that the Japanese culture was so different from the culture of America. The Japanese culture was described as being more homogeneous and its workers were believed to be better educated. The sense was that communications and decision-making may be easier and more efficient in a homogeneous culture with a highly trained workforce and that these factors would directly increase productivity and quality.

Then, in the mid-1970s, Sony Corporation built a television factory in San Diego, California, and employed a multiethnic workforce. Within three years, this plant became one of the top ten plants for Sony in the world. The achievement of the Sony plant effectively undermined the discounting of superior Japanese product quality as being the supposed results of the Japanese culture (Barker, 1992). At this point, attention began to be focused more specifically on the Japanese approach to management, an approach that emphasized continuous improvement of products and processes, or what has come to be known as total quality management.

American industry became more receptive to the principles of total quality management in the 1980s, but only as a response to its marked decline. This decline was evident even in American flagship high-tech industries. For example, by 1984 the United States had lost almost 25% of the American domestic market for semiconductors and integrated circuits to foreign producers. Similar losses were reported for the machine-tool industry and even the food products industry, both of which had long been dominated by United States producers (Hayes et al., 1988).

At the same time, the pursuit of quality was having positive, quantifiable results for the Japanese. A study of American and Japanese manufacturers found that the products and services of Japanese companies were far superior to those of their American counterparts. Their assembly line defect rate was about 70 times lower and their average first-year service call rate nearly 17 times better. In fact, the total costs of quality incurred by Japanese producers were less than one-half of the failure costs incurred by the best United States companies (Garvin, 1986). As the United States passed on the cost of poor quality to the consumers, the American hold on the domestic and international markets declined. Between 1980 and 1990, the United States had lost more than 10% of these markets (Dobyns & Crawford-Mason, 1991). In sum, American industry had lost its competitive advantage.

During the 1980s, several major American companies, including Westinghouse, 3M, and Hewlett-Packard, began to emphasize quality improvement and to Americanize the concept of total quality management. Interest in TQM continued to grow in this country, and in 1984 the American Society for Quality Control (ASQC) successfully lobbied Congress to gain sponsorship of an annual program of education and training on quality concepts and activities. The United States Federal Quality Institute is a government agency that was established by Executive Order in 1988 to improve the productivity of American business (Bowles & Hammond, 1991; Dobyns & Crawford-Mason, 1991).

The pursuit of total quality management has now been wholeheartedly accepted in the United States. The usefulness of continuous improvement techniques such as total quality control for increasing competitiveness by improving production appears often in the trade literature (Imai, 1986; Schonberger, 1992). The view is widely held that strong commitment to company-wide total quality efforts, with the full support of top executives in the company, is a prerequisite for world-class manufacturing excellence. Today, total quality management programs are found both in manufacturing and in service industries, and in both the for-profit and the not-for-profit sectors. A national survey of human resource professionals from Fortune 500 companies conducted in 1992 concluded that

the pursuit of quality is one of the top strategic priorities of businesses in the United States in the 1990s (Port, 1991a). Fred Smith, Chairman of Federal Express, stated, "If companies are not aggressively pursuing total quality today, they are following a self-liquidating strategy" (Schonberger, 1992, p. 27). For those companies that are already in a strong competitive position, there is increased emphasis on the pursuit of quality as a moral issue, one which contributes both to the overall health of the organization and to the society at large (Pedler, Burgoyne, & Boydell, 1991).

There are various approaches to total quality management. These approaches are most often identified with a single well-known figure or guru in the field of TQM, such as Dr. W. Edwards Deming, Dr. Joseph M. Juran, or Philip Crosby. On the surface, the philosophy or approach propounded by each these individuals appears to be distinctive from other approaches. However, various approaches to total quality management are actually far more similar than they are different (Flynn, Schroeder, & Sakakibara, 1991). For example, all approaches to total quality management emphasize the necessity of top management support and commitment. Also, in all approaches, information is collected and communicated throughout the organization in order to improve processes, in turn preventing defects and reducing variation. Furthermore, to support the implementation of any total quality management effort, employees must receive extensive training in

problem-solving techniques and teamwork. Finally, all approaches to total quality management involve customers and suppliers in product development and process improvement. A recent report (Holmes, 1992) indicates that most organizations eventually broaden their initial attempts to implement total quality management efforts to go beyond the precepts recommended by any one guru in the field of TQM and to encompass the principles of other key figures and approaches to quality.

Malcolm Baldrige National Quality Award

One milestone in the emergence of total quality management in the United States which has particular relevance to this study is the creation of the Malcolm Baldrige National Quality Award (MBNQA). This award was established in 1987 by Congress to recognize those companies in the United States which have made the greatest advances towards improving the quality of their products and services. It is the highest level of recognition for quality that can be achieved by a United States company. The award, now widely recognized as a standard of excellence in the pursuit of quality, has been called "a dramatic catalyst for improvement in American business" (Bowles & Hammond, 1991, p. 15).

The Malcolm Baldrige National Quality Award program serves as a blueprint for literally thousands of companies as they struggle to implement

total quality management. The large number of requests for applications for the MBNQA indicates that thousands of companies are using the criteria outlined in the award as the basis of an internal self-assessment process. However, only a relatively small proportion of those companies which request applications are able to complete all of the steps in the award application process. For example, the American Society for Quality Control, which administers the award, received more than 150,000 requests for 1993 award applications; only 76 companies completed the application process (L. Olson, personal communication, September 27, 1993). Furthermore, of those 76 companies, only two received a Malcolm Baldrige National Quality Award in 1993.

The examiners involved in judging applicants for the MBNQA are quality professionals from around the nation, representing various constituencies, including industry, government, universities, trade associations, and healthcare. Examiners go through a rigorous preparation and examination process (Bureau of Business Practices, 1992). In some cases, an individual who has successfully led a company in its effort to win a MBNQA may then go on to qualify as an MBNQA examiner (K. Leach, personal communication, January 4, 1994).

The Malcolm Baldrige National Quality Award has three broad goals: to promote an awareness of quality concepts and practices, to recognize

United States businesses which have achieved outstanding results in the area of quality, and to publicize successful quality efforts and strategies. To be eligible to apply for the award, a company must be a for-profit business located in the United States or its territories. Up to six awards may be given each year, with up to two awards in each of these categories: manufacturing, service, and small business (defined as a complete business with not more than 500 full-time employees). Only nineteen companies have won the MBNQA during the years 1988 to 1993 (see Appendix A). It is important to note that companies that win the MBNQA are required to actively share information on the strategies that helped them to achieve their quality goals (United States Department of Commerce Technology Administration, 1992).

Research on Total Quality Management

Total quality management seldom has been addressed in its broadest sense in the academic literature. Most of what as been written about total quality management has come from the perspective of product and service quality, with a strong emphasis on customer satisfaction. As a result, most of these writings reflect an emphasis on the quantifiable results of the quality effort (i.e., measurable improvements in product and service quality), rather

than on the processes and conditions which may contribute to these improvements.

Some empirical research on total quality management does exist, however. Saraph, Benson, and Schroeder (1989) sought to synthesize the quality literature by identifying eight critical areas of quality management. Measures of these factors were developed using data from 162 general managers from 20 companies. These factors comprised measures of top management leadership, the role of the quality department, training, product/service design, supplier quality management, process management, quality data and reporting, and employee relations. Based on these measures, Saraph et al. developed an instrument which could be used to evaluate quality management in either manufacturing or service organizations. Under the heading of leadership, the instrument items focus on outcomes such as commitment to quality goals, specificity of quality goals, and comprehensiveness of the goal-setting process. While this instrument does address the role of top management in setting quality policies and modeling commitment to quality, it is not intended to differentiate between those leaders who are effective at leading a quality effort and those who are not effective. This instrument is still in the process of being validated across various organizational settings and is not yet available to other researchers.

Gildea (1991) also conducted a study on the relationships between the elements of quality, the dimensions of culture, and measures of performance within 56 manufacturing companies located in the northeastern United States. This study found that chief executive officers (CEOs) of manufacturing firms with quality efforts felt that the concept of total quality management would be useful in an ideal setting. However, the CEOs reported that they found these concepts less useful in their own organizational setting. In essence, the CEOs were saying that while total quality management does have value conceptually, it is difficult to implement the concepts and principles of TQM in the day-to-day operations of their companies or to measure its results.

Some aspects of total quality management are more easily measured than others. For example, a recent study indicated that companies using total quality management experienced measurable improvements in these areas: employee relations, productivity, customer satisfaction, market share, and profitability (United States General Accounting Office, 1991). However, it is only recently that research has even begun to attempt to measure other aspects of total quality management. For example, one recent study (Collard, 1993) utilized a survey administered across two departments to determine how the implementation of a total quality process affected employees' perceptions of cooperation between interacting departments.

The results of this study suggested that total quality management may be useful in dealing with organizational issues such as internal competition.

Leadership Effectiveness and Total Quality Management

Only in the last three or four years have articles begun to appear in the literature which address the role of effective leadership in creating successful total quality management. Most of these articles are based on practitioners' observations rather than on empirical research. Nevertheless, these articles do reflect an emerging consensus on the importance of effective leadership to the success of total quality management.

Lawrence (1991) interviewed the chief executive officers of companies with exemplary quality programs. These companies were all previous winners of the Malcolm Baldrige Award during the years 1988, 1989, and 1990. Lawrence sought to define leadership within the context of total quality management. Lawrence identified seven characteristics demonstrated by these CEOs: highly trusting in people, personable, self-initiated, strategic, articulate, charismatic, and obsessed with quality. She concluded that there was "no magical success formula" (p. 8) for leadership within the context of total quality management. However, Lawrence did find some commonalities among these CEOs. First, these CEOs had assumed their roles during a time of crisis, for example, when the company was trying to maintain or

increase its market share. Second, the CEOs had led their companies to achieve successes which could be measured both in terms of financial criteria and in terms of customer confidence. Finally, the leaders had been involved in quality for several years. That is, they were knowledgeable about quality concepts and experienced in the implementation of total quality management.

While Lawrence's study did provide useful information on characteristics associated with the effectiveness of total quality leaders, it did not seek to answer the question of where these characteristics had come from or how these executives had developed them. Also, Lawrence's study focused on CEOs whose energies and responsibilities are spread across numerous activities. She did not focus her investigation on the top ranking quality professional, the total quality leader, whose principal responsibility would be the implementation of a quality effort.

In a study of workplace environments, Rothrauff (1992) empirically related leadership to the success of a total quality management effort. This researcher compared the environments within a business unit led through traditional leadership structures and processes with a business unit operating under the concepts and principles of total quality management. Rothrauff concluded that the more holistic leadership approach of total quality management does have a limited positive effect on organizational climate.

Bryan and Coine (1991) reported another study of senior total quality professionals. These authors interviewed 14 quality leaders who were superior performers in their role as total quality leaders. They were asked to provide information on high points and low points in their careers. The purpose of this study was to gather information on critical events that would reveal the knowledge, skills, and traits that contribute to success in leading within total quality management.

Bryan and Coine's (1991) study makes two specific contributions to the current study. First, Bryan and Coine's study includes the first appearance of the phrase "total quality leader" as a general term used to describe senior executives who have major responsibilities for leading company-wide total quality efforts. Second, Bryan and Coine used an events-based approach to investigate the development of executives who are responsible for implementing total quality management. One major difference in the Bryan and Coine study and the current study, however, is that Bryan and Coine used only informal assessments (snowball sampling based on personal referrals) to determine which total quality leaders were superior performers. It is also important to note that Bryan and Coine are consultants rather than academicians or researchers, and that they have made the details of this study available only to their clients, so the study has not been published in the research literature.

In a study of more than 100 successful senior managers representing major United States corporations, Darling (1992) sought to determine how leaders in total quality management can be effective. After surveying these senior managers, Darling linked success in the context of total quality management to four key strategies: attention through vision, meaning through communication, trust through position, and confidence through respect. Attention through vision means creating a quality focus for the organization. Meaning through communication means being able to relate a clear image of the desired future, an image that will elicit the commitment of others. Trust through positioning refers to accountability for results, credibility, and reliability. Finally, confidence through respect means a leader's self-respect and the esteem of others based on their perceptions of the leader's strengths and the organization's needs.

Darling's findings emphasized that leaders within total quality management need to focus on providing individuals with a sense of personal worth and meaning. He concluded, "A leader in total quality management is a person who inspires, by appropriate means, sufficient competence to influence a group of individuals to become willing followers in the achievement of organizational goals" (Darling, 1992, p. 5).

Perspectives of Executive Development

Research relating to executive development seeks ultimately to answer questions concerning the origins of leadership. Several distinct views of the origins of leadership are present in this literature. One view of executive development holds that leaders are born, not made. This perspective supports the notion that some individuals have innate skills and abilities, such as intellectual capacity and energy level, that enable them to be effective leaders. This view leads to the conclusion that leadership roles should be reserved for a few elite individuals. Companies operating with this view of leadership are likely to place relatively greater emphasis on executive selection, the accurate assessment of individuals to determine whether they have the intelligence and the personality characteristics which would enable them to be successful in leadership roles.

Yet another view of executive development suggests that formal education produces great leaders. A company operating under this view is likely to offer rising executives opportunities to attend formal training classes in which they acquire skills and learn concepts related to management and leadership. For example, executive succession planning, a process of creating formal plans for determining who is to be promoted into senior positions in organizations, often requires designated individuals to complete a series of

internal or external training courses to prepare them to assume specific leadership roles in the future.

In the last twenty years, however, another quite different perspective of executive development has emerged. This view suggests that leadership is largely a factor of experiences which executives have while on the job. This view is supported by studies that show that 70% of executive development takes place as a result of on-the-job experiences, while formal training accounts for less than 10% (Robinson & Wick, 1992). According to this view, on-the-job experiences present opportunities for individuals to gain skills and knowledge to enhance their leadership potential.

The notion that executives learn from on-the-job experiences is especially appropriate in light of today's highly turbulent business environment. First, organizations are struggling to respond to an increasingly global economy and to deal with rapid change, uncertainty, and complexity. Organizational structures have changed and as a result leadership is becoming increasingly distributed throughout the organization. This is especially true within the context of total quality management (Barry, 1991; Patten, 1991). Therefore, all organizations (and especially those operating within the context of total quality management) must move from a paradigm of leadership which places emphasis on techniques of control and analysis to an emphasis on the process of continual interpretation (Vicere, 1991).

Within this shifting paradigm, whatever executives may learn in a formal training program may quickly become out-of-date. Consequently, it is the skill of learning itself which is most useful to executives in today's business environment. In essence, learning from experience is key to the notion of a learning organization -- an organization which can gather input from the environment, can respond quickly and appropriately to change, and can redesign itself to maximize its ability to work toward organizational goals.

These views of executive development are not mutually exclusive; in practice, organizations may reflect overlapping perspectives. For example, an organization may sponsor senior executives in a course of study in an internal or external training program or a graduate school of business. Attendance at such a program may be expected to build further on the executives' innate abilities, particularly their intellectual skills. However, such programs may also provide individuals with opportunities to learn critical concepts regarding management and leadership while at the same time offering opportunities for reflection on previous on-the-job experiences. So the view that learning from experience is critical to executive development is not meant to exclude the other views, but rather to give greater weight to one perspective of executive development which is especially appropriate given the challenges presented by today's turbulent business environment. This

final perspective, that executive development results from learning from on-the-job experiences, forms the foundation of the current study.

Executive Development and Learning from On-the-Job Experience

The notion that on-the-job experience contributes to executive development has its historical basis in the fields of experiential learning and adult learning theory, particularly the notion that adults learn best from experience. The role of experience in adult learning was highlighted in the research literature early in the twentieth century (Dewey, 1938; James, 1931; Whitehead, 1929). By the mid-twentieth century, the role of experience in how adults learn came to be a foundation of an emerging body of literature on adult learning theory (Cross, 1981; Knowles, 1984; Tough, 1971, 1982).

Both Tough (1971, 1982) and Knowles (1984) focused on the self-directed nature of adult learning. Tough (1971) described the self-directed learning projects of adults who were seeking to develop specific knowledge or skills. In a later work, Tough (1982) reported the results of interviews with 330 men and women in which they described the choices they had made concerning their pursuit of self-directed learning projects. In describing what he called intentional changes, Tough emphasized the planning skills needed by adults who are seeking to manage their own learning. Preparing oneself

for a new role or position by undertaking formal or informal learning activities would be one example of an intentional change as described by Tough.

Similarly, Knowles' (1984) theory of andragogical learning emphasized the view that adults have a psychological need to be perceived by others as being self-directed in their learning. Knowles suggested that adults are internally motivated to seek opportunities to learn. This internal motivation, coupled with the cumulative nature of adult learning, provides an "expanding reservoir of experience" (p. 46) which allows the adult learner to serve as an increasingly rich resource for his or her own learning.

Cross (1981) and Jarvis (1992) added to the adult learning theory literature by emphasizing the discomfort that may be a part of learning. Just as Tough and Knowles did earlier, Cross viewed adult learners as planning and managing their own learning experiences. However, Cross wrote more directly of the need to create "motivation for learning through making the learner uncomfortable in her present assumptions" (p. 240). This is congruent with Jarvis' (1992) view that learning is a paradox of being human. Jarvis was referring to the paradox that we must be ignorant in order to learn and yet we must learn in order to grow and develop. Both Cross and Jarvis suggested that learners begin to feel uncomfortable when they first realize that their current level of knowledge is inadequate to enable them to

meet their goals. One situation in which this might occur would be when an executive is about to undertake a new work role, particularly during a time of great organizational change.

Other researchers (Argyris, 1982; Knox, 1977) agreed that learning is a necessity during times of job transition. For example, Argyris (1982) proposed the view that managers at times must design their own jobs and undertake them however they deem will be most effective. By this, Argyris meant that managers can no longer refer to a clearly defined job description in order to determine how to carry our their job duties. Instead, managers have to engage in a cycle of taking action, reflecting, and learning. The complexity of managerial work requires that managers must become more proactive in determining what their jobs require and in deciding how best to accomplish their tasks and responsibilities. In this sense, work provides opportunities for experiential learning as a basis for both personal and professional growth. Similarly, Knox (1977) suggested that adults learn continually and informally as a response to life changes, including work-role changes. All of these changes require that the individual learn new skills. However, this is especially true when the new role is not yet fully developed and when there are few standards or precedents for effective performance in the role.

Events-Based Research on Executive Development

Early Research on Critical Events and Lessons Learned

In the early 1970s, the literature on executive development began to encompass this notion of learning from experience, focusing for the first time on how executives learn from specific critical events while on the job. At that time, a study was conducted which involved interviews with 109 chief executive officers (Copeman, 1971). These executives were asked to describe events which contributed to the development of specific leadership skills. In response, many of the executives identified important job-related events. The events reported by executives in Copeman's study were not analyzed or categorized. Nevertheless, this study is important in that it sets a precedent for looking at critical events as learning experiences which contribute to executive development.

About this same time, a major study of executive development which is based on assessment center technology was conducted (Bray, Campbell, & Grant, 1974). This study suggests that early on-the-job experiences contribute to the future success of executives. Among other findings of this study is the observation that companies provide challenging opportunities to individuals, often early in their careers, in order to enhance long-term executive growth.

A longitudinal follow-up to this study confirmed that experiencing challenge while on the job is an important factor in executive development and resulting career advancement (Bray & Howard, 1983). This study, which was also based on assessment centers, assessed young managers early in their careers and then predicted their performance using rate of promotion as a measure of effective job performance. This study found that those young managers who have received lower assessments (i.e., those who are determined to have lower levels of the skills and attributes needed for promotion) are still more often promoted than managers with higher assessments if they are given the opportunity to take on more challenging assignments. This study confirmed that on-the-job experience contributes significantly to long-term executive development.

From the mid-1970s to the mid-1980s, research in executive development began to focus even more on the role of on-the-job experience in executive learning. In general, the approach used in the studies which appeared in the research literature during this time period typically involved asking executives to provide verbal or written self-reports of their recollection of critical events in their work lives. However, there was still no systematic body of research literature which sought to determine specifically which developmental experiences were most important to executive development (McCauley, 1986). Until the mid-1980s, most research focused

on the end product of executive development, that is, what a successful executive is like, rather than how he or she got to be that way.

From the mid-1980s until the present, there has been a significant theme in the research literature which clearly relates executive development to the process of learning from on-the-job experience. For example, Wolf (1983) conducted a study of the relationship between career advancement in the public service sector and on-the-job experience. Wolf's findings indicated that developmental assignments are opportunities for executives to build on their interests and to develop their skills. Along these same lines, Davies and Easterby-Smith (1984) used an events-based approach to gather reflections on the development of sixty British executives. The findings of this study indicated that executives often attribute their development to critical events, especially events that required coping with new situations. However, neither Wolf nor Davies and Easterby-Smith sought to directly relate their findings to any measures of executive effectiveness.

Akin (1987) also concluded that research on executive development must go beyond simply identifying the knowledge, skills, and attitudes that contribute to effective leadership and should instead investigate how those can be learned. To accomplish this goal, Akin suggested looking at specific learning experiences of leaders to discover themes in how executives learn and develop. Akin's research revealed a wide variety of learning experiences

and associated learning themes. Akin defined seven major learning themes: emulation of a mentor, role taking, practical accomplishment, validation, anticipation, personal growth, and scientific learning. These learning themes are significant in that they focus on how the managers learn, rather than simply on what they learn. Along these same lines, Moulton and Fickel (1993) strongly supported the view that on-the-job experiences are crucial to executive development. However, these investigators also suggested that such experiences must be meaningful. In other words, the experiences must provide rich opportunities to learn from challenging experiences within a dynamic organizational environment.

Kelleher, Finestone, and Lowy (1986) sought to determine the differences between those managers who have a high degree of on-the-job learning and those with a low degree of on-the-job learning. The subjects for this study were 43 middle managers and senior professionals enrolled in a formal management development program. Interviews, observations, and informal communications were used to gather data from these individuals. This study found that high learners reported more opportunities to learn while on the job. The high learners were also more people-oriented in their leadership style than were the low learners.

Two broad themes emerged in relation to the degree of on-the-job learning found in the managers in the Kelleher et al. (1986) study. These

were the themes of change and people. The theme of change had to do primarily with improvisation and policy as well as with having the need and the opportunity to learn while on the job. The second theme, that of people, had to do with choosing more people-oriented leadership roles, managing subordinates, and simply focusing more on the people aspect of organizational culture. The findings of this study are congruent with what is known about total quality management, that is, that it is a culture change. It also fits with what is known more specifically about leadership and total quality management, that leading within the context of TQM involves a strong emphasis on participation, cross-functional communication, and shared decision-making.

Center for Creative Leadership's Studies
on Critical Events and Lessons Learned

In the 1980s, the Center for Creative Leadership (CCL) in Greensboro, North Carolina, sponsored a series of research studies which used an events-based approach to investigate executive development. The broad purpose of all of these studies was to gather data on how executives learn, change, and grow. The first of these studies (Lindsey, Homes, & McCall, 1987) started as a cooperative research effort involving direct interviews with 86 executives from three Fortune 100 corporations. This

study was designed to monitor the progress of executives who were considered to be successful in their companies. White and Lombardo (1986) summed up the strategy used in this initial study simply as follows, "to elicit the exceptional remembrances of an exceptional group to see what implications these events had for the development of managerial talent" (p.6).

To collect data in this study, the investigators used in-depth interviews with executives, as well as interviews with their associates, with other senior managers, and other knowledgeable insiders within their corporations. The interviews focused on critical events which had led to important learnings for the targeted executives. A follow-up investigation (McCall, Lombardo, & Morrison, 1988) expanded the scope of the initial study (Lindsey et al., 1987). This expanded investigation utilized the same focusing question regarding critical events, but data were gathered through open-ended questionnaires. These questionnaires were sent to about 300 executives in three additional companies. The executives were from a range of performance levels. One hundred and five of the executives from this sample of 300 were then identified as high performers. Next, the data from these 105 high-performing executives were combined with data from the 86 executives who had been interviewed for the initial study.

By combining data from the McCall et al. study (1988) with that from the Lindsey et al. study (1987), researchers created a large pool of data on critical events and lessons learned and the relationship of these to executive development. The data collected through interviews with and open-ended questionnaires from a total of 191 high-performing managers yielded a raw data pool of 616 descriptions of critical events and 1,547 descriptions of lessons learned from those events. This pool of data has been analyzed in various ways and by several different teams of researchers (Lindsey et al., 1987; McCall et al., 1988; Van Velsor & Hughes, 1990). Ultimately, consensus was reached on the following framework. First, five broad categories of critical events were identified: setting the stage, leading by persuasion, leading on line, when other people matter, and hardships. Setting the stage refers to job challenges encountered early in one's career. Leading by persuasion focuses primarily on getting others in the organization to do things that they don't have to do or perhaps don't want to do. Leading on line refers to line assignments such as starting a business from scratch or fixing a business (or unit) which is in trouble. When other people matter is a category for events which feature a specific person such as a boss or a mentor. Finally, the category labelled hardships comprises overcoming difficulties such as personal trauma involving one's health or a career

setback. These five categories were derived from a total of sixteen discrete types of critical events (see Appendix B).

Secondly, five broad themes of lessons learned were also identified: setting and implementing agendas, handling relationships, basic values, executive temperament, and personal awareness. The theme of setting and implementing agendas involves a range of technical and problem-solving skills. The broad theme labelled handling relationships comprises quite a wide variety of interpersonal skills. Basic values refers to lessons which reflect an appreciation of management values. Executive temperament covers lessons such as toughness, self-confidence, and perseverance. Finally, the lessons which were grouped into the final theme of personal awareness had to do with issues such as balance between work and personal life, recognizing personal limits, and seizing opportunities in one's career. These five lesson themes encompassed a total of 31 separate lessons that executives believed they had gleaned from the critical events (see Appendix C).

There were only 2 women among the total of 191 high-performing managers. Consequently, another study (Morrison, White, & Van Velsor, 1987) was carried out with 76 additional women from 25 corporations. This study, which utilized face-to-face interviews, led to the reanalysis of data from the earlier studies (Van Velsor & Hughes, 1990) in order to differentiate more clearly between the critical events and lessons learned

identified by high-potential female executives and those identified by high-potential male executives. Most important, women reported a relatively greater proportion of lessons coming from events which could be categorized as hardships and those which involved learning from other people. In contrast, men were more likely to report a greater proportion of lessons stemming from events which were linked to challenging assignments (or the categories of setting the stage, leading by persuasion, and leading on line).

Also, while men and women reported many of the same lessons being derived from critical events (lessons such as setting and implementing agendas and handling relationships), some differences did appear. For example, men were more likely to cite lessons related to executive temperament (such as perseverance), while women were more likely to cite lessons related to personal awareness. These differences are of interest in that they suggest that men and women may benefit in different ways or to a different extent from various on-the-job experiences. This finding has implications for both individual executive development planning and for broader training and development program planning within corporations.

In sum, the initial CCL study (Lindsey et al., 1987) on the relationship of critical events and lessons learned to executive development has evolved into a multi-year project on executive learning and change. This series of CCL studies (McCall et al., 1988; Morrison et al., 1987; Van Velsor

& Hughes, 1990) now encompasses more than 400 executives, representing more than 30 Fortune 500 corporations. The broad conclusion of all of these studies is that executive development is more than a matter of innate ability. Specifically, these studies support the perspective that executive development results from critical events experienced on the job and that useful lessons may be gleaned from those events. Furthermore, some critical events are more likely to be associated with executive development than other events, and some lessons are more likely to be associated with some critical events than others.

Related Research on Critical Events and Lessons Learned

Since 1988, other investigators have replicated CCL's research on how executives learn from experience, applying this approach to executives operating within particular contexts and environments. For example, Little (1991) used an events-based approach to investigate executive development within the public sector. Little's study focused on a specific population -- women in the Senior Executive Service of the federal government. Seventy-eight career women participated in this study. Little found that the critical events identified by these women could be classified into the same broad

categories identified in the CCL studies which also focused on women (Morrison et al., 1987).

In comparing the findings of these two studies, it was found that relatively more events were placed in the assignments category by the women in the Senior Executive Service (Little, 1991) than by the women in the CCL study (Morrison et al., 1987). Also, the hardships noted by the women in the Senior Executive Service were more likely to be changing jobs, career setbacks, and employee performance problems. The lessons learned included many of the ones which had been identified in the CCL study on female executives. However, the female executives in the Senior Executive Service identified these additional lessons: how government works, technical skills, sensitivity to the human side of management, coping with ambiguous situations, developing other people, and management models. These findings are relevant to the current study in that they indicate that even though the same general themes emerged in both studies of female executives, there are also aspects of the findings which reflect the particular context in which the female executives worked (in this case, the public service).

Emrich (1991) again replicated the CCL studies (Lindsey et al., 1987; McCall et al., 1988) in a study of developmental experiences of 46 executives (both male and female) from selected federal government agencies. The executives in this study reported that they perceived certain critical events as

unique learning opportunities and as a complement to (rather than a substitute for) other training and development activities. These critical events were developmental experiences the executives selected based on their perceptions of their own developmental needs. The experiences were intentionally undertaken in order to expand the executives' capabilities by broadening their background and addressing skill or knowledge deficits.

Emrich's study also reflected the particular context of the respondents. They were senior-level federal government agency employees undertaking individualized short-term developmental assignments and their responses reflected relatively greater emphasis on project-related assignments. Also, these executives found particular value in critical events that required them to perform complex tasks in unfamiliar situations. This study revealed a wider range of developmental experiences than had been uncovered in previous studies. The experiences varied in duration (from one week to 30 months) as well as in the setting (domestic and international placements in both government agencies and public organizations as well as in the private sector). Examples of specific critical events identified by the executives in this study as contributing to their development included acting as an internal consultant on special projects, serving on a task force, and serving as a special assistant to a more senior executive. The executives in this study identified lessons which fit into these categories: longer-term or

higher level perspectives, greater knowledge of their own interests and abilities, greater knowledge of executives and their work, increased understanding of the needs and concerns of other groups, and greater understanding of organizational systems.

Valerio (1990) also replicated the CCL study using managers drawn from a single company. At the time of her study, Valerio was employed by New York Telephone. Consequently, she had a practical interest in conducting this investigation. Valerio was interested in using the results of her study for the redesign of the company's management development curriculum. The findings of this study were not noticeably different from the findings of previous studies using a similar approach. However, as a direct result of this study, New York Telephone revised its internal development program to include increased emphasis on lateral movement for development purposes and special programs to provide specialized developmental experiences for females and minority managers. This study is relevant to the current study in that it illustrates how research using an events-based approach to executive development can have immediate, practical application within a corporate setting.

Little (1991), Emrich (1991), and Valerio (1990) all utilized an events-based approach to executive development, but each of these investigators applied this approach in varied settings and with diverse

populations. The current study is similar in that it will again utilize an events-based approach to executive development. However, the target group to be included in the current study will be total quality leaders who represent companies with exemplary total quality efforts.

Only two studies, both completed but not yet published, have utilized an events-based approach to the study of total quality leaders. The first of these is the study by Bryan and Coine (1991). This study included interviews with 14 quality leaders who were considered to be superior performers. The study focused only on the high points and low points in the executives' careers, rather than addressing the broader range of on-the-job learning experiences. While this study did gather factual data on the critical events which executives saw as being related to their success as total quality leaders, it failed to take the interpretation a step further and explore what meaning or lessons learned the leaders might attribute to these critical events.

A second study (Lewis, 1993) explored the personal experiences of total quality leaders working within a high technology environment, within a single Fortune 500 corporation. This study investigated trigger events that these leaders believed had increased their commitment to continuous quality improvement. To gather information on these trigger events, a questionnaire was sent to 112 managers. The questionnaire was followed by in-depth interviews with eight leaders who were identified as exemplifying high levels

of commitment to total quality management. This study found that supervisors and middle managers can facilitate the changes in organizational culture which are part of total quality management, even in the face of lack of top management support. This finding was particularly interesting in that it emphasized the power that middle managers have to influence the success of TQM directly. It is also especially relevant to the current study in that it is the only study to date which has sought to gather information directly from total quality leaders on their personal experiences and the meaning or lessons learned that they attribute to those experiences in relation to their role in their companies' quality efforts.

Linking Events-Based Research to Total Quality Management

What then has been learned about executive development during the past 20 years as a result of research on critical events and lessons learned? And, of particular relevance to the current study, how can this research lead us to make some conclusions about total quality leaders? First, these studies have confirmed that on-the-job experiences do indeed contribute to the future success of executives. Also, this research suggests that not all experiences are equal. That is, some experiences provide more developmental potential than others. Also, while there is a fair degree of

consistency in the types of events and lessons learned which have been cited by respondents across these various studies, it is also true that the context within which an executive works may influence both the type of event that he or she finds to be most useful and the specific lessons that he or she gleans from those events. Furthermore, there are other differences, such as the gender of the respondents, that may effect the findings of studies on critical events and lessons learned. Finally, this research has been shown to have immediate, practical application in corporate settings.

All of these factors lead us to the notion of utilizing a critical event methodology to study total quality leaders. These individuals are first and foremost executives, so it is appropriate to study their development using methods that have a rich history in the field of executive development. However, total quality leaders operate within a specific context, i.e., within an environment which is defined and shaped by total quality management. Research which utilizes a critical incident methodology has been shown to be sensitive to contextual factors. Finally, as the need for total quality leaders grows, so does the need for research which can be immediately applied in a practical way within a corporate setting.

Therefore, the current study builds directly on previous research on executive development while at the same time it focuses particular attention on executives who are responsible for total quality management. In addition,

the current study follows precedents in the research literature for particularly attending to those executives who are believed to be high-potential or outstanding. In order to reflect these emphases, the research questions for the current study are as follows: (a) What critical events do leaders of exemplary quality efforts believe have contributed most significantly to their effectiveness as total quality leaders? and (b) What specific lessons have these individuals learned from these critical events? These research questions are consistent with the theoretical rationale that critical events do lead to learning on the part of executives and that leading within the context of total quality management may be somewhat different that leading within other contexts.

Summary

This literature review attempted to bring together two strands of research -- that on total quality management and that on executive development. The topics included were the history of total quality management, the growing importance of the Malcolm Baldrige National Quality Award, research on total quality management, and leadership within the context of total quality. Within the area of executive development, there was a broad overview of several differing perspectives of executive development. Particular attention was paid to research which supports the

link between on-the-job experience and executive development. Specific research was cited which sought to determine those critical events which executives report have enabled them to learn, change, and grow. The role of the Center for Creative Leadership in pioneering and furthering this approach to research on executive development was particularly highlighted.

III. METHODOLOGY

This research effort utilized a qualitative approach to explore leadership within the context of total quality management. In this study, an established qualitative research process, critical event methodology, was applied to a specific population of leaders which the literature suggests may have a somewhat different role than that of leaders in other contexts. The respondents in the study were executives who have led exemplary total quality management efforts. By answering open-ended interview questions, these respondents provided data on critical experiences that they believe have contributed to their effectiveness as total quality leaders and the lessons they learned from those experiences.

Subjects

The strategy of extreme sampling was used in this study. That is, the type of sampling used involved cases representing outstanding successes (Patton, 1990). The value of using exceptional people as research subjects was established by Maslow (1970). Peters and Waterman's (1982) study, In Search of Excellence, is a recent well-known example of extreme sampling. Just as Peters and Waterman intended their sample only to be illustrative of highly successful United States companies, the sample used for the current

study was designed only to be illustrative of individuals who lead exemplary total quality management efforts. It is not intended to provide information on leadership in general, but on outstanding leadership within the context of quality.

Consequently, the respondents were a relatively small, select group of influential persons. This is important to specify at the outset because within qualitative research, issues of sampling reliability and generalizability are not as critical in studies based on extreme sampling. This view is based on the notion that participants drawn from an extreme sample may in fact constitute a consensus of the target population (Goldman & McDonald, 1987).
The subjects in this study all had been leaders of exemplary quality efforts. Specifically, the subjects were all executives who have led total quality management efforts in the 19 companies that have won the Malcolm Baldrige National Quality Award (MBNQA) during the years 1988 to 1993.

Attempts were made to contact all 19 potential respondents. Only 12 were successfully contacted. (Six of the remaining 7 potential respondents had assumed responsibility for other roles within their companies; one was deceased.) Of the 12 potential respondents who were successfully contacted, 10 agreed to participate. Of these 10, 9 are still in the same companies; 6 of these 9 are still total quality leaders. In other words, their positions have not changed. Three additional respondents have moved on to other senior

executive positions within the same companies. The tenth and final respondent recently left the company in which he had been a total quality leader to become an examiner for the Malcolm Baldrige National Quality Award and a consultant to companies applying for the MBNQA.

There was no way to determine before the start of this study how many total quality leaders who were invited to participate in this study would be willing to do so. However, the care given to the selection of participants, data collection, and data analysis contributed more directly to the validity and meaningfulness of the data than the sample size. In the words of a respected qualitative researcher (McCracken, 1988):

> It is more important to work longer, and with greater care, with a few people, than more superficially with many of them. For many research projects, 8 respondents will be perfectly sufficient. (p.17)

Interview Protocol

This study involved open-ended interviews, conducted by telephone by the principal investigator. An interview guide was utilized to insure that the same questions were presented in about the same order to each respondent (see Appendix D). A practice interview was conducted prior to the start of the study so that the wording and flow of the questions in the interview guide could be edited and improved.

The format for the interview followed guidelines suggested by previous researchers (Lincoln & Guba, 1985; Spradley, 1979). Specifically, the interview proceeded from broad background questions, designed primarily to establish rapport, to more focused questions requiring personal reflection and detailed responses. At the beginning of each interview, the principal investigator reiterated the broad purpose of the study. Specifically, the respondent was reminded that the focus of the interview would be on those experiences which the respondent felt had contributed to his effectiveness as a leader of an exemplary quality effort. The respondent was also reminded of how much time had been scheduled for the interview and the respondent was assured again of confidentiality. At that point in each interview, the interviewer (principal investigator) asked the respondent's permission to tape record the interview. A tape recorder which was connected directly to the telephone line was switched on only after that verbal permission to record the interview had been granted by the respondent.

The initial interview questions were background questions which elicited information on each respondent's career history and his role in leading his company's quality effort at the time the company applied for and won the Malcolm Baldrige National Quality Award. These questions were designed to establish rapport and to provide a context for the description of

the critical events. Next, each respondent was asked to provide detailed accounts of critical events which he believed had contributed to his effectiveness as a leader of total quality management. The respondent was then asked to describe the lessons which he had learned from these critical events. Follow-up questions, or probes, were used to encourage the respondent to expand upon his initial description of critical events and lessons learned. After the respondent had answered those questions, the principal investigator described in general terms how the data would be compiled and classified. The principal investigator closed the interview by reminding the respondent that he would be receiving a copy of highlights of the findings of the study.

Procedures

Potential respondents were contacted first by letter (see Appendix E). This letter stated the purpose of the research effort and provided relevant information about the principal investigator. A copy of the primary research questions also accompanied the letter to potential respondents (see Appendix F). This gave the respondents time to reflect on their answers to the main questions to be asked during the interview.

In most cases, a telephone call was placed to each respondent about one week after the receipt of the letter. The purpose of this call was to give

the potential respondent an opportunity to ask any questions he or she might have had about the research study, to gain the respondent's verbal agreement to participate in this study, and to set a specific date and time for the telephone interview. Interviews were scheduled to take place within two weeks of this telephone conversation with the respondent.

Four criteria were used to determine when to stop collecting data in this research study (Guba, 1978). The first criterion used to determine whether enough data had been gathered was saturation of categories. This criterion would have been met if it were found that collecting additional data (e.g., conducting additional interviews) produced only tiny increments of new information relative to the time and energy expended to gather the information. A second criterion used to determine when to stop data collection was the emergence of regularities in the data. This criterion would have been met if there were a sense that the emerging themes were more similar than dissimilar. A third criterion used was overextension. This criterion would have been met if the new information seemed to be far away from the categories which had been emerging in the data.

To ascertain whether the first, second, or third criterion was being met, it was necessary for the principal investigator in this study to engage in ongoing analysis of the data. If, during this ongoing analysis, the principal investigator had determined that one or more of these criteria had been met,

then the collection of data would have ended. Because none of these criteria was met during the ongoing data analysis, then the data collection process continued until all of the potential respondents had been contacted and all of those who were willing to participate had been interviewed. Therefore, data collection continued until exhaustion of resources occurred.

Data Analysis

The interviews were recorded on audiocassettes and then transcribed in their entirety. A personal computer was used to assist with text management. WordPerfect 5.1, word-processing software designed for use on a personal computer, was used for basic text input, editing, and sorting of data. First, the transcripts of all of the interviews were manually sorted into broad categories of emerging themes and highlighting pens were used to mark emerging themes in the data. These categories were developed inductively by the principal investigator as part of the ongoing data analysis, without reference to any previously published frameworks or models. Next, number and letter codes for these emerging categories were developed and these were inserted into the disk copies of the interview transcripts. These number and letter codes allowed the data to be sorted and resorted multiple times according to various emerging themes. Then, the lessons learned from each critical event were also categorized, coded, sorted, and resorted through

a similar inductive process. This process of categorizing and coding data gathered during open-ended interviews has been used previously by numerous well-known qualitative researchers, including Glaser and Strauss (1967), Miles and Huberman (1984), and Taylor and Bogden (1984).

The coded data were tabulated to determine the relative importance of each of the event categories and each of the lesson themes. These tabulations were used to answer the two research questions posed by the current study, (a) What critical events do leaders of exemplary quality efforts believe have contributed most significantly to their effectiveness as total quality leaders? and (b) What specific lessons have these individuals learned from these critical events? In addition, event-by-lesson matrices were created. These matrices were used as a tool to enable the principal researcher to begin to explore the emerging patterns regarding the relationship of each of the lesson themes to each of the categories of critical events. The matrices were not viewed as a final empirical analysis; rather, the principal researcher re-read the interview transcripts in their entirety and used additional intuitive reasoning before reaching final conclusions regarding the relationship between the critical events and the lesson themes.

The bulk of the report of the data from this study was in the form of brief excerpts from the interview transcripts. This method of reporting the findings from a qualitative study has been recommended as being

appropriate and even necessary in order to retain the rich, subjective nature of qualitative data (McCall, Lombardo, & White, 1985). In the case of critical events and lesson themes, the information was reported in order of decreasing importance, based on the frequency of events in each category and the frequency of lessons learned in each lesson theme.

During the course of this study, the principal investigator held periodic discussions with two individuals who were not involved in the data collection process. One of these individuals is an experienced researcher from the Center for Creative Leadership who has been involved in the design and analysis of earlier CCL studies on executive development, including studies utilizing critical event methodology. The second individual is a senior quality executive in a major manufacturing firm who has extensive practical experience in the implementation of total quality management. These discussions provided valuable opportunities for the principal investigator in this study to articulate and validate emerging themes in the data.

In addition, the transcripts of two of the interviews and the analysis of the critical events and lessons identified in those interviews were returned to the respective respondents for their review. These respondents were asked to comment on both the accuracy of the transcription process and on their perceptions of the validity of the emerging analysis of critical events and

lessons learned. These two steps, utilizing individuals outside of the data collection process for reflection and feedback and involving respondents in checking and validating the data, were intended to enhance the validity of this research effort (White & Lombardo, 1986).

Summary

This was a qualitative research study which utilized critical event methodology. In this study, the principal investigator conducted open-ended interviews by telephone with executives who have led award-winning total quality management efforts. All of the companies represented by these leaders have been winners of the Malcolm Baldrige National Quality Award during the years 1988 to 1993. Furthermore, the individuals who participated in the study were leaders of their companies' quality efforts at the time those companies received the Malcolm Baldrige National Quality Award.

The interviews were designed to elicit the critical events which these executives believe have contributed to the development of their effectiveness as leaders, particularly as leaders of exemplary quality efforts. The data gathered also included the lessons which these leaders believed they learned from these critical events. The transcripts from these telephone interviews were transcribed and analyzed for emerging themes, then categorized and coded.

IV. PRESENTATION OF FINDINGS

This chapter presents the findings of this study. First, general information is provided on the respondents, including their educational backgrounds, their positions, and the companies they represent. This is followed by a detailed discussion of the categories of critical events which were described by the respondents as having contributed to their effectiveness as total quality leaders. Similarly, the themes of lessons learned from these events are also reported. Finally, there is a discussion of the relationship between critical events and the lessons learned. In the discussions of critical events, of lessons learned, and of the relationship between the two, the respondents' own words are used as much as possible, in order to preserve the richness of this qualitative data.

Description of Respondents

In recruiting subjects for this research study, every effort was made to identify and to contact individuals who fit the description of having been the most senior quality professional in the company at the time that the company won the MBNQA. This criterion was strictly adhered to. Ten of the 19 individuals who were asked to participate in this study agreed to do so. All of these were male. Of these 10 respondents, 6 are still total quality leaders

in their respective companies. Three other respondents have been promoted to other senior management positions within their companies. The final respondent has recently left his role as a total quality leader to become a fulltime consultant to companies pursuing the Malcolm Baldrige National Quality Award.

Most of the respondents had worked for their respective companies for at least 10 years before being promoted to a position in which they had responsibility for total quality management (TQM). One respondent has worked for his company for more than 35 years. He had moved literally from sweeping floors (during high school) to becoming Vice President of Quality, with tenure in a variety of company functional areas along the way. In contrast, one respondent was hired by his company specifically because of his background in total quality. He came to the company as a Corporate Director of Quality and was immediately responsible for designing and implementing that company's TQM effort. Under his leadership, his company won the MBNQA only three years later.

Although each of these individuals could be described as a total quality leader at the time that his company won the MBNQA, their official titles were varied, such as Director of Quality Planning, Director of Market-Driven Quality, and Vice President of Quality. In spite of the variation in titles, each of these individuals had been the most senior professional in his

respective company at the time that the company won the MBNQA. Most also shared responsibility for quality with an executive team, quality council, or a similar decision-making body.

Their academic backgrounds were also varied. Most of the respondents had earned an undergraduate degree in a technical field and had received additional training in business or management. More than half had undergraduate degrees in engineering, including mechanical, electrical, and textile engineering. One had an undergraduate degree in math and another had an undergraduate degree in economics. Several respondents also had master's degrees, one in computer science, one in industrial engineering, and one in business administration. One respondent had earned a doctoral degree in material science.

Description of the Companies Represented by the Respondents

One respondent represented a company which had won the award in 1988, the first year that the MBNQA was given. Similarly, there was one respondent each representing companies which had won the award in 1989 and 1990. Three respondents represented companies which won the award in 1991, three respondents represented companies which won the award in

1992, and one respondent represented a company which won the award in 1993.

All of these companies are recognized as leaders in their respective industries. For example, one company represented by a respondent in this study manufactures and markets over 400 chemicals, fibers, and plastics for 7,000 customers around the world. It is now the 10th largest chemical company in sales in the United States and 34th largest in the world, with annual sales of $4 billion. Another company is the largest maker of transmission equipment for telecommunication networks in the United States. Yet another organization is a major textile manufacturer which produces more than 48,000 different textile chemical products. Annual sales are more than $1 billion. The only service organization represented by a respondent in this study is a hotel chain operating 25 luxury business and resort hotels in the United States and Australia. This hotel chain has 9 international sales offices and employs 11,500 people.

It is significant to note that the leadership which these individuals brought to their companies and to their efforts to implement total quality management resulted in more than the winning of a single, albeit prestigious, award. The outstanding nature of these quality efforts is supported by quantifiable, bottom-line results. For example, one respondent helped his company to improve its productivity by 30% in just three years. Another

respondent led a quality program which enabled his company to trim its manufacturing cycle by 60%, lower the cost of its products, and increase its product warranty period from 3 to 12 months. During another respondent's tenure as total quality leader in his organization, that company experienced a 91% reduction in customer complaints (American Society for Quality Control, 1993).

Furthermore, most of these companies have won numerous quality awards in addition to the Malcolm Baldrige National Quality Award. One company received 41 major customer quality awards in the first five years of its quality effort. Another company won Japan's prestigious Shingo Prize for Manufacturing Excellence, as well as the United States Senate's Productivity Award and the Quality Cup of the Rochester Institute of Technology. Yet another company received more than 120 other quality-related awards during the year that it also received the Malcolm Baldrige National Quality Award. All of these examples of accomplishments in the area of quality are provided as a support to the claim that under the leadership of these respondents, these companies had exemplary quality efforts.

Categories of Critical Events

The first research question to be answered by this study was, what critical events do leaders of exemplary quality efforts believe have

contributed most significantly to their effectiveness as total quality leaders? The data needed to answer this question was provided by the respondents in the form of stories or vignettes. Each description of a critical event included when the critical event took place, who the key people involved were, what the respondent's role was in the critical event, and other background information. Most of the descriptions were lengthy and detailed, including not only the facts of the situation, but also the individual's emotional response to the event. Each event was ultimately assigned to a single event category for purposes of analysis.

A total of 35 critical events were reported by the 10 participants in this study. These critical events were divided into five major categories: challenging projects, role models, benchmarking, training/education, and feedback. Table 1 provides succinct descriptions of the critical events reported in this study, sorted by category, in decreasing order of frequency. Only one of the 35 events did not fit into any of these five major categories.

It is important to note that the respondents' descriptions of these critical events were examined in their entirety for purposes of data analysis. That is, the events were assigned to event categories based on consideration of the entire event description, including the context in which the event occurred. Once the primary thrust of the event description had been determined, each event was assigned to a single event category.

Table 1

Critical Events, By Category

1. Challenging Projects
    1. Used an innovative, team-centered approach to develop a new product.
    2. Directly involved manufacturing employees in redesigning a product.
    3. Solved a chronic problem with a mainframe computer system.
    4. Led company's efforts to implement quality in the midst of a strike.
    5. Redesigned and integrated systems to support quality efforts.
    6. Solved a problem for a major customer by bypassing company rules.
    7. Coordinated the company's effort to complete the MBNQA process.
    8. Independently completed the MBNQA award application.
    9. Gave series of international presentations representing quality function to peers.
    10. Successfully lobbied within company for quality leadership role.

2. Role Models
    1. Worked for person who modelled teamwork and empowerment.
    2. Worked for an individual who had a coaching style of management.
    3. Worked for an individual who was highly directed and controlling.

4. Watched CEO change his leadership style.

5. Watched CEO model commitment to continuous improvement.

6. Worked with a co-worker who shared insights on good leadership.

7. Observed executive team in a meeting as they committed to TQM.

8. As child, listened to mother talk about achieving up to ability.

9. As child, was taught by parents to be fair, to listen, and to value others.

10. Watched film of individual who was committed to continuous improvement.

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3. Benchmarking

1. Visited luxury hotels in the Far East.

2. Observed Japanese management and systems integration.

3. Visited Japan with top management team; observed alignment of systems.

4. Visited a customer's site to observe quality program.

5. Became examiner for the Malcolm Baldrige National Quality Award.

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4. Training/Education

1. Attended Deming seminar and observed red-bead experiment (first report).

2. Attended Deming seminar and observed red-bead experiment (second report).

3. Reviewed Deming seminar materials, including 13 principles of TQM.

4. Attended training with Juran.

5. Majored in electrical engineering in college.

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5. Feedback

1. Received feedback from employee regarding lack of trust.

2. Was confronted by employee about lack of communication.

3. Received feedback from a peer regarding lack of personal commitment.

4. Received feedback from customer regarding a quality audit.

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6. Other

1. As a child, worked in family's restaurant.

Table 2 summarizes the frequency of critical events in each category and the proportion of total events which are accounted for by each of the event categories. Note that the two largest categories are challenging projects and role models. These two categories account for more than half of the critical events reported by the respondents in this study. All of the event categories are discussed in the following sections, in the order shown in Table 2.

Challenging Projects

The largest category of critical events reported by the respondents in this study is challenging projects. All of the events which were placed in this category involved a unique task or activity which had definite beginning and ending points. That is, the event was more than a case of the individual's carrying out one of the continuing responsibilities of his position; the event was finite. Also, all of these events involved some element of challenge. In many of these events, the respondent was responsible for directing or coordinating the project.

In one description of a critical event which fit into this category, a respondent reported that he had used an innovative, team-centered approach to develop a new product within a tight timeframe. While it was a part of his continuing responsibilities as a programmer to develop new software

Table 2

Frequency and Percent of Total Events Assigned to Each of the Event Categories

Event Category	Frequency n = 35	Percent
Challenging Projects	10	29%
Role Models	10	29%
Benchmarking	5	14%
Training/Education	5	14%
Feedback	4	11%
Other	1	3%

systems for internal customers within the company, this special project arose in response to a customer's pressing need for a new piece of software. In the respondent's words:

> We said [to our supervisor], 'You don't understand. It can't be done, it just can't be done.' And the guy said, 'Well, see what you have to cut out to do it. But do what you can as soon as you can and come back and tell me what you can do.' So we went back again...we went back to our manager and said, 'You know, we can cut out some of the bells and whistles and some of the tests and what not and if you let the three of us do it as opposed to having to communicate with thousands and write documents and all that kind of stuff. If you let the three of us do it and work whatever hours we want to work, we think we can probably get it done in 5-6 weeks. And we did it, by the way, we actually did it.

This event presented a series of challenges. First, because the customer needed the new product as soon as possible, the respondent and his two co-workers had to be highly efficient in the development process. They responded by redefining the project, by scaling it down to minimal specifications. Then, the three of them worked together in an intense fashion, virtually in isolation, to complete the project within the especially tight timeframe which the customer required. This critical event, then, is an excellent example of a challenging project which presented the respondent with an opportunity for taking on a unique, finite task and for overcoming a number of obstacles or challenges in order to complete the task successfully.

In other critical events reported by respondents in this study, the challenge came not from an external constraint such as a tight timeframe, but from the internally imposed challenge of trying to develop a new process or to utilize an innovative approach. For example, another respondent described how he managed a project to redesign a product, and in doing so he chose to involve manufacturing employees directly:

> I was responsible for a project to design something and we had a bunch of engineers sitting in a room trying to figure out what to do to make [this product] easier to manufacture. I had this bright idea, "Why don't we go down to the factory floor and ask the people what would make it easier for them?' So everybody took two breaths and said, 'Wow, that is a good idea, you know.' And so I got the assignment to do that.

This respondent went on to explain how this project grew in scope and complexity over time and became a major event in his own career development. The challenge for him in this project was not to complete a new or unfamiliar task, but to complete a familiar task in a new way.

In a similar report, another respondent described how he solved a chronic problem with a mainframe computer system. This problem was creating relatively minor, but quite frequent, interruptions to his life both at work and at home, as well as to the flow of work within his unit. Typically, such projects were given low priority. An individual could only try to fit in the corrective redesign work around his other responsibilities. This respondent, however, described in detail how he convinced his superior to

allow him to take several weeks away from his daily management responsibilities to concentrate on solving this chronic problem. Like the previous example, the respondent's challenge here was to redefine the project and then carry it out in a way that had not been tried before.

Another challenging event reported by a respondent involved leading the company's efforts to implement quality in the midst of a strike. While implementing a total quality management effort is challenging in and of itself because it involves redirecting every facet of the organization to support quality, such an effort becomes far more difficult when environmental forces exert additional pressure on the organization and its leadership:

> ...A lot of people don't worry so much about training employees when they have got a whole group of people that have been there for 20-25 years. They all know what to do. But what if they all walk out someday?...That is what happened to us and then the emphasis [was] on trying to train the people [we'd] hired in off the streets. They [had] no idea what [we did]....[And] the environment [was] a very heavy duty, dirty, noisy, dangerous kind of industrial setting...People were actually crossing very violent picket lines to get into the plant to begin with...Our customers had to do the same thing...So that was a rough situation but there [was] a lot to be learned.

Two respondents specifically stated that the process of applying for the Malcolm Baldrige National Quality Award was a significant event in their professional development. Both of these individuals emphasized the fact that they felt challenged to learn about their company and to articulate this knowledge in the application process. One respondent, who worked for

a small manufacturing organization, completed the application independently, working intensely over a few days of time. The other respondent, working with a substantial budget and working over months of time, coordinated the receipt of input for the MBNQA application from a variety of subsystems within the organization. Therefore, the same critical event was experienced by two different respondents, but the event varied in scope and involved different challenges for each one.

Role Models

The second largest category of critical events reported by the respondents in this study is that of role models. Events placed in this category involved the respondent's observing an individual (or group of individuals) and then making a deliberate decision to model some aspect of another's behavior in his own leadership practices in the future. The nature of these observations varied greatly. In some cases, respondents had observed other individuals only once and yet those persons became role models. In another case, a respondent had observed a role model over years of time. There was also great diversity among the role models described by the respondents. Some were the respondents' immediate superiors or other senior executives, while others were co-workers. Some respondents also reported that they had modeled themselves after noted figures in the field of

total quality management. There were also reports of parents as role models and one respondent even found a role model in a film character.

Most often, respondents reported critical events with their immediate superiors as role models. For example, one respondent had worked for an individual who possessed several positive qualities that the respondent later assimilated into his own leadership style:

> ...It goes back to my early pre-management or first or second management assignment. And it is very simple in that during that time I worked for [a] manager,...I might even call [him] a leader, that I would say had specific positive...attributes. It enables me to sort of sit back and say what is it that you want to become when you grow up?...This was an individual who was not terribly technically qualified but yet was excellent in developing team relationships and empowering people to act on their capabilities and competencies. From that I sort of said, gee, I like working in this environment...wouldn't everyone?

This respondent had learned a great deal from working an individual who he considered to be a positive role model. This experience took place more than twenty years earlier, yet he still remembers it vividly even today. Similarly, another respondent had learned a great deal from the experience of working with another positive role model, an individual with a coaching style of management:

> At first, I didn't like his [management style] because he didn't seem to work hard enough; he wasn't busy enough doing. We discussed this difference in management style and it came to me immediately that he was leading and coaching rather than supervising the direct work of others. Compared with other

> managers he always seemed to have time for other people rather than not having the time because he was so involved with day-to-day activities. It came to me that this change of management style and priorities was at the heart of his professional success and the success of businesses he managed over the years.

Both of these descriptions are of immediate supervisors who served as positive role models. However, a respondent could also learn from a positive role model who was not his immediate superior, but rather who was another senior executive in the company. For example, one respondent described how powerfully he had been impressed by how the chief executive officer (CEO) of the company had been willing to change personally in order to support the move toward total quality management:

> [It] made a big impression in my mind...when [the CEO], 13 years ago, at the age of 65, having been the CEO for 40 years and being autocratic in his management style, stood up in front of us, the top 100 or so in the company, and said, 'Management is the problem.' That was significant in not so much that he stood up then, but [that] then he actually began to live it and to recognize that management is the problem. So the CEO had a profound understanding, a profound change in his management style and that was very significant.

Not all role models were positive, however. In contrast, another respondent felt that a significant event in his development had been the experience of working with an immediate superior who served as a negative role model. This role model was a highly directive and controlling

individual. Again, the respondent vividly remembered what it felt like to work in the environment that this individual had created:

> [I] worked for an individual who I thought was totally insensitive to the individual and to group relationships, but [who was] a very technically capable individual. And he sort of told you what to do and how to do it and when to do it. I sat there during most days saying maybe we are getting the job done, but not as well as I think I could do it if they gave me some freedom. So I said I'm never going to be like this.

Other critical events involving role models included childhood interactions with parents or more recent interactions with co-workers who espoused particular values which the respondents felt were congruent with their role as a total quality leader. One respondent even had taken a role model from a film. This film, Cheaper by the Dozen, produced in the early 1960s, was based on the life of Frank Gilbrath. Specifically, the film portrayed (in a somewhat humorous fashion) Gilbrath's attempts to organize the daily activities of his large family according to the pursuit of continuous improvement. In the film, there are numerous examples of Gilbrath's redesigning simple processes, such as shaving each morning, in order to be able to complete the tasks more efficiently. The respondent who saw this film stated that Gilbrath served as a role model to him in that he presented a "real-life example" of an individual who was fully committed to the pursuit of quality in all aspects of his life, not just his work life.

Role models, therefore, were cited as critical events by a number of respondents in this study. These role models varied, and the degree and type of interactions with they had with the respondent also varied. However, those respondents who described role models as contributing to their effectiveness as total quality leaders felt that the impact of these role models had been direct and strong. One of the respondents summed up the value of working with role models:

> ...If I look back I actually [can say] today that I am a mound of information probably of about twenty experiences with key leaders inside and outside [the company]. And sure, you bring some of your own personality to it, but I think role models are a big thing,...both positive and negative.

Benchmarking

The third most frequently cited category of critical events found in this study is benchmarking. Benchmarking is a term often used within the field of total quality management to refer to the process of evaluating a product, a process, or the company's overall performance through comparison with the products, processes, or performance of other companies. Within the field of total quality management, benchmarking is often used to set standards to which a company might aspire in its own TQM process.

Respondents reported a variety of events which involved benchmarking. One of the most dramatic of these events was reported by a respondent who works within the hotel industry:

> About five years ago, I was sent to the Far East...There, I had an opportunity to see a number of magnificent hotels. I was impressed with the appreciation of quality, quality of design, of service....I spent time in world-class hotels and that impressed me.

This respondent went on to say that now he brings a rich, mental image of world-class quality with him into his daily management of the quality effort of the chain of luxury hotels where he is now employed.

Similarly, two other respondents reported that their benchmarking of companies in Japan had had a significant impact on them. In one instance, the respondent had visited Japan with his company's top management team. While there, the team visited a number of leading Japanese firms. In the case of the second respondent, the benchmarking activity included an in-depth analysis of achievements of Japanese industry in the early 1980s. These experiences gave both respondents a sense of what was possible in American industry, in general, and in their respective companies, specifically. As one of these respondents stated:

> ...It just seemed to me that there was just no reason that we couldn't do the same thing the Japanese were doing from a quality standpoint.

Another respondent was invited to visit the facilities of one of his company's major corporate customers. While there, he had an opportunity to observe that company's quality program. He found this visit to be very useful, stating, "They really put me on the right track."

All of these respondents felt that their benchmarking activities had been of practical value to them in their role as total quality leaders. One respondent summed up the value of his benchmarking experiences with these words,

> I think just being that familiar with...the practices...of these companies...has probably given me everything I know just about, as far as what it takes to be successful in the quality area.

In essence, benchmarking provided respondents with opportunities to experience total quality management in different settings and to learn first-hand how other companies had solved a variety of problems associated with the implementation of TQM.

Training/Education

Several respondents also described their participation in workshops, seminars, or other educational experiences. These respondents focused most often on what they had gained from the technical training that preceded their companies' quality efforts. They specifically cited training in statistical

process control and training in the principles of quality as being useful in implementing a prevention-based quality effort.

Several of these events involved the respondents' attending lectures and demonstrations conducted by Dr. W. Edwards Deming or Dr. Joseph M. Juran, both noted experts in the field of total quality management. Specifically, two respondents watched Dr. Deming conduct his red-bead experiment in a seminar setting. In this experiment, Dr. Deming used a tray of colored beads to illustrate the principles of naturally occurring variation. The point of this experiment is to demonstrate that some variation is to be expected (for example, in an individual's performance or in a manufacturing process). Dr. Deming contended that it is a mistake to over-react to variation which occurs by chance. Rather, one must attend to and take steps to reduce variation which cannot be accounted for by chance. In essence, then, the red-bead experiment demonstrated elementary statistical concepts in a concrete manner.

One of the respondents who had watched Dr. Deming conduct the red-bead experiment eloquently described the impact this event had on him:

> I absolutely just sat there...and I think I was just stunned as I thought that through. And I did not sleep any that night in the hotel.

This respondent went on to describe the many changes that he had implemented within his company, particularly in the area of performance

appraisals, as a result of adopting the principles that he learned in that seminar. This respondent felt that he had been focusing too much on employees' mistakes and not enough on the goal of gradual improvement of performance over time. He summed up his overall experience in Dr. Deming's seminar, beginning with his observation of the red-bead experiment, as follows:

> Those [four days] really had an impact on me....That is an experience that I shall never forget. It really did touch me...[It] changed my life.

It is striking to note that these two respondents had observed the same demonstration, conducted by the same person, years apart and in different places, but that both felt that the event had had a profound, lasting impact on them. Interestingly, yet another respondent also found that he had learned significantly from being exposed to Dr. Deming's ideas, albeit indirectly. This respondent had attended a debriefing session in which another employee of his company reported on his attendance at a Deming seminar the week before. The co-worker shared his materials and notes with the respondent and the respondent said that he "caught the fire" on the spot.

Similarly, another respondent reported having learned a great deal from participating in a series of seminars facilitated by Dr. Joseph Juran. In this case, the critical event was not a single lecture or seminar, but a series of presentations which took place over several years. This respondent

defined these interactions cumulatively as a single critical event. These were all formal training situations, however, and they were all facilitated by the same individual, Dr. Juran. This respondent had read a great deal about total quality management in the years since he had attended Dr. Juran's seminars, yet he felt that there was particular value in the "clarity" with which Dr. Juran explained "quality concepts."

Only one respondent referred to his college education as having had a direct impact on his effectiveness as a total quality leader. This respondent, who had studied electrical engineering as an undergraduate, stated that he "truly believed that that helped me in the position that I am in presently." Specifically, it was the technical preparation his degree provided that he felt was most useful to him in this role. It should be noted that this respondent has worked in a high technology industry since graduating from college. He emphasized that the career path that led him to assume his role as a total quality leader involved a series of positions in which his technical expertise was essential both in terms of his job performance and his credibility as a manager.

Feedback

The next most frequently cited category of critical events which the respondents identified as contributing to their effectiveness as total quality

leaders was feedback. Feedback involves the respondent's receiving information from another individual concerning the respondent's behavior or performance. Feedback is usually based on observation or measurement of behavior and it may include subjective information on the observer's emotional response to the behavior as well.

Two instances cited by respondents in this study involved direct feedback from employees. In the first instance, an employee had observed that the supervisors in the company were having a difficult time deciding how (and even if) to let the employees take over more management responsibility. The employee spoke with the respondent, who at that time was one of those supervisors:

> He [the employee] said, 'Well, we keep hearing these stories that we don't know how to manage, that you folks don't really believe that we can manage our work without having direct supervision. You don't have confidence in doing that.' But he said, 'Just let me tell you something about what I do when I go home...I have three children. Two have just graduated from college...I managed my money that I directed toward their college support. I managed that whole exercise. I funded their way through college. I have managed my house payment, mortgage payment...I have managed my car payment. I manage our bank account at home. I believe I'm like all the other people here; we are already managers. We manage a piece of business, it's called our own private business. And we do a good job of it. So if you folks could just recognize that, then you would believe that we could manage the company's business, too.' That had an impact on me.

Being confronted in this way by an employee was a powerful experience for this respondent. He realized that if he could so easily underestimate the ability of this employee to manage his work, then it was likely that he was underestimating many others in the organization as well.

In a similar situation, another respondent received direct, forceful feedback about the effect which one of his decisions had had on an employee. The respondent, in an effort to improve interactions between the first-shift and second-shift employees in a manufacturing plant, had implemented a significant change in operating procedures. However, for a variety of reasons, he elected not to explain his actions or his rationale to the employees. Performance problems surfaced quickly as the employees attempted to implement changes without understanding the purpose of the changes or their potential benefit. In trying to uncover the reasons for the declining performance levels, this respondent solicited some feedback from one employee:

> So over the course of the next two or three weeks, one individual who worked for me, their performance literally fell in the tank. I mean it was just awful. And I'm looking at this thing, saying, what in the world is going on here?
>
> So one night, I make a brief appointment and we go into an office and I ask the individual, what is the deal here?. And he just told me, this guy did not speak very good English...he only had, well, I'm not even sure he had a high school degree...but he very eloquently told me, 'You took my pride away.' I said, 'What? What do you mean I did this?' He said, 'A trained

> ape can run this machine. There is only pride and ownership in doing the set-ups and changing the jobs over and things like that. Pushing buttons doesn't do anything.'

The direct feedback provided by this employee had a powerful effect on this respondent. He went on to say that he changed his management style literally overnight as a result of this employee's open and honest sharing of how he perceived the respondent's decisions and actions.

Another event reported by a respondent involved some indirect feedback from an employee about his (the respondent's) apparent lack of personal commitment to the quality effort in his company. The respondent was taking a "wait and see" attitude about implementing quality, letting another senior executive take the lead, when one of his employees approached him and shared his perceptions. The respondent said:

> He [the employee] said, 'You know, a lot of people in the division here are talking about how John says this and John says that about quality. But...when are they going to say that Ray [the respondent] says this about quality and Ray says that about quality and here is what Ray thinks we ought to be doing?'
>
> It just stopped me in my tracks and I recognized at that point that I had abdicated my responsibility as a leader of that unit and I had not risen to the occasion of accepting my responsibility as a leader of quality. I had delegated that to other people in my division and even to the person who was two levels above me in the organization. I had become somewhat invisible in the transformation.

This respondent had deliberately decided to wait and let another person take the lead in implementing total quality management in his organization. In doing so, however, he had underestimated the effect that his lower level of involvement in TQM would have on others who looked to him for direction. He benefited greatly from hearing how his actions were being perceived by another person. This candid feedback caused him to adopt a new strategy which involved heightening his visibility in the organization and more actively modelling his commitment to TQM.

Other

Only one event reported by a respondent in this study did not fit into any of the five broad categories of critical events which have already been described. One respondent described having spent many hours as a child working in his family's business, a restaurant. Even when pressed, this respondent did not report that one aspect of this experience was more important than another aspect, or that one event from within the overall series of experiences of working in the restaurant had particular meaning. Therefore, it is likely that it is the ambiguity of the respondent's description of the event, rather than the nature of the event itself, that made it difficult to place in one of the five major categories.

Again, the five categories into which most of the critical events reported in this study were placed are challenging projects, role models, benchmarking, training/education, and feedback. Of these, the first two categories, challenging projects and role models, accounted for more than half of the critical events reported. The five categories encompassed 97% of the total events reported by the respondents in this study, with only one event not fitting into one of these major categories.

Themes of Lessons Learned

The second research question was, what specific lessons have these respondents learned from these critical events? After describing a critical event, each respondent was asked simply, what did you learn from this event (for better or for worse)? The respondent was free to report as many lessons as he wished for each critical event. Sometimes these summations were simply a word or phrase; on other occasions these summations of lessons learned led into another, secondary discussion which encompassed several lessons. As an initial step, a master list of lessons was created, drawing from the respondents' own interpretation and articulation of what they had gleaned from each critical event (see Appendix G).

The goal in analyzing the initial list of lessons learned was to identify a few broad themes or clusters of lessons which could encompass all of the

lessons learned. The lessons were analyzed inductively, and a lesson could fit into more than one lesson theme. The lessons learned were ultimately clustered into seven lesson themes: commitment, empowerment, conceptual understanding of quality, team orientation, systems perspective, resourcefulness, and communication. Table 3 summarizes the frequency of each of these lesson themes.

Each of the following sections presents one of these lesson themes. The themes are presented in their order of importance, based on the percent of total lessons accounted for by each of the lesson themes. Note that the first three lesson themes, commitment, empowerment, and conceptual understanding of quality, are all approximately equal in occurrence in this study. These three lesson themes accounted for 67% of the lessons learned by these respondents. Each of these lesson themes are discussed, in descending order of the frequency with which they were reported by the respondents. Also, note that since respondents at times described a lesson with a only a word or phrase, fewer extended quotations are not provided in the description of lessons learned to the same degree as they were in the descriptions of critical events.

Table 3

Frequency and Percent of Total Lessons Learned Accounted for by Each Lesson Theme

Lesson Theme	Frequency n = 57	Percent
Commitment	13	23%
Empowerment	13	23%
Conceptual Understanding of Quality	12	21%
Team Orientation	6	10%
Systems Perspective	5	9%
Resourcefulness	4	7%
Communication	4	7%

Commitment

One major cluster of lessons which emerged in the analysis of the data was commitment. The lesson theme of commitment encompasses having a high degree of commitment to, even a passion for, quality. Furthermore, this commitment to quality includes not only commitment to high-quality products, but to high-quality processes and services as well.

Perhaps more than any other lesson theme which emerged in this study, this theme was described in the most abstract terms. That is, the theme was expressed subtly, rather than explicitly, almost as if the respondents were searching for the correct words to describe this lesson. For example, one respondent talked about being motivated, even inspired, by the perseverance that he saw was required of the employees in his organization in order for them to achieve their quality goals. This in turn resulted in his own level of commitment to quality being heightened. He said he "wasn't sure what to call it" but then went on to say that he knew that he just wanted to "do more, to work harder," as a result of observing the commitment of others. In a similar vein, several respondents described the high level of personal commitment to quality that they had observed in the behaviors of the CEO or the executive team. The respondents reported that they felt "energized" or "fueled" by observing the commitment of others.

Other respondents reported that critical events had led to their becoming committed to living up to certain values or standards. In one case, these values had to do with a commitment to excellence of service; in another situation, the standards were related to excellence of a product. As one respondent reported:

> [I was] impressed with the appreciation of quality, quality of design, of service. I learned the exhilaration, the pride of having a world-class product...[I became] a very serious advocate for quality excellence."

In sum, these respondents described situations which led to an increased personal or professional commitment on their part to some aspect of leadership of total quality management. They had a strong emotional reaction to some critical event and they translated this reaction into increased commitment to TQM. Finally, and most important, they saw this increased commitment as essential to their development as effective total quality leaders.

Empowerment

Another major cluster of lessons gave rise to the lesson theme of empowerment. Traditionally, the term empowerment has been used in many different ways, even within the context of total quality management. For example, employees who operate successfully in self-directed work teams are

often described as being empowered. Also, the manager who is able to let go of his or her own formal authority and to encourage employees to take on increasing responsibility could be described as empowering others. However, for the lessons reported in this study, the lesson theme of empowerment encompassed the respondents' having learned the value of distributing power throughout the organization in such a way that individual employees feel a sense of ownership, that they are able to participate in decision-making, and that over time they become less dependent on the supervisor or manager.

The respondents in this study reported that many of the critical events which contributed to their effectiveness as total quality leaders had taught them the value of empowering others. Specifically, one respondent said, in describing an incident in which for the first time he had involved manufacturing employees in solving a problem:

> That always causes me to remember that there is well put talent throughout the organization. Sometimes you forget to get people engaged and involved....people who you might not first think of as having the bright ideas do end up having those ideas.

Another respondent described how, even in the midst of a violent strike, a group of employees were able to assume greater responsibility for managing their own work:

> They were able not only to learn what they had to do. They were also able to do what they needed to in the quality area. They learned things like statistical process control, problem-solving skills, brainstorming skills, all those kinds of things. ...Most of them [moved to] working in a kind of a self-managed work group kind of a situation...So I think the human resource element of it, I had always heard that that was an important piece of the thing, but I guess I didn't really appreciate that until we got into this strike. Then I realized that that is really the thing.

Other respondents reported that they had learned how important it is to "walk the talk" of empowerment. That is, it is important for the total quality leader to value others and to encourage all employees to participate in decision-making. The belief was expressed that a leader cannot expect employees to simply take ownership of decision-making. Rather, the total quality leader must be willing to demonstrate actively and consistently that he recognizes the values of employee empowerment. One respondent summed up the value of recognizing the "people component" of leading an organization within the context of total quality management as follows:

> We are trying to win that battle to get every employee to feel like they are the owner of the company and what they are doing is as important to the success of the company as what the CEO does. I enjoy talking about quality and so forth, but when you get into it and keep digging back the layers you find out what's there. It's as much psychology as tools and techniques. And those folks who can see the impact of people and how <u>people</u> fit into quality excellence and can then chip away at those things can make that happen. That is where it is at.

Conceptual Understanding of Quality

A third theme which appeared in the data on lessons learned was that of conceptual understanding of quality. In essence, conceptual understanding of quality is a phrase which brings together those lessons which refer explicitly to learning the basic principles of total quality management. For example, one respondent reported having learned a valuable lesson about the hidden cost of poor quality, the cost of not fixing a problem. He talked about the fact that often employees are allowed or even encouraged to ignore chronic problems, to either "pass the buck" or just "get by day to day." This respondent had an opportunity to correct a long-standing computer system malfunction. It was only after the malfunction had been corrected that the respondent became aware of how much time (and therefore, money) the company had been losing by trying to "work around" the malfunctioning system. Before the problem was corrected, the respondent had been awakened during the middle of the night several times a week to troubleshoot the mainframe computer system (by telephone) and to enable the night shift to get the system operational once again. Now that no longer happened. Upon reflection, the respondent was amazed that he, and others in the position before him, had put up with the recurring problem for years. After correcting the error, he described what he learned from that event:

> It [is] just phenomenal what the cost of poor quality is. And you talk about the hidden factor, I mean here there was a person who was literally full-time employed, in fact more than full-time employed, keeping up with an error or set of errors that just wasn't necessary.
>
> I [rewrote] this thing now understanding what the majority of the problems are to where it will never fail again....I know for the next 3-4 years [it ran] everyday with maybe one problem a year.

This respondent learned the value of approaching a chronic problem from a quality perspective. More specifically, he saw that there was continued value over time to be gained by fixing a problem in such a way that it did not easily or quickly re-occur. In a sense, this respondent learned that there are even varying degrees of the quality of solutions. By taking the time to develop an excellent (i.e., effective and permanent) solution to the original problem, he saved himself time and his company money over the long run. He felt that this was an overlooked principle of total quality, what he called "the hidden cost of poor quality."

Several respondents described having learned a formal, structured list or set of the basic principles of total quality management (e.g., Deming's list or Juran's list of quality principles). As a result, these individuals had clarified and expanded their understanding of quality and of total quality management. For example, one respondent reported that he had thought that "quality...was more of a capacity, a tonnage kind of thing." (This

respondent worked for a foundry in which production was measured in tons.) As a result of some of his critical experiences, the respondent learned, "We were not on the right kind of a path here to assure the quality of the product that we were producing." This respondent went on to explain that he gained an understanding of the differences between "detection-based quality systems and prevention-based quality systems." Total quality management emphasizes the value of implementing quality systems which prevent defects before they occur. This approach differs from quality assurance programs which focus on discovering and correcting defects after the fact. In this respondent's view, this shift in understanding had been a critical prerequisite to his assuming more responsibility for total quality management within his company.

Team Orientation

A fourth cluster of lessons was grouped together under the heading, team orientation. As described by the respondents in this study, team orientation is more than the ability to work well as a member of a team; it also connotes a valuing of the contribution that teams make to total quality efforts and the ability to utilize teams to accomplish quality goals. One example of team orientation was offered by the respondent who had served as a member of a three-person team responsible for developing a new

software system within a tight timeframe. The respondent was literally amazed at what the smaller group was able to accomplish in a relatively short amount of time. In his words:

> So the message is, given a quantum leap kind of target and being willing to break paradigms, to work in a small highly communicating group, it is remarkable what can be done.

This respondent felt that he had learned that teams could be utilized far more effectively than he had previously realized. He contrasted this experience with other experiences he had had in which teams weren't effectively utilized and as a result "galactic developments [took] forever."

Another respondent felt that he had learned that organizations that wanted to be successful in quality needed to support teams actively and consistently:

> And then we started moving towards getting people involved in teams and working in teams and we recognized the importance of sharing ideas and building on each others' ideas.

This is similar to comments made by other respondents. One said that it was "key [to the successful implementation of quality] to develop a team-based atmosphere." Another respondent talked about becoming "excellent in developing team relationships." Yet another respondent stated:

> I learned that you have to work all as one team. I learned the value of relationships...of working with people in a team setting.

Systems Perspective

A fifth theme that came through in the reports of lessons learned was that of systems perspective. The lessons that were clustered into this lesson theme were ones which highlighted the value of taking a systems perspective of total quality management, of recognizing the need to integrate systems (and subsystems) within an organization. In essence, a systems perspective of TQM emphasizes the interrelatedness of all of the various aspects of an organization's operations.

One respondent felt that the ability to take a systems perspective was the most critical factor in the success of any total quality management effort:

> You hear a lot of people talk that total quality management hasn't been as successful as it should have been. Some organizations are going to abandon their quality effort because it hasn't been successful and you see what is really happening there in my judgment is that most people don't recognize the total system aspect of this. They will put a statistical process control system in place or training in place and they will say we now have total quality management. Or they will put in an employee empowerment system and they will say well we now have total quality management. Or they will improve their customer satisfaction process or they will work on their strategic planing and they will say they have a total quality management system in place. But in fact, total quality management is none of those, but rather all of those working together, harnessed and focused on delighting customers. And that is what it is all about...companies who can crack that are the ones that are going to win.

This respondent went on to describe, step by step, the specific operations and subsystems within the company that he had changed as a result of adopting a systems perspective.

Another respondent spoke of the frustrations which occur as a result of "sub-organizations optimizing at the expense of the company." That is, one department of the company might be functioning at a high level, perhaps with a superficial commitment to total quality management, but other departments were not operating at the same high level and this caused the overall organization to be weakened. A vivid description of systems thinking was offered by a respondent who had witnessed the application of such a perspective on a visit to a competitor's site in Japan:

> Their arrows were so aligned. It was uncanny how they were all pulling together and they knew exactly what the ballgame was and what their particular role was and that alignment of arrows. You can just see a picture..think of a picture with all the arrows pointing in all different directions. That is the way a lot of departments function. If you get those arrows aligned, you can accomplish anything. It was their system of management as such...that...encourages and...even requires alignment. The management focuses on the alignment of arrows. It is the management system that makes a difference there. And it works.

Although the lesson theme of systems perspective was not one of the more frequently-mentioned lesson themes in this study, when it was mentioned, it was described with particular forcefulness and energy. In other words, not all the respondents cited systems perspective as an important

lesson theme, but those who did said that it was extremely important to their later success as a total quality leader.

Resourcefulness

Yet another theme which emerged from the analysis of the data on lessons learned was that many of the respondents had experienced first-hand the value of being resourceful in solving problems. Resourcefulness in its narrowest definition involves the ability to deal promptly and effectively with problems and difficulties. However, resourcefulness as it is being used in this study also includes learning to be proactive, even creative, in defining and solving problems. It should be noted that the specific word resourcefulness was not used often by the respondents. Rather, this term was selected by the principal researcher as a label for this lesson theme because it simultaneously connotes solving problems, being innovative, and, most important, being proactive.

One example of this lesson theme involved a respondent proactively involving employees from the factory floor in improving the manufacturing process for one of the company's products. He described his approach as follows:

> I actually called up our manufacturing folks and said here is a project we have to do. We can set up a system designing it over here in a separate room and we want to come down and get some space on the factory floor for a couple of people. And I just talked to them about how we could do this and make it easier to manufacture.

Over time, this respondent became known for his resourcefulness, his creativity in approaching problems in the organizations. He traced his reputation for this back to that incident, stating that the employees involved remembered the incident for years to come:

> Even in the future, when I was working with something else, they [those employees] always stopped and said, 'I always thought it was great that you did that type of thing.'

Another respondent had been encouraged to be resourceful in tackling problems which could not be solved by strictly following existing protocols or guidelines. After an event in which the respondent had broken an established policy in order to meet a customer's needs, the president of the respondent's company said to him, "Every rule can and should be broken to serve a customer well." The respondent stated that the value of that lesson had become even more apparent to him as he had moved from being a field engineer to assuming responsibility for total quality management. In yet another situation, a respondent said that he had learned to "be willing to break paradigms." One respondent summed up the value of being resourceful:

> That was a transition right there for me. The experience that I learned from that, bottom line, is that I didn't want to just sit back and wait for things to happen. You have to go out and get it. It is kind of like anything else, [like] the Baldrige Award and setting things up to get that. It really takes a lot of perseverance, a lot of initiative, and a lot of action.

Communication

A final lesson theme which emerged in the reports of lessons learned was that of communication. The lessons which were clustered together to become the communication theme are those that directly contributed to the respondent's improving his ability to take in information from others and to disseminate information effectively. For example, one respondent stated that he had developed the ability to absorb vast amounts of information in a short time period. He went on to say that this was invaluable to him in his role as a total quality leader:

> You know every month it seems that there is a new quality directive occurring in the field and you have to stay very current with that. There is a lot of [information that I had to take in] in reliability studies, in that field, and in overall quality assurance.

Another respondent emphasized how valuable it had been for him to develop his ability to communicate orally, through opportunities for public speaking, as he became more deeply involved in his company's quality effort:

> When I began speaking publicly at seminars and that type of thing it opened a whole new feeling for me in that people were actually attending and really intently listening to what we had to say. I began to sharpen those speaking skills and more and more people would call and invite me to come out and speak....The ability to share information with other professionals in the industry has been a real enlightenment in my career.

Other aspects of communication also came through in this lesson theme. Specifically, several respondents cited the necessity to communicate differently within the context of total quality management -- to give all individuals equal opportunities to be heard. These respondents mentioned the need to "listen well" and to "listen to all sides before making a decision."

Relationship Between Categories of Critical Events and Themes of Lessons Learned

The relationship between the categories of critical events and the themes of the lessons learned were determined inductively and intuitively. First, a series of matrices was created to graphically illustrate the distribution of lessons within each lesson theme, according to the categories of critical events (see Appendix H). Then, these matrices were used as a tool by the principal researcher to highlight emerging patterns in the data. Next, the interview transcripts were re-read in their entirety. Those relationships which emerged as strong and clear both in these matrices and in the

interview transcripts (in their entirety) were then noted and explored further. This inductive, intuitive approach was deemed to be appropriate due to the qualitative nature of this study and the scope and type of data which were collected.

Challenging projects and role models were the two largest categories of events reported in this study. Of these two categories, challenging projects gave rise to a wider variety of lessons. This is not surprising as challenging projects are by definition multifaceted, encompassing the task itself, the people involved, and both internal and external constraints which may make the task more difficult to complete. Challenging projects especially led to lessons of empowering employees and being resourceful.

The lessons learned from role models were narrower in focus. Specifically, role models led most often to lessons in the areas of commitment and empowerment. The respondents were inspired by role models to increase their personal commitment to excellence as well as their professional commitment to total quality management. Respondents also learned from observing role models interact with others in the organization. The role models demonstrated behaviors that empowered others and the respondents learned from watching those behaviors.

Benchmarking was related to two lesson themes, commitment and conceptual understanding of quality. By participating in benchmarking

activities, respondents increased their commitment to quality and also increased their understanding of quality principles. That is, respondents were energized by their exposure to total quality management in other settings. In addition, respondents learned a great deal about the technical aspects of total quality management by visiting competitors and by engaging in open dialogue with customers.

The training/education events which were cited in this study most often included attending seminars or workshops led by experts in the field of total quality management. These experiences contributed most directly to the respondents' conceptual understanding of quality. Training/education events also were associated with some other lesson themes, but no other strong pattern of relationships emerged. Similarly, the lessons taught by feedback events varied according to the purpose and content of the feedback.

Summary

The findings of this study were presented in this chapter. Ten respondents offered descriptions of critical events which they felt had contributed to their effectiveness as total quality leaders. These respondents also suggested the meaning or lessons learned which they had gleaned from these events. Inductive data analysis yielded descriptions of five distinct

categories of critical events. These categories of critical events were: challenging projects, role models, benchmarking, training/education, and feedback. Further data analysis yielded seven clusters of lesson themes. These lesson themes were: commitment, empowerment, conceptual understanding of quality, team orientation, systems perspective, resourcefulness, and communication.

Each of the categories of critical events and the lesson themes have been defined or described in this chapter. In the descriptions of the categories of critical events and lesson themes, excerpts have been taken from the interview transcripts, allowing the respondents' own words to be used to support these descriptions. Some observations were also offered about the relationship between critical events and lessons learned. These observations were based on an initial empirical analysis of event-by-lesson matrices, combined with careful re-reading of the interview transcripts in their entirety. Therefore, the analysis of data in this study was both inductive and intuitive.

V. SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

This chapter summarizes the main aspects of this study, including the purpose, the research questions, the limitations of the study, and the research methodology. In addition, this chapter provides an overview of the key findings of the study and suggests conclusions which may be drawn from these findings. The discussion section relates these findings to the review of the literature, pointing out similarities and differences between the findings of this study and the work of others. Finally, the chapter closes with recommendations for both practice and research.

Summary

The purpose of this research study has been to further our understanding of the developmental experiences of total quality leaders. The need for this study stems from the recent trend in American business towards the implementation of total quality management (TQM) as a means of increasing the competitiveness of American industry. As TQM has become more prevalent, there is an increased need to select and develop individuals who can effectively lead quality efforts.

In this study, a qualitative approach based on critical event methodology was utilized to study executive development within the context of total quality management. More specifically, this study was intended to answer two primary research questions. The first research question was, what critical events do leaders of exemplary quality efforts believe have contributed most significantly to their effectiveness as total quality leaders? This question was intended to elicit examples of events, situations, or problems that have taken place over the course of the respondents' careers and which they believe contributed to their ability to be effective as total quality leaders. The second research question this study was intended to answer was, what specific lessons have these individuals learned from these critical events?

The ten respondents in this study all have been responsible for total quality management efforts in companies which have received the Malcolm Baldrige National Quality Award (MBNQA), this country's highest award for achievements in the area of quality, during the years 1988 - 1993. Moreover, each of these individuals had been the senior quality professional in his respective company at the time that the company won the MBNQA. Therefore, an assumption of this study was that these respondents were highly effective leaders of exemplary quality efforts.

During individual interviews, conducted by telephone, these respondents reported 35 distinct events as having contributed to their effectiveness in their role as total quality leaders of exemplary quality efforts. These critical events fit into the following categories: challenging projects, role models, benchmarking, training/education, and feedback. The respondents also reported that these critical events led to a total of 57 lessons learned. These lessons learned were clustered into seven major lesson themes. These themes are commitment, empowerment, conceptual understanding of quality, team orientation, systems perspective, resourcefulness, and communication.

This study, like earlier events-based research, confirmed that on-the-job experiences do indeed contribute to the future success of executives. The study also confirmed that not all experiences are equal. That is, some experiences provide more developmental potential than others. Finally, it supported the more recent finding in the literature that the context within which an executive works may influence both the type of event that he or she finds to be most useful and the specific lessons that he or she gleans from those events.

Limitations

The major potential limitation of this study stemmed from the use of self-reported retrospective data. Previous researchers (Brim & Ryff, 1980) have suggested that respondents may selectively attend to some events more than others, that they may give disproportionate attention to particularly dramatic or major events, and they may underestimate the extent to which events interact. However, no evidence of this limitation was found in this study. Respondents provided descriptions of some events which were short in duration, other events that were more subtle than dramatic, and events which had taken place as long as 35 or 40 years before. Some respondents also mentioned events which they described as being the sum of smaller events which took place over time, describing them as a "mound of experiences" or a "conglomerate."

Also, it has been suggested (Goldstein, 1980; Rubin, 1985) that respondents may intentionally omit some events, especially if those events are unflattering to the respondents. However, several respondents provided descriptions of events in which they had made mistakes or when they had received difficult feedback about an aspect of their behavior. These events were not flattering to these respondents; nevertheless, they reported them. Finally, it has been suggested that due to time constraints, some important events may be omitted by respondents. This did not prove to be the case in

this study. Each respondent was asked only to provide three critical events, yet more than half of the respondents volunteered to describe more than three events.

Conclusions

The broad purpose of this study was to further our understanding of the developmental experiences of total quality leaders. In addition, this study sought to answer two specific research questions: (a) What critical events do leaders of exemplary quality efforts believe have contributed most significantly to their effectiveness as total quality leaders? and (b) What specific lessons have these individuals learned from these critical events? Both of these research questions were successfully answered in this study.

The conclusions which have been reached as a result of this study focus on the patterns which emerged from within the data on critical events and lessons learned. Additional conclusions are offered regarding the relationship between critical events and lessons learned. Because these data were gathered from respondents who were leaders of exemplary quality programs, these conclusions are applicable specifically to the development of total quality leaders. Consequently, these findings and the conclusions which are drawn from them do serve to fulfill the broad purpose of this study -- to

further our understanding of the developmental experiences of total quality leaders.

Conclusions Related to Critical Events

The first research question to be answered in this study was, what critical events do leaders of exemplary quality efforts believe have contributed most significantly to their effectiveness as total quality leaders? This question was answered through an analysis of the descriptions of the critical events offered by the ten respondents in this study. Based on the patterns which emerged in the analysis of those descriptions, a number of conclusions may be drawn.

First, challenging projects and role models clearly emerged as the two categories of events which contributed most often to the effectiveness of the respondents in this study. Of these, challenging projects gave rise to a wider variety of lessons learned. In fact, the lessons learned from challenging projects encompassed every lesson theme which was identified by the respondents in this study. From this, one may conclude that challenging projects offer rich, multifaceted, learning opportunities which may contribute significantly to the development of leadership within the context of total quality management.

Next, while role models also were cited often by the respondents in this study, the lessons which arose from the respondents' observing or interacting with role models were much narrower in focus. Specifically, role models were more often associated with two major lesson themes, commitment and empowerment. The lesson theme of commitment was expressed as the total quality leader's commitment to, even passion for, excellence of products and services. Empowerment encompassed the notion of the total quality leader (and other authority figures in the organization) letting go of the power inherent in their role as managers and distributing that power throughout the organization. Because role models both increased commitment and enhanced empowerment, we can conclude that role models inspired the total quality leaders to strive for excellence. Also, role models served as examples of how to encourage others to become more involved in decision-making.

Another category of events in this study which emerged as having been significant in the development of total quality leaders was benchmarking. Though not reported as often as either challenging projects or role models, benchmarking has particular significance because it led to very specific lessons for the respondents. Benchmarking was most often associated with the lesson themes of conceptual understanding of quality and commitment. From this, one may conclude that benchmarking offers direct

opportunities for total quality leaders to develop their practical knowledge of how to implement TQM across a variety of settings. Furthermore, benchmarking activities enable total quality leaders to expand their knowledge of how to overcome some of the problems associated with the implementation of TQM. In this way, benchmarking serves to reinforce the belief that the pursuit of quality is an attainable, albeit highly challenging, goal. In sum, benchmarking helps total quality leaders to develop their conceptual understanding of quality and to increase their commitment to their companies' quality efforts.

Another category of events described by the respondents in this study involved formal training and education opportunities, including attendance at seminars taught by noted experts in the field of quality. From this one may conclude that there is specific knowledge that total quality leaders need in order to be effective in their role, and, furthermore, that this knowledge may be appropriately disseminated, at least in part, in formal educational settings. Also, these formal learning experiences may leave a more lasting impression, and hence may lead to greater learning, if they are taught by recognized experts who have strong credibility in the field of TQM and who possess the ability to explain and demonstrate quality concepts with clarity.

Finally, the data in this study revealed that receiving feedback was yet another category of event or experience which had meaning for these total

quality leaders. The sources of this feedback varied. In the descriptions of feedback experiences provided by respondents in this study, superiors, peers, subordinates, and even customers served as effective sources of feedback. However, in all of the cases in which feedback was cited as a critical event, the content of the feedback included detailed descriptions of observable behaviors on the part of the respondent. Two conclusions regarding feedback are offered based on the findings of this study. First, total quality leaders may benefit from receiving feedback from a variety of sources. Secondly, total quality leaders benefit most from feedback which is specific and immediate (i.e., based on present, observable behaviors).

Conclusions Related to Lessons Learned

The findings of this study may also be examined from another perspective, one which is focused more on the respondents' reports of lessons learned. The data in this study did indeed answer the second research question, what specific lessons have these respondents learned from these critical events?

Commitment and empowerment were the two strongest lesson themes in this study. Commitment involves placing a high value on excellence of products and services. Also, empowerment requires that the leaders in the

organization share authority and let go of control in order to distribute power for decision-making throughout the organization.

As the data in this study were analyzed and re-analyzed, it became apparent that commitment and empowerment were linked in the minds of the respondents. That is, from the results of this study one may conclude that effective leadership within the context of total quality management requires that the total quality leader be visibly committed to empowering others. Also, a total quality leader who is fully committed to continuous improvement and the pursuit of excellence is likely to appreciate the value of having empowered employees. This need for the total quality leader to model his own commitment to quality by empowering others is what respondents in this study referred to as walking the talk of quality.

Another important lesson theme which emerged in this study is conceptual understanding of quality. Conceptual understanding of quality referred primarily to the principles of variation and the notion of continuous improvement. Conceptual understanding of quality was attained most often through benchmarking activities and through formal training. Benchmarking served more specifically as a source of technical knowledge of the respondents' industries and products. From this one may conclude that technical knowledge, combined with a broader knowledge of quality principles, serves as a foundation for success as a total quality leader.

Another lesson theme which emerged in this study was team orientation. These findings suggest that effective total quality leaders are proactive in optimizing opportunities for teamwork. For example, the total quality leaders in this study reported that they had redefined tasks so that the tasks might be accomplished by small, autonomous work teams. Therefore, one may conclude that it is important to the development of total quality leaders that they have experience working successfully within a team-oriented environment. Furthermore, individuals who aspire to become total quality leaders would benefit from having an opportunity to create or redesign work teams to accomplish specific tasks or goals.

Also, the data in this study indicate that total quality leaders must have a systems perspective of their organization and its pursuit of total quality. That is, the total quality leader must view his organization in terms of the interdependence of all of the organizations' systems and subsystems. These systems and subsystems must be in alignment for the total quality effort to be successful. From this, one may conclude that the development of a total quality leader is likely to be enhanced through exposure to various systems and subsystems, perhaps through cross-functional assignments in his own organization. Another way to enhance the development of a total quality leader is by providing opportunities for benchmarking as this would allow the individual to observe the alignment of systems in other settings.

There were two final lesson themes which emerged in this study, resourcefulness and communication. However, only limited conclusions may be drawn regarding these two lesson themes. First, although the lessons related to resourcefulness did cluster together into a distinct lesson theme, these lessons arose only from one category of critical event, challenging projects. In other words, the respondents emphasized the need to be proactive and innovative when dealing with large, multifaceted projects. It has already been concluded that aspiring total quality leaders would benefit from being given several opportunities over the course of their career to undertake challenging projects. However, to maximize the learning potential of these challenging projects, the individual should be allowed to be proactive in seeking out these challenging projects and should be encouraged to take risks and be autonomous in completing the projects.

Similarly, the final lesson theme of communication was cited by only a few respondents. Those respondents who did mention lessons related to this lesson theme focused on the skills of listening and of public speaking. There was not enough additional information offered by these respondents for this researcher to reach any clear conclusions regarding this lesson theme.

Discussion

A number of issues and themes which emerged in this study have also been examined by previous researchers. In some cases, the findings of the current study are similar to the work of these previous researchers; in others cases, the findings differ. It should be noted that not all categories of critical events or all lesson themes are addressed in this discussion section. Only those areas in which there is a body of literature from previous research which may be compared and contrasted with the findings of the current study are addressed.

These are the specific categories of critical events for which sufficient information exists to compare the findings of the current study with the work of previous researchers: challenging projects, role models, feedback, and training/education. Also, because commitment and empowerment together accounted for about half of all the lessons learned by the respondents in this study and because there is some evidence that these two lessons were linked in the minds of the respondents, commitment and empowerment are discussed in a single, final section.

Challenging Projects

The current study found that challenging projects were very important events in the development of effective leadership within the context of total

quality management. This finding is highly consistent with what has been found in numerous earlier research efforts in the broader arena of executive development. For example, Margerison and Kakabadse (1984) highlighted the need for job challenge in executive development. Also, McCall et al. (1988) reported that executives often created their own learning opportunities. That is, they chose to take on interesting challenges and they handled these challenges well. This fits with the description of challenging projects provided by respondents in the current study. More recently, McCauley, Ohlott, and Ruderman (1989) confirmed the importance of job challenge as a stimulus for executive development. Also, McCauley (1986) concluded that is it is "evident that managers need assignments that will challenge them and give them broader perspectives" (p. 9). All of these findings were confirmed in the current study.

Role Models

The respondents in the current study were clear in describing the value of role models to their development. This, too, is borne out in earlier research. Specifically, Bandura (1977) demonstrated that people can serve as learning models. Also, in a synthesis of the research on role models, McCauley (1986) concluded that by watching role models, the manager may learn the "do's and don'ts of interacting with others" (p. 14). Also, other

people was one of the main categories of developmental experiences identified in the series of studies at the Center for Creative Leadership (McCall et al., 1988; Morrison et al., 1987; Van Velsor & Hughes, 1990). In these studies, role models were cited as a sub-set of the category of other people.

In the current study, role models were particularly useful in that they led total quality leaders to become more committed to quality and to be more active and consistent in empowering others. The notion that observing role models may increase one's commitment has not been addressed directly in earlier research. However, the findings of the current study do support earlier research (Marshall and Stewart, 1981) which has suggested that bosses may serve as models of how to treat subordinates. This latter finding may be related to the finding of the current study that role models (including bosses) may serve as models of empowerment. Additional research is needed to clarify how role models contribute to the development of leadership within the context of total quality management.

Feedback

The current study confirmed that feedback was an especially helpful event in the development of total quality leaders. This fits with what is known generally about executive development -- that executives benefit from

feedback which increases their understanding of their personal limits and blind spots (Lindsey et al., 1987). However, some researchers (Kaplan, Drath, & Kofodimos, 1985) have suggested that senior executives may be more interested in building on their strengths than on correcting deficiencies. Consequently, senior executives may be reluctant to solicit feedback about areas in which they need improvement, even though they would benefit from receiving that feedback. This generalization regarding feedback was not confirmed in the current study. In fact, the total quality leaders in this study at times actively solicited feedback on their performance from others in the organization. Furthermore, even when the feedback was not actively solicited, still it was welcomed and responded to immediately.

There are particular implications for the use of feedback within the context of total quality management. Specifically, trust and open communication are considered to be essential to the successful implementation of TQM. For example, Deming (1986) admonishes managers to drive fear out of the workplace in order to achieve excellence in total quality (i.e., to eliminate the fear of being punished for delivering bad news). Ryan and Oestreich (1991) confirmed that managers within a total quality environment may decrease fear in the workplace by actively soliciting feedback. Also, Patten (1991) suggested that giving and receiving feedback is indispensable in a total quality environment.

In sum, earlier research confirms that receiving feedback is an important developmental experience for executives. More recent research suggests that giving and receiving feedback should be encouraged as an important component of total quality management. The current study adds credence to both of these earlier findings, plus it suggests that total quality leaders may be especially receptive to the notion of using feedback for executive development.

Training/Education

Previous researchers also have confirmed that formal training experiences do contribute to executive development (Goldstein, 1980; Wexley, 1984; McCall et al., 1988). What has been less clear in earlier research studies is the degree to which the impact of training has carried over to an executive's job. However, the total quality leaders who were respondents in this study indicated that they had experienced a high degree of transfer of learning from their formal training experiences to the work setting.

McCauley (1986) noted that one of the factors which increased the value of training to senior executives was the opportunity to apply what they had learned back on the job. Also, Zemke (1985) reported that training was more effective as a source of learning for executives when it was closely

linked to changes in assignments. These earlier studies may shed light on why the total quality leaders in the current study felt that they had benefitted so directly from formal training experiences. First, most of the training experiences cited by the respondents in this study took place immediately before or just after the individuals assumed responsibility for their companies' total quality efforts. Hence, the respondents in this study were able to immediately apply and reinforce the information they had gained from their training experiences in accomplishing goals related to their new job assignment as leaders of their organizations' total quality efforts. In essence, timing may be an especially important issue in the effectiveness of training for total quality leaders.

Commitment and Empowerment

The current study found a link between a total quality leader's commitment to quality and the need for him to model that commitment by empowering others. The congruence between these two attitudes on the part of the total quality leader supports what is referred to in the trade literature as walking the talk of quality. To date, very little empirical research has been conducted on either commitment or empowerment. However, the findings of the current study are consistent with the findings of a qualitative study by Lawrence (1991). Lawrence found that Chief Executive Officers

(CEOs) of companies that won the Malcolm Baldrige National Quality Award had as their most notable leadership characteristic a high trust in people. This high trust in people was expressed as the belief that people are the greatest asset of the organization. Also, these CEOs demonstrated congruency between their words and actions regarding commitment to total quality management, employee empowerment, and teams. The respondents in Lawrence's study referred to this congruency as walking the talk of quality. The current study also confirmed the need for total quality leaders to actively demonstrate their commitment to employee empowerment. Like the respondents in Lawrence's study, the respondents in the current study also referred to this relationship between commitment and empowerment as walking the talk.

Overall, the findings of the current study confirmed the work of earlier researchers in the field of executive development, including research on leadership within the context of total quality management. Specifically, this study confirmed previous research which highlighted the value of challenging projects or assignments in executive development. Also, total quality leaders learned most often from role models. This is also consistent with earlier research in the broader field of executive development. However, in contrast to some earlier research findings, total quality leaders found that the learning they experienced in formal training settings

transferred more directly to the work environment. And, finally, total quality leaders were found especially to be open to feedback from others.

It is also worth noting that there were some findings of the current study which have not been addressed in earlier research. For example, the total quality leaders in the current study cited benchmarking as a critical event in their own executive development. However, benchmarking per se has not been identified as a critical experience in earlier research in the field of executive development. Similarly, conceptual understanding of quality is a lesson theme which appeared often in the current study, but which does not appear in the broader literature on executive development. Benchmarking as a critical event and conceptual understanding of quality as an important lesson theme may therefore be seen as reflecting the particular environment within which the respondents in the current study operate -- the context of total quality management.

In summary, the findings, conclusions, and implications of this study do shed light on the developmental experiences of total quality leaders. Furthermore, it is the opinion of this researcher that these conclusions and implications should be taken into account by companies which are seeking develop or recruit individuals to be total quality leaders. Specifically, these findings provide the basis for a framework which may be used to create an individual development plan for an individual who is a potential total quality

leader. Such a framework would be largely experiential in nature, and would emphasize the types of critical events and lessons learned which were identified in the current study. This framework would enable managers to take advantage of the demands which are inherent in their current positions and to shape their careers over time to increase appropriate learning opportunities.

The framework for development which may be developed based on the findings of this study may also be useful to organizations which are seeking to recruit and select external candidates for the role of total quality leaders. During the selection process, these organizations may choose to ask candidates who are applying for the position of total quality leader to provide information about their past work experiences and about the lessons they have learned earlier in their career. This information may shed some light on the candidate's similarity to total quality leaders of exemplary quality efforts, and, in so doing, may help the organization to judge the candidate's suitability for position. This study therefore provides a starting point to determine the key criteria to be used in the process of recruiting and selecting total quality leaders.

Recommendations

One of the goals of the current study has been to provide companies with suggestions which may be implemented in order to enhance the selection and development of total quality leaders. In addition, in the course of conducting the current study, a number of possible avenues for future research have been identified which might further enhance our understanding of the development of total quality leaders. These recommendations for practice and for research are as follows:

Recommendations for Practice

(1) Companies should revise their internal development programs to include increased opportunities for executives who are targeted for the role of total quality leader to take on challenging projects. In addition, these potential total quality leaders should be allowed sufficient autonomy in completing these projects to allow them to be innovative, to take risks, and to be resourceful. Suitable projects may involve job rotations or other cross-functional assignments as these may also enhance systems perspective. To support total quality leaders in making decisions regarding challenging projects, human resources professionals within companies should create and maintain a listing of potential assignments.

(2) Companies should support individuals who are potential total quality leaders both in learning from role models and in becoming role models themselves to others in the organization. For example, a company could establish a formal mentoring program in which managers responsible for implementing total quality are paired with senior executives who are both knowledgeable about quality and visibly committed to the quality effort.

(3) Formal training in the principles and practices of quality is typically offered at the outset of a company's effort to implement total quality management. This practice certainly should be continued. However, companies should bring in noted speakers with strong credibility in the field of total quality for this training whenever possible. Also, demonstrations and other experiential activities should be incorporated into the formal training setting to clarify quality concepts.

(4) Companies should encourage individuals who aspire to become total quality leaders to engage in benchmarking of other companies, particularly those with exemplary quality efforts, both here and abroad. This is likely to increase the conceptual understanding of quality which these individuals have, while at the same time it will increase their commitment to excellence of products and services.

(5) Companies should establish and maintain an environment of trust and openness so that all members of the organization, including potential

total quality leaders, will feel free to provide feedback to each other without fear of reprisal. Organizational climate audits may be administered by companies in order to establish a baseline of support for feedback and to highlight the possible need for training in giving and receiving feedback.

(6) Companies should provide more formal assessment opportunities for potential total quality leaders, particularly assessment based on gathering 360-degree feedback (i.e., feedback from superiors, peers, and subordinates).

(7) Organizations which offer programs in leadership development, including schools of business administration, training and consulting organizations, and departments of educational administration, should continue to build on the trend to redesign their curricula so as to integrate principles of total quality management. However, these organizations need to do more than redesign the content of their curricula. They should begin also to include learning opportunities which more directly contribute to the development of total quality leaders. These learning opportunities could include, for example, benchmarking of exemplary quality efforts; simulations; opportunities for students to manage cross-functional projects within organizations, perhaps on an internship basis; and perhaps a distinguished lecturer series featuring experts from within the field of total quality management.

Recommendations for Future Research

A number of questions and issues which have been raised in the current study are worthy of further research. These are:

(1) How might the critical event methodology utilized in this study be used to focus on other sets of individuals or on other variables? For example, what are the critical events and lessons learned which contribute to the development of leaders of quality efforts which have won state-level awards for quality? Or, given that the most significant lessons learned were commitment and empowerment, what more can be learned about the critical events which give rise to these lessons, perhaps for all managers within a total quality environment, not just for total quality leaders?

(2) What are the particular characteristics that enable an individual to serve as an effective role model, particularly within the context of total quality management?

(3) How are the role of the CEO and the total quality leader the same (and how are they different)? To what extent do the CEO and the total quality leader overlap in their responsibilities for the successful implementation of total quality management? On the other hand, what unique skills or perspectives must the total quality leader bring to his role that are perhaps less critical for the CEO?

(4) How can elements which are important to total quality management, such as team orientation and giving and receiving feedback, be incorporated into the performance appraisal system? How can managers be rewarded for behaving in ways that support the successful implementation of TQM?

(5) How might we learn more about the development of all managers who operate within the context of quality (some of whom move upward in the organization to become total quality leaders)? More longitudinal research of individuals involved in quality is needed so that these individuals might be studied as they experience developmental events, not after the fact. This approach would have the advantage of enabling the researcher to detect patterns as they develop and to follow individuals over the whole of their career.

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APPENDIX A:

WINNERS OF THE MALCOLM BALDRIGE
NATIONAL QUALITY AWARD
1988 - 1993

1993 Award Winners

Manufacturing

Eastman Chemical Company
Kingsport, Tennessee

Small Business

Ames Rubber Company
Hamburg, New Jersey

1992 Award Winners

Manufacturing

AT&T Network Systems Group
Transmissions Systems Business Unit
Morristown, New Jersey

Texas Instruments, Inc.
Defense Systems & Electronics Group
Dallas, Texas

Service

AT&T Universal Card Services
Jacksonville, Florida

The Ritz-Carlton Hotel Company
Atlanta, Georgia

Small Business

Granite Rock Company
Watsonville, California

1991 Award Winners

Manufacturing

Solectron Corporation
San Jose, California

Zytec Corporation
Eden Prairie, Minnesota

Small Business

Marlow Industries
Dallas, Texas

1990 Award Winners

Manufacturing

Cadillac Motor Car Company
Detroit, Michigan

IBM Rochester
Rochester, Minnesota

Service

Federal Express Corporation
Memphis, Tennessee

Small Business

Wallace Company, Inc.
Houston, Texas

1989 Award Winners

Manufacturing

Milliken & Company
Spartanburg, South Carolina

Xerox Business Products and Systems
Stamford, Connecticut

1988 Award Winners

Manufacturing

Motorola, Inc.
Schaumburg, Illinois

Westinghouse Commercial
Nuclear Fuel Division
Pittsburgh, Pennsylvania

Small Business

Globe Metallurgical, Inc.
Cleveland, Ohio

APPENDIX B:

CRITICAL EVENTS WHICH CONTRIBUTE TO EXECUTIVE DEVELOPMENT

Setting the Stage

. Early work experience
. First supervisory job

Leading by Persuasion

. Project/task force assignments
. Line to staff switches

Leading on Line

. Starting from scratch
. Turning a business around
. Managing a larger scope

When Other People Matter

. Bosses

Hardships

. Personal trauma
. Career setback
. Changing jobs
. Business mistakes
. Subordinate performance problems

Lindsey, E. H., Homes, V., & McCall, M. W., Jr. (1987). Key events in executives' lives. (Tech. Rep. No. 32). Greensboro, NC: Center for Creative Leadership.

APPENDIX C:

THE POTENTIAL LESSONS OF EXPERIENCE

Setting and Implementing Agendas

. Technical/professional knowledge
. All about the business one is in
. Shouldering full responsibility
. Strategic thinking
. Innovative problem-solving methods
. Doing it beats hypothesizing

Handling Relationships

. Directing and motivating subordinates
. Understanding other people's perspectives
. Handling political situations
. Dealing with people over whom you have no authority
. How to work with executives
. Strategies of negotiation
. Confronting subordinate performance problems
. What executives are like
. Getting people to implement solutions
. Developing other people
. Managing former bosses and peers
. Dealing with conflict

Basic Values

. Basic management values
. Sensitivity to the human side of management
. You can't manage everything all alone

Executive Temperament

. Self-confidence
. Coping with ambiguous situations
. Persevering through adversity
. Being tough when necessary
. Coping with situations beyond your control
. Use (and abuse) of power

Personal Awareness

. Personal limits and blind spots
. Knowing what really excites you about work
. Taking charge of your career
. The balance between work and personal life
. Recognizing and seizing opportunities

Lindsey, E. H., Homes, V., & McCall, M. W., Jr. (1987). Key events in executives' lives. (Tech. Rep. No. 32). Greensboro, NC: Center for Creative Leadership, p. 227.

APPENDIX D:

INTERVIEW GUIDE

(Final Version)

Name of Respondent:_____

Company Name:_____

Date of Interview:_____

I. Open conversation:

A. Introduce myself.

B. Describe my role as researcher.

C. Describe respondent's role.

D. Assure respondent of confidentiality.

E. Ask permission to tape interview.

(Switch on tape recorder.)

II. Obtain or confirm background information from respondent:

A. "When did you join this organization?"

B. "Briefly describe the various positions you have held since you joined this company:"

C. "What is your educational background?"

D. "What was your role at the time your organization applied for the Malcolm Baldrige Quality Award?"

E. "What is your current role in your organization? (if applicable) ...in your organization's quality effort?" (if applicable)

F. "How is this role defined? (Probes: Do you have a written job description? Are you setting your own performance goals or are those set for you?)"

III. Restate the primary research questions:

Possible lead-in: "You should have a received a copy of the main questions that we are going to cover in the mail in the past week or so. I'd like to spend most of the time now getting your reflections on this question. 'Just to recap..."

"When you think about your career, and specifically about your role as a leader of a total quality effort in _____ (company), certain events or episodes

probably stand out in your mind -- things that led to a lasting change in you as a manager and ultimately as a leader of total quality. Please describe three 'key events' in your career: things that made a difference in the way you approach your role as a leader within the context of total quality management."

A. "For the first event:

1. What happened?

(Possible probes: "Give me a few more details. When did this happen? Who else was involved? Was a particular aspect of this event more vivid or memorable than other aspects?")

2. What did you learn from it (for better or worse)?"

(Possible probes: "What has stayed with you most vividly about this event? In what way, specifically, did this event have an impact on you as a leader? Can you capture this learning in a word or a phrase?")

B. "For the next event:

1. What happened?

2. What did you learn from it (for better or worse)?"

C. "For the final event:

1. What happened?

2. What did you learn from it (for better or worse)?"

V. Close conversation.

A. Thank the respondent for participating.

B. Briefly describe how data will be compiled and classified.

C. Promise to send the respondent a summary of the research results.

D. Ask if respondent has any questions.

APPENDIX E:

LETTER TO POTENTIAL RESPONDENT

(Printed on principal investigator's business letterhead.)

Date

Name
Current Title
Company Name
Company Address

Dear _____:

I am writing to invite you to participate in a study of effective leadership. I am a graduate student at North Carolina State University and am conducting this study as part of my doctoral research. This research is intended to increase knowledge of executive development and leadership effectiveness, especially within the context of total quality management.

Fewer than twenty people from across the United States are being invited to participate in this study. All of these individuals, like yourself, have been leaders of highly successful total quality management efforts. You specifically are being invited to participate because you have been a total quality leader in an organization which has won the Malcolm Baldrige National Quality Award.

Your participation in this study would require 45 minutes to one hour of your time. This time would be spent in a telephone interview during which I would ask you to answer the questions which are enclosed with this letter. As you can tell from reading these questions, the focus of this research effort is on determining which experiences you may have had earlier in your career which you feel may have had direct impact on your ability to be an outstanding leader.

Your responses to these questions would be entirely confidential. That is, the information gathered during all of the interviews will be combined and the data will be analyzed for key themes and trends. No individual responses will be reported.

I will telephone you in about a week to find out whether you might be willing to participate in this important research study. In the meantime, please do not hesitate to telephone me if you have additional questions that I might answer. Thank you for considering this request.

Sincerely,

Bonnie Favorite

Attachment

APPENDIX F:

ATTACHMENT TO LETTER TO RESPONDENT

Research Question:

When you think about your career, and specifically about your role as a leader of a total quality effort, certain events or episodes probably stand out in your mind -- things that led to a lasting change in you as a manager and ultimately as a leader of total quality. Please take a few moments to jot down some notes for yourself identifying at least three "key events" in your career -- things that made a difference in the way you approach your role as a leader within the context of total quality management.

Event #1:

What happened?

What did you learn from it (for better or worse)?

Event #2:

What happened?

What did you learn from it?

Event #3:

What happened?

What did you learn from it?

APPENDIX G:

LIST OF LESSONS LEARNED, BY LESSON THEME

I. Commitment

To do more, to work harder.
To become a serious advocate for quality excellence.
To demonstrate commitment to quality on a daily basis.
To be strong internal advocate for quality.
To become visible advocate for quality.
The importance of demonstrating commitment to quality.
The importance of focusing on quality as priority.
To be committed to continuous improvement.
To walking the talk...to show commitment.
Importance of walking the talk of for quality.
To persevere [to accomplish quality goals].
To be outspoken for quality.
Value of having high goal...of pursuing excellence.

II. Empowerment

There is talent throughout the organization...get people engaged and involved.
To appreciate...the human resource element of quality.
To get every employee to feel like they are the owner of the company...to see the impact of people and how people fit into quality excellence.
Need to have leadership practices that model trust.
Importance of trusting employees to make good decisions.
Importance of establishing an environment that is conducive to empowering employees.
You need to let go of control in order to get others involved.
You must give up control and empower employees.
Get people involved and engaged.
It's important to capture the abilities of all employees.
Get people working for you....to accomplish organization's goals.
How easy it is to disempower people.
Managers must create systems to support empowerment.

III. Conceptual Understanding of Quality

The hidden cost of poor quality.
To get on a different path to achieve quality....to move toward a prevention-based quality system.
The basic principles of total quality management (first report).
The basic principles of total quality management (second report).
Principles of implementing total quality.
Technical knowledge of processes and improvement.
About MBNQA criteria, the technical side of quality.
Practical understanding of how to implement quality principles.
The financial importance, the economic aspect of implementing quality.
Quality concepts, including statistical process control.
How to implement quality concepts.
The basic principles of quality.

IV. Team Orientation

[The value of working] in a small highly communicating group.
The importance of sharing ideas and building on each others' ideas.
The value of...of working with people in a team setting.
To get people involved...in teams.
To need to more toward self-directed work teams.
To develop a team-based atmosphere.

V. Systems Perspective

Total quality management is none of those (individual systems), but rather all of those [systems] working together.
Frustrations [result] from sub-organizations optimizing at the expense of the company.
If you get those arrows [the individual systems] aligned, you can accomplish anything.
Appreciation of systems.
Systems thinking.

VI. Resourcefulness

Every rule can and should be broken to serve a customer well.
Be willing to break paradigms.
It really takes a lot of perseverance, a lot of initiative,
and a lot of action.
Be proactive.

VII. Communication

The ability to take in vast amounts of information in a short time.
The ability to share information with other professionals in the
industry [through public speaking].
To listen well.
To listen to all sides.

APPENDIX H: MATRICES OF CRITICAL EVENTS AND LESSON THEMES

1. CHALLENGING PROJECTS	Commitment	Empowerment	Conceptual Understanding of Quality	Team Orientation	Systems Perspective	Resourcefulness	Communication
1.1 Used an innovative, team-centered approach to develop a new product.	X	X		X		X	
1.2 Directly involved manufacturing employees in redesigning a product.		X					
1.3 Solved a chronic problem with mainframe computer system.						X	
1.4 Led company's efforts to implement quality in the midst of a strike.		X					
1.5 Redesigned and integrated systems to support quality efforts.		X		X	X		
1.6 Solved a problem for a major customer by bypassing company rules.						X	
1.7 Coordinated the company's effort to complete the MBNQA process.	X			X			
1.8 Independently completed the MBNQA award application.			X				
1.9 Gave series of internal presentations representing quality function to peers.							X
1.10 Successfully lobbied within company for quality leadership role.		X				X	

2. ROLE MODELS	Commitment	Empowerment	Conceptual Understanding of Quality	Team Orientation	Systems Perspective	Resourcefulness	Communication
2.1 Worked for person who modelled teamwork and empowerment.		X		X			
2.2 Worked for an individual who had a coaching style of management.		X					
2.3 Worked for an individual who was highly directive and controlling.		X					
2.4 Watched CEO change his leadership style.	X						
2.5 Watched CEO model commitment to continuous improvement.	X						
2.6 Worked with a coworker who shared insights on good leadership.	X						
2.7 Observed executive team in a meeting as they committed to TQM.	X						
2.8 As child, listened to mother talk about achieving up to ability.	X						
2.9 As child, was taught by parents to be fair, to listen, and to value others.		X					X
2.10 Watched film of individual who was committed to continuous improvement.	X						

3. BENCHMARKING	Commitment	Empowerment	Conceptual Understanding of Quality	Team Orientation	Systems Perspective	Resourcefulness	Communication
3.1 Visited luxury hotels in the Far East.	X		X				
3.2 Observed Japanese management and systems integration.			X		X		
3.3 Visited Japan with top management team; observed alignment of systems.	X		X	X	X		
3.4 Visited a customer's site to observe quality program.	X		X				
3.5 Became examiner for the Malcolm Baldrige National Quality Award.			X				

4. TRAINING/EDUCATION	Commitment	Empowerment	Conceptual Understanding of Quality	Team Orientation	Systems Perspective	Resourceness	Communication
4.1 Attended Deming seminar and observed red-bead experiment.			X				X
4.2 Attended Deming seminar and observed red-bead experiment.		X	X		X		
4.3 Reviewed Deming seminar materials, including 13 principles of TQM.	X	X	X				
4.4 Attended training with Juran.			X				
4.5 Majored in electrical engineering in college.			X				

5. FEEDBACK	Commitment	Empowerment	Conceptual Understanding of Quality	Team Orientation	Systems Perspective	Resourcefulness	Communication
5.1 Received feedback from employee regarding lack of trust.		X			X		
5.2 Was confronted by employee about lack of communication.		X					X
5.3 Received feedback from a peer regarding lack of personal commitment.	X						
5.4 Received feedback from customer regarding a quality audit.			X				

6. OTHER	Commitment	Empowerment	Conceptual Understanding of Quality	Team Orientation	Systems Perspective	Resourcefulness	Communication
6.1 As a child, worked in family's restaurant.				X			