

**Appendix E - UNIVERSITY HONORS PROGRAM
SENIOR PROJECT - APPROVAL**

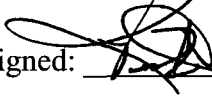
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PROJECT TITLE: TQM & The Malcolm Baldrige Award

I have reviewed this completed senior honors thesis with this student and certify that it is a project commensurate with honors level undergraduate research in this field.

Signed: , Faculty Mentor

Date: July 16, 2003

General Assessment - please provide a short paragraph that highlights the most significant features of the project.

Comments (Optional):

TQM and the Malcolm Baldrige Award

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Senior Honors Project

July 16, 2003

TQM and the Malcolm Baldrige Award

Quality is the key to being successful in many aspects of business. As management theory progressed over time, many managers began to realize this. The United States has come to realize that consumers want quality in many things. After Japan started the quality movement, U.S. companies realized they needed to do the same to remain competitive. To remain competitive, many organizations began to implement Total Quality Management in their practices. The quality movement also led to the creation of the Malcolm Baldrige National Quality Award to promote quality in all types of organizations. To win this award, is it simply necessary to implement TQM, or is there a bigger, more in-depth relationship between the practices of Total Quality Management and the Malcolm Baldrige Award?

To analyze the relationship between TQM and the Malcolm Baldrige Award, it is necessary to first understand TQM. Total Quality Management is "a people-focused management system that aims at continual increase in customer satisfaction at continually lower real cost. Total Quality is a total system approach (not a separate area or program) and an integral part of high-level strategy. It works horizontally across functions and departments, involving all employees, top to bottom, and extends backward and forward to include the supply chain and the customer chain" (Bounds 796). Looking at this definition, one

must understand that TQM is a complete approach to management practices and cannot simply be another program an organization implements as a separate measure to supplement other practices. Not allowing TQM to be the complete practice can lead to its failure. Some reasons for this failure are "the executive promotional ladder, executive bonuses and the resultant interest in short-term results, and shareholder pressures. There are, however, wider and more complex factors which make the need for commitment more encompassing and more widely spread. There is a need, for example, for internal commitment of all employees and a willingness to combat waste, reduce costs and carry out consistent improvements...The issues in relation to TQM, therefore are twofold. There are needs for: short-term benefits in enhancing profit levels and initiating growth; and long-term benefits through ensuring sustainability and consistency in achieving related superior performance standards" (Zairi 38). As one can see from this quote, managers, shareholders and employees must be patient with TQM and allow it time to show long-term results.

To implement TQM, an organization must completely change all of its practices. During these changes, the organizational culture will change. This is necessary to shift from a management control type of environment to a more open environment where low-level employees have more control.

Employee empowerment is a key to TQM. Empowerment involves giving employees power to make decisions on their own without the approval of management. By doing this, change takes place more rapidly. Low-level employees do not have to wait for the approval of upper management to make a decision. In most cases, the low-level employee actually understands more about the process because he or she actually performs it as his or her job function. Allowing employees to make these decisions can save an organization a great deal of time, which can lead to a cost savings as well. Additionally, giving employees power will make them happier while they do their jobs. Making them happier will lead to better performance, as the employees feel good about performing their jobs. By empowering employees, an organization can have better performance, which leads to better quality.

Not only should TQM be embraced at an operation level, but it must also be embraced at the corporate level. According to Denis Leonard and Rodney McAdam, "TQM needs to be supported at the top. It needs to have commitment at the corporate strategic level, with an understanding of its corporate strategic characteristics and a clear awareness of the fit and position of the award models and their application if appropriate. If it is delegated and used only at operational level - middle level down - ...that will save money, but this is not creating a strategic impact. It will not highlight the need to move into a different

market or alert to a company to the fact that a new competitor has entered the market. These are issues not considered at the operational level" (Leonard 5). As one can see, making a strategic impact across the organization is a necessity. If all the necessary issues are to be considered, TQM must not only empower lower level employees but must also be embraced by the corporate managers.

Another dimension of TQM that must be analyzed is customer value. Customer value "defines value as benefits minus sacrifices" (Bounds 792). A customer will perceive the quality it receives by weighing the benefits it gets against what it gives up. Most of the time, the sacrifice is cost. To give the customer good value, the costs must not outweigh the benefits. It is imperative that the customer perceives the product or service offered by the organization as worth the cost it gives up to have the product or service. TQM forces an organization to make the customer first and work for the customer and not for itself.

The emergence of TQM and the necessity for quality in the United States led to the creation of the Malcolm Baldrige National Quality Award. The award was created in 1987 by the U.S. Department of Commerce to enhance competitiveness. The U.S. had fallen behind in many industries in quality thanks to the Japanese implementing TQM successfully. The Department of

Commerce realized that something had to be done if the U.S. industries were going to be able to continue competing with the Japanese. It created the Malcolm Baldrige Award "to promote awareness of quality as an increasingly important element in competitiveness, to improve understanding of the requirements for quality excellence, and to foster sharing of information on successful quality strategies and the benefits derived from implementation of these strategies" (Bounds 23). It can even be argued, "The Malcolm Baldrige National Quality Award has quickly gained recognition as the premier indicator of product quality among US businesses. The objective of the award is to recognize firms achieving world-class competitor status. Additionally, the award seeks to give other firms (non-winners and non-applicants) a basis for benchmarking their own quality efforts and give examples for quality improvement programmes" (Wisner 24). In doing so, the government hoped to aid not only individual organizations but also the entire frame of U.S. competitiveness. According to Chris Taylor, "the biggest winner is the USA where business competitiveness is on the up and up, and where service and quality are becoming the norm, rather than the exception" (Taylor 66). By creating the Baldrige Award, the Department of Commerce achieved its goal of enhancing U.S. competitiveness.

Additionally, the Baldrige Award has criteria that "encompass seven common sense, though not common practice,

interrelated areas that drive organizational excellence" (Circles of Learning). These criteria lie in the leadership, strategic planning, customer and market focus, information and analysis, human resource focus, process management, and business results of the organization. In an article written by Rodney McAdam, "'the best way to understand the Baldrige criteria is an audit framework, that tells companies...what they must demonstrate'...The model also provides an overview or 'a big picture view from different angles...a holistic approach'" (McAdam 18). Many organizations have used the Baldrige criteria as the foundation for their implementation of TQM. In doing so, the organization uses self-assessment methods to evaluate its quality. According to Marion M. Steeples, this method "is the ultimate quality tool. It works because it systematically uses award criteria for assessment and improvement, and it fulfills TQM's critical success requirements, thus: It looks at key quality areas - it concentrates on the right things. It is comprehensive - it addresses all operations, practices, and processes. It is diagnostic - it inventories what is good, bad, and missing and it supports a company which is custom designing its TQM process" (Steeples 43). Pui-Mun Lee and Hesam Quazi argue that "the use of national quality award criteria requirements as the basis for developing a survey-based self-assessment tool" (Lee 140) is a good methodology to use for

internal self-assessment of quality. The Baldrige Award has five different categories that the award can be won in: manufacturing, small business, service, education, and health care. Past winners of the award include Motorola, FedEx, Ritz-Carlton, Boeing, 3M, and AT&T.

While there is great recognition for the winners of the award, Dr. J.M. Juran argues that just applying for the award is a large step for the quality of an organization. According to Arvinder Loomba, "What many critics fail to realize is that the primary value of the Baldrige Awards lies in the process - the road map provided by the criteria set - rather than in the handful of awards distributed each year. In competing for the Malcolm Baldrige National Quality Awards, it is not important whether you win or lose, just that you play the game. This idea is supported by Dr J.M. Juran, who served for four years on the Baldrige Board of Overseers. He believes most of the criticisms have been misplaced by the media. 'The *Wall Street Journal* and *Fortune* have fallen into the trap of believing that filling out the application is the most important story', Juran says. 'It's not. Meeting the criteria is the heroic effort'" (Loomba 72). As this quote illustrates, an organization that simply applies for the award and meets the standards has taken a step in the right direction for its own quality improvement. Additionally, David Steventon argues, "both the Baldrige and European Quality

Award models then work on a scoring system, so that companies may self-assess their performance against those factors relevant to their own business. Therefore, as there is not a pass/fail concept (except in terms of number of points in applying for an award or prize), companies are directed towards the idea of continuous improvement" (Steventon 8). This also shows how simply applying the concepts and standards of the Baldrige can allow an organization to improve its quality.

Several may argue that there can be a simple plan for winning the Baldrige. All an organization must do is simply apply the criteria and show that it is the best in every aspect of the criteria set forth by the Baldrige Award. However, Tongta Srivivatanakul argues that it is much more in-depth than this. According to Srivivatanakul, an organization must have a distinct strategic plan, functional plans, and annual business unit plans. Within the strategic plan, the organization must have a rationale for the plan, an assessment of its current status, goals and objectives, approach and methods, and roles and responsibilities. Within functional level plans, an organization should be long term and cover in greater detail the Baldrige criteria. The annual business unit plans must develop what was established in the functional plans. They should help to achieve the long-term goals for the Baldrige criteria. (Srivivatanakul 13-15) However, more than just a plan is

necessary to win the Baldrige Award. Organizations that have won the award have gone beyond the criteria to set themselves apart. To try and distinguish what has made these organizations successful in their implementation of TQM and in winning the Baldrige, I have chosen to take a closer look at a few of the winning companies to try and determine what has set them apart from other organizations that have attempted to do the same.

Eastman Chemical Company won the award in the manufacturing division in 1993. Eastman, based in Kingsport, Tennessee, manufactures and markets over 400 chemicals, plastics and fibers. It began its quality transformation in 1982 to win customers, grow, and prosper. Along the way, it developed a marketing strategy with its focus on delighting the customer. As the quality transformed, Eastman began to use the Baldrige criteria as a self-checklist for TQM (Eastman Chemical Company). Eastman also found that the key to quality lies in communication (*Quest for Excellence VI*). Eastman found that focusing on the customer was the way to make a quality product and in turn make a profit.

In addition to the customer, Eastman also focused on its employees. Eastman found the key to its quality lies in the motivation of its employees. Making employees care about their work was the key. Eastman did this by eliminating several obstacles. According to Weston Milliken, "Eastman realized that

employees might be afraid that they would improve themselves out of a job. The company has therefore kept a promise never to lay off anyone because of quality improvement" (Milliken 188).

Additionally, Eastman changed the way in which it appraises employees. The previous "system automatically ranked half of company employees as below average. But some 80 percent of employees actually think of themselves as being in the top third of their work group. Asks Robert C. Joines, former vice-president of quality: 'What is wrong with telling employees that they are all in the top third, thereby making them feel better about them-selves? When you do, they will go out and win battles for you.' The company has now shifted its energy from simply grading employees, to developing them" (Milliken 188-89).

Eastman also changed its employee suggestion system: "Eastman discovered that employee-suggestion schemes which reward individuals with money for their ideas interfered with suggestions for improvement made by teams. Now suggestions are encouraged from teams, and the company reports a higher quality of ideas. Instead of money, Eastman relies on the intrinsic value that employees seek in their jobs and what they accomplish. Letting employees know that they make a difference to the company produces pride and excitement, which are not found in many businesses today" (Milliken 189). While restructuring the training system for employees, "Eastman

Chemical let the employees and team leaders choose which competences they needed to improve. The training options fell into four categories: 'in-house training sessions, self-directed courses, literature other than internal training materials, and outside courses, seminars, and conferences'" (Switzer 15). In doing this, Eastman allowed employees to pick where they believed they most needed improvement. This is just another way they empowered their employees. By looking at both its customers and employees, Eastman set itself apart and won the Malcolm Baldrige Award.

Another organization that focuses on its customers is Pal's Sudden Service. Pal's is a small hamburger and hot dog fast food restaurant in northeast Tennessee and southwest Virginia. According to Pal Barger and Thomas Crosby, the founder and president of Pal's respectively, Pal's goal is to go beyond satisfying the customer and delight it. In Pal's attempt to delight the customer, its stores have an average handout speed of twenty seconds, which is four times faster than its competitors. Additionally, Pal's makes less than one mistake for every two thousand transactions. When it does make a mistake, it fixes the problem by going as far as sending a taxi to the customer's home with the correct order if a drive-thru order was incorrect. At a new store, an order had been messed up while Barger and Crosby attended. When they heard from the

customer, Crosby got the customer's address and he and Barger took the correct order to the customer. Going beyond the standard practices to delight its customers has made Pal's successful. To teach employees to do their best to make a quality product, they are trained to create the food as if they themselves were going to consume it. Additionally, when a customer goes through the drive-thru at Pal's, he or she actually orders from a person rather than a loudspeaker. This cuts down on the mistakes and helps the restaurant to have more interaction with the customer. According to Pal Barger, it is not important to look at profits, but rather to look at customers because if the customer is focused on, the bottom line, profits, will take care of itself (*Quest for Excellence XIV*).

Another way organizations have set themselves apart is the manner in which they treat their employees and empower them. One such organization is Boeing. Boeing Airlift and Tanker Programs won the Malcolm Baldrige Award for manufacturing in 1998. Boeing transformed its process by keeping its employees constantly informed and empowering them to make changes on the shop floor. Additionally, Boeing set up an advanced craftsmanship work center to train employees better as they increase their skills over time. As they advance in this, their autonomy on the job increases. According to E. David Spong, CEO

of Boeing, the goal is to "make people care about their jobs" (*Quest for Excellence XI*). By making employees care, they will perform better and have helped Boeing to increase its quality. To determine how it could set itself apart, Boeing came up with its best twenty practices and initiatives. They found these to greatly enrich the organization. These twenty are employee involvement, lean enterprise, process-based management, customer relationship management, integrated planning process, leadership system, enterprise performance integration, performance excellence sustainment, affordability, community involvement, Boeing vision 2016, earned value management system, Boeing quality management system, multiple customer/multiple configuration, supplier partnering, defects/cycle time reduction, safe workplace, clear operating priorities, career development, and diversity (Walden 129-130). Additionally, Boeing cut down costs on planes by almost 2 million dollars per plane. By putting an anti-corrosive on fasteners rather than a sealant that had to be put on each fastener after it was attached to the plane, Boeing saved not only money but also time in its process. This made employees' jobs easier and led to fewer quality problems for Boeing (*Quest for Excellence XI*). By empowering employees and making their jobs easier, Boeing set itself apart and successfully implemented TQM and won the Malcolm Baldrige Award.

Another organization that empowered its employees to become more quality oriented is Texas Nameplate. Texas Nameplate "manufactures and sells identification and information labels that are affixed to refrigerators, oil-field equipment, high-pressure valves, trucks, computer equipment, and other products made by its 1,000 customers" (Texas Nameplate Company, Inc.). Dale Crownover, CEO of Texas Nameplate, says, "Never underestimate what people can do" (*Quest for Excellence XI*). Texas Nameplate offers many incentives for its employees to not only perform well but to continually educate themselves as well. By offering tuition reimbursement to its employees, Texas Nameplate encourages them to get a degree and shows that it values education. Additionally, to show his support of getting an education, Crownover has bought class rings for anyone that does finish school. Texas Nameplate also offers profit sharing and gain-sharing programs for its employees. These "profit-sharing and gain-sharing incentives, along with higher-than-industry-average pay scales, serve to reinforce the workforce's commitment to quality and foster company loyalty. In TNC's 1997 employee survey, employee satisfaction rates ranged from 72 percent to almost 88 percent in the five areas that employees say are most important: fair pay, job content satisfaction, recognition, fairness/respect, and career development. A comparable national average shows rates of 50 percent to 57

percent on these same areas" (Texas Nameplate Company, Inc.). These percentages show how Texas Nameplate is committed to its employees. By fostering this kind of environment with its employees, Texas Nameplate set itself apart and successfully implemented TQM and won the Malcolm Baldrige Award.

Another organization that uses its employees to its advantage is Ames Rubber Corporation. Ames can be seen as a good model for small to medium size companies to follow. Many believe that TQM concepts are easier to embrace and utilize in a larger corporation. However, Ames is one of several small to medium size companies to win the Baldrige Award (Ghobadian 125). Ames uses team ideas to change its processes. By grouping employees into teams and allowing them to come up with ideas, Ames shows its commitment to giving employees more power in their jobs. Ames did not use these teams as a quick fix to better its quality. Initially, the CEO and six members of his executive committee spent about one year researching and defining strategic tasks for the company. The next year, all of the employees were trained in TQM concepts and techniques. As the employees were trained, projects arose to help aid the organization. As these projects arose, teams were assigned to carry them out. As this progressed, all employees could suggest projects. These suggestions led to more teamwork and empowerment for employees (Roth 43-44). From the ideas the

teams had, Ames saved over 1.2 million dollars. Additionally, its defect rate decreased dramatically from 30,000 to eleven per million parts (*Quest for Excellence VI*). Ames also has close contact with its suppliers and customers. It has developed a program called "CS/CI" which stands for Continuous Supplier/Customer Involvement. In the CS/CI system "New products begin with a series of customer meetings to create a product brief outlining technical, material and operational requirements. This is forwarded to internal departments to select materials, processes and procedures which must be approved by the customer. The customer evaluates prototypes until completely satisfied. Finally, a trial production run is made. Not until the customer approves the results does full-scale production commence" (Evans 57). Ames has reduced its number of suppliers from forty-two to nineteen. These nineteen have a quality rating of near ninety-nine percent. It also stays in constant communication with its suppliers and customers to ensure proper orders (Ames Rubber Corporation). While staying in touch with its customers, Ames puts them first. According to Chris Taylor, "The organization chart at Ames Rubber is the tip-off to this company's view of how to do business: 'External Customers' are on top, then the firm's unit and other managers, and then president Joel Marvil. In fact, the company's entire business strategy is designed to ensure that

the customer drives Ames Rubber's operations and goals. All the company's products are made to order, and to customer design and specification. Its warranties are among the best in the industry and include a refund of the customer's portion of development costs for prototype parts if specifications are not achieved" (Taylor 27). In addition to this, "customers work directly with design engineers on new product development teams" (Evans 49). By empowering employees and communicating with suppliers and customers, Ames Rubber Corporation successfully implemented TQM and won the Malcolm Baldrige Award.

By putting an emphasis on customers and empowering employees, organizations have set themselves apart and won the Malcolm Baldrige Award. In doing so, organizations have shown their commitment to Total Quality Management. They have also shown it is not simply the implementation of TQM practices, but the management and carrying out of these practices that leads to success. By using the Baldrige criteria as a foundation for their TQM programs, these organizations have successfully implemented TQM while also gaining recognition as a superior organization with the winning of the Malcolm Baldrige National Quality Award.

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