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IMPLEMENTING THE TOTAL QUALITY MANAGEMENT PHILOSOPHY IN AN ELEMENTARY SCHOOL

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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1997

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ABSTRACT

The call to reform schools has been heard over the last decade. This descriptive case study examined Gardenview Elementary School which answered this call through the use of the Total Quality philosophy. The implementation of this philosophy is examined through the rules, roles, and relationships which have occurred as a result of the transformation.

Many of the tenets of the Total Quality philosophy can be viewed at the site. Staff members share in the decision making process of the school. They articulate the school's vision, have sought the training needed to make educationally sound decisions based upon current research and trends, are not afraid to make mistakes, and participate in the leadership of the building.

While there is some confusion as to what constitutes Total Quality and the tools and techniques are not labeled or used, the essence of continuous improvement is evident at Gardenview. A thorough knowledge of the philosophy itself, however, would improve the understanding of how to implement it in all aspects of the school, including the classroom. A formal program for sharing the structures and philosophy with new staff members is needed to sustain the change.
At a time when the percentage of people without school-age children is increasing, it is important for schools to make sure their product -- students -- meet the needs of their customers -- students, parents, higher education institutions, business and industry, and society -- in order to continue the financial support necessary to operate. The Total Quality philosophy demands that customer needs are considered in decisions made by those closest to the problem.

The future of the Total Quality philosophy in an educational setting remains to be seen. Other schools have shown that its implementation has been successful and adaptable to an educational setting. While schools, including Gardenview, have incorporated the philosophy into their present structure, they have not necessarily institutionalized the philosophy into their system. This will occur when using the tools, techniques, and philosophy are a normal part of the way the school does business, even when the leadership in the building has changed.
Dedicated to my dad, George Jicha, Sr.
ACKNOWLEDGMENTS

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I am indebted to the learning community of Gardenview Elementary. They showed me how parents and staff members can work together to improve an educational system.

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CHAPTER 1

INTRODUCTION


This focus on education had economic roots. A recession in the 1980s resulted in part from increased international competition and the need to improve productivity in the United States. This recession had educational implications in that the quality of the work force was in question.

A key piece of the competitiveness equation was improvement of the work force; a major investment in 'human capital,' it was argued, was essential to increased domestic productivity. Thus school reform -- as a means to a more highly skilled work force -- was seen by many as crucial to the nation's quest for renewed economic competitiveness. This was the argument of A Nation at Risk and Action for Excellence. (Toch, 1991, p. 17)

Restructuring efforts must reach all aspects of the population. In the future, the haves and the have nots will be based upon those who possess
information/knowledge and those who are ignorant. Not only will they have
different access in the society of the future, they will have different philosophies.
Therefore, when determining the type of education needed for the twenty-first
century, it is necessary to consider changes in the demographics of America --
the aging population, working parents, the diversity of families, and becoming a
nation of minorities (Gainey, 1993).

The need for reform has transformed the way America is "doing
business." Changes have occurred in corporations, industry, and education as
organizations have adopted the Total Quality Management (TQM) philosophy
as a means of continuous improvement. This chapter will look at the reform
movement in the United States as it pertains to business and industry, as well
as implications for education, and touch briefly on the research questions
related to the implementation of the Total Quality Management philosophy in an
elementary school setting.

Reform in America

Business and Industry

The Industrial Revolution changed the way industry was organized from
autonomous skilled artisans and family businesses to unskilled jobs in factory
settings. Much of how early factories were set up was taken from the military
ingenuity of Frederick the Great of Prussia who introduced ranks and uniforms,
standardized regulations and equipment, and increased the specialization of tasks (Morgan, 1986). The organization of business and industry as a bureaucracy remains well into the twentieth century.

Until the 1970s, Americans believed their place as a world leader was firm.

The nation awoke in the late 1970s to learn that not only was America's status not permanently secure, it was crumbling. Americans were forced to confront a harsh reality -- the United States was losing its leadership role in the world marketplace, international government, and education. America's postwar consumers had become her fiercest competitors, and the change had occurred so gradually and quietly that it could be understood only in retrospect. ...

The first stirrings of awareness and rousings from lethargy occurred in business and government as the obvious impact of an impending economic crisis became apparent in the late 1970s. Once the browbeating and scapegoating stages were past, it became clear to those studying the issue of America's decline that quality was the primary differentiator between American products and services and those of its more successful competitors. Americans themselves increasingly preferred foreign-made products and services because of the superior quality. ...

Naively or perhaps smugly, Americans had assumed that "made in America" assured a competitive edge in the marketplace and world community. ... Only in retrospect and in the midst of crisis, did the real threat to America's well-being become apparent. By focusing on production and not on quality, America had given its foreign competitors an unmistakable advantage. The threat was internal and not external in origin. (National LEADership Network Study Group on Restructuring Schools, 1993, pp. 6-7)

It has become clear that we are living in a global marketplace with goods and services accessible to us from around the world. Because consumers can
choose the best quality from a wide variety of sources, America needs to be competitive (Creech, 1994).

It's a new game, and the nation has yet to awaken adequately to its new rules, and their portent for the future. I am convinced that getting back to a position of leadership in international competitiveness -- including against the Japanese -- is well within reach. But we can't go on as we are. Our management practices must change. Adequate though not ideal for earlier times, they are thoroughly unsatisfactory in an era of intense competition. The proof is in. This new era presents new realities such as borderless marketplaces and discriminating consumers who are unmoved by appeals to select home-built products for patriotic reasons. Consumers look for the best value (quality and durability considered) and buy that product. In doing so they are indifferent to the macroeconomic effects of their decision. However, the cumulative effects of their individual decisions are profound -- that's all too clear. And the trend toward choosing foreign-made products in America is accelerating, not diminishing. The effect eventually reaches every business and every individual in the society, not just those involved in international commerce. (Creech, 1994, p. 3)

In order to remain competitive, organizations have evolved past strict bureaucratic structures to include corporate planning teams, autonomous units within the larger structure, and change in the culture of the organization, allowing workers to manage progress towards organizational vision and goals (Morgan, 1986; Schlechty, 1990).

Three men -- Dr. Philip Crosby, Dr. Joseph Juran, and Dr. W. Edwards Deming -- are associated with the Quality Movement, begun to improve the organization of business and industry. Total Quality is a philosophy with
customer satisfaction at its heart as people work together to improve the system

(Sashkin & Kiser, 1993; Schmidt & Finnigan, 1992).

In the simplest of terms TQM may be defined as a way of thinking and working to achieve continuous improvement through employee involvement and a focus on customers. TQM is not viewed as an end, but as a continuous pursuit of organizational effectiveness that all would regard as quality. TQM reflects the commitment and involvement of all employees in an organization to the delivery of products or services which the users (customers or clients) judge as meeting or exceeding their expectations.

(National LEADershio Network Study Group on Restructuring Schools, 1993, p. 3)

Crosby (1984) identified several characteristics that organizations in trouble have in common:

1. The outgoing product or service normally contains deviations from the published, announced, or agreed-upon requirements. ...

   The ease of living in a situation where nonconformance is the norm produces a consistent flow of problems. This consistency alone convinces everyone that "this is the way life is." Thus the situation feeds on itself. If things are always going to be that way, then it is necessary to take some other steps to ensure customer satisfaction. ...

2. The company has an extensive field service or dealer network skilled in rework and resourceful corrective action to keep the customers satisfied. ...

   When the service is expected to be incomplete and the product is assumed to always require some adjustment, a situation emerges in which the employees create their own performance standards. ...

3. Management does not provide a clear performance standard or definition of quality, so the employees each develop their own. ...
4. Management does not know the price of nonconformance. ... 
5. Management denies that it is the cause of the problem. 
(Crosby, 1984, pp. 1-3, 5)

To solve the problems in business and industry, many companies are turning to the Total Quality Management philosophy. Dr. Juran (1992) states the need for quality in business and industry as follows:

We have learned that living in a technological society puts us at the mercy of the continuing operation of the goods and services that make such a society possible. In turn, such continuing operation depends absolutely on the quality built into those goods and services. Without such quality we have failures of all sorts: power outages, interruptions in communication and transportation, inoperative appliances. At the least these failures involve annoyances and minor costs. At their worst they are terrifying -- Chernobyl, Bhopal.

A third major force has been the gathering awareness by companies that they have been enduring excessive costs due to chronic quality-related wastes. In the U.S.A. about a third of what we do consists of redoing work previously "done." This redoing consists of correcting errors, rewriting documents, scrapping or reprocessing factory goods, responding to customer complaints, and so on. (p. 2)

W. Edwards Deming has two important principles which deal with quality:

The first is the quality principle: Quality is never the problem; rather, it is the solution to the problem. According to this notion, improving the performance of a system of people begins with a concern for the quality of whatever is being done. Improving that quality results in less waste, less cost, more satisfaction for all concerned, greater productivity, and a better product.

The second is the perversity principle: Any attempt to increase productivity and cut costs by imposing quantitative constraints on a system results only in increased costs elsewhere in the system. According to this notion, if a manager attempts to
change a system by forcing its members to behave differently, the system will be resistant to management's action -- even if the workers say they wish to cooperate. Traditional management theory is the antithesis of the first principle and the embodiment of the second. (Crawford, Bodine, & Hoglund, 1993, pp. 11-12)

Putinski and Kocik (1993) have identified three key advantages and benefits for TQM: "improved competitiveness, improved organizational effectiveness, [and] improved customer satisfaction" (p. 95).

Companies, including manufacturing, service, and small business, which have adopted the quality philosophy have met with success. George and Weimerskirch (1994) chose 53 companies which exemplify the use of a quality philosophy. They used criteria for the Baldridge Award, given to organizations which are deemed to be quality and meet or exceed customer expectations, as part of their selection process. Their choices, including 14 of the 17 Baldridge Award winners, list companies such as BM Rochester, L. L. Bean, Staples, Cadillac, GTE Telephone Operations, Ben & Jerry's, and Eastman Kodak Company. "The benchmark companies ... --Motorola, Corning, Federal Express, Xerox, Solectron, the Ritz-Carlton Hotels, and others -- make understanding and satisfying customer requirements their top priority. They have learned from experience that customer satisfaction determines financial success" (George & Weimerskirch, 1994, p. 3).

In The Five pillars of TQM How to Make Total Quality Management Work for You, Bill Creech (1994) uses examples of automotive companies which
have achieved success using the Total Quality Management philosophy. Among them are GM Cadillac Division, Toyota, and Honda of America. Honda's success includes winning the *Golden Steering Wheel Award*, Germany's top prize for automobile quality.

In business and industry, leaders have identified planning, organizing, problem-solving and decision-making as the fundamental processes underlying every project, every task. And, of course, in order to plan, organize, solve problems, or make decisions effectively, successful individuals have found that they need to be able to generate ideas, identify critical elements, and utilize significant data. (McClanahan & Wicks, 1993, p. 43)

Toyota's success through the use of TQM has shown quantifiable results:

Employees at the Toyota plant in Georgetown, Kentucky, are concerned with such results as the percentage (measured by tenths of a percentage) of car hoods that fit perfectly in place. In another case, the results of introducing a new conveyor hook into the process were measured by the number of times a part fell off the hook and into a water bath. The plant concentrates on measurable results, such as reliability and repair records, the percentage of cars arriving on the lot in perfect condition, and customer satisfaction data. Processes are always "in the rough;" concern with results ensures that all processes are perpetually scrutinized for adjustments. (Schmoker, 1996, p. 5)

In *Quality Without Tears*, Philip Crosby (1984) lists many successes that business and industry have experienced through the use of a quality philosophy. Some examples are as follows:
Computer Manufacturer
The pilot site, producing peripheral equipment, reported comptroller-calculated cost-of-quality reduction of $241 million after twenty-two months of the quality improvement process. Production had increased 48 percent and the field service population, as one example, had shrunk. (p. 149)

Sweeper Manufacturer
During 1981, invoice errors caused by the billing department were reduced by 38 percent. (p. 151)

Chemical Company
In three weeks keypunch order entry errors were reduced from 2,300 a week to 1,300. (p. 152)

Semiconductor Manufacturer
In January, a customer was rejecting 7 percent of the components received and was ready to cancel. By May the rejection rate was down to 1 percent, and in June the customer reported zero rejections. One work group processed 76,948 wafers without an error.
    Scrap due to scratched wafers has dropped from 4 percent to 0.6 percent and is still being reduced.
    Field failure returns of MD boards are down to 0.4 percent from 8 percent. Overall the defect rate internally has been reduced from 1.5 percent to 0.2 percent. (p. 153)

Building quality into products instead of inspecting it at the end of the line, involving employees in decision-making and problem-solving processes, and meeting the needs of customers have proven to be successful goals for business and industry.

Education
There are similarities and differences between schools and businesses. In many small towns, schools are the biggest business replete with customers (students, parents, and society as a whole), a product (a student graduate), a
system of organization, and a budget which is dependent in some cases on the satisfaction of its customers, as in the passage of levies. Unlike a business, schools have no control over "raw materials" (the students) before they come to the school or the entire time they are members of the school, cannot raise prices arbitrarily to hire additional staff or build new buildings, and seldom offer "money-back" guarantees for their products.

In spite of the differences, a relationship has existed between schools and businesses. Schools adopted the bureaucratic form of organization and developed a graded system of educating students, which included sorting and selecting students for tracks in high school and jobs in the workplace (Schlechty, 1990). The need for reform in industry and business eventually became a need to reform education since it became no longer acceptable to have students unable to perform in teams to solve problems in the workplace.

As concerned business and government leaders turned their attention to the reversal of America's downward spiral, a common theme emerged -- the American educational system was not working. At the very time when America needed a highly skilled work force to prevent further losses in commerce, industry, science, and technology, the data strongly suggested that the public education system was not preparing individuals for entry into such a work force. Millions of Americans were functionally illiterate by even the simplest literacy measures. Business and the military were expending millions of dollars annually to provide remedial education in basic skills for employees and enlistees. The American education system was failing its students and the nation. ... Education, along with business and government, had to be transformed if America was to survive. (National LEADership Network Study Group on Restructuring Schools, 1993, pp. 9-10)
The use of Total Quality processes enables schools to develop a systems approach to solving problems, using data to drive decision making, and sharing leadership so that those most affected by a problem are instrumental in solving it. "The most fundamental parallel between business and education leaders using Quality practices and tools is their common reference point -- a shared vision of a postindustrial learning environment, both in school and at work -- and what they have done about it" (Siegel & Byrne, 1994, pp. 106-107).

Unfortunately, not all education settings have gone past the postindustrial stage as noted below:

The assembly-line industrial model, long since abandoned by successful companies, still characterizes most education settings. "Education places children on a conveyor belt at age six," notes Ted Sanders, Ohio superintendent of public instruction. "When many of the 'products' are found to be defective, they are simply cast off. Moreover, there is little concern for the wide variance in the final product." ... To be able to serve all children well, education needs to develop the capacity to vary its instructional processes in order to ensure high performance in every child, across the board. What it will take to make this happen differs for each child and in each community. "There must be unity of purpose but not unity of method," observes Sanders. In other words, all children can learn and will, but not in the same way. (Siegel & Byrne, 1994, pp. 107-108)

There needs to be an agreement on the purpose of schools and education:

To address the needs of society and student learning, the education community must constantly question, what is going on to foster learning? What is going on to deter learning and, what can we do to help? In essence, the answer to the question of
where we have to go lies in our constant reflection on the questions. (Gainey, 1993, p. 8)

When considering where we have to go, Peter Drucker has suggested that we should ask ourselves a number of crucial questions. The first set of questions involves purpose. What is the fundamental purpose of schools? What are their reasons for being? What is the business of schools? (Gainey, 1993, p. 11)

Some authors argue that an educational goal is to make sure all students receive a quality education:

Why is it important for us to educate all students, not just some of them? Because in a country that ostensibly embraces the ideal of social and economic equality, education can be a great equalizer. In an open society, we cannot afford to be driven along class lines. ... Our educational system has given us the edge in developing new products through inventions and technology. It has done this by doing an impressive job of educating its elite. But educating the elite to invent new products is not enough, as we have seen. It is not new products, but the processes involved in producing them, that give countries the competitive edge. Increasingly, it will be in this arena that international competition is won or lost, especially by such resource-poor countries as Japan, Thailand, and Singapore, which invest their best thinking and energy and resources accordingly. (Schmoker and Wilson, 1993b, pp. 2-3)

Public schools appear to be failing the basic educational mandate of any democracy, to provide equitable preparation for, and equal opportunity in, society. A system that holds a far higher likelihood of educational failure for students who typically struggle in school cannot be considered effective, even if some students are experiencing success. This basic failure has led to a cacophony of voices calling for educational reform.

One of the most insistent voices has been from business and industry. Industrial America has found itself in a situation remarkably similar to public education: beset by dissatisfied consumers, accused of producing inferior products, and perceived as being unable to right itself without outside assistance. As part
of its reformation, American industry has communicated very direct expectations to public education in the need for a more competent workforce. The lack of basic skills in the workforce has compelled industry to reeducate employees, at great cost. When industry is forced to reeducate high school graduates in basic work skills, the gnashing of teeth emanating from corporate boardrooms is not difficult to understand. It is under these national conditions that business and industry have felt compelled to insert themselves into the public education debate. (Capper & Jamison, 1993, p. 25)

Schools have answered the call to reform in a variety of ways throughout the last several years:

The reform efforts and recommendations have come in waves. The SCHOOL IMPROVEMENT wave, initiated by the commission's report, insisted upon doing MORE OF THE SAME. More classroom instruction, more of the "basics" and science, more discipline, more teacher training, more control, more parent participation, more pay for teachers. A follow-up modification of this first wave called for doing basically the same but DOING IT BETTER. In this early period, the focus was on EFFICIENCY. But assessments of the push for improvement found it to be far from adequate to meet the challenges of the "crisis."

The second wave, still in motion, suggests that nothing less than RESTRUCTURING THE SYSTEM is adequate. We should focus on the EFFECTIVENESS of schooling by rearranging its components and realigning the distribution of responsibilities. The structuralists believe (Kniep, 1989) that we need to bring about fundamental changes in the EXISTING organization of schooling.

... It seems that a new wave is emerging. These observers point to the need to look at the total SYSTEM and seek NEW DESIGNS. (Banathy, 1991, pp. 7-8)

Since A Nation at Risk, states have implemented reform at the high school level while elementary and middle school levels have remained much the same.
Radical reform in the elementary and middle schools, where 70 percent of the nation's children are enrolled, must now become the nation's highest educational priority. It is abundantly clear that putting the emphasis at the secondary school level where students are nearing completion of their public school education is not going to bring about massive school improvement. (Brown, 1992, p. 5)

Changes in school systems and structure include changes in roles and relationships. A teacher remaining isolated in his/her classroom will no longer be acceptable:

If the public educational system is to reform, consideration will need to be given to matching the expertise of individuals with the task at hand, rather than assigning the task to a position. This will require the rules of the system to be both flexible and adaptable to meet changing needs. To achieve this end, we will need to consider breaking the stereotypical role divisions, to flattening the organizational structure, and to increasing the professional decision-making ability of all the personnel in the organization. ... If we are to work cooperatively and collaboratively, we will need to promote positive relationships between all human resources within the school system and the community. To this end, perhaps the keys to effective relationships are the mutual trust and respect that individuals or groups of individuals possess for one another. (Gainey, 1993, pp. 29-30)

Shared decision making should be utilized since one person will no longer possess all the skills or knowledge needed to lead a dynamic organization. Collective skills of a group are greater than those of an individual and research should be the basis of change. Site-based management as a restructuring effort has occurred in many districts. "And yet even now, there is no certainty that site-based management, by itself, has had, or ever will have,
any significant impact on student achievement (Malen, Ogawa, and Kranz 1990)" (Schmoker & Wilson, 1993b, p. xii). While an important part of it, the Total Quality Management philosophy is more than site-based management.

The Total Quality philosophy is one way to reform schools to bring about the changes our schools need as Schenkat (1993b) points out:

Public education in the United States is at a crossroads. We can become a centerpiece of American life in the age of intellectual capital, or we can dwindle into a woefully underfunded, irrelevant enterprise. Total Quality Management (TQM) and especially, the thinking and work of W. Edwards Deming can be useful to American education. The Deming method is based on leadership through understanding, continuous improvement through personal growth and education, constancy of purpose, and elimination of barriers to self-fulfillment. It is also based on a system of profound knowledge, as Deming terms it, built on understanding of theories of systems, variation, knowledge, and psychology.

Deming's approach provides a means for job satisfaction and self-fulfillment, as leaders strive to understand and mitigate the forces of destruction that cause humiliation, fear, defensiveness, and a dependence on extrinsic motivation. In the TQM process, practices such as judging and ranking employees are stopped. TQM seeks to restore intrinsic motivation, self-esteem, dignity, cooperation, curiosity, and joy in learning. This is what schools and learning should be about for both students and teachers.

There are quality challenges for American education today. The TQM route offers a direction in answering many educational dilemmas. For instance, it is possible to have caring, well-intended teachers giving their all and yet not attaining the educational results needed. For the most part, problems aren't with individuals, but rather with systems; and people often do not notice the systems. This is Deming's most important point: 90 percent of problems with quality are problems with systems, not with people. (p. 3)
In the foreword to *Using Quality to Redesign School Systems: The Cutting Edge of Common Sense* (Siegel & Byrne, 1994), David Kearns, former chairman and CEO of Xerox Corporation and former deputy secretary of the U.S. Department of Education, states:

In the next ten years, America's schools will go through tremendous change. The requirements of an increasingly demanding work environment and world economy will drive vast improvements in the ways we teach and learn. The success of our communities and schools in managing this change will determine our ability to compete -- as individuals, as businesses, and as a nation -- in the twenty-first century. ... Quality is an important part of the process of managing such institutional change. It involves the tools we give all of our people to do their job. Quality is not the end -- it is the means. It requires a change in culture and in operations. And while the operations and outputs of schools are clearly different from those of most companies, the lessons of change in corporate America and the processes applied are invaluable to our education system. (pp. ix-x)

Other authors agree that Total Quality Management is one way to reform schools:

What distinguishes Deming's philosophy from other educational fads is its adaptability, its capacity to embrace and refine much of what already is working. Rather than embrace a rigid view of his philosophy, we prefer to learn from it, perhaps even to expand on it. ...

In our view, Deming's work is important for educators because it is flexible enough to enable us to understand and appreciate apparently unrelated reform efforts in education, such as the Effective Schools, Accelerated Schools, Essential Schools, and Outcome-based Schools movements. We can learn from these efforts and build on them without negating what has accounted for their success. And so we find that Deming helps us to demystify educational improvement. (Schmoker & Wilson, 1993b, pp. xi, xii-xiii)
Educators can apply the quest for quality in their schools and classrooms by adopting the philosophy that American students can and will perform at world-class levels, and acknowledge that current levels of performance are unacceptable. By committing to quality, they will create a constancy of purpose toward continuous improvement in student learning. (Mueller, 1995, p. 413)

Deming's principles have been applied with great success to American industry and to many non-profit organizations. Those which have fully accepted them have experienced major improvement in the quality of their production and the job satisfaction of their employees. Many educational leaders have also seen the value of following TQM principles and have applied them in their efforts at educational reform. Again, those educators who have wholeheartedly bought into TQM thinking have experienced significant improvement in the quality of the learning of students and in the increased professional satisfaction of teachers. (Sevick, 1995b, p. 215)

The needs of the client -- the student, parent, or community, are at the forefront in schools of quality. According to Bradley (1993):

Quality schools are those schools that are meeting the needs of their clients. Needless to say, the term quality is ever evolving. What was quality in the past is not quality today, and what is quality today will not suffice as quality in the future. What remains constant in the definition, however, is the basic requirement of meeting the needs and thus satisfying the clients of the school. Clients of the school system are the students, the parents or guardians of the students, and the community that the school serves. In this sense, the term community is a very broad one that includes all interest groups of the community. (p. 3)

While the general public may not understand the development of curriculum and instruction, Bradley (1993) believes that it is able to judge the product of the school, the student.
In enterprises that depend on public support for their existence, perception is truth. In education, it is not just that the public must be supportive from a programmatic point of view, but it must also be supportive financially. Couple this fact with the demographics that show that less than 50 percent of the people in this country have children in the public schools, and you can see the need for schools to be perceived as top quality. (pp. 4-5)

In the past, reform efforts have cost more money, but have not shown an increase in the quality of the product or student.

Quite to the contrary, industry today is tuned into the notion of better results with the same or fewer resources. The whole society feels that we must do more with less. Education is not going to get more resources; in fact, fewer resources is a more likely reality for public education. We must adopt this mindset. (Bradley, 1993, pp. 6-7)

Total Quality (TQ) principles are being used in the schools by staff members, parents, and students to make improvements. Schools must improve in meeting the needs of the external customer, those people outside the school district who benefit from the school product — the student. There is now competition with private schools to offer quality programs. If public schools want to compete, they must also be quality organizations (Fields, 1993).

Unlike industrial, manufacturing, and service organizations in which the customers determine their needs, in education, both the customers (parents and students) and providers (school administrators and teachers) reach mutual agreement on needs, requirements, and expectations. There is a sound reason for this. School administrators and teachers are the professionals who have been trained and certified to have some knowledge of what students need today. They must also look into the future to determine what students need to become productive members of
society. However, parents, who are the customers of the school district, also know what they want for their children. That is why it is absolutely necessary for a partnership to exist between the school district and parents in order to decide on student needs, requirements, and expectations. (Lewis, 1993, pp. 26-27)

As educators and parents, we should not be satisfied with excellent schools. Excellence refers to the best traditional school administration, principles, and practices that have produced some positive results in our schools. However, these traditional principles and practices are no longer adequate to accommodate the needs of our students. The school environment has changed drastically, and so have our students. What is required is a transformational change. The only well-thought out, field-tested alternative available today for us to elevate from excellent to great schools is to begin the journey to TQ. The journey toward achieving greatness in schools is predicated not by merely implementing it on a district-wide or school level, but also on a classroom level. It is at this level that the transformation must take hold, thereby transforming the teachers and students, along with parents. It is also at this level where school administrators find it very difficult to relate TQ principles and practices for classroom use. (Lewis, 1993, pp. 227-228)

The use of Total Quality has many advantages and has shown to be effective in educational settings:

TQM enables a school to produce more (more and better-defined learning outcomes) with its current resources (people, buildings, and funding) by improving and streamlining its processes, and doing more of the “right” things right the first time through an increased awareness of internal and external customers' needs. This will lower overall costs, reduce customer turnover (higher student retention rates and fewer students repeating courses), and even attract new customers at lower marketing costs. A positive bottom-line impact results, perhaps not immediately, but certainly over the long term. (Putinski & Kocik, 1993 p. 95)
The benefits of TQM are tangible: People feel better about themselves and their efforts on the job, and they take greater pride in their work. Relationships among people in the organization are more honest and open. Administrators often feel less isolated, misunderstood, and burdened. Productivity goes up, as work processes are improved continuously. With organizational change come opportunities for personal and professional growth, along with the pride and joy that come with getting better and better every day, and helping others to do the same.

Although the philosophy of Total Quality Management springs from the world of business, it transcends the narrow commercial imperatives of increased productivity and profitability. TQM, at its heart, is dedicated to bringing out the best qualities in ourselves, in others, and in the work we do together. It is, in many ways, a natural fit with the hopes and aspirations of educational leaders in their work to improve schools and communities. (Bonstingl, 1992a, p. 5)

A partnership should exist between business and education. "In Deming's view, education, industry, and government should interact as a system. They should begin looking for the vital connections they share" (Schmoker & Wilson, 1993b, p. 4).

Eleven site visits and over 200 interviews have led us to four key findings. ... These observations should encourage business leaders who wish to align with educators in advancing Quality as a systemic change strategy in education.

**Finding 1:** Quality as a comprehensive systemic change strategy is applicable to an education setting.

**Finding 2:** Implementing Quality in education is not a quick fix; in fact, it will be even more difficult than in the private sector.

Certain conditions also must be present before Quality can be institutionalized. TQM is "for real" when the practices, processes, and tools are no longer an add-on program or fad but become part and parcel of how an organization does business. It is for real when change efforts continue, despite the turnover of key "change agents." Few, if any, school systems have reached this stage in their transition to becoming Quality-driven organizations. **Whether Quality will have the staying power to help**
educators restructure school systems is, in fact, the central issue raised by this study.

Finding 3: Business management experience and political support are critical -- if not essential -- resources for implementing Quality in education.

Finding 4: Before business and education leaders can use Quality together to restructure education, bridges between them need to be built. (Siegel & Byrne, 1994, pp. 9-11)

Jenlink (1995) believes that schools and universities should look at the TQM philosophy from a systems perspective.

Realizing the interrelatedness and interdependence of the educational context is critical to restructuring the educational system. ... Increased interaction between education, business, and engineering are as critical to the success of TQM as is the interaction between public schools and the college of education. Strong dynamic collaborations are needed to create a new sense of community -- an infrastructure to enable and support the TQM process. (p. 483)

Implementing a Total Quality philosophy within an educational setting is not without difficulties:

Education certainly represents a significant opportunity for TQM management. While it is generally agreed that TQM management would benefit American schools, there is much less understanding of how to go about the process and what kind of support school administrators will require. ...

Implementing quality in the schools is not a simple task. School administrators, school board members, and students are not taught to view the schools as a "system." They are caught in the old paradigms of managing and as they struggle to make the necessary changes, they must rely on outside forces to teach them and support them in improving their system. (Schmidt & Finnigan, 1992, p. 76)
Some schools have taken serious the cry for reform and have begun to transform the rules, roles, and relationships of their school community. It is unclear whether or not these modifications have improved systems, or if they are "just another program" which will fall by the wayside as schools continue on the same organizational path they have walked for the last hundred years.

Schmoker (1996) says:

> We are now in the middle of another major reform: Many schools and districts have adopted some form of TQM initiative. Will it go the way of site-base management (with which it is frequently confused)? The signs are not good. Examples of real success, even in districts where the effort is well under way, are rare. A recent review of almost 100 articles reveals the same disturbing tendency to avoid a concern with goals, with striving for measurable results. Only five articles featured an explicit reference to concrete goals or results, either already achieved or anticipated. Only two goals were related to student learning; one was to improve student scores on weekly spelling tests, an innocuous but hardly inspiring focus. The remaining goals dealt with processes and activities, elaborate planning, partnerships, and new arrangements.

> If we concentrate our efforts more on measurable goals, then site-based management and Total Quality Management will thrive. I do not mean that all school goals must be academic learning goals. Salient goals for processes and products are needed, too. But the last 10 years should have taught us that establishing vague process or procedural goals in the absence of clear, concrete learning goals is foolish. Each undergirds the other. Learning goals give meaning to and act as a healthy check on the traditionally untethered tendency for public institutions to be satisfied with processes, regardless of outcomes. (pp. 26-27)
Research Topic and Questions

A close examination of a school which has adopted a philosophy of change based on the Total Quality philosophy may enable us to determine effective practices in a school setting. The purpose of this study was to see how the implementation of Total Quality in an elementary school made a difference.

Research questions, based on Deming's fourteen points for Total Quality, were developed and looked at the organization, governance, teaching, and learning of the elementary school. The research questions included the following:

• What is the role of the leader(s) in the school?
• What is the process for continuous improvement? (Decision making, implementation, and evaluation)
• How does staff development support continuous improvement?
• How has the organization of the building into teams and committees supported or hindered continuous improvement?
• How is the school culture imparted to new staff members?
• How are the parents of the school involved in the continuous improvement efforts?
• What is the process for developing and assessing student goals?

A qualitative case study was used to examine this school. Interviews with the key stakeholders in the school (the principal, secretary, Parent Teacher Association [PTA] President, teachers, parents, custodians, and educational
assistants), an examination of archival data, and observations of site-based committees have been components of this investigation.

Research Site and Access to Gardenview Elementary School

During the 1993-94 school year, the state of Ohio initiated a Venture Capital grant program. Individual schools across the state were encouraged to submit an application which would demonstrate the commitment and capacity to reform in the areas of governance, organization, teaching, and learning. A variety of reform models such as Outcome Based Education, Quality Schools, Coalition of Essential Schools, Classroom of the Future, Success for All, and Effective Schools, were available for school buildings to adapt and adopt. Schools were also permitted to invent their own model based upon a theoretical framework. Applicants who successfully completed the grant application and interview process were awarded $25,000 annually for five years for the purpose of staff development. The state believed that transformations would be deep and long-lasting if the attitudes and skills of educators would change.

As of January, 1996, three K-5 elementary buildings across the state received Venture Capital grants based upon the Total Quality philosophy. All three buildings were in the Sheldon City School District. In the spring of 1996, I met with Dr. Allen Green, Assistant Superintendent in charge of Curriculum, Instruction, and Administration, about the feasibility of studying the elementary
buildings to see how the implementation of the Total Quality philosophy made a difference.

Dr. Green said that one of the buildings, Gardenview Elementary, was beyond the other two in terms of the implementation of a reform movement and use of the Total Quality philosophy. It was determined that a case study of this school would be appropriate.

A letter of introduction and brief outline of what was intended to be accomplished was submitted to Dr. Green who shared it with the district’s Operation Team and principal of Gardenview Elementary, Dr. Linda Burke. In August, 1996, it was determined that research could begin at Gardenview Elementary.

I interviewed Dr. Linda Burke and it was agreed that I meet the staff at the next faculty meeting. I introduced myself, gave an overview of the research to be undertaken, and gave them each a Consent for Participation in Social and Behavioral Research as well as a short survey to complete. I explained to the staff that I would be interviewing them and attending committee meetings as an observer, both of which would be recorded.

Based upon the survey they completed, interviews were scheduled with staff members which included teachers, educational assistants, the secretary, custodians, and parents, including the president of the Parent Teacher Association (PTA). Times to observe committee meetings were also scheduled.
Sheldon City Schools is comprised of three communities: Sheldon, Lakeview, Marble Heights, and a portion of Wilhelm. Gardenview is the smallest elementary school in the district with a student population of 253.

In the past, Gardenview had a bad reputation because of the socio-economic area in which it is located. Gardenview had a minority population of over 20% and a large percentage of students on free and reduced lunches. Teaching staff did not want to be assigned to the school they called "Garbageview" because of the students and surrounding area. There was graffiti on the outside of the school and the parking lot was a place for people to use and sell drugs, and drink alcoholic beverages. The school alcove smelled of urine.

On a windy day, Dr. Burke would station teachers outside the doors because the empty beer and alcohol bottles that were thrown up on the roof would blow down.

Dr. Burke wanted to change the image of the school and invited the mayor and council members to come to the school to help solve the problem. When the Classroom of the Future grant was available in the state during the 1989-90 school year, Sheldon City Schools was rewarded with a grant and Gardenview became the elementary site in the district. As a result, part of the school was reorganized into multi-age teams. The primary team was comprised of a first and second grade teacher; the intermediate team included grades
three, four, and five. Each team received computers and Josten's Integrated Learning System software.

According to Linda, this was a great break-through in turning the school around. Parents of the brightest wanted to have their children attend Gardenview. Having traditional classrooms and teams in the same building worked well for about four years until problems of competition between teams and the regular teachers began.

For instance, teachers on the teams were able to pool the money allotted to each class in order to purchase larger pieces of equipment or instructional supplies such as literary libraries. Although self-contained classroom teachers were able to do the same, they did not and jealousies arose. Parents began moving their children out of and into the teams, based upon the success or failure of their child, blaming either the team or self-contained teacher for their child's problems.

At about this time, the district began to develop the Total Quality Elementary School (TQES) plan. Staff, both classified and certified, and community representatives from the elementary schools worked to write the plan which was then shared at each building. The plan called for teaming, flexible instructional spaces and learning time, participative leadership, an increase in the use of technology, cooperative learning, and staff development opportunities.
Because of the problems at Gardenview with the combination of teams and traditional classrooms, and the new direction toward teaming that the district was taking, Dr. Burke announced to the staff that, in the fall of 1993, the school would be structured in teams. She told the teachers that "we're going to total teaming, but you can do it your own way and at your own speed." This proved to be disconcerting to some of the staff members and fights erupted between the unions and administration. With the backing of the Board of Education and central office, Linda was able to move forward to total teaming and implementation of the TQES plan.

Dr. Burke told the staff she did not want to describe Gardenview as two different schools to parents anymore. She told teachers if there was no way that teaming fit their teaching style, they could escape for a period of time by transferring to another school, but that, eventually, the entire district would comply with the TQES plan and teaming. Teachers who were against this reform spoke to parents about the upcoming changes. As a result, concerned parents were asked to be involved with site-based decision making and the site-based Unity Committee was established. The teachers who did not want to participate in a teaming situation asked for and were granted transfers to other buildings.

Gardenview was totally organized into multi-age teams during the 1993-94 school year, although the extent of teaming was different for the teams which
had prior experience because of the Classroom of the Future initiative and the newly formed teams.

During the 1994-95 school year, Gardenview applied for and was awarded a Venture Capital grant based upon the implementation of the TQES plan in the building. This grant has allowed the staff, both classified and certified, to participate in more staff development activities. Consultants are brought to the school and staff members are released either by hiring substitute teachers or by granting students time off in order for staff to participate in these activities. Staff members are compensated for planning time which takes place beyond their contractual day and year, and an annual retreat is scheduled for Gardenview and other Venture Capital elementary schools in the district.

The TQES report and Venture Capital grant have delineated the expectations for reform at Gardenview.

Summary

The need for reform has been heard by business, industry, and education. While there have been several reform movements, the Total Quality philosophy, first used by the business sector, is now being used in educational settings. This dissertation examined changes as a result of the implementation of the Total Quality philosophy in an elementary school setting.
The next chapter will review the literature associated with the Total Quality philosophy. Chapter 3 discusses the methodology used; chapter 4 examines the data, and chapter 5 will discuss significant themes which emerged from the research.
CHAPTER 2

REVIEW OF LITERATURE

Chapter 1 discussed the reform movement in general terms. Chapter 2 will be a literature review of the following topics:

• Brief History of the Total Quality Philosophy
• Definitions used in Total Quality
• Total Quality Management (TQM) Philosophy in School Systems
• W. Edwards Deming's Philosophy -- the 14 Points
• Total Quality Management -- New Rules, Roles and Relationships

Brief History of the Total Quality Philosophy

W. Edwards Deming is one of the key people associated internationally with the Quality Movement. Deming's introduction to quality and statistical control began when he worked at Bell Laboratories in New Jersey with Walter A. Shewhart, the man Deming called his mentor. Shewhart, a statistician, was working on a procedure for improving the reliability of the telephone. He
developed a methodology for determining the acceptable limits of variation through the use of a control chart, which he shared with Deming (Bonstingl, 1992b; Kilian, 1992).

In 1938, Walter Shewhart said there were three steps in the quality control process: specification of what is wanted, its production, and inspection to see if it satisfies the specifications (Specification-Production-Inspection). This was called the old view or pipeline model. In this model, a higher degree of quality meant an increase in rework or scrap costs since inspection was not built into the model but performed as a last step. At the same time, Shewhart also described the cyclic model which included the same steps, but in a circle, instead of a line which made the steps more interlocking and built inspection into the process, thus lowering rework or scrap costs.

"Problems can be addressed immediately, not at the end of the production. And the worker can begin to take pride in his/her job because now the worker can contribute to that job" (Bradley, 1993b, p. 20).

Deming took Shewhart’s cycle and divided the inspection into study-act. The circle now has four parts -- plan, do, study, and act (PDSA) which Deming called the Shewhart Cycle to honor his mentor (Bonstingl, 1992b; Bradley, 1993b).

After World War II, Deming worked for the U.S. Census Bureau. In 1950, he was asked to travel to Japan to help conduct a census. While there, he lectured on statistical quality control to some of Japan’s top business leaders,
telling them they could be world-class leaders if they followed his advice.

Deming was invited back to Japan by the Japanese Union of Scientists and Engineers (JUSE) to lecture on statistical quality control (Brocka & Brocka, 1992).

In 1954, JUSE extended an invitation to lecture to a second American statistical expert, Joseph M. Juran. Juran's seminars reinforced Deming's earlier teaching. Juran told the Japanese that management, not the production worker, is most accountable for the organization's performance. In Juran on Planning for Quality, Juran (1988) stresses the need for management to carefully plan quality into the production process, to monitor the quality of products throughout the production process, and to improve quality at a rapid rate. Juran writes that good planning requires that a dependable process be developed. If the process is not dependable, goals will not be consistently achieved. (Bonstingl, 1992b, p. 14)

American industry dominated the late 1940s and 1950s in world production, and the United States mistook this production and market dominance for quality. In the meantime, the Japanese, under the tutelage of an American, W. Edwards Deming, gave a new meaning to the words quality and quality control. Once their economy had recovered from the war destruction, they, along with other recovering nations, began to challenge America's dominance. (Bradley, 1993b, p. 10)

In 1980, NBC aired a program about Deming's success in Japan entitled "If Japan Can, Why Can't We." This program was the impetus for much interest in the Total Quality philosophy in the United States (Bradley, 1993b; Brocka & Brocka, 1992).

Deming warned that it was not possible to simply copy Japanese successes. American management had to understand its own
responsibility for systems that resulted in poor or high quality, and that personal involvement at the highest level of management was necessary to effect changes. (Kilian, 1992, p. 17)

A third person associated with the quality movement in the United States is Dr. Philip Crosby.

"Planned obsolescence" became an accepted fact of life. Taylorism thrived. "How little quality can we get away with?" too often reflected the philosophy of American industry and commerce.

Disturbed by this attitude, Philip Crosby, an industrial consultant at ITT, joined his elder quality experts in preaching the gospel of 'quality first' to American companies. He reinforced the idea that quality doesn't increase the cost of production, but lowers it. In Quality Is Free, Crosby (1980) argues that putting the best possible resources in at the front end of a process will more than pay for the investment later. Mistakes in business are costly, in terms of lost time, lost profits, lost customers, and lost opportunities for growth and learning. Compared with such costs, doing the right thing the first time around is considerably less expensive. (Bonstingl, 1992b, p. 16)

U.S. Corporations are following Japanese industrialists in implementing the philosophy of total quality management (TQM). The gurus of quality -- Crosby, Deming, and Juran -- preach the economy of "doing it right the first time."

Each of these management experts has a 10- to 14- step quality improvement process with Deming more the philosopher, Crosby more the process facilitator, and Juran more the technician. The definition of quality they promote is "to serve the customer better by improving the quality of the process." ... When applied to education, the differences between approaches of the various quality models are insignificant. (Mueller, 1995, pp. 413-414)
Use of the Total Quality philosophy and practices in service industries and the public sector, including education, began in the 1980s and continues today (Bradley, 1993; Lewis, 1993).

The next section defines terms associated with the Total Quality philosophy.

Definitions

It is important to have common definitions for specific terminology associated with TQM because a common language allows people to communicate effectively their understandings (Jenlink, 1995).

Juran (1992) believes that a team should be assigned to:

"Identify the key terms for which standardized definitions could significantly improve communication,

Develop agreed definitions for these key terms, [and]

Publish the agreed definitions in an official glossary" (p. 24).

In this section, commonly used terms have been defined.

Consumer Research

Consumer research in a school system will help the district align its mission and goals with the needs and wants of the customer. "Such needs and
wants will define the organizational focus, which will then enable schools to engage in long-term quality planning" (Bradley, 1993b, p. 73).

Data collection is inherent in consumer research since decisions in a TQM system are based upon data rather than hunches or intuition. In a school system, however, customers may base their decisions on perceptions.

These perceptions, if accurate, can be acted upon. If erroneous, the school officials know where their future information giving had better start. That is not the primary purpose of client research, but could be a valuable secondary one.

Consumer research holds much promise for schools. It would not require more money. It basically calls for a new mindset about how to communicate with the public, which is: first, assume the public has good information for you; second, base decisions on that information; third, switch the emphasis from giving the public information about what you think is important to gathering information about what they think is important, and be open to this public opinion; fourth, move from persuasion to perception; fifth, move from periodic to continual communication with the consumers. (Bradley, 1993b, p. 75)

Because school systems depend on the residents of that district for funding, customer satisfaction is an important factor in the success of the district. "The clients pass judgment and act accordingly. Acting accordingly means assessing their level of satisfaction with the quality of their chosen program and making decisions about their continued involvement and support" (Bradley, 1993b, p. 68).
In addition to discovering the perceptions of the school customers, inviting them to make a personal contribution in the system will help in the continuous improvement process of the school (Bonstingl, 1992b).

**Customers**

Customers are at the heart of the Total Quality philosophy; customers are the reason for being in business. "Juran told the Japanese to think of customers as 'all persons who are impacted by our processes and our products,' not just clients" (Bonstingl, 1992b, p. 15).

"In a total quality (TQ) context, the standard for determining quality is meeting and exceeding customer needs, requirements, and expectations on a continual basis" (Lewis, 1993, p. 1).

Dr. Deming stresses the need to identify your customer: "Ask yourself, he says, who is the person who receives your work? Whom must you satisfy? Many people cannot identify their customers and therefore cannot determine precisely what their jobs are. Everyone has a customer and must know who it is" (Walton, 1986, p. 87).

There are two types of customers: external and internal.

**External Customers**

External customers are not part of the company and receive the "end product." In industry, the external customer is the person purchasing the
product manufactured by the business. In education, it is somewhat difficult to
determine who the external customer is. Is the student the external customer, or
is it "the organization receiving the school graduate -- the company, university,
military, or marriage" (Fields, 1993, p. 14).

Byrnes, M., Cornesky, and Byrnes, L. (1992) define external customers
as "parents, post-secondary institutions, employers, and the community" (p.
175).

Determining the external customer is important in order to discover
his/her requirements, identify how to respond to those requirements, and how to
communicate with the customer to ensure his/her needs will be met (Fields,
1993).

**Internal Customers**

There are also internal customers -- they are within the organization
working towards developing a product for the external customer, and generally
are a part of the vertical structure of a school (Bonstingl, 1992b; Bradley, 1993b;
Fields, 1993).

In a school setting, "an internal customer is a person or group located
within the school district who receives a service or product" (Lewis, 1993, pp.
14-15). This includes "students and teachers from all grades who teach the
sequence courses in any subject matter area" (Byrnes, M., Cornesky, & Byrnes,
"The needs of customers, especially internal customers, go beyond products and processes. They include needs for self-respect, respect of others, continuity of habit patterns, and still other elements of what is broadly called the cultural pattern" (Juran, 1992, p. 76).

**Data**

The Total Quality philosophy necessitates decisions that are data driven. "Data determines how one can work towards continuous improvement. TQM is based upon the use of statistical data properly analyzed to show the level of one's achievements" (Byrnes, M., Cornesky, & Byrnes, L., 1992, p. 165).

With TQM, decisions should not be made based upon intuition or hunches.

When data is not the basis for making a decision, changes are often made on intuition. If we do not verify if a specific change is an improvement, we end up tampering with our process. Tampering with any process always makes the results of that process worse. (Law, 1993b, p. 26)

Schmoker (1996) uses an analogy in describing data:

Data are to goals what signposts are to travelers; data are not end points, but data are essential to reaching them -- the signposts on the road to school improvement. Thus, data and feedback are interchangeable. Although schools rarely use data and results to inform practice (Rosenholtz 1991), data should be an essential feature of how schools do business. ... Data almost always point to action -- they are the enemy of comfortable routines. By ignoring data, we promote inaction and inefficiency. (pp. 30, 33)
**Baseline Data**

Data used to obtain information on one’s current state of functioning is called baseline data. It is a starting point for the improvement process. Baseline data is used to prepare charts and graphs for each of the areas one wishes to improve. ... This is a starting point, however, to be effective, one must also collect data after making some changes in the processes and systems within the classroom. Since the goal is continuous improvement, the only true way to measure that improvement is with data collected from one’s internal and external customers before and after changes are made to the processes and systems. (Byrnes, M., Cornesky, & Byrnes, L., 1992, p. 165)

**Plan-Do-Study-Act (PDSA) Cycle**

Named by Deming in honor of his mentor, Shewhart's cycle is the plan-do-study-act cycle. The first step in the cycle is to find information and identify the problem, generating a number of possible solutions; next, the best solution is tested with a small population; third, the results are studied and evaluated, adjusting where needed; and finally, the solution is used with a larger population, abandoned, or changed and tested again (Fields, 1993).

"Thus, the PDSA cycle is a simple, effective, data-driven instrument for continuous learning and improvement" (Bonstingl, 1992b, pp. 9-10).

**Product**

Putinski and Kocik (1993) define product as follows:

A product is a tangible output. It can be physically stored and possessed. Products are generated before they reach the
customer and, therefore, can be measured, tested, and verified in advance of the customer's purchase to assure their quality. (p. 48)

A product in an educational setting can be defined as follows:

The product that is produced is a change in human behavior, e.g., when a person learns simple addition facts, the person no longer has to physically count every item to determine a sum. The product -- the change in behavior -- generally cannot be attributed to a single event or factor. (National LEADership Network Study Group on Restructuring Schools, 1993, p. 27)

Quality

Exemplars in the field have defined quality in a variety of ways, some of which are listed below.

Quality has to be defined as conformance to requirements. This definition places the organization in the position of operating to something other than opinion and experience. It means that the best brains and most useful knowledge will be invested in establishing the requirements in the first place. They will not be used in determining what can be done to smooth over the rough places. (Crosby, 1984, p. 60)

According to Siegel and Byrne (1994), "Based on our interviews and observations, the what's of Quality in practice can be boiled down to a commitment to three C's: customers, culture, and capacity" (p. 19).

Scientific management held that quality was ensured simply by "inspecting" products at the end of the line, and eliminating those units which did not meet standards. It is just this position which Deming rejected in point 13 and advocated that quality must begin at the beginning of the production process and that the process itself was the factor that would ensure quality. In short, a quality
process would ensure a quality product. Quality is not something that can be added on at the end of the process. (Sevick, 1995b, p. 218)

What would quality look like in schools? In order to be a quality place, schools must be a community of problem solvers. "In other words, the method used in seeking the problem level of student achievement is as valuable as the instructional strategy used in teaching students academic skills" (Fields, 1993, p. 2).

Glasser offers the following descriptions of a Quality School:

1. Quality is always a product of warm, caring human relationships.
2. Quality is always useful in some way...
   Characteristic of quality is that it is never destructive either to individuals or to society.
3. Quality is the best that everyone in the organization, working both separately and together, can achieve at any particular time. A quality organization never settles for less.
4. Quality can always be improved no matter how good it is at any time. A quality organization is always alert for ways to improve what it does and how it does it.
5. Quality always feels good, and the greater the quality the longer the good feeling lasts. (Following the first condition, however, that it is never destructive, no matter how good it feels, it is never quality to abuse people, property, or addicting drugs.) (Glasser, 1990, pp. 177-178)

In a later work, Glasser added that "it is also safe to say that quality lasts; it is not faddish and it is always useful. Most school assignments lack quality because they are useless--a major cause of the nonquality education that
permeates our schools" (Glasser, 1994, p. 17). Quality must be dynamic, maintained through an effort of continuous improvement (Glasser, 1994).

Once they've identified what quality is, customers are loyal to a quality service or product and are reluctant to change their minds. However, once a customer determines that a product or service is no longer quality, it will be next to impossible to have that person change his/her mind back (Glasser, 1994).

Deming further emphasizes that quality suffers if it remains the same. It can only be maintained through a continual effort to improve it, though generally the change will be slow. ... People tend to be loyal to quality. It may take quite a while for cautious customers to decide what quality is, but once they make up their minds that a product or a service is quality, they will be reluctant to change that opinion. ... Once the customer changes his mind and decides that a product is no longer quality, then it is very hard, maybe next to impossible, to get that person to change his mind back to where it was. (Glasser, 1994, pp. 17-18)

Quality Circles

There is a distinction between Quality Circles and more traditional groups and committees (Hansen, 1990).

Quality Circles (QC's) are groups of workers who meet at their workplace to explore ways to improve their work and their environment. QC members' efforts focus on their own self-development as well as development of others. A primary goal is to get all of their fellow workers involved in the improvement process. The American executives who saw these QC's were determined to use them back in the United States. (Bonstingl, 1992b, pp. 16-17)
Originally, Quality Circles in America were advisory to management, and oftentimes supervisors or managers were encouraged to lead the QC. Principals or supervisors usually had the final word on decisions and often did not give up any power (Bellanca, 1982; Dunne & Maurer, 1982; Marks, 1986).

Part of the success of Quality Circles is dependent upon training the members in the total quality tools and processes, including data collection and analysis (Zeiders & Sivak, 1985).

Quality Circles did not fare as well in America as they did in Japan. American executives imposed QCs on the workers and often only permitted workers to offer suggestions to management, instead of empowering the workers to make changes, as in Japan. When this happened, they failed. As a result, American QCs turned into gripe sessions (Bonstingl, 1992b; Dillon & Brown, 1983).

**Strategic Planning**

One way to determine customer needs and involve an entire system in developing the direction of the district is to go through a strategic planning process. All stakeholders of the system can be a part of this process and have the opportunity to give their input.

During the strategic plan process, a vision for the organization is developed. This helps establish what the TQM culture will look like (Law, 1993a).
The vision helps people see how they fit into a system and allows them to align activities and decisions to the vision. "Risk-taking occurs because teachers and administrators within the organization know what it is they are each trying to achieve and how these individual achievements will fit into the vision of it as a whole" (Murgatroyd & Morgan, 1993, p. 80).

Mission is a part of vision.

Guided by values, mission provides an image of the future and accurately reflects the shared core values of the school. ... Goals make up the third component of a vision and state specifically what the school intends to accomplish. Goals are long-range in nature and often serve as the basis for strategic planning. (Weller, Hartley, & Brown, 1994, p. 300)

While Deming saw the value of goals, he also knew that it was important to describe how those goals would be achieved (Walton, 1986). "Goals are necessary for you and for me, but numerical goals set for other people, without a road map to reach the goal, have effects opposite to the effects sought" (Deming, 1982, p. 69).

An action plan, including those responsible for implementation and how the plan will be evaluated is an important last step in the strategic plan process (Crawford, Bodine, & Hoglund, 1993).
Total Quality Management (TQM)

Total Quality Management has customer satisfaction at the heart of it, continually improving the product or service in order to meet the needs of the customer. While TQM uses tools and techniques, it is a philosophy which permeates the organization, not a program (Sashkin & Kiser, 1993; Schmidt & Finnigan, 1992).

In the simplest of terms TQM may be defined as a way of thinking and working to achieve continuous improvement through employee involvement and a focus on customers. TQM is not viewed as an end, but as a continuous pursuit of organizational effectiveness that all would regard as quality. TQM reflects the commitment and involvement of all employees in an organization to the delivery of products or services which the users (customers or clients) judge as meeting or exceeding their expectations. (National LEADership Network Study Group on Restructuring Schools, 1993, p. 3)

Fields (1993) explains the use of TQM in education as follows:

TQM in education organizations is the commitment of everyone -- parents, teachers, students, aides, service persons, board members, administrators, and all others -- to meet the requirements of customers, collaboratively. Total (everyone committed) quality (meeting the requirements of customers) management (collaboratively) is the day-to-day belief and behavior of effective TQM organizations. Effective parents, teachers, administrators, and students usually have exhibited not only the definition of TQM but its principles. (p. 13)
Total Quality Tools

The seven traditional TQ tools include the following: flowchart, Ishikawa or fishbone diagram, Pareto chart, scatter diagram, PDSA cycle, histogram, and control chart.

"TQM tools help people to collect and analyze data so they can solve quality problems and make continuous improvements. ... But the deeper importance of TQM tools is to enable people to develop a sense of control over their own work and work outputs" (Sashkin & Kiser, 1993, pp. 50-51).

Tools should not be confused with techniques or training activities nor should they be thought of as TQM. "To confuse tools with TQM is like saying that great literature is good grammar" (Sashkin & Kiser, 1993, p. 51).

Total Quality Management Philosophy in School Systems

Total Quality Management philosophy has been used successfully in schools across the country.

Some school districts, such as the Canadaigua City Schools (CCS) in upstate New York, recognized that using TQM is a powerful tool for change. CCS viewed TQM as an opportunity to conceptualize a systematic change for the school district. It offered a fresh way to think about how the district was managed, the challenges it faced and the chief responsibilities of its employees.

No longer is a vertical hierarchy of power in effect. School board members, administrators, teachers, support staff, parents and students now meet on a peer level to reach consensus about a shared vision of excellence. Using decentralized decision-making enables these stakeholders to build and share a vision.
The board of education and the administration are in no way relinquishing their authority or responsibility by adopting TQM. They are, in essence, the architects of the new management paradigm shift. CCS is getting the best of both worlds -- the creativity of small units and the strategic vision of the board of education and the school administration. (Mastro & Kerwin, 1993, p. 32)

The TQM philosophy encourages students to be actively involved in their own learning.

The first parallel between Deming's principles and operations at Central Park East is Meier's [the principal at Central Park East] belief that engagement and enthusiasm are prerequisites to learning. Her school operates on a strong belief in what Deming calls the "joy of labor" or "pride of workmanship." Her belief is embraced by her like-minded peers. For Meier and her faculty, serious student engagement is more important than covering every fact in a history book, completing a math text, or finishing all the stories in a reader. (Schmoker & Wilson, 1993b, p. 93)

Another example of a successful TQ school is Johnson City Schools who "believe that quality, not grades, is what impels effort. ... Students are not allowed to fail. They may not master a subject or complete a course within a prescribed time, but eventually almost all do. The average percentage grade of Johnson City students is 88%" (Schmoker & Wilson, 1993b, p. 44).

Because of students who self-manage their own learning, teachers in Gilbert High School and Mt. Edgecumbe High School have increased their planning time from 1% to 10%. This additional time is used for meeting and planning for continuous improvement. At Mt. Edgecumbe High School,
students are consulted to see how satisfied they are. Student enthusiasm and accomplishments show what can happen when they find learning relevant and can take part in the management of it (Schmoker & Wilson, 1993b).

Students at Northview Elementary School in Manhattan, Kansas, increased their fourth-grade reading competency scores from 59.5% to almost 100%. Sixth grade scores had a similar increase as did fourth and sixth grade math scores. The principal, Dan Yunk, attributes these increases to the employees' analysis of the problem by using quality processes and tools (Schmoker & Wilson, 1993c).

Since the work of W. Edwards Deming plays an important role in the TQM philosophy of many schools, it is important to gain an understanding of the points which comprise his framework.

W. Edwards Deming's Philosophy -- the 14 Points

Many educational endeavors in the use of the Total Quality philosophy are based upon Deming's fourteen points and indicate some of the rules, roles, and relationships which can be found in a TQ school. Deming's (1982, pp. 23-24) points are listed below in bold print. Underneath each heading are explanations of the points, educational implications, and applications.

The 14 points apply anywhere, to small organizations as well as to large ones, to the service industry as well as
to manufacturing. They apply to a division within a company.

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.

Companies and their employees should know what their purpose is, based upon customer needs. As customer needs change, they should be reflected in the company in order to stay in business. Developing a plan and methods for its implementation will help insure a company's future (Walton, 1986).

Crawford, Bodine, and Hoglund (1993) write that there are two sets of problems -- those of today and those of tomorrow. Schools typically tend to the student needs of today -- getting through the curriculum, only having students for a year, student results on achievement tests, and so forth. Not enough time is spent meeting the diverse needs of all the students nor on producing students who will be successful in the future, outside of school. Constancy of purpose can be thought of as the reason for being in business.

Likewise, schools' primary purpose is not to produce students who can score well on tests but to prepare students for lifelong learning. Education, like business, must focus on the constant improvement of product (each student's learning) and service (methods for creating that product). (Crawford, Bodine, & Hoglund, 1993, p. 20)

When schools understand their business and who the customer is, striving to meet the customers' dynamic needs is vital. This means that schools should constantly re-examine what they are doing to determine if it is still what
their customers want and is appropriate for students, making adjustments in the system when it is no longer appropriate (Fields, 1993; Rankin, 1992).

2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.

Management should put quality into the system. When quality is expected by everyone, costs will be lowered and the customer's quality of life increased (Walton, 1986).

It is important for management to be committed to the TQM philosophy. Without this total commitment from the top down, a systemic change is impossible. Schools cannot be places of status quo, serving the internal customer by being guaranteed a job or serving parents as a day care center. They must constantly seek ways to improve schools using all resources available (Fields, 1993; Rankin, 1992).

The new mission for schools should be quality. The cost of living depends inversely on the goods and services that a given sum of money will buy. Reliable products and services reduce costs, whereas defective products and services increase them. Likewise, the educational system cannot continue to tolerate student dropouts, failure, and underachievement, nor can it tolerate inappropriate curriculum and ineffective teaching methods. Defective products of education usually end up in welfare lines, in prisons, or hopelessly involved in the cultures of crime or poverty. Again, the public pays for these defects. (Crawford, Bodine, & Hoglund, 1993, pp. 20-21)
Teachers and students should work together as a team dedicated to continuous improvement. Interpersonal trust should be the focus of the relationship, not test scores (Bonstingl, 1992b).

3. Cease dependence on inspection to achieve quality. Eliminate the need of inspection of a mass basis by building quality into the product in the first place.

When quality is built into a process and system, reworking defective parts will decrease the cost of the product (Walton, 1986). When we inspect our products, quality decreases since it is assumed that defective parts will be found and corrected. "Routine 100 per cent inspection to improve quality is equivalent to planning for defects, acknowledgment that the process has not the capability required for the specifications. ... Quality comes not from inspection, but from improvement of the production process" (Deming, 1982, p. 28, 29).

Inspection should be part of the system, not at the end, and everyone should be inspecting for quality. In education, this should not include the mass testing of students (Crawford, Bodine, & Hoglund, 1993). "Educational systems often do more screening and sorting of students than teaching and learning for students" (Rankin, 1992, p. 68).

In fact, the inspection of student achievement through mass testing actually prevents quality learning because teachers spend a significant portion of their instructional time teaching for the purpose of raising test scores. The result is an educational experience that is constricted and contrived. Because instructional time is finite and because preparing students for tests consumes precious instructional time, activities that actually lead to quality learning are most likely to be omitted from the
instructional day. Students involved in instruction aimed at test taking usually become disengaged because they see no meaning or relevance in what they are asked to do. (Crawford, Bodine, & Hoglund, 1993, p. 21)

Test scores at the end of the unit or year are too late to help maximize student learning. "Learning is best shown by students' performance, applying information and skills to real-life challenges. Students must be taught how to assess their own work and progress if they are to take ownership of their own educational process" (Bonstingl, 1992, p. 78).

Quality should be built into schools, not achieved because they are inspected from without. To accomplish this, personal contribution must be the goal of every employee. Internal customers must be satisfied and learning processes must be emphasized (Fields, 1993).

4. End the practice of awarding business on the basis of a price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.

Accepting the lowest bid is not always the best thing to do, especially if the lowest bid is not a quality part.

Striking deals with the cheapest supplier is the accepted American way of doing business. Certainly thrift is an admirable quality, and costs are important. But if low cost guarantees low quality anywhere in the supply chain, then the final product, though it may be cheap, will also be of low quality. Indeed, often low quality of the final product can be traced back to problems with incoming materials. (Walton, 1986, p. 63)
In education, detailed specifications should be developed for materials so that the school gets the lowest bid for a quality product. If a long-term relationship based on trust and loyalty is developed with suppliers, they will give their best to the school (Crawford, Bodine, & Hoglund 1993, Fields 1993).

In schools, class sizes are increased in order to cut costs. This practice, based on short-term savings, does not minimize total cost. In larger classes, the teacher is unable to give the attention and meet the demands of all children. Because of that, a greater percentage of children are either identified as special education students or they need to repeat the class/grade which increases the cost of education (Crawford, Bodine, & Hoglund, 1993).

5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.

Everyone should be involved in improving the system, not just putting out fires. When a total system is improved, quality will be improved and costs will be lowered (Walton, 1986).

A school staff should be empowered to make continuous progress, even though there may be some temporary failure in their improvement attempts (Bonstingl, 1992b).

The Shewhart Cycle (or PDSA -- plan, do, study, act cycle) can be used to determine what parts of the system can be improved to provide optimum service or product. Part of the cycle includes testing an idea on a small
population before trying to implement an improvement throughout the entire system. In education, fires are often being put out and the causes are not being examined to see if they are special causes or common causes. For example, with poor test results, teachers and students begin to concentrate more on the test, and longer days or more academic requirements may be mandated because the impression is that the people involved are not working hard enough. If everyone in the system was involved in the improvement method, using the PDSA cycle, this could be avoided (Crawford, Bodine, & Hoglund, 1993).

6. Institute training on the job.

Consistent training of new employees should occur so that everyone knows and understands job requirements (Walton, 1986).

Teachers have been trained by university professors who usually have not had classroom or school (outside of college) experience. These teachers may have only been required to have one semester of student teaching with supervising teachers who are not necessarily experts in the use of Total Quality. A staff development program, designed to meet the various needs of teachers, (not a "one size fits all" program) should be designed and implemented to further produce quality staff members (Crawford, Bodine, & Hoglund, 1993).
Students should also learn how to set and evaluate goals so they can be more effective in their own work. Teachers can model this behavior for students (Bonstingl, 1992b).

7. Institute leadership ... The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.

"Leadership is the job of management. It is the responsibility of management to discover the barriers that prevent workers from taking pride in what they do" (Walton, 1986, p. 70).

Leadership in schools is vital:

Managers must be responsible for the transformation to the new system. They must have a working knowledge of variability and its causes. They must understand people inside and outside the system. Their primary task is to improve the system: its outcomes, its processes, its inputs. They must not oversimplify the task. They should develop expectations with employees and provide a supportive working environment. (Rankin, 1992, p. 69)

Leaders are not just people with titles; everyone should be empowered to lead the organization forward. Lead management is one way to describe this (Fields, 1993).

Lead management in the school means that the principal must create an environment where teachers can feel pride in their work; lead management in the classroom means that the teacher must create an environment where students can feel pride in their learning. Pride, an internal sense of one's own dignity and self-worth, is indispensable to quality learning. The lead manager's responsibility, to keep everyone working toward the common goal
of quality, is an impossible mission unless individuals can experience pride in their work. (Crawford, Bodine, & Hoglund, 1993, pp. 25-26)

8. Drive out fear, so that everyone may work effectively for the company.

Workers who are afraid of losing their job do not point out defects or problems. When people are afraid to point out areas in need of improvement, poor quality continues (Walton, 1986). Most everyone works to the best of his/her ability. If improvement efforts do not result in a positive change of the system, it is likely that the problem is in the system itself, not with the people (Rankin, 1992).

Teachers and students will not work up to their optimum level if they are fearful. If there is no trust and they feel threatened, they will not be able to think. People should not be afraid to take risks and state their opinions in a supportive atmosphere so that continual improvement might take place (Crawford, Bodine, & Hoglund, 1993; Fields, 1993).

To eliminate fear, principals and teachers must strive to create an environment where intrinsic motivation is understood, is valued, and is the inspiration for learning. They can do this through self-evaluation, an internal assessment process that actuates intrinsic motivation to improve quality. (Crawford, Bodine, & Hoglund, 1993, p. 27)

9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.
When people from different departments work together to solve a problem or improve a system, the solution works better in the organization than when one department tries to initiate change without a thorough understanding of the entire organization (Walton, 1986).

The barriers between departments should be broken down and people should work as teams. This would include all people in a school from the principal to the custodial staff, food services, and so forth, working together in teams, cross-categorically, to solve problems (Fields, 1993).

In schools, the most significant barriers between staff areas arise from the segregated and segmented subject matter approach to curriculum. The teacher teaches a content area in isolation from all other content areas. ...

If students are to be actively engaged in learning, they must view the curriculum as meaningful and relevant. Integrating curriculum and employing cooperative learning can break down barriers to relevance. Integrating curriculum requires teamwork among teachers with expertise in various content areas. They combine their information and teaching resources to develop learning experiences and opportunities that keep students continually engaged in learning. Cooperative learning requires teamwork among students as they complete learning activities. With the barriers gone, teachers have the opportunity to learn from one another, students have the opportunity to learn from their peers, and teachers and students can learn from one another as well. The result is quality teaching and quality learning. (Crawford, Bodine, & Hoglund, 1993, pp. 27-28)

10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity which belong to the system and thus lie beyond the power of the work force.
Slogans generally are aimed at workers who are typically not in control of changing the system in order to achieve a better product or service. The slogans may, as a result, cause workers to resent the fact that management sees them as being inferior (Crawford, Bodine, & Hoglund, 1993).

What is wrong with posters and exhortations? They are directed at wrong people. They arise from management's supposition that the production workers could, by putting their backs into the job, accomplish zero defects, improve quality, improve productivity, and all else that is desirable. The charts and posters take no account of the fact that most of the trouble comes from the system. (Deming, 1982, p. 66)

Deming says that the use of slogans presupposes that people could, if they only tried, do better. Employees are offended by this suggestion.

Forced to work with improper or malfunctioning equipment, poor lighting or ventilation, in awkward work spaces under incompetent supervision, they perceive slogans and exhortations as signals that management not only doesn't understand their problem, it doesn't care enough to find out. (Walton, 1986, p. 76)

In the educational setting, Rankin (1992) states: "Teachers and principals are intelligent, dedicated workers who can have internal motivation and can craft carefully-designed processes to improve teaching and learning. Lasting increases in effort derive from sterner stuff than slogans" (p. 71).

Teams of people can develop their own goals and slogans. When they develop their own goals and/or slogans, people learn to manage themselves and productivity is increased (Fields, 1993).
11a. Eliminate work standard (quotas) on the factory floor. Substitute leadership.
   b. Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.

Quotas and management by objectives focus only on the end goals and not on the process. When quotas are based on an average, the result will be mediocrity. In schools, an emphasis on standardized test scores is not productive, because quality learning will not necessarily take place (Crawford, Bodine, & Hoglund, 1993). Numerical quotas should be eliminated (Fields, 1993).

Management must substitute leadership for quotas and focus attention on the processes rather than on the outcomes. Quotas ignore the quality of inputs and do not provide direction for improvement. They reward the system, not the staff member. (Rankin, 1992, p. 71)

12a. Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.
   b. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and of management by objective.

By listening to workers without management in the room, Deming found that workers are often frustrated because they are unable to do their job with pride because of changing demands of supervisors, machines in need of repairs or maintenance, defective supplies, or inadequate training. By listening
to workers and involving them in problem solving, improvements can be made to the system (Walton 1986).

In schools, this requires involving people in the decision-making process. Teachers should have input with the principal, and students should have input with the teacher in order to become responsible for actions and committed to quality (Crawford, Bodine, & Hoglund, 1993).

Barriers, such as annual rating systems and evaluations, should be eliminated. Deming doesn't believe that it is the amount a student learns that is important, but what the student does with that knowledge. Personal goals and achievements should be celebrated rather than one standard everyone must achieve (Fields, 1993).

13. Institute a vigorous program of education and self-improvement.

While this is similar to point 6, it differs in that the purpose of point 6 is to create a basic foundation for everyone and point 13 strives to prepare for the future needs of the system.

It is not enough to have good people in your organization. They must be continually acquiring the new knowledge and the new skills that are required to deal with new materials and new methods of production. Education and retraining -- an investment in people -- are required for long-term planning. (Walton, 1986, p. 84)
Everyone should be continually learning and improving his/her mind and skills. Administrators need to be trained so they are able to be leaders instead of manager bosses (Fields, 1993).

Teachers need to acquire skills in a number of areas, such as learning styles, cooperative learning, whole-language instruction, integrated learning, and responsibility education -- not to mention keeping abreast of overall developments in the profession. (Crawford, Bodine, & Hoglund, 1993, p. 32)

14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.

In order to accomplish the transformation, people must understand the 14 points and how to apply them. They must agree to carry out the philosophy. Managers must transform their style of management, help employees understand why change is necessary, and understand the 14 points. All jobs, activities, processes, and so forth, should be analyzed for improvement. This would be done by teams of people using the PDSA cycle (Crawford, Bodine, & Hoglund, 1993).

In addition to the use of the Shewhart Cycle [PDSA cycle], Dr. Deming says to accomplish the transformation it is vital that everyone begin to think of his or her work as having satisfaction for a customer. There are internal as well as external customers. Ask yourself, he says, who is the person who receives your work? Whom must you satisfy? Many people cannot identify their customers and therefore cannot determine precisely what their jobs are. Everyone has a customer and must know who it is. (Walton, 1986, p. 87)
All the key parties in a school district must have substantial understanding of the system, and many of them will need specific training in advance of any decision to go forward. They must know the consequences of an agreement to transform their district using these principles, and be eager to do so. This requirement also implies that the program must provide adequate training and other resources for implementation. (Rankin, 1992, p. 72)

**Total Quality Management -- New Rules, Roles, and Relationships**

In an interview, Philip Schlechty stated "Restructuring is changing the system of rules, roles, and relationships that govern the way time, people, space, knowledge, and technology are used and deployed" (Brandt, 1993).

This section will examine how rules, roles, and relationships are changed in a school which has adopted a TQ philosophy.

In order for TQM to be successfully integrated in a school system, Bradley (1993b) believes three groups must be supportive of this new philosophy. "These groups are the board of education, the administrators, and the teachers' union or organization" (p. 200).

Because implementation of the TQ philosophy brings about changes in the way schools traditionally have been structured -- a hierarchical approach in the organization and management of the system -- board approval and understanding are necessary. Bradley (1993b) believes so strongly in the need for this support, he states: "If that support never develops, then total quality management should not be initiated" (p. 201).
Since administrators change, it is necessary to have a large percentage of the leaders in a system committed to the Total Quality philosophy. "The shift in intellectual frameworks and the change in philosophy must occur with the leadership first if the 'quality' ideal is to be embraced at a significant enough level for success" (Jenlink, 1995, p. 486).

The role of middle management (people such as supervisors, central office administrators, principals, and assistant principals) changes from that of manager to that of facilitator and leader.

The biggest change that total quality management brings to middle management is that positions move from being authority-based to being expertise-based. The only way total quality management can be successful is if middle management personnel are experts in the processes of total quality management. To attempt the transformation with authoritarians will fail. To attempt the transformation with authoritarians falsely presenting themselves as experts will also fail. The process must be led by middle management with the knowledge to understand and lead the transformation. (Bradley, 1993b, p. 201)

It is important for the major stakeholders of the school system to agree that a change to the Total Quality philosophy is something that should be undertaken by the system. "The most important notion to emerge from that research is that unless the people ultimately responsible for implementing the change are heavily invested in it, the change will not be permanent" (Crawford, Bodine, & Hoglund, 1993, p. 63).

Commitment in a TQ system can be seen through the practices and actions of the people in that system (Sashkin & Kiser, 1993). "Commitment is
determined by what an individual or group does, not what it says that it believes" (Putinski & Kocik, 1993, p. 74).

The role of teachers changes as they are empowered with decision making in the school. "The concept of teacher as management is unique because they've been viewed historically as workers with the administration designated as management" (Byrnes, M., Cornesky, & Byrnes, L., 1992, p. 42).

**Decision Makers in a School System**

In a TQ system, decision making is an activity shared by the stakeholders -- those most affected by the problem or decision -- of that system.

People closest to the problems usually have the best solutions. School people are an almost unlimited source of knowledge and creativity that can be used, not only to solve problems, but also to continuously improve the quality of services and products. (Lewis, 1993, pp. 20-21)

By involving a representative group of key people in the process, the team working on an improvement strategy will not be viewed by others as being on an elitist team, which could hamper the implementation of their efforts (Lewis, 1993).

Additionally, a cross-functional team allows people from different departments to work together on the solution to a problem or improvement effort.
This type of structural linkage offers a number of benefits to the school organization:

- It helps the school organization stay focused on pursuing the same goals, rather than having functional units working at cross purposes.
- It fosters better teamwork and less internal competition.
- It improves the communication throughout the school organization, and a better understanding of how all the pieces fit together.
- It improves the ability to replicate ideas and standardize solutions that have applicability to processes in other areas of the school organization. (Lewis, 1993, p. 73)

In successful TQM organizations, employees are encouraged to work with managers and peers in continuous improvement efforts. "These organizations realize that no one understands a worker's job better than the worker. ... The organization gains the benefit of the creativity, innovation, and commitment of the people closest to the action" (Schmidt & Finnigan, 1992, p. 129).

"Recent research also confirms that long-term performance is highest in those school organizations that practice a participative approach to management" (Lewis, 1993, p. 69).

Using consensus in arriving at a decision is often applied by teams. "In TQM, consensus is a clear course of action to which most members subscribe, one that the dissenters will support because they feel they have had their chance to influence the outcome" (Schmidt & Finnigan, 1993, p. 74).
A feeling of trust is essential when people are working together in
decision making and problem-solving situations which will improve their
organization (Siegel & Byrne, 1994).

Trust needs to be built into decision-making processes so that
employees, working together to address common problems, can
craft acceptable, credible solutions. Trust must be earned and
takes time to establish, especially in school systems where most
teachers were prepared to work with groups of students but not
collaboratively with adults. (Siegel & Byrne, 1994, p. 23)

Leadership, not management, is another important characteristic of a
Total Quality system as discussed in the next section.

**Role of Leaders**

Total Quality Management calls for leaders in order to sustain continuous
improvement in a system. "The job of management is not supervision, but
leadership. Management must work on sources of improvement, the intent of
quality of product and/or service, and on the translation of the intent into design
and actual product" (Deming, 1982, p. 54).

Effective leaders can have an impact on the system they head.
"Wherever work standards have been thrown out and replaced by leadership,
quality and productivity have gone up substantially, and people are happier on
the job" (Deming, 1982, p. 75).

Quality, insists Deming, cannot and must not be delegated.
Responsibility for quality processes, systems, and outcomes rests
with management. Workers, acting by themselves, cannot create the system-wide conditions under which quality processes take place. That is the job of management, which is entrusted with the responsibility of fully adopting this new Total Quality philosophy throughout the organization, building relationships of trust from the top down, empowering and enabling frontline workers to continuously improve by removing the barriers to their natural joy and pride of workmanship, and garnering the necessary resources to provide ongoing training in Total Quality principles and practices for management and workers. This applies to quality businesses, as well as Schools of Quality. (Bonstingl, 1992b, p. 43)

The term lead-manager has been used to describe the type of manager Deming believes is necessary for a quality system; boss-manager describes the traditional hierarchical manager.

School systems have been characterized by top-down systems. These tend to force competition, insulate the leader who is usually unable to gain data from lower levels, and does not always acknowledge the information that is there. Top-down systems have threat inherent in them since the boss can terminate an employee (Crawford, Bodine, & Hoglund, 1993).

Glasser (1994) says that boss-management is a firmly fixed tradition in the United States.

Bosses are in charge of the workers; they tell them what, when, and how to do their job. They have the power to reward them for doing a good job and to punish them for not doing what they are told to do. ... Unfortunately, it is the unwise use of this power that effectively prevents us from achieving the quality work that is needed if we are to regain our competitive place in the market. (p. 10)
Glasser (1994) describes boss-management as follows:

Reduced to its essentials it contains four elements:

1. The boss sets the task and the standards for what the workers are to do, usually without consulting the workers. Bosses do not compromise; the worker has to adjust to the job as the boss defines it or suffer any consequences the boss determines.

2. The boss usually tells, rather than shows, the workers how the work is to be done and rarely asks for their input as to how it might possibly be done better.

3. The boss, or someone the boss designates, inspects the work. Because the boss does not involve the workers in this evaluation, they do only enough to get by; they rarely even think of doing what is required for quality.

4. When workers resist, as they almost always do in a variety of ways, all of which compromise quality, the boss uses coercion (usually punishment) almost exclusively to try to make them do as they are told. In so doing, the boss creates a workplace in which the workers and the managers are adversaries. Bosses think that this adversarial situation is the way it should be. (Glasser, 1994, p. 11)

Following is Glasser's (1994) definition of a lead-manager which parallels that of a boss-manager:

1. Lead-managers engage the workers in an ongoing honest discussion of both the cost and the quality of the work that is needed for the company to be successful. They not only listen but they also encourage their workers to give them any input that will improve quality and lower costs.

2. The lead-manager (or someone designated by him or her) shows or models the job so that the worker who is to do the job can see exactly what the manager expects. The lead-manager works to increase the workers' sense of control over the work they do.

3. The lead-manager eliminates most inspectors and inspection. He or she teaches the workers to inspect or to evaluate their own work for quality with the understanding that they know a great deal, almost always more than anyone else,
about both what high-quality work is and how to produce it economically.

4. The lead-manager continually teaches the workers that the essence of quality is constant improvement. To help them, he makes it clear that he believes his main job is as a facilitator, which means he is doing all he can to provide them with the best tools and workplace as well as a friendly, noncoercive, nonadversarial atmosphere in which to work. (Glasser, 1994, pp. 14-15)

Literature shows that the role of the building administrator is essential to an effective quality school. Building principals should be lead-managers who model a total quality philosophy. "If a single individual in our schools had to be identified who will bring about the changes in education that will be necessary in the next century, it would be the principal" (Gainey, 1993, p. 48).

In a school setting, the principal works with the teachers in continual improvement of the school. "Gone are the vestiges of 'Scientific Management' popularized early in this century by Frederick Winslow Taylor, whose watchwords were compliance, control, and command. ... Total Quality is, essentially, a win-win philosophy that works to everyone's ultimate advantage" (Bonstingl, 1992a, p. 6).

The principal and staff actively seek out problem areas in the school and work on their improvement.

Problems may be described as discrepancies between what is and what should be that become untenable or unbearable to someone. When discrepancies reach the status of problems, people react with heightened emotions and look for solutions to be developed and implemented in a timely fashion. They expect the principal to reduce the difference between the actual and the ideal
to an acceptable level. Time becomes the primary constraining factor in the problem-solving process. (Gainey, 1993, p. 50)

The attitude of the principal on a problem-solving team can influence other team members.

Attitude training is best performed through the role model behavior of the principal. The single most important factor in attitude training is how the principal treats team members. If the principal is people-sensitive, then the attitudes of team members will be positive. Change the undesirable behavior of a principal, and there will be resultant attitude changes in team members. (Lewis, 1993, p. 257)

Members of the school should be able to take pride and joy in their work. Lead-managers are responsible for removing the barriers that prevent this from happening. With the use of data, these barriers should be worked on by teams of people who are most directly affected (Bonstingl, 1992b).

Effective school administrators involve school people, including union/association leadership where applicable, in the early stages of the quality planning process. They empower school people to make decisions. They shift their efforts from directing and controlling how the operations will be carried out to identifying and removing barriers that prevent school people from meeting customer needs, requirements, and expectations the first time and every time. They lead the fundamental change in the school organization culture from crisis management to continuous improvement. (Lewis, 1993, p. 16)

A lead-manager style can have tangible benefits for organizations as listed by Glasser (1994):
It is well known that a company that is led by managers whose workers have them in their quality worlds have much lower medical expenses, absenteeism, accidents, and work disruptions than workers who are bossed. Bossing leads to dissatisfaction, which causes expensive waste and misery. (p. 87)

Openness and a trusting relationship must be developed by leaders from the top down in a TQ system. When this type of relationship is developed, there will be a "confident belief and faith that people say what they mean and will do what they say. This kind of openness breeds trust" (Schmidt & Finnigan, 1993, p. 48).

Lead-managers have other qualities which include listening to their employees, respecting their employees as workers and people, encouraging workers to higher levels of performance through the use of positive reinforcement, and providing guidance and direction to employees when necessary (Schmidt & Finnigan, 1993).

TQ managers also "must acquire the resources, inspire the troops (especially when the going gets tough), and, most important, demonstrate openly and decisively an ongoing personal commitment to Total Quality Management and its application to the continuing improvement of schools and their people" (Bonstingl, 1992a, p. 9).

Modeling and sharing the vision of a TQM culture is another duty of a lead-manager who empowers the people in the organization. This manager
answers questions honestly so that the system can move forward (National LEADership Network Study Group on Restructuring Schools, 1993, p. 25).

Under TQM, the leader's role is one of enabling everyone in the organization to focus on pleasing the customer. This means that the leader develops work processes, goals, and measurements. It is the leader who sees to it that everyone has a sense of how important a particular task or project is to accomplishing the goals. The leader, then, must reflect an understanding of the mission, vision, and values of the organization in order to demonstrate them to everyone else. The leader must also ensure that others have the same vision, so that they can "hit the road" running. (Siegel & Byrne, 1994, p. 67)

Leaders make sure that everyone is aware of the system's purpose, goals, and progress towards those goals. This progress should be celebrated at appropriate times with rewards and recognition (Schmoker, 1996).

"When your requests or demands are consistent with the rewards you give, you send clear signals of what is expected; when they are inconsistent, people will trust your rewards, not your requests" (Schmidt & Finnigan, 1993, p. 105).

Rewards may include congratulatory notes, plaques, team shirts, or a genuine thank you from the leader. It is important to remember that rewards should be accompanied by recognition (Schmidt & Finnigan, 1993).

Schmoker & Wilson (1993b) warn about the use of monetary rewards which may foster competition in an organization instead of cooperation.

Monetary rewards can palpably express appreciation and spur additional effort. But if they rank employees or result in gross
disparities among them, they could be potentially demoralizing and even undermine a willingness to share expertise, which is essential to continuous improvement. (Schmoker & Wilson, 1993b, p. 159)

In a system, it is sometimes necessary to take corrective action. A lead-manager will remember to focus on issues and "correcting negative behaviors without labeling or classifying people" (Schmidt & Finnigan, 1993, p. 59).

If we are to be truly committed to improvement, then we must let go of old notions of fixing blame and operation on our worst assumptions about people. To the extent that we can do this, we will succeed mightily with Deming's methods. (Schmoker & Wilson, 1993b, p. 160)

**Importance of Staff Development**

In any organization, it is important that people have a common language and understand their role in the organization. To this end, the people of the organization need to become learners.

The culture of the company is going to change only when all employees absorb the common language of quality and begin to understand their individual roles in making quality improvement happen. As their education takes effect, the employees will expect management to put quality first among equals. From that point on they expect to see management insisting on conformance to requirements and they expect to get used to it. (Crosby, 1984, p. 100)

When a change in the culture of the organization takes place, a change in attitude is part of it. "Changing a culture is not a matter of teaching people a
bunch of new techniques, or replacing their behavior patterns with new ones. It is a matter of exchanging values and providing role models. This is done by changing attitudes" (Crosby, 1984, p. 98).

Deming believed that education in an organization is necessary. "Encourage education and self-improvement for everyone. What an organization needs is not just good people; it needs people that are improving with education" (Deming, 1982, p. 86).

This education will allow people to be aware of what others in the organization are doing while each employee has the opportunity to develop. Education and knowledge are resources which cannot be squandered (Deming, 1982).

Knowledge in any country is a national resource. Unlike rare metals, which can not be replaced, the supply of knowledge in any field can be increased by education. Education may be formal, as in school. It may be supplemented and rounded out by work and review under a master. A company must, for its very existence, make use of the store of knowledge that exists within the company, and learn how to make use of help from the outside when it can be effective. ... Waste of knowledge, in the sense of failure of a company to use knowledge that is there and available for development, is even more deplorable. (Deming, 1982, p. 466)

Staff development is important in the implementation of the Total Quality philosophy and all key people, from management on down, should be inserviced in the tenets of TQ (Fields, 1993).
Knowledge of Total Quality tools and processes is important, but the application of that knowledge is key.

Concepts are essential, and the education to understand them is a must; however, nothing happens unless somebody actively does something. ‘Doing something’ in the case of quality improvement requires that actions be taken to actually change the culture and management style of the company. (Crosby, 1984, p. 96)

Lewis (1993) believes that 1-2% of the payroll should be allocated to training and all members of the school staff should be required to attend a minimum number of hours.

The planning and implementation of a comprehensive training and education program is the heart and soul of a good TQ process. However, this is easier said than done. Most school districts in the United States fail to provide the necessary funds to sufficiently maintain their school people through an adequate education and training process. It is not uncommon to hear school administrators who attempt to install TQ say, "We implemented TQ without increasing the budget." TQ requires more education and training than most processes, because the training is all-encompassing. That is, every level of the school organization will need some education and training in the principles and practices of quality improvement, because school people will have to be retrained and receive advanced training when the program has blossomed. (Lewis, 1993, p. 255)

In an organization, "when workers are viewed as assets, training is seen as an investment. As workers' competence grows, the company's worth increases. Efforts are made to keep the training budget intact during difficult times" (Schmidt & Finnigan, 1993, p. 15).
Since knowledge and competencies are changing, education is important to support the continuous improvement of an organization. This allows for tools and processes to be applied with consistency within an organization. Sharing information with others also stimulates new thoughts and dialogues within a system (Schmidt & Finnigan, 1993).

**Change in Staff Evaluation**

The traditional approach to evaluation identifies weaknesses and is a source of fear for many employees.

Thus, the traditional approach to teacher evaluation, which sought to identify weaknesses and deficiencies, is not the approach to professional development and growth taken by TQM. This former approach relied on the motivation of fear to cause professional improvement. Fear as a motivator, however, is eliminated in the philosophy of Deming. (Sevick, 1995b, p. 216)

Glasser (1990) talks about the need for employees to be able to self-evaluate their work and the role of the lead-manager in that process.

W. Edwards Deming states that of all the things we do that are destructive to quality work as we attempt to manage workers, evaluating them is the most destructive of all. This is because it is almost impossible consistently to evaluate a worker (or a student) in a way that he or she thinks is fair. Because of this, the evaluation is often seen by the worker as criticism. ... Deming suggests strongly that we stop evaluating workers and instead ask them to evaluate their own work. If after this self-evaluation they want to improve, a lead-manager asks how he or she can help. (Glasser, 1990, pp. 211-212)
Lead-managers approach evaluation with two broad goals:

The first is to cause each staff member to develop the skills for, and to engage in, a continual self-evaluation leading to personal and professional growth. Any staff member unable or unwilling to engage in this process will not be an effective participant in the school for quality learning. The second goal is to prepare each teacher to develop self-evaluation capabilities in the learners. The self-evaluation process is the same, whether directed toward quality teaching or toward quality learning. (Crawford, Bodine, & Hoglund, 1993, p. 83)

The evaluation of an employee is formative, not summative. Checklists, rankings and comparisons are only used to compare one's own previous behavior. The principal and teacher meet together to decide possible areas for goals. Both parties discuss growth plans, but the teacher decides on the final goals and strategies for accomplishing them. The principal may observe the teacher during the year and confer formally and/or informally. The teacher, meanwhile, self-assesses his/her own growth. "The teacher's self-assessment of performance, strengths and weaknesses, and potential is extremely important, more important than the principal's assessment" (Crawford, Bodine, & Hoglund, 1993, p. 85).

Near the end of the year, the principal and teacher can meet again to discuss the progress of the year and set new goals. Some goals may continue over multiple years if they are of a significant nature. Colleagues should be encouraged to help each other with their growth plan and observe one another for new ideas (Crawford, Bodine, & Hoglund, 1993).
Dr. Deming contends that people who do not do well on the job have been misplaced in the system. "If someone has a disability, or is incapable of doing a job, the manager has an obligation to find a place for that person" (Walton, 1986, p. 71).

Schmidt & Finnigan (1993) believe that the lead-manager has a responsibility to work with the employee until:

- The root cause is identified.
- A corrective action is developed that will prevent the mistake from recurring.
- They have mutually agreed-upon objectives, standards, and measurements that provide the employee with specific, measurable objectives and actions.
- The employee knows not only how to correct the problem for the future, but how to learn from the experience. (p. 62)

**Role of Teachers**

As in leaders, there are boss-manager teachers and lead-manager teachers. Glasser (1990) describes boss-teachers as follows:

Basically, the boss-teacher is not that concerned with the students' needs. This type of teacher does not work at making friends with students and sees the work as more important than the atmosphere in which it is done. Contrary to what Deming advises, the boss-teacher works on the students, not on the system. In this tense situation, where low grades abound, it is hard for all but a few students to satisfy their needs. Far too many stop trying altogether.

To be fair, boss-teachers are willing to reward workers who work hard and do well, but, ... except for good grades there are few rewards available that mean much to students. (Glasser, 1990, p. 49)
In some schools, students are successful under the boss-manager teacher. Glasser (1990) says that this is not due to the way in which they are being managed, but because of the types of homes the students come from. The failure of boss-management with students can be seen by the number of students who receive detentions, suspensions, or expulsions (Glasser, 1990).

Lead-manager teachers have an understanding of quality; their view of power is not that of coercion, but reason and logic. There is collaboration with colleagues, cooperative learning is evident in the classroom, as well as higher level questioning, mediation, and an avoidance of adversarial confrontation. There is a people orientation about these teachers and they facilitate discussion, learning, and risk taking. They are trusted and have a vision (Crawford, Bodine, & Hoglund, 1993).

From the first day, the lead-teacher attempts to create a work situation that is warm and friendly and totally noncoercive. Students quickly realize that this teacher is not their adversary and is not trying to satisfy his or her need for power by bossing them. (Glasser, 1990, p. 52)

Lead-manager teachers strive to meet the needs of each child.

Super-leader teachers believe in the worth of all students and encourage each student to stretch their intellectual limits to achieve superior knowledge and problem-solving capabilities. Such a teacher reaches not only the academically gifted student, but also those students who may need additional time to learn a fact or concept. This teacher establishes a classroom climate conducive to universal success. (Byrnes, M., Cornesky, & Byrnes, L., 1992, p. 42)
In a quality classroom, the teacher will be a cheerleader who will reward and encourage students, and guide processes which include goal setting, self-evaluation, self-motivation and critical thinking skills, and a coach who will teach information and skills necessary for complex concepts (Byrnes, M., Cornesky, & Byrnes, L., 1992).

**Students as Self-Assessors**

Teachers should be role models for their students, showing them how to be flexible so that they may "become flexible with the learning process, permitting them to recognize many ways to improve along the way" (Byrnes, M., Cornesky, & Byrnes, L., 1992, p. 121).

Modeling shows the students what is expected by the teacher, including what constitutes quality.

**Examples of quality work are provided so students can clearly understand specifically what is required.** Expectations are clearly spelled out for all students, and each understands his/her role. Teams of students can work together identifying problems and accomplishing more than the individuals alone, while producing a superior product in which all can take pride. (Byrnes, M., Cornesky, & Byrnes, L., 1992, p. 50)

Once students who understand the need for quality work have learned how to evaluate their work for quality, "you will expect them to do it and to defend their evaluation of their work against you or anyone else" (Glasser, 1993, p. 40).
Students can be asked to keep a portfolio of their quality work: "Work they had achieved through a lot of self-evaluation and repeated improvement" (Glasser, 1993, p. 103). The opportunity to improve their work and demonstrate improved skills and knowledge should produce quality products from students.

Summary

In this section, the literature pertaining to the Total Quality philosophy was reviewed and is the basis for the on-site research. The next chapter will discuss the methodology used in this study.
CHAPTER 3

METHODOLOGY

This chapter will re-examine the research questions, how the data were collected to answer them, and the methods of analysis that were employed to analyze the data.

Research Questions

The purpose of this study was to see how the implementation of Total Quality in an elementary school made a difference. Research questions, based on Deming's fourteen points for Total Quality, were developed to examine the organization, governance, teaching, and learning at Gardenview Elementary School. These questions included the following:

• What is the role of the leader(s) in the school?
• What is the process for continuous improvement? (Decision making, implementation, and evaluation)
• How does staff development support continuous improvement?
• How has the organization of the building into teams and committees supported or hindered continuous improvement?

• How is the school culture imparted to new staff members?

• How are the parents of the school involved in the continuous improvement efforts?

• What is the process for developing and assessing student goals?

Interviews, observations, and the examination of archival data were used in this descriptive case study.

**Research Methodology and Data Collection**

A qualitative case study was used to examine Gardenview Elementary, the site of this study. Lancy (1993) states that:

The case study, used alone or as part of large-scale quantitative study, is the method of choice for studying interventions or innovations. And education is replete with these. One would be hard pressed to visit any school, at any point in time, that was not in the process of implementing and/or trying out new curricula, technology, staffing arrangements, student assessment procedures, etc. (p. 140)

Merriam (1988) says "In education as well as other areas of social practice, case study is a legitimate methodological option for researchers to consider when designing a study" (p. xi).
Case study research is primarily descriptive with the goal of understanding the particular case being studied. Since case studies are typically inductive in nature, variables are not all identified ahead of time, and are presented in a qualitative format (Merriam, 1988; Stake, 1995). "In general, case studies are the preferred strategy when how or why questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context" (Yin, 1989, p. 13).

Descriptive case studies in education are "useful ... in presenting basic information about areas of education where little research has been conducted. Innovative programs and practices are often the focus of descriptive case studies in education. Such studies often form a data base for future comparison and theory building" (Merriam, 1988, p. 27).

Case studies include systematic interviewing, direct observation, documentation, and archival records. "A case study is an empirical inquiry that: investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used" (Yin, 1989, p. 23).

These multiple sources of evidence help to establish validity and reliability of a case study. "Multiple sources of evidence essentially provide multiple measures of the same phenomenon" (Yin, 1989, p. 97).
Triangulation, the use of multiple methods of data collection and analysis, strengthens the reliability and internal validity of a case study (Merriam, 1988).

Qualitative researchers depend on a variety of methods for gathering data. The use of multiple-data-collection methods contributes to the trustworthiness of the data. This practice is commonly called "triangulation" and may also involve the incorporation of multiple data sources, investigators, and theoretical perspectives in order to increase confidence in research findings (see Denzin, 1988). (Glesne & Peshkin, 1992, p. 24)

Semi-structured interviews with the key stakeholders in the school (the principal, secretaries, Parent Teacher Association [PTA] President, teachers, parents, custodians, and educational assistants), an examination of archival data and documentation, and observations of site-based committees have been components of this investigation.

Case study interviews are open-ended and may include questions about facts or opinions about events. Interviews allow the researcher to obtain descriptions and interpretations of others which leads to the multiple realities of the case (Stake, 1995; Yin, 1989).

In the semi-structured interview, certain information is desired from all the respondents. These interviews are guided by a list of questions or issues to be explored, but neither the exact wording nor the order of the questions is determined ahead of time. This format allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic. (Merriam, 1988, p. 74)
When a researcher visits the case study site, "an investigator is creating
the opportunity for direct observations. Assuming that the phenomena of
interest have not been purely historical, some relevant behaviors or
environmental conditions will be available for observation" (Yin, 1989, p. 91).
These observations are another source of information for the case study.

Based upon the qualitative traditions, it is appropriate to conduct a
descriptive case study of an elementary school which has implemented the
Total Quality philosophy.

**Interviews**

The questions posed in the interviews related back to the major research
questions relating to the implementation of Total Quality in an elementary
school.

The interviews conducted were semi-formal. Questions centered around
the way decisions were arrived at, including who was involved in the decision-
making process, the strengths of the school, areas of improvement, and
leadership in the building. As new topics presented themselves, they were
explored with the respondent.

Interviews were scheduled with the building principal, the secretary, the
assistant secretary, three educational assistants, fifteen multi-age teachers, four
specialist teachers (art, music, physical education, and library), a tutor, the head
day and night custodians, the speech pathologist, the school counselor, three
parents who are members of the site-based teams and involved with the Parent Teacher Association, and a facilitator from the central office staff. All elementary teachers with more than a half-time responsibility at Gardenview were interviewed. The total number of interviews was 34. Interviews lasted in duration an average of 30-45 minutes and were tape recorded for transcription at a later time. Field notes were also taken during the interviews.

Observations

In most cases, nonparticipant observations were used to collect data. During some meetings, invitations to offer input were extended, but unless questions were directly asked of the researcher, nonparticipant observations were maintained.

Gardenview is divided into two primary multi-age teams (Primary East and West) and two intermediate multi-age teams (Intermediate South and North). Additionally, there is a team comprised of the specialists in art, music, physical education, and library (Central Team). These teams meet regularly to share information, plan, and solve problems their team is experiencing. There are also two main site-based decision-making teams in operation in the school. The Building Committee is comprised of both classified and certified staff members and the process for choosing members is located in their respective negotiated agreements. The principal is a member of this team. The Unity Committee is another site-based team and is comprised of volunteers from
classified staff, certified staff, and parents. The differences in these two teams can be found in the Unity minutes, dated October 2, 1995.

We discussed the original purpose of the Unity committee which was to implement the TQES Report. It also raised the issue of the definition of a "site-based" committee. The definition that was accepted -- as a committee we are able to make decisions that are best for our individual building within the parameters set up by the Board Office. Usually, the building is given the authority to implement -- the "how to" is up to the individual building. It was discussed that the purpose of this committee is both as a decision-making unit and an advisory to other committees such as the Building Committee.

The question, regarding our understanding of the Building Committee at Gardenview, was raised. Every school within the District is to have such a committee in place. Gardenview's Building Committee consists of a representative from each of the teams, the special areas, the teacher's union and the classified staff and union. They meet every other week and discuss topics that have to do with the nuts and bolts of every day operations. Issues of concern are brought to their attention and they work to resolve those issues from a whole staff approach.

There were a total of twelve team observations which included the four multi-age teams, Technology Committee, Building Committee, and Unity. Each team was observed at least once in the fall; Unity was observed five times from September through February. Team meetings lasted between 45 minutes and one and one half hours.

Examination of Archival Data and Documentation

A number of sources of written information were available which gave a historic perspective and rich data as to the progression and use of the Total
Quality philosophy at Gardenview Elementary. These included the Total Quality Elementary School Report (TQES), minutes from the Unity committee since its inception in April of 1993, Building Committee minutes from January through September of 1996, the Venture Capital grant application, progress reports submitted on the Indicators of Success for the Venture Capital grant, selected correspondence kept by the principal, and portfolios of student work and progress.

Data Analysis

Yin (1989) says there is a strategy to analyzing case study evidence. "For case-study analysis, one of the most desirable strategies is the use of a pattern-matching logic" (p. 109).

The collected data -- interviews, observations, and archival data -- were examined for emergent themes and patterns. The themes of rules, roles, and relationships became evident in the data. To verify this, a matrix was developed to look at the topics of rules, roles, and relationships, and the subtopics which emerged from the data. The topic of rules included subtopics of committee or team work, staff development, the Venture Capital grant, and the TQES report. Subtopics under the main heading of roles included leadership, visionary, decision maker/problem solver, teacher, learner, assessor, manager, and facilitator. Relationships included the areas of central office, principal, teacher, educational assistants, custodian, secretary, parents, PTA, and students. Each
main category included the subcategory of other to include interesting or relevant data which did not easily fit into the subtopics.

The greatest number of occurrences appeared in the category of roles -- 165 times during interviews, 73 times during observations of meetings, and 46 times in archival documents for a total of 284. All research questions were answered in the roles category; however, rules gave the direction of the change and relationships supported or hindered what was accomplished.

Relationships occurred most frequently in interviews (114 times) and observations (35 times). There were only eight references to relationships recorded in the archival documents. This low number may more accurately reflect the objective way minutes were recorded rather than a lack of relationships. This was verified when comparing Unity minutes with recorded observations; only 2 of the 14 items categorized as relationships in the observations could be found in the minutes.

The category of rules had the least number of occurrences. During interviews and observations, 19 occurrences were recorded in each category for a total of 38. There were also 19 codings in the archival data which included Unity Meeting minutes, Building committee minutes, and one piece of correspondence; however, the entire TQES report and Venture Capital Grant application were very specific as to the rules and expectations which would govern Gardenview. Because of its importance, the category of rules was maintained.
The data were reviewed by the people interviewed and observed for the study. Each participant had the opportunity to examine and offer corrections to the researcher as a member check which helps triangulate observations (Stake, 1995). This procedure "has been correctly identified -- but only rarely -- as a way of corroborating the essential facts and evidence presented in the case report (Schatzman & Strauss, 1973, p. 134)" (Yin, 1989, p. 144).

During the member check, some participants expressed concern because they were quoted as saying "gotta" or "gonna." While they acknowledged the quotes as accurate and reflective of their conversational speech, they felt in print it appeared unprofessional. Since it did not change the meaning of the passages, the words gonna and gotta were changed to "going to" or "have to" within brackets within the quotes.

During one of the team meetings described in chapter 4, the husband and young child surprised one of the teachers by visiting for a few minutes. The interruption was minimal and the team continued with their agenda. Since the visit was atypical and not representative of their normal team meeting, the reference to the visit was eliminated at the team's request.

Summary

This chapter examined the methodology used in this descriptive case study. Data to answer the research questions were collected through 34
interviews, 12 observations of team meetings, and the examination of Building Committee minutes from January through September of 1996, Unity minutes from April of 1993 through February of 1997, the Total Quality Elementary School report, and Venture Capital Grant application. These data were analyzed for patterns and the themes of rules, roles, and relationships emerged. Chapter 4 will explore these emergent themes as they answered the research questions.
Restructuring calls for radical changes in education that seek to alter the ways organizations are put together (Cuban, 1988; Schlechty, 1990). According to Schlechty (1990), "restructuring means altering systems of rules, roles, and relationships so that schools can serve existing purposes more effectively or serve new purposes altogether" (p. xvi). This chapter examines the themes of rules, roles, and relationships which emerged at Gardenview Elementary School as a result of their school reform efforts in continuous improvement.

**Rules**

Rules can be both written or unwritten and control the way an organization functions, both formally or informally. Written rules can be found in formal board of education adopted policies and procedures manuals or in staff handbooks. They may also be found in memos to the staff or minutes from
committees. Unwritten rules are expectations or guidelines which govern an organization. They are "the way things are done around here" and must be learned by new staff from those familiar with the organization. Sometimes, the entire staff learns about unwritten rules at a meeting when new expectations are discussed. This section will investigate the way rules effect continuous improvement at Gardenview.

**Documents Which Guide Building Rules and Expectations**

Two documents have guided Gardenview's changes. The first document is the Total Quality Elementary School Report (TQES) which was adopted by the Sheldon City School District in June, 1993. Parents, classified staff, certified staff, and administration were invited in December 1991, to serve on the committee which resulted in this report. Its purpose (below) was included in the text of this report.

The purpose of this report is to set forth the principles which will guide the development and restructuring of the elementary schools of the Sheldon City School District in the future. The principles which are outlined herein have been drawn from literature and research from the fields of Effective Teaching, Educational Psychology, and Total Quality Schools. (p. 3)

The report included a rationale for the Total Quality Elementary School and emergent themes, all based on a literature review of research and best practices. Seven main topics are included: Learning, Instruction, Curriculum,
Assessment, Leadership, Community/Resources, and Facilities/Technology/Equipment. Each topic has two sections: Guiding Principles -- what should happen -- and Recommendations -- how it will happen. The TQES committee acknowledged the different stages of readiness by the elementary schools in the implementation of this report.

It is extremely important to recognize that different teachers, different grade levels, and different schools are at various points toward meeting the principles described. Implementation plans will need to be sensitive to these differences and to other needs of the various groups affected by this plan. (p. 15)

Gardenview had participated in the Classroom of the Future project and had already embraced some of the Guiding Principles contained in the TQES report, but only with the half of the school that had been directly involved in Classroom of the Future.

Dr. Linda Burke, principal at Gardenview, said that, after four years as a Classroom of the Future site, she was describing two different schools to parents -- one school that was set up with multi-age teams at the primary and intermediate levels, and one that contained traditional classrooms and grade levels. The TQES report allowed her to move forward with teaming at all levels. At a staff meeting, she presented the TQES report and told teachers "we're going total teaming, but you can do it your own way and at your own speed." Linda realized that her statement wasn't "Total Quality," but, according to her, she "had to take the bull by the horns and set the vision of the school."
Teachers were told they could move at their own pace, and that this was the direction the whole district was heading. Linda said, "We're all going to Pittsburgh and the train is moving -- you need to get on it. This report is Pittsburgh, and I don't care how you get there." It was decided if someone did not want to be a part of this type of structure, they could request a transfer to another school which would eventually move towards teaming, but not as quickly.

Gabby remembers the risk Linda took in changing the school. "She certainly had some major opposition, you know, staff members that didn't want to buy into it. They had the opportunity to leave, but they were certainly very vocal on the way out the door."

In addition to the TQES report, Gardenview submitted a Venture Capital grant proposal, based on the TQES report, which further delineated the changes that have taken place. Because one of the grant requirements included setting Indicators of Success and evaluating progress toward meeting them, the school community is constantly reexamining what they have achieved in relation to their original goals and those of the district.

Most of the rules and expectations governing the building are a result of one or both of these documents. Teachers are expected to be members of a multi-age team which begins to see itself as a team, and not separate grade level teachers working together. Teachers remind themselves they are not to
refer to each other as a third, fourth, or fifth grade teacher, but a member of the intermediate team.

Parents are expected to be equal participants on teams and in the decision making process of the school. As a result of the TQES report, Unity, the site-based team which sets the vision for the school, was created and includes several parents.

Staff development is a recommendation under the areas of Learning, Instruction, Curriculum, Assessment, and Technology in the TQES report, and is the purpose of the money received through the Venture Capital Grant. All staff members are expected to participate in these staff development opportunities occurring both during and beyond the school day. Parents are invited to attend the same inservice opportunities as the staff, and some have chosen to do so.

**Unwritten Rules and Expectations Regarding Committees**

As in all organizations, there are expectations which are not written down. One of these is for people to participate in committee work. In the spring of the year, each staff member is asked to indicate the committees he/she would like to be on during the next school year. People rank their interest with a one (they want to be on the committee), two (they do not care if they are on that committee), and three (they will help out if they are needed, but do not really have an interest in it). Committees they do not want to serve on are left blank. Linda takes this information and creates lists of committee members. She said,
"Teachers complain about all of the committees, but they realize one person can't do it all and much of what is happening would not occur."

Staff members understand they are required to be committee members. Teresa says everybody makes you accountable -- "it's the unwritten rule." New staff members find out through word of mouth and it is assumed everyone will participate.

Marie Newman explains the expectation from her point of view. "It's usually two that you're actively involved with, but you could be on others. There's other people that might be on six or seven, but you're expected to be on two. You might be a participant on some just because you have a little interest and you don't mind helping out that activity."

When Susan Month, the Alternative Service Delivery Options (ASDO) Tutor, left, she wrote a welcoming letter to the person who would take her place. In this letter she stated, "Every staff member from teachers, to educational assistants, to secretaries is involved in some committee or school activity. While that may seem exhausting, it's also very exciting, and I think you will come to enjoy being such an important, active part of the school community."

The number of committees and communication among them became an issue during the 1996-97 school year. In addition to the two primary, two intermediate, and one central specialist team, there are 25 committees in operation, some with subcommittees, and six other liaison positions or people solely in charge of a project. These positions are staffed by 27 full and six part
time employees, with six parent volunteers. Committees meet before, during, and after school. While the number of committees seems overwhelming, they allow people to be actively involved in the decision making process of the school.

Although Linda told staff members that they should not feel stressed about being on a committee, the number of committees is still an issue. Staff members met with central office personnel to talk about this problem and try to solve it.

From these meetings, rules about how to communicate committee work were discussed. It was suggested that teams write meeting dates, including time and place, on the calendar in the office, and after each meeting write and post minutes so everybody knows what is happening. The committee should make sure that Linda receives a copy, since oftentimes no one apprises her of what has happened in the meetings.

The possibility of combining committees with similar purposes was also discussed. For instance, Market Day and Candy Sale could be combined under the heading "fundraising." It was discovered that one committee is the over rider of all the others -- the Building Committee. This committee is comprised of representatives from classified and certified staff, with the building principal. They meet to solve problems and make decisions regarding the day-to-day operations of the school.
Some teams and committees have added their own rules to operate more smoothly. The Intermediate North Team has three rules which they and their students follow: Do your best, Do what is right, and Do unto others as you would have them do unto you.

Written Rules Governing Teams and Committees

The site-based management team, Unity, first met April 29, 1993 and had several meetings before the 1992-93 school year ended. At these meetings, members developed a mission statement, engaged in trust building activities, and determined the makeup of this new site-based team. At their first meeting of the 1993-94 school year, discussions began about the rules that Unity would use for their meetings. These rules covered topics such as the decision making process, dissemination of minutes, and meeting times. Agenda topics could be submitted by anyone one week prior to the scheduled meeting, discussion and data gathering would occur before any decision was made by consensus with a win-win attitude, and meetings would take place once a month for an hour and forty-five minutes for the remainder of the school year. In April of that same school year, discussions began about how long staff members would stay on the committee and how they would replace parent representatives. As it was determined, teachers would rotate on a three year cycle they would develop so not all teachers would be new in any given year; no limitation was set for parent terms. Parents interested in joining the team could send their written intention
to the school. Those parents would be interviewed by the remaining parents to make sure they were open-minded about possible changes and a recommendation would then be made to the rest of the Unity committee.

During the winter of the 1994-95 school year, a parent questioned why Unity meetings were closed to guests. At their February 14 meeting, Unity decided to open the meetings so they might get input from other parents who were not part of the committee. They added a rule to govern this participation time:

The procedure for future Unity meeting will be that the first 50 minutes of the meeting will be agenda items and the last 10 minutes will be open for questions, discussions and concerns expressed by other parents or staff members. Unity will attempt to address the questions and concerns posed; however, if there is not sufficient time, the person presenting the question or concern will be asked to return at another scheduled meeting.

Annually, the Unity Committee establishes meeting times and frequency and determines if any other changes need to be made in the way the agenda is created and the meeting is facilitated.

**Changing Rules and Expectations**

Just as staff members have the freedom to develop rules as they are needed, they also bend them when there is a reason to do so. There was a need for all staff members to attend a staff development session, but no time built into the calendar for such a day. The Building Committee proposed that
staff attend the inservice activities on the half day set aside for planning for conferences and the whole day scheduled as a day off after conferences. In turn, teachers would be granted a day and a half compensation anytime during the school year. There was peer pressure to accept this proposal and, as a result, staff members gained common knowledge about the workshop topic.

In another instance, during the 1996-97 school year, the district was eliminating special education assistants and attempting to have only special education associates. The associate classification had been added during the last negotiations as a response to the number of students who needed physical assistance and/or had toileting needs, tasks which assistants were not required to perform. It was hoped that each special education unit would eventually have an associate attached to it who could perform the assistant duties in addition to newly identified needs. In an attempt to make the adjustment to an educational associate at Gardenview, it was discovered that it would not work unless the teams were totally disrupted. Since it was already the end of September, there was no desire to change what had been established at the beginning of the school year. Dr. Burke worked with the OAPSE representative and special education office to reach an agreement that would work on paper and would allow them to continue the way they began the school year.

Written expectations as found in the TQES report and Venture Capital grant application are used to promote the changes which have occurred at
Gardenview. As can be seen above, rules which inhibit change are bent or modified to work for the school.

Roles

Because of a philosophy of shared decision making, the traditional roles of parents, teachers, classified staff, principal, and students have changed. The principal no longer is the sole keeper of the school vision, but has empowered those around her to make the changes necessary for its actualization. Teachers and classified staff members have taken an active role in the day to day operations of the school as well as planning for continuous change and improvement. Parents are invited to be active participants in the decision making process of the school. Students have begun to set their own goals and measure progress towards them. Following is an example of some changed roles and discussion of other innovations which have occurred.

Unity Committee Meeting, January 1997

The Staff Lounge had people walking through it at the end of the day, a short cut from one end of the building to the other. Ellen Murphy was busy making coffee and setting up refreshments for the special site-based committee (Unity) meeting which was to begin at four. She said that she was inspired to bring snacks since the committee had agreed to stay beyond their typical hour
until their task was completed. A chart stand and paper had been set up in case
the team wanted to record any ideas. Members of Unity began coming into the
lounge, reviewing their day as they did so. Janelle asked Estelle what was
wrong with the pop machine because the pop had been warm for a few days.
Estelle said she had just found out about it and someone would be out soon to
look at it. They had just returned from their winter break a few days earlier and
some of the members hadn't seen each other to talk about their vacation, so
Julianne's winter tan was a topic of conversation. Alex came in and said he
would only be able to stay for a short while because of a previously scheduled
appointment. Many of the members checked to make sure he would be able to
travel to his next meeting and be on time if he stayed.

This small talk reflected the comfort level the members of Unity have with
one another. Many of them have gone through team building exercises
together and have learned about each other on a personal level.

The meeting was called to order by Liz Arthur at 4:15. Liz was one of four
parents on the Unity committee; Ellen, Betty, and Michelle were the other parent
representatives and all were in attendance at the meeting, although Michelle
came in late. Other members of the team included Dr. Linda Burke, the
principal, primary team teachers Lila and Janelle, intermediate team teachers
Becky and Julianne, Alex, the music teacher who represented the central
specialist team, and two teacher assistants, Rachel and Estelle, who
represented the classified staff; only Becky was absent from the meeting. Two
guests were in attendance: Bernie, Lila's teaching partner from one of the primary teams, and Gabby, a member of the district Transition Committee.

This afternoon's meeting had only two agenda items. The first was announcements, and there were two printed on the agenda: Interviews of prospective parent members and Update on Transition Committee process. The second item was an issue for discussion to determine the criteria/competencies for the new principal (Dr. Burke announced her retirement at the end of the next school year) and the timeline for interviewing and hiring. These recommendations would be relayed to the Transition Committee through Gabby.

Before beginning with the printed agenda, Liz asked for other announcements. Linda said she would be out of the building the next day because she would be visiting the middle school. She also said the middle school principal would be visiting Gardenview within the next month to improve articulation between the elementary and middle school.

Julianne said she did not really have an announcement, but would like to request that agenda items be prioritized so they would be able to complete some items more effectively instead of adding meetings which was becoming overwhelming. Liz said she thought they were all in agreement, but didn't know exactly how to get there. She added perhaps that was an agenda item for another meeting, and several people started to laugh.
Moving onto the printed announcements, Ellen explained two parents, Jill and Sheila, had expressed an interest in being members of Unity. They had been interviewed by the other parents on Unity and both were found to be acceptable. As a result, the parents were requesting the number of parent representatives on Unity increase to six members. Linda talked about the number of representatives first on Unity when it began during the spring of the 1992-93 school year. At that time, it was decided the five team leaders (two primary, two intermediate, and one specialist) be members of the team with the principal, two classified staff members, and five parents. When one of the original parents no longer had a child at Gardenview Elementary, Unity decided to change the membership to include one community member at large, so that particular parent could remain on the team. Since Unity had set a precedent of changing the number of members to fit the number of members they wanted on the team, she saw no reason why they could not increase the number of parent representatives to six. The members agreed they would not want to turn down parents who were actively involved in the school and agreed to increase the number of parents to six. Alex said they do not have an "us versus them" mentality and it didn't matter to him if there were more parent representatives than teachers. All team members welcomed one of the new parent representatives, Jill, who was able to attend the meeting.

Gabby gave an update of the district Transition Committee which was formed to plan for the large turnover in staff occurring during the next two years.
as the result of an Early Retirement Incentive. It was expected that over one hundred staff members and four principals, including Linda Burke, would take advantage of the proposal and retire. The recommendations of Unity were to be taken back to the Transition Committee.

As Unity began to share the competencies and criteria they believed to be important in a new principal, Ellen volunteered to write the ideas on chart paper for everyone to see. The qualifications and competencies mirrored what was happening at Gardenview -- experience with a multi-age school, in a multi-cultural setting, and with students from a low socio-economic background. In addition, they wanted someone who was: compassionate, intelligent, firm, flexible, friendly, open to the staff, students, and community, willing to continue on the path Gardenview set, able and willing to go beyond the call of duty, a creative problem solver, in tune with new ideas and whether they would fit with Gardenview, fearless, a visionary, a risk taker, nonconfrontational, interested in continuous progress, and accepting of people, making it a safe place to take risks. Several more characteristics were added before Unity members paused and began to think about what they liked in the school and would want to continue with a new principal. Teaming, technology, a willingness to support staff development, a person adept at fund raising or leveraging resources were added as well as someone not allergic to animals because two cats roam the halls freely and iguanas, morning doves, birds, and other animals reside at Gardenview.
When all ideas had been exhausted, the discussion moved to the timeline and interview/hiring process to be followed. All agreed a visit to the prospective candidates' schools, including interviews of the staff members there, should be a part of the process. They also wanted the prospective candidate to spend a day at Gardenview to see if he/she liked the structure and organization of the school. Unity wanted to have the person hired several months in advance of the August start date so the new hire could visit Gardenview often and talk with Linda about the school and its structure.

How the candidates would be chosen from the applications and who would be involved with the interview process were discussed backwards, from the final interview process to the initial screening. Unity decided that, in addition to the superintendent, assistant superintendent, and building principal representative chosen by the district, nine people from Gardenview should be involved in the interview process. These people would include three parents, three representatives from the classified staff (recommendations included the custodian, secretary, and teacher assistant, one of whom would be a union representative), and three representatives from the certified staff (recommendations included a teacher representative from the primary, intermediate, and specialists team, one of whom would be a union representative).

One representative from each of the Gardenview groups (parent, classified, and certified) would begin with a paper screening of the candidates.
Those candidates meeting their criteria would receive an interview. There was some discussion as to what would eliminate a person from the interview step. Certification was required by the State, so it was felt that those candidates who did not have minimum requirements would be screened out at the district level.

Linda asked if it was important for the candidate to have prior administrative experience. Some members felt that if a person had his/her own building before, he/she might have very specific ideas of how a building should be governed which might be in conflict with what they are doing at Gardenview, where a new person could be trained by the staff and parents. Others felt it was important for a person to have prior experience or prior life experience because there are so many strong personalities in the school and a person without that experience would not be able to "maintain his/her own." Jill, the new parent representative on Unity, said that a young person might more likely be a risk taker and visionary without prior experiences which would inhibit him/her from trying something new and different. Liz still thought it was important to have someone with experience who would know how to deal with empowered people who solve problems.

Unity decided to see how many applicants they receive before they decide how many people would be interviewed and asked to come to Gardenview for a day prior to the final decision. A lot of discussion centered around the timeline to be used. It was finally decided that brochures and requests for applications would go out during the summer prior to Linda's
retirement with interviews taking place in January and February and a final
decision made by March 31. Unity was scheduled to meet with Matt Thompson,
the facilitator of the Transition Committee, the following week to discuss their
thoughts on the criteria and process they hope to follow when looking for a
principal to replace Dr. Burke when she retires.

The meeting adjourned at 5:45.

Unity, like Gardenview's staff, has been empowered to make decisions
which typically have been the role of other people. Instead of Central Office
determining the process of interviewing and hiring the replacement for Dr.
Burke and informing the building staff how they might take part in the selection
process, Unity, including community representatives, was determining how and
when Central Office might assist them.

Role of Principal as Leader who Empowers Others to Lead

Leadership is an important part of the restructuring process. "Without the
commitment of leaders and upper management, the restructuring of education
is doomed to failure. The mantle of leadership falls on the shoulders of school
administrators whether or not they want the responsibility" (National

Schlechty (1990) says "a leader is a person who is in a position to
influence others to act and who has, as well, the moral, intellectual, and social
skills required to take advantage of that position" (p. xix).
Changing rules, roles, and relationships in schools -- which is what is required if schools are to be restructured -- will require leaders to learn new ways of leading. Restructuring will also require subordinates to learn new ways of following. To lead the restructuring effort, those in authority should not confuse loyalty with obedience. Restructuring requires that one's loyalty be bound to principles and visions, not to individual leaders. (Schlechty, 1990, p. 10)

A leader is important because:

Change begins wherever someone is in a position to recognize the need for a change and has the capacity to conceptualize and articulate the nature of the change. ... Thus those at the site of change must be involved in decisions regarding the change. And for change to be sustained -- especially changes that are structural in nature -- it is essential that those in positions of authority actively support (as opposed to passively tolerate) the change. (Schlechty, 1990, pp. 8-9)

Because of its importance, the way the principal interacts with the stakeholders of the school and their impressions of that leadership were examined.

Empowerment, allowing people to share in decision making, is an important quality found in Dr. Linda Burke, principal of Gardenview Elementary. She is viewed not just as a manager, but a leader and a visionary. Dr. Burke facilitates the changes that she empowers those around her to make. The definition she uses for an effective leader is "Surround yourself with professional people, empower them, and get out of the way!"
Dr. Matt Thompson, a retired Sheldon administrator who works for the district part time as a consultant, said that Dr. Burke learned this leadership style. "Linda is a very high achiever and tends to really like to establish goals and action plans and so on and so forth. In order to be the kind of leader that requires others to do that, you have to give that up and stop doing that for others and start teaching others how to do it. So the leader becomes more of a facilitator, coach, counselor in the process and less of a director of activities and that type of thing."

Some of the teachers have had to adjust to this empowerment. Traci says Linda "steps back and lets you have the decision making, you know, the empowerment, if you will. I just think because I come from the old school, they tell me to do it so I do it and that was kind of how it was when I first started, [it] was this is the way it is and you will do this. It's taken me a while to get to the point of feeling comfortable with the change of 'wow, it's Okay if I do this, it doesn't have to come from on high!'"

Linda's empowerment of the staff has allowed other leaders in the building to emerge. Bernie feels "This school is filled to the brim with leaders. People who aren't afraid to take responsibility, people who aren't afraid to try new ideas. It takes a certain type of person that is saying, 'Okay, it may fail, but it may not, so let's try it!'"
This type of attitude is what Deming refers to when he says we should drive out fear so that people may work to their potential. The staff is not afraid of trying an idea or innovation because it might not work.

The night custodian, Andy, said "I think she empowers everybody from the aides to custodial to all the staff to make decisions themselves for the staff by themselves. She pretty much believes you have the intelligence to make decisions."

While Linda was the person to set the vision of the school in the beginning of the changes that occurred, this form of empowerment has allowed the staff to take on the role of visionary, too. Alex believes "if you dream it, you can do it here."

Sometimes, staff members feel overwhelmed by all the freedom they have to decide things and at times would rather go back to having Linda tell them what to do. Oftentimes, this is more a frustration over the time it takes them to make decisions and changes than in a desire not to have ability to do so.

"Sometimes it would be nice to be told what to do, when you have to go back and have another meeting. It's like just tell us. But she's done a really nice job at that, and I think everyone at some point has been a leader in this school in one way or another." (Janelle Wells)

"...in fact, it's almost too much sometimes because you have so many [decisions] you almost wish someone would say 'you have to do this.'" (Julianne Holmes)
"So I think when you have that kind of input it makes you feel more in charge of what you're doing. On the other hand, there's almost sometimes when you'd like to have someone tell you what to do, rather than struggle with trying to figure it out yourself." (Vicki Lane)

Linda said, "We excite each other to death!" Sometimes she needs to ask teachers how something fits into the plan for this year or if it would be better to do it another year. In spite of her attempts to manage the change, the staff still feels overwhelmed.

Dr. Burke actively supports the changes she, her staff, and parents create. Everyone is empowered to make decisions for continuous improvement and to take leadership roles in the school community. By allowing others to share the power and responsibility of decision making, staff and parents have ownership of the changes they have initiated.

**Role of Staff and Parents as Decision Makers and Problem Solvers**

Everyone at Gardenview is encouraged to take part in the decision making and problem-solving processes, including parents. In addition to being on the Unity committee, parents are invited to be on other teams and are a part of the Artists in the School, Respect, Talent Show, Right to Read Week, Technology, and Student Conflict Resolution committees.

Decisions are made changing the structure and organization of the school by those most affected by the proposed innovation -- staff and parents.
These cross functional teams have broken down barriers between departments and the community, Deming’s ninth point.

The Unity committee has had a subcommittee working on the possibility of beginning an all day kindergarten program. If accepted by the Board of Education, this program could change the configuration of the multi-age teams and would add at least one other staff member. Because of the additional long term financial costs, the subcommittee scheduled meetings with central office staff to see whether or not this was a possibility before they made further plans.

Meet the Teacher Night held in September was not well attended this year. During the 1995-96 school year, Unity had talked about it being an information night for parents, but the low turnout suggested it was not meeting parent needs. Committee members speculated as to why the evening was not successful and what the purpose of such an evening was -- to impart information, to interact with parents, or both. Suggestions for improvements were made, but it was determined a survey of the parents needed to be done. A subcommittee was formed to do the survey and make changes for next year’s Meet the Teacher Night. A parent was chosen to chair the committee and other parents and staff members volunteered to serve on the team.

The results of the subcommittee were brought to the next Unity meeting. Alex got comments from staff members as did Liz, the parent chairperson, who also got them from PTA. It was decided that the next Meet the Teacher Night would be more informal with an opportunity for parents to meet the teachers
from 6:30-7:30. At 7:30 teams could do a half-hour formal presentation. Refreshments would be served in the gym, students would be invited to show off their rooms, the library would be open, and the PTA would be around with scrapbooks, with an effort to make Meet the Teachers Night more interactive.

Decision making and problem solving occur throughout the building. Staff members and parents have taken active roles in staffing decisions and have interviewed and hired replacement teachers as positions have become open. Dr. Thompson says, "Of course, the teachers know what they're looking for when they replace teachers, so they're hiring the right kind of teachers." They have included community resources when problem-solving issues go beyond the classroom. They have made scheduling decisions which have given teams larger blocks of instructional time during the day. As a new hire, secretary Marissa Porter made several changes to make the office run more smoothly. She and Barbara, the assistant secretary, made these changes without explanations or asking permission. Toni Andrews, librarian, reconfigured the library media center to make it more usable for staff and students throughout the day, not just when classes are being held in the library.

Teams and committees are comfortable making decisions. "As far as making our decisions, I think we are very capable making decisions as a team," said Daniel O'Connor.

The Technology Team solved the problem of how to keep software secure during community nights when the computer labs would be open to the
public. And the Building Committee decided one of their three permanent improvement requests for next summer would be sliding glass doors on the showcase so people would be able to use it more easily.

**Role of Staff in Financial Decisions**

The philosophy of site-based management allows staff members some say in how money is spent within the building. In this role, Gardenview staff members take an active part.

Each year, contracts are issued for co-curricular activities within the building. A formula had been developed for the amount of pay each of four co-curricular categories would receive. This formula was based upon the number of students involved, the degree of planning and preparation an activity takes, and the amount of contact time or number of meetings involved. Pay ranges from $50 to $500. The amount of money allocated to this fund comes from the district level. Each elementary building is given a base of $3000 and one dollar per student, giving Gardenview a grand total of $3253 to budget and spend.

During the October Building Committee meeting, Linda Burke presented a rough draft of the co-curricular activities eligible for funding and what they might receive. Because of added activities and a decrease in the student enrollment from the 1995-96 school year, the amount of money each activity received was changed from the previous year. Members of the team questioned each other as to what was actually involved in some activities and
debated the amount each should receive. When the Building Committee had an understanding of the amount of time spent in each activity, some adjustments were made in the compensation offered this year.

Market Day is one of the main fund raisers in the building and generates several thousand dollars each year. A committee organizes the sale of Market Day food items to parents and supervises the delivery and distribution of them once each month. The Building Committee decides how the funds will be used and they had been allocated to technology for the 1995-96 and 1996-97 school years. The Technology Committee was concerned that, if they did not prioritize how the money was to be spent, people would just request a variety of items from those funds and they wouldn't have enough money to tackle some of their main concerns. After some discussion, the priorities included first, carts for the new computers they were getting and second, site licenses for the software they felt should be available on all computers.

When extra money is needed, the staff looks to outside resources for additional funding. The Venture Capital grant provided the school with $125,000 over a five year period for staff development opportunities. In addition, the building has received other grants from community agencies. Gabby said, "She'll [Linda] always say, if it's really worth it for kids, you figure it out and we'll find money."

This reflects Deming's second point -- instituting leadership for change by improving schools using available resources.
The money received is divided in a way to make it go further. The other Venture Capital schools in the district pay teachers a stipend of $6 to $12 per hour for time spent beyond the school day for staff development activities or curriculum writing. Gardenview staff decided to have a flat rate of six dollars an hour so the funds would last longer.

**Expanded Roles for School Community**

**Teacher and Learner**

The role of teacher has been expanded at Gardenview to include parents as teachers. When the TQES report had been adopted, several of the parents instrumental in the development of the report felt that other parents needed to be educated in some of the key concepts associated with TQES. In addition to parent meetings, a set of "Glad You Asked" informational pieces were written and distributed to all parents in the community. Topics included School Reform, Total Quality Schools, Site-Based Management/Shared Decision Making, the Total Quality Elementary School Report, Assessment, Thematic - Interdisciplinary Instruction, Learning Styles and Modalities, Outcomes Based Education, Teaching Teams, Multi-age Grouping, Inclusion, and the Integration of Technology. These pieces helped answer some of the questions associated with the changes at Gardenview.

Staff members are encouraged to teach each other and have offered training sessions on some of the new software available in the labs. Using staff
members to instruct each other helps stretch available funds and teachers feel they have a ready resource should they experience difficulties. Some teachers have presented information about the changes at Gardenview to other districts at state conferences.

The role of the educational assistant has expanded to teacher. Margaret said, "They are thought of as teachers, really, even by the students. They are just other teachers here in the building and I think we all have a really strong working relationship. ... They plan with us, their input is just as valuable, they work with all the students, almost as much as we do. It's a real working team."

The role of learner has been expanded to include teachers, parents, and classified staff, in addition to students. Vicki Lane said, "The parents that helped design that [the TQES report] did a lot of growing and that helped our parent base, not just in our building, but in our district, to understand a little more of where we're going. A lot of it is parent education and we fought the battles here."

Parents have been invited to attend many of the same inservice opportunities as the staff. In addition, special sessions were developed just for parents. One of these was a parent Technology Night, designed to show parents how to use some of the technology in the building and some computers parents may check out and use at home.

According to Mary Pilliod, learning by the staff was important to the success of the changes which have occurred at Gardenview. "...Before we have
tried any of these new things, we've had extensive staff development. I think the reason many plans fail is because people have not been given the proper background, the reasoning, how to do it, how to go about doing things."

Through the learning opportunities made available to both staff and community, Gardenview is providing both a basic foundation and a program of education for future needs, two tenets of Total Quality.

**Curriculum Planners**

Because the curriculum in the Sheldon City School District was written for specific grade levels and not multi-age groups, teachers need to make curriculum decisions regarding what to teach each year. This occurs in their team and individual planning. Mary Pilliod, kindergarten teacher, explained it as follows: "Everyone is encouraged to take the curriculum and does not have to feel that they have to follow A, B, C, D, page one, two, three, four, but picks and chooses what they feel is important at that time or the students that they have, covering all the areas, except at their own speed and in the order that they wish."

Since physical education classes became multi-age classes, new thinking was required in planning. Physical education teacher Laurell Johnson said, "A lot of things that they have talked about is getting out of the mind-frame that I have to fulfill the curriculum for each grade level. ... Right now it's a little bit
overwhelming still thinking, 'Okay, how am I going to do this with third, fourth, and fifth graders?'

Curriculum planning usually occurs within the teams as topics are decided and activities are sketched out. Candi Armstrong, the Alternative Service Delivery Options (ASDO) tutor and newest teacher, enjoyed the opportunity to plan curriculum with a team of teachers. "It was good because you get to throw your idea and then shoot it down, or say it's not going to work, because they see other views that you may not see. Or listening to them, you know, because it sparks something up in your head -- 'oh yeah, that'd be a good idea.' I learned a lot from them and contributed a lot, I felt."

Role of Students, Teachers, and Administrators in Setting Goals and Evaluating Progress

Students

Each child at Gardenview sets goals for him or herself at least quarterly and, with the teacher, evaluates his/her progress towards meeting those goals. While state mandated testing still occurs, goal setting activities help eliminate inspection and allow the students to assess their own work.

Janelle Wells works with students who have special needs on one of the primary teams. In addition to goals being kept in the student's portfolio, she writes them on a sentence strip. "At the end of the morning, that was the end where I would just have them together, they would have to come up and tell me"
or show me if they met their goal. And then we put stickers on it. If they got fifteen good days, then we'd erase their goal and we'd write another one."

Teaching goal setting to students can be difficult in the beginning. Becky Kirkland works with her new intermediate students in the beginning of the year. She said:

At the beginning of the first quarter, it's hard for them to set goals and know exactly what they're working for. They have very nebulous things like be nice, and they want to get A's and that sort of thing. But after the first quarter we do an evaluation and I give them a paper that says "in math I learned this; in reading I learned this." They really do have to think about what we did concentrate on, what we have learned, and I'd say a majority of the children are able to evaluate themselves pretty honestly and know what I was expecting of them. My goals, I see them reflected in what they say they learn, and that's really good for me. So after the first quarter they are able to evaluate themselves fairly well. Then the next quarter we have a little conference and we're able to set our goals more specifically. Like in writing, "I'm going to make sure I have a beginning, middle, and end to my stories," instead of "I will write good stories." Very specific things. And they're able to do that after the first quarter.

Students in the intermediate teams may have the same goal for a longer period of time. Julianne Holmes said, "They'll look at that and say, 'you know, I wanted to do such and such in reading and I really didn't make it and I'll put this on next time' and continue to work on that goal. Some goals become a year long. Others are short term and some take them a lot longer."

Students maintain a portfolio of their work. In some classes, they determine why a paper is quality and should be included in the portfolio. At the
intermediate levels, the portfolios are kept and given to the child as they leave the building to go onto sixth grade. The first Portfolio Night occurred in the spring of the 1995-96 school year. During this night, parents came to school with their child to look at their portfolios of work. The children explained their progress to their parents in a student led conference which they practiced beforehand.

**Teachers**

Teachers are given the opportunity to set and evaluate goals for themselves, a way of eliminating barriers to workmanship, Deming's twelfth point. The Consulting Teacher program is a two to three year mentoring program for new teachers. At the beginning of his first year, Daniel O'Connor and his consulting teacher set goals which they evaluated at the end of the year. New goals were written for the following school year and Daniel sees that as a form of continuous improvement.

Teachers with continuing contracts have the opportunity for professional growth options instead of clinical supervision. With this option, teachers decide on a goal, project, or action research they would like to do during their evaluation year. Vicki Lane and her team used this option and "put together a presentation to take to ... the Special Education Conference on things that we're trying to do to include special ed. children on our team. We actually got a slide
presentation and visuals and worked on that as a team and did it as a cooperative thing."

**Administrators**

Every principal is a part of a team of three administrators who will begin putting together portfolios of their work and leadership styles. They also participate in goal setting.

The TQES report and Venture Capital Grant have been an impetus for change, enabling staff members to take on new roles and expand the traditional roles that they had.

**Relationships**

Relationships exist among and between central office members, the principal, certified staff, classified staff, parents, and students. These relationships can facilitate or hinder the work done by the school community.

**Central Office**

The change initiative began at the central office level with the writing of the TQES report. Since then, central office has supported the changes occurring at the building level. They have done this by allocating some of Matt Thompson's time to facilitate their meetings and improvement efforts. He has
done staff development in continuous improvement and McBer training, a systems approach to getting people to work together. He has facilitated meetings and worked with the staff to examine their committee structure in an effort to lessen the time devoted to committee work.

Dr. Thompson said:

I think the commitment from central office to say, "we don't know where you're going, we don't know what kind of obstacles you're going to run into, and we don't know how successful you're going to be, but we're willing to support your initiative." To support it not only verbally, but Dr. Green [the assistant superintendent] goes over there and meets with them, Mr. Royalton, the superintendent goes over there, the board's been over there, and then to say to me, Matt, put your time in there, that's a strong commitment to that program over there. The staff has responded very well to it.

Becky Kirkland said the changes are due in part to central office administrators. "I think it's because we have a superintendent who is committed to continuous improvement and a lot of the things we are doing here. And the assistant superintendent also. We have people in the top spots who are behind us, otherwise we couldn't do what we are doing at all."

Gardenview had a difficult time scheduling each year because the schedule for specialists shared between buildings would change. When a proposal was brought to the central office personnel to eliminate this barrier and keep the same specialist schedule year after year, they agreed. Dr. Burke believes "the District has come to honor our needs."
Gabby Darcy says support of central office is an issue of control. "A lot of it comes down to local control or central control. If you really believe in site-based management, then you [have to] go with the process that supports that."

When teachers are given power through the Consultant Teacher program for the dismissal of an unsatisfactory teacher, it is reassuring for them to have the backing of central office. Vicki Lane was in that position and said about her experience: "It's empowering teachers to say 'this person meets our professional standards or not.' I did go through dismissal of a teacher and had the backing of District Review Board. I think it's another way the district is trying to help us all be a part of what's going on."

**Principal**

Dr. Burke's relationship with staff members has allowed them to become empowered to make changes. This is Deming's seventh point -- institute leadership, empowering everyone to be a leader. Risk taking has been encouraged and supported by Linda. Becky Kirkland said, "She's not the kind of person that needs to be in charge, she lets us do what we need to do. And we feel like we have the leeway to try whatever we need to try to help the children."

"She makes you feel like that's Okay if we make that decision and if it bombs it's not your fault. It's not like a major thing. And that's really important to know that if I do something and it's totally terrible, it's not the end of the world..."
and it's Okay and we learn by trying. That's part of the reason why people feel so comfortable trying things." (Marie Newman)

Everyone has been given leadership opportunities, and some people have taken the leadership role to an extreme and have dominated. According to Janelle Wells, when that has happened "People get angry. We pretty much shut down sometimes and then Linda has to help." She has done that by getting teams together. "Sometimes she'll call a meeting, and instead of just the two [people having difficulty], she'll make it so that it's not really like calling people and saying there's a problem. She'll set up a meeting, and I don't know, she does a good job. She doesn't directly say 'you two have a problem,' but she'll bring it to your attention, but in an appropriate way, a nice way."

Two of the Unity parents, Liz Arthur and Betty Goode, had the following to say about Dr. Burke:

Liz: She empowers everybody to such an extent.

Betty: But then she sort of leaves them. She gives them the vision to go forward and lets them take their own steps.

Liz: I really think that's why Total Quality works here because she's really open to that. There has never, ever, been a situation that I've been involved with Dr. Burke and I've been involved since '89, where she's ever treated someone as they're less worthy of respect because they don't have the education, because they don't have the background. A lot of times you talk to educators and there is that, 'I'm the teacher, you're the parent barrier' erects, and that doesn't happen with her.

Betty: No, I haven't come across that either.

Liz: She may disagree with you,
Betty: But you can still approach her, and bring out your thoughts which might be on a lower level. I think of myself, my worth is, I don't think, compared to her intelligence, but she makes you feel like whatever you say is important to her. She takes actions necessary to correct it and make sure you feel comfortable.

These are examples of Dr. Burke putting into action her belief in a Total Quality philosophy; she breaks down barriers, respects people and their opinions, and drives out fear.

"Someone asked me not too long ago why, if I had a chance to go anywhere, did I pick this building? I said, well I thought I would be valued for who I am rather than punished. I have worked with principals who didn't care for my style. And that I saw it [coming to Gardenview] as an opportunity to grow and change." (Gabby Darcy)

The safe environment Dr. Burke has created is also felt by the head custodian, Marcus Willoughby. "I tend to be a shy person, but when I'm around here I think I'm kind of like a complete opposite because I want things run a certain way. I can go to Linda, I feel I can go to Linda anytime. We have a problem with our staff, or to rectify a problem, to at least discuss things that go on in the building."

Along with the positive aspects of empowering the staff to make decisions, there is a potential for people who seek power to intimidate others. One staff member is concerned that a new administrator might "wash his/her
hands" of some of the decisions made by committees, something that the present administrator does not do.

Certified Staff

Below is an example of a team's weekly meeting. Intermediate South demonstrates the decision making power they have in reallocating time to meet their needs.

The team began to gather around a long table in Becky's room. Their weekly schedule to meet was from 10:25 until 11:55. Brook, the special education teacher assigned to the team, brought in cinnamon rolls to eat and Becky, the team leader, passed out their agenda. Daniel, a second year teacher, and Vicki, a veteran teacher, completed the team. There were five items listed on the agenda: Community Meeting -- How is it working at the end of the day? Grade Level Meeting -- A time for Becky to share information from the district meeting, Theme Update -- Do we need class lists? Building Committee, and Curriculum Writing -- Need a date to meet. A sixth item at the bottom was called "Other concerns" and was an opportunity for the team members to add to the agenda.

Vicki shared a letter one of her students received from a child in Kentucky. The child asked how much contact lenses cost where we live and the teachers laughed, wondering why that was an interest.
After the teachers had gotten a cinnamon roll, Becky asked Vicki to discuss the first agenda item because she had originated the concern. Vicki said she did not think the Community Meeting at the end of the day was going smoothly and Daniel and Brook agreed with her. Becky said, "The one advantage, though, is that it's giving us more language arts time in the morning."

Vicki pointed out the disadvantages: "One is that second semester when we start to do our multi-age groups, something's [going to] have to be moved to the morning or to the afternoon and it is then that's [going to] mess up our multi-age groups. The other thing is Candi's [the ASDO tutor] schedule's all set up and that would be difficult to juggle and change around."

The discussion about Candi's schedule continued until Brook whispered "I'm [going to] put my two cents in." Vicki encouraged her to speak up: "Put your two cents in. I know because you have a schedule problem."

Brook began to speak:

That's the biggest problem. If we did reading in the afternoon, I have kids in the morning with specials -- special PE, special art, or special whatever, I have so many kids, just when I think I've got the kids that are reading basically on the same level, then two of them from that group have to go out to speech and then I'm stuck with just one person left in that reading group. It's just not working. Or if I want to read with the whole group in the Matthew Jackson book there are times where Doug and Brad don't hear what I've read that day because they're off at art ... I'm sure Patrick's missing things.
Becky said, "I like having reading in the morning."

And Brook replied, "But you have your whole group with you. I never have the same group of children. I don't have my plan book. I'm very embarrassed. My plan book for the first three weeks has nothing written in it because I don't know who's where. I don't have a set schedule yet."

Brook will be out of the building next week and was concerned about what type of plans to leave for a substitute. The team decided that they needed to throw out some ideas to see if there was a solution to the problem.

The team continued to generate ideas for changes in the schedule. It was suggested a fifteen minute Community Meeting be paired with a forty-five minute theme. Becky said, "Instead of doing our poetry? When am I [going to] do poetry?"

"Well I don't know, Becky, I'm just brainstorming here. And of course chorus on Friday would knock that out," replied Vicki.

Becky said, "Well, I could do poetry during center time. Like on Monday I could read the poem and do the poem with a smaller group."

The discussion continued as the team tried to figure out what part of the day the special ed. children would miss because of the extra services they required.

The team considered moving the math time after lunch, which would work for both Vicki and Daniel. When asked if it would work for her, Becky said, "It's Okay -- I prefer it before lunch, but prefer everything before lunch. My kids
don't pay attention after lunch!" The entire team laughed and teased her, saying, "Now come on, Becky!"

The brainstorming continued and a tentative time slot for Community Meeting was found. The team went through the schedule, checking to make sure it would work both the first semester and second semester when multi-age specials would begin. Brook was confused about how it would work and still give her planning time. The team let out an "Ugh!" and went back to work on the schedule.

Vicki suggested that Brook follow her schedule, but the team discovered that, in order for it to work, all ten of Brook's students would have to go to specials at the same time causing an imbalance in those multi-age groups. Dividing Brook's students between two classes would only give Brook half the planning time that the other teachers had and they did not think that was fair and worked to give her the same amount of time they had. Brook was not as concerned about equal planning time as she was in making sure her students received the reading instruction they needed.

Vicki continued to go through the schedule for both first and second semester, listing the times theme and Community Meeting would occur. Daniel was having difficulty understanding what she was doing and there was a lot of laughter. At one point Daniel raised his hand and was instantly teased: "Daniel, you don't have to raise your hand, you're a teacher now!" He returned the teasing in a good-natured way.
They completed their schedule changes and everything appeared to work out, but Vicki was the one team member who understood the schedule the best. Becky told Vicki, "Think about it and if you come up with some problems, let us know." The team laughed and moved on to their other agenda items.

The above meeting is typical of the relationship team members have with each other. Food was served at other meetings and donuts or baked goods are often found in the lounge. The scheduling problem they worked on required cooperation, flexibility, and input by all team members in order to develop a workable solution. The team was able to do so in a light-hearted manner, completing a difficult task in a reasonable amount of time.

Staff members did not always get along. Bernie remembers they went through the phases of team building. "You look at the way Gardenview was formed and it followed the regular routine of forming, storming, and norming. We went through every single phase. And made more -- made deeper friends."

Not everyone feels the entire staff gets along all the time and that, sometimes, it is like a family with arguments and gossip. Two staff members talked about the need for more professionalism and less backstabbing. Laurell said perhaps the backstabbing occurs because the school is small and everyone knows everyone else so well. "It's a battle of gossip and it's a battle of the way people feel about each other and the way they treat each other."

Daniel O'Connor appreciated his team mates when he first got to Gardenview two years ago. He did not have any prior experience with teaming.
How did they help that? They pretty much held my hand and said "here we go" and "start running." They were very good, that's one of the great things about team teaching. I love the fact that we can sit down once a week and share ideas and say, "Okay Becky, I like your idea, but Vicki we ought to go with yours because of this, this, and this." It feels really nice to do that and they basically walked me through the first [year] -- just keep my head above water -- that's all I was doing last year. Now, this year, I'm starting to do a little bit more things on my own and contribute some ideas. I did some of that last year, but not nearly where I would like to be.

Laurell does not feel that the staff appreciates her special area.

I think that as a physical education teacher I'm constantly up against the battle of teachers saying or believing that they are trying to be supportive of what's going on with physical education, however I get really shoved aside. I'm really a second person, someone who's really not as important ... someone who's a dumping ground sometimes or a person who, oh, they check with to see if they can use the gymnasium. If I have to go somewhere else, oh well, that's just too bad. So I think that just if the general attitude changed in viewing what physical education is all about would be a nice thing.

Another specialist, Cindy Chagall, echoes Laurell's feelings of frustration.

As a special who doesn't really have a team, for me it's very frustrating. Because decisions are made that effect me directly without any input from me. It seems to be a continuous process. Last year I thought maybe it was cause I'm new and I don't know. But I see things on newsletters and things that directly affect me that no one ever said anything to me about it.

My schedule this year -- there was a change in my schedule and no one ever referred to me about it. They just printed it and put it in everyone's box without me even knowing it. And it wasn't that I wasn't in the building that day -- I was here -- but no one chose to ask.

Interviewer: Does that happen often with all the specialists or you in particular?
Cindy: I think it's all of us. We really feel a general lack of communication between the teams. Maybe because the teams support each other so much that sometimes we feel like we're the outsider.

Interviewer: You've got a Central Team.

Cindy: We just started it this year. We were called the specials before, but I felt uncomfortable with it because it just didn't seem to fit in with the north, south, east, west [teams]. So we're trying to promote ourselves more as a team and we're trying to open communication more this year. We have forms that go back and forth to the teachers asking them what they're doing. It's a biweekly update. We also have one central team member assigned to the team leader of each team which is helping, too. Now I don't have to go to four team meetings, I just have to go to one and then I relay the information to the other specialists.

Interviewer: Do you think they're going to be asking you about decisions that affect you?

Cindy: I think I'm going to be starting to be more aggressive, so hopefully, if I stick my face in enough places. ...

We had an art show the night of portfolio night. Their work was displayed somewhere in the building, every student. I didn't know about Portfolio Night until the middle of the year. That was something that was thrust upon me. Someone decided to have a Portfolio Night and have an art show and I found out about it. It wasn't something that I did not want to do, but it was a lot of pressure thrown on me and not a lot of time to prep for it.

While other people in the school community have felt that barriers between departments have been eliminated, the above two teachers still feel as though communication between regular teachers and specialists is an issue.
**Classified Staff**

Classified staff members, educational assistants, custodians, and the secretary, are looked on as part of the Gardenview team. They get along with each other and with the other members of the school. They are members of committees and work with students in groups such as Courtyard Beautification, Animal Care, Student Council, Safety Patrol and Post Office. Barbara, one of the assistants, said: "I feel that we're treated just as equally as the teachers are."

Rene Bacall, an educational assistant, feels like she is a member of the team she works with. "I pretty much take care of the centers, so when we decide what we're gonna do for the centers, I always do those."

Both custodians like to have contact with the students. Marcus, the head custodian, commented, "I like to go into the classroom and read to them. I've done that with the pre-school and the kindergarten. ... I was involved in Field Day last year. I spent the whole day with them doing activities. I try to be friendly with the kids, just to say we're normal people, too."

The night custodian, Andy, is a certified teacher and volunteers time tutoring students. He and Marcus work together to improve the school. Marcus has learned the following: "It might be something little, and I see it as little, but little to me might be a major stumbling block to someone else."

Andy volunteered to paint the office to brighten it up. Marissa and Barbara, the secretary and assistant secretary, picked the colors. In addition to
Andy's regular nightly duties, he painted whenever he could fit it into the schedule.

Marissa felt she was able to make friends with another classified staff member. She often refers to Barbara as "my best friend, Barbara."

Social activities are planned for the staff throughout the year. Marcus said, "I think that when you're close to the people you work with and know them a little better, you can understand them a little more."

Gabby feels teachers sometimes do things that damage the relationship between classified and certified staff. "We do dumb things that reinforce that. We call it the teachers' lounge instead of the staff lounge, the teachers' directory instead of the staff directory, and those are terms that fit when I started in education. They don't fit anymore. But we still use them."

**Parents**

In addition to being active participants on Unity, the site-based management committee, parents are members of other committees within the building. The staff actively seeks input from the parents in determining and evaluating activities. Surveys are often sent to gain their input on how the school is meeting their expectations and the needs of their children.

Teachers apprise parents of their child's progress often. If a primary team teacher thinks a child might benefit from three years on the team instead of the typical two, she lets the parent know the first year at the November
conference. Bernie said, "We find that by letting the parents know, they have
time to live with it and time to adjust and time to grow into it and it's very easy."

Parent Liz Arthur says:

Parents are expected to take more responsibility. And very much
more of an active role in their child's learning. If nothing else, the
weekly reports that go home every week. All of the teams send
home a weekly report and you're supposed to review your child's
work and initial it and send it back. That's a weekly basis. You're
getting an idea of your child's progress in academic areas. And by
seeing the work that's sent home, it's authentic assessment as far
as I'm concerned. The school is offering the parent the
responsibility to become involved at any point along the line. If
you have a problem with a weekly report, then you have a space
at the bottom of each weekly report to make comments and send
them back. I think to some extent, what Total Quality enables the
school to do is to address problems along the line and not just
every nine weeks when the report card's sent and you have a
parent teacher conference. It also forces the parent to be aware of
the fact that this child is not getting straight As in spelling. Don't
wait for the report card to come out and then come fussing to the
teacher because the child got a C in spelling.

Mary feels parents "all seem to have a positive attitude and really try their
best to help with their children." She has parents come into her classroom to
help as volunteer aides.

Mary was instrumental in getting a parent new to Gardenview involved.

Betty recalls:

When I came my daughter was in kindergarten and Mrs. Pilliod
grabbed me and said there's a PTA meeting. I'd like you to be
there, why don't you come? I forgot about it and the night of the
PTA meeting, she grabbed me and said "there's a PTA meeting, I
would like you to come with me." I felt like I was on the spot, so I
told her I'd be here. I was here and I've shown up every night after

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that. So to me, it feels like I've had a lot of involvement with the teachers and felt like I was accepted right away rather than, sometimes you go someplace and you feel there's a wall in place, and I didn't feel that from the beginning.

Parent Ellen Murphy thinks that the parents are looked at as equal partners; there is not an "us versus them" mentality. She has never felt that her opinions are not valued because she is "just" a parent.

In addition to the school committees, there is a Parent Teacher Association (PTA) at Gardenview. Alex has been the staff liaison so the PTA members have a teacher's perspective when it is needed. In return, the PTA has financially supported school projects, especially the music program. Liz Arthur, PTA president, says only about eight people are very active as PTA officers, but whenever they need volunteers, they never seem to have a shortage.

In order to improve home-school relationships, two teachers visited each of their student's homes the week before school started. Julianne had done home visits for several years and convinced Becky to try it this year. Both teachers were pleased with the results and their insights into the lives of their students.

Becky stated: "This is the best start I've ever had in the school year. And it's all because I know where the kids are coming from, and I know the parents, and they know me."
Julianne talked about how excited their students are to have them come to their home. "Oh, they're so excited, they usually wait by the door or come out right to the car. They're really excited. I mean really it says a lot about how much you care about your students. You care enough to come to their home. The kids for the most part feel this is their home, they're proud of it. And you coming to visit them they think is wonderful."

Knowing what a student's home life is like helps the teachers understand why a student might not have his or her homework the next day. Becky said:

I think what convinced me was Julianne was talking ... last year about how if she was having trouble with a child she knew the problems they were having because she had been in their home and she knew the child didn't have a place to study, didn't have supplies and if you know that from the start then you're not on their case and you're not so down on them. You kind of give them the extra boost that they need. So I think that's what convinced me the most and I can see already that it's helped.

Julianne said "without knowing that you'd be right away on that child or calling and making a negative phone call which means your first contact with that parent is negative."

Next year, more teachers will be encouraged to participate in home visitations.

Bernie summed up participation in the Gardenview community as follows: "The great thing about our school is that when you have a committee,
usually the parents are represented, and the teachers are represented, the administration is represented, and it's all with the child's welfare in mind."

**Students**

Students are the reason for all the work at Gardenview, and the staff remembers that constantly. "Kids first!" is how people think when making decisions. Teachers offer clubs for students after school which have included Math club, Dance Club, Sewing Club, and Rec Club. Students who are at risk for failure are invited to participate in CAVS (Children Are Very Special) which teaches children how to make good decisions.

Staff members are helping students solve their own problems through conflict mediation. Adele, the guidance counselor, has taught students lessons on different perspectives and points of view to help students in the mediation process.

Estelle, an educational assistant, likes to give students extra attention and encourage them, especially those who might not be getting enough at home.

As a result of staff efforts, Becky said, "The students are very appreciative of the school. Most of them, anything you do for any of them is appreciated."
Summary

Administration, staff, and parents work together for the benefit of students. Rules, roles and relationships have been redefined and are dynamic in nature. The tenets of Deming's Total Quality philosophy are evident throughout the school. Chapter 5 will consist of conclusions based on this descriptive study.
CHAPTER 5

CONCLUSIONS

Gardenview Elementary School is implementing systemic change. Staff and community members have the authority for determining how time, funds, and space are allocated, how students are assigned to multi-age classes with a curriculum designed to meet student needs, and how replacements are hired. The roles and relationships of those involved in the school community have evolved as people are given more authority and responsibility in the educational setting for the changes which continue to occur.

While the basis of these changes is said to be a belief in the Total Quality philosophy, staff members are confused as to what that philosophy might be. Lila Singer has been at Gardenview for four years. She was a veteran teacher who came back fulltime to the classroom seven years ago after an extended leave of absence. When she returned, she asked several people their definition of Total Quality. "Everybody I asked has a different idea of what it is. So I would sit in and everywhere I'd go I'd find out what does it mean in this building, and
what does it mean here? ... I told Bernie [one of her team members] I really don't know what Total Quality is. She said, 'Well, it's working in the school;' I said that's what I've gotten."

This is Cindy Chagall's second year in the Sheldon City School District. During our interview, she asked about the Total Quality philosophy, "Because I don't remember anyone talking about Total Quality last year, but the system where I taught before it was just being introduced and it was something they were really pushing for and when you came and mentioned it I thought did I miss something here? Because I'm only here 3 days a week."

When most teachers were asked about Total Quality, they talked about Continuous Improvement. Although brainstorming was used in problem-solving sessions and flowcharts were evident, other common tools associated with Total Quality -- Ishikawa or fishbone diagram, Pareto chart, scatter diagram, PDSA cycle, histogram, and control chart -- were not evident.

Matt Thompson has done much staff development in the district, including Total Quality sessions. When asked why teachers did not have a common understanding of Total Quality or the use of Total Quality tools, he said:

That was a conscious effort on our part about 4 or 5 years ago because TQM, Total Quality, TQE, whatever was getting some bad press and it was a feeling of myself, our superintendent, and several people on our Operations Team that we just didn't want to be associated with that, but it was hard for anyone to argue with Continuous Improvement. That's what schools are all about, so we quickly made that transition.
Interviewer: When I've asked them if they use tools, the teachers don't know exactly how to respond.

Matt: Again, that was a conscious effort not to label those things -- to teach them the process. Ask them how they resolve their problem -- we call them problem solving -- the fact that they would have to go through these steps, there were a lot of steps. I've put out the Q & A [Question and Answer] piece on Total Quality that explains that stuff, but it began to sound too industrialized and the teachers didn't like it.

Interviewer: They seem to solve the problems, but they don't use the tools.

Matt: Right, not formally, but they do those steps. Again, that was a conscious effort on our part to separate from that, but quality is the name of the game and they know that. We just weren't interested in doing anything that was offensive to people, but we weren't willing to trade the concept away. We were willing to trade the label away, we were willing to trade the offensiveness of it, but the guiding principles are all quality, the continuous improvement process comes right from the quality literature. I never had been so locked into it that it had to be this way. What I was locked into is trying to get people to understand the importance of doing surveys, being customer driven, who are your customers. They didn't even like the Plan, Do, Study, Act, so we do the Assessment, Plan, Implement, and Evaluate. Same circle, we just changed the names on it.

Interviewer: When Deming did the PDSA, he was talking about doing the study on a small group of people. I noticed at Gardenview, sometimes one team will try something before it becomes school-wide and other times, they just dive in and they all do it, like portfolios.

Matt: Part of that is because intuitively they know this is good, part of it is because the district might suggest that is the direction and people just see it as inevitable -- we might as well from the ground level, all get involved with it, and some things don't seem to be as risky as others, so they're more apt to take some chances. You've got shakers and movers and you've got squatters and settlers, and they don't want to venture out, they want to stay in the village and improve the village.
Cuban (1988) says some reforms are "adapted into pale shadows of their original selves" (p. 344). This seems to be partly true of the implementation of Total Quality at Gardenview. While most staff members and parents are not familiar with Deming's fourteen points, nor do they use the traditional tools and techniques of Total Quality, many of their actions reflect an implementation of the philosophy and can be observed in the rules, roles, and relationships at Gardenview Elementary.

Rules, Roles, and Relationships

Rules

The Total Quality Elementary School (TQES) report and Venture Capital grant application are guiding documents influencing the rules and expectations governing the building. They have provided the school community with a constancy of purpose and shared vision. Each staff member knows the direction the school will take and works towards the realization of those two documents.

Staff Development to Support Continuous Improvement

Staff development has been provided through the Venture Capital grant. This inservice has had benefits reflective of two of Deming's points: basic knowledge and a program of education for future changes. Workshops
provided research and the common understanding necessary to make changes in the rules and expectations governing the school. For example, a study on performance and alternative assessments began during the 1993-94 school year and continues. As a result of this study, students in grades one through five have a portfolio containing work samples from several content areas. A Portfolio Night for students and their families was first held in the spring of 1996. This direction of study can be found in the TQES report.

When existing structures inhibit the implementation of the TQES report or Venture Capital grant, rules or expectations are changed. For example, the school calendar was changed so all staff could attend a workshop.

**Roles and Relationships**

**Role of Leaders in the School**

Dr. Linda Burke, principal of Gardenview, has had an important role in the success of the reform efforts, which reflects a Total Quality philosophy. She has a clear vision for the school and communicates it with the staff and community. Parent Betty Goode says "She gives them the vision to go forward and lets them take their own steps." Alex thinks Linda's role is "the leader of the team; [she] has a vision and [it] was bought into ... by the staff."

Staff members are empowered to make decisions and leadership is shared among staff and parents. Dr. Burke is a member of many of the teams in
the building, but teachers or parents are the chairs, including the two major site-based committees -- Building Committee and Unity.

Dr. Burke has found funding sources for the reform initiatives through Classroom of the Future and Venture Capital Grants, and other local and state grant opportunities such as the Pacesetter Grant and Owen-Hug Grant. She has used building funds creatively in order to make them go further. When the amount of funds is limited, such as district money available to support co-curricular activities and clubs, Linda attempts to distribute it fairly, getting input from those directly affected by her decision.

Staff members and committees are encouraged by Linda to evaluate what they have done and the direction they would like to go. This is evident in site-based meetings when members are asked to give their input as to the progress made towards the Indicators of Success or district Strategic Plan.

Fear of failure is not evident at Gardenview. Because of this, Toni Andrews says there is a willingness of the staff to try new things and evaluate them. Laurell thinks this risk-taking is encouraged. "Linda is very willing to help out when she can, and go with the ideas we have; she's very supportive."

Continuous training for staff and parents is an important aspect at Gardenview, and Linda works with committees to plan and implement these events. Training, meetings where experts are brought to the school for all staff members and parents, opportunities for staff to share their expertise in a
particular topic, and events such as Technology Night for parents to gain
knowledge are some of the activities available.

Staff members and parents are anxious about the person who will be
hired to take Dr. Burke's place when she retires at the end of next year. Unity
has spent several meetings developing lists of characteristics for her
replacement, mirroring the qualities she possesses. They will actively
participate in the entire hiring process, from the initial screening to the final
recommendation.

While concerned about the leadership style of the next principal, the staff
believes they have been empowered enough to continue progress towards
meeting their vision. Gabby says Linda's leaving was discussed in a Building
Committee meeting. "Linda repeated that Gardenview is what it is because of
all of us. And yes, she's had a role in allowing that to become, but that she has
all the confidence in the world that this staff would not tolerate someone [who is]
not promoting [of the vision]."

Process for Continuous Improvement - Evaluation of Decisions

Evaluation of decisions is done both informally, based on hunches and
opinions, and formally, based on surveys and data.

The Total Quality philosophy says that decisions should be data driven.
"Data determines how one can work towards continuous improvement. TQM is
based upon the use of statistical data properly analyzed to show the level of one's achievements" (Byrnes, M., Comesky, & Byrnes, L., 1992, p. 165).

With TQM, decisions should not be made based upon intuition or hunches.

When data is not the basis for making a decision, changes are often made on intuition. If we do not verify if a specific change is an improvement, we end up tampering with our process. Tampering with any process always makes the results of that process worse. (Law, 1993b, p. 26)

More formal data collection and evaluations are done for certain committees and activities in the school, most of which relate to the Venture Capital Grant, the district Strategic Plan, or major curricular changes which are being proposed by Unity.

Gardenview collects data each year on their progress towards meeting the Indicators of Success, a required part of the Venture Capital Grant. Data collected through the use of surveys from staff and parents have been used as a basis for improvements in the school. These changes are evaluated on a regular basis to determine if they have become part of the culture at Gardenview or if they still need to be worked on.

Annually, each school in the district is asked to report progress towards the implementation of the district Strategic Plan. A committee is formed which documents the activities and work throughout the previous year.
When Unity is proposing a major change, such as the addition of an all-day kindergarten program, data are collected through surveys of the school community and the topic is researched. Unity has been studying this topic since February 1995, and, during the 1996-97 school year, has proposed the change to central office administration.

An example of an informal evaluation is Unity's assessment of the poor attendance at Meet the Teacher Night in the fall. The format of the evening was based upon a decision made the previous year by Unity. People offered many good points about the evening as well as things that should be changed. The specialists wanted time to interact with the parents; nothing was in the structure of the evening and consequently no parents visited them. There were some data as to the number of parents who attended the activity, but not all teams provided that input. Several possible causes for poor attendance -- not allowing students to attend with their parents, not having the time to interact with the teacher, sending home in advance the material that was covered that night, meeting with some of the parents and students during home visits prior to the opening of school, and having the same students/parents on a team for more than one year -- were generated. The purpose of the evening was unclear -- was it to be an Open House where parents could see where their child will be, meet his/her teachers, and so forth, or a Curriculum Night which discusses the content and structure of the year.
At the end of the meeting, it was decided that a subcommittee should be formed to survey parents and staff and come up with a solution to the problem. Other than what was captured in the minutes of the meeting, none of the ideas or concerns were recorded; the parent who eventually chaired the subcommittee had not been present at that Unity meeting to hear the discussion. The subcommittee informally asked some parents and teachers before deciding on a format for the following year's meeting. The data collected upon which the decision was based was limited and may have erroneously reflected the reasons for poor attendance. Had a formal survey instrument been developed and administered, the information may have been different from that collected, and a different solution may have been developed.

Other decisions and activities in the school are evaluated informally, too. Many teachers evaluate activities or changes based upon casual feedback or observations of the activity. Oftentimes, these evaluations are not recorded.

I think that a lot of it's just feedback, a lot of it is asking kids what they liked, what they didn't like, asking the teachers what they liked, what they didn't like. For those kinds of things, it was the end of the year last year, and that's basically the only way I had an evaluation of how successful it was or wasn't. (Laurell Johnson)

When all of the stakeholders do not have the opportunity to offer input, relationships can be damaged. Cindy was frustrated in the beginning of the year because she was not asked about a decision directly affecting her
schedule. Laurell experiences similar frustrations when her classroom, the gymnasium, is used for other activities without her first being consulted.

The lack of opportunity for input into all decisions by everyone involved may be due to the large number of committees and teams (over thirty) in operation at Gardenview.

I think for one thing you can look at how many responsibilities each teacher has. I think in this building everybody has more proportionately than others. Some of it's because we're small and some of it's because we're site-based. People are on the Unity Committee to make decisions that was not there before we had site-based management. So you might look at what are the different areas everybody's involved in specifically, although we're all involved in everything. (Vicki Lane)

The informal collection of data may be a shortcut used by staff so that time can be spent on the implementation of decisions instead of their evaluation. This shortcut, however, may be damaging the relationships among the staff as some people directly affected by the decision are not consulted. The lack of a written record of feedback forces people to rely on their memory rather than the information they received.

**Staff and Parents as Learners -- Staff Development for Change**

Formal staff development opportunities exist both during and beyond the school year and contractual day. Classified staff, certified staff, and parents all take part in these opportunities to increase their basic knowledge and acquire
new information and skills. Many of the opportunities, as well as stipends for staff participation extending beyond the contract, are a direct result of money received through the Venture Capital grant which will run out at the end of the next school year.

At the present time, there is no formal program for training new staff and parents in the culture of the school. Teachers who are new to the system have a mentor for at least two years, but the mentor may be from another building and not be familiar with the organizational structure of Gardenview -- multi-age teaming. Staff members rely on their team mates to help them adjust to the structure of the school and learn the skills needed to be successful.

The lack of a formal program for acclimating new staff into the school culture may be because change is still occurring in many areas. Brook Robertson says the staff is always trying different things. "We're not really focused on trying a few things well. We're spread too thin; we need to simplify and focus, not think the more the better." While some changes may have been institutionalized, there does not seem to be time to formalize it in a way that can be learned by others.

Parents have an opportunity to become involved in the school and learn about it, either by joining the PTA or volunteering to be on the building committees. Teachers talk about multi-age teams in the beginning of the year, and there is a building level brochure which discusses the structure of the school, goals, and how parents can become involved. Unity has published a
pamphlet for parents who would like more information and may be interested in becoming a member of the committee.

In spite of all the communication, there is only a small core of parents involved in the governance of Gardenview. Unity has included two new parents to its team who will have children at Gardenview for several more years. This continual replacement of parents on Unity will help insure the involvement of parents in the decision making process of the school.

Gardenview's Implementation of Deming's 14 Points

A clearer picture of the Implementation of the Total Quality philosophy can be seen when Deming's 14 points are compared to the data collected at Gardenview. Deming's points are listed in bold (Deming, 1982, pp. 23-24).

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.

Gardenview has attempted to meet the needs of today's students while preparing them for tomorrow. The structured multi-age teams encourage students from a variety of levels and backgrounds to work together as they learn. Technology and software are available for students to produce quality work in addition to practicing skills. Staff members attend workshops, keeping current on educational trends which may benefit their primary customer, the students.
2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.

Dr. Burke and Gardenview’s staff seek a variety of resources to help in their transformation process. They have actively sought and received grants which have given them the funds to initiate change.

Crawford, Bodine, & Hogland (1993) state "The educational system cannot continue to tolerate student dropouts, failure, and underachievement, nor can it tolerate inappropriate curriculum and ineffective teaching methods" (pp. 20-21). Unity has studied Gardenview’s at risk student population in order to improve learning.

3. Cease dependence on inspection to achieve quality. Eliminate the need of inspection of a mass basis by building quality into the product in the first place.

Bonstingl (1992) says "Students must be taught how to assess their own work and progress if they are to take ownership of their own educational process" (p. 78). Gardenview students have begun this process by setting their own goals each quarter and evaluating their work through the use of portfolios. However, the state still mandates a variety of standardized tests each year. While these test scores are reported to the school and parents, staff members have not examined this test data to determine if there have been positive changes in student learning as a result of their reform efforts and implementation of the TQES report.
4. **End the practice of awarding business on the basis of a price tag. Instead, minimize total cost.**

The researcher observed no evidence that Gardenview awarded business on the basis of quality instead of price, or that class sizes were kept lower than other district elementary schools, both of which can minimize total cost. Because of the multi-age teaming philosophy, special education teachers were included on each team which effectively lowered the student-teacher ratio.

5. **Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.**

The PDSA cycle can be used to improve the quality of education. At Gardenview, this cycle was not used consistently for changes in the system. Major decisions included research about the topic from others considered experts in the field. However, if the area was included as a direction of change in the TQES report, such as alternative assessment and the use of portfolios, the change was not first tried on a small population, but instituted throughout the school. Evaluation data was not always gathered from all the stakeholders in the system which gave an incomplete picture upon which future changes were made. When some of the stakeholders within the school were not asked their opinion, relationships were damaged.

6. **Institute training on the job.**

The district has provided classified and certified staff members and parents with the same basic training. However, there is no program for giving
new staff members this same information, forcing them to rely on their colleagues to pass on their knowledge. This process can lead to inconsistencies as present staff interpret these changes from their perspective. As the district experiences a large number of staff changes during the next two years due to retirements, a structured program of imparting basic knowledge to new staff will be important. This knowledge not only includes an understanding of the continuous improvement process, but of multi-age teaching and the use of technology.

7. Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job.

Dr. Burke's relationship with staff members has allowed them to become empowered to make changes. Some of them have stepped forward and taken on leadership roles within the school, particularly through committees. There is a danger that these leaders become autocratic and stifle the decision-making process. If this happens, relationships can be damaged as people feel their ability to effect change has been hampered.

8. Drive out fear, so that everyone may work effectively for the company.

Generally, Gardenview staff members and parents trust and respect each other. Everyone is able to point out areas of improvement and work improving the system, but not all have done that. Newer staff members are reluctant to
share their opinions with veteran staff and, unless their opinions are actively sought, their viewpoints may not be considered.

When staff members are afraid to take risks, growth can be stifled or changes are attempted behind the safety of one's closed classroom door, without others' awareness of them.


At Gardenview, decisions are made changing the structure and organization of the school by those most affected by the proposed innovation -- staff and parents. Cross functional teams have broken down barriers between departments and the community. However, the opinions of some stakeholders are not sought; these include the cafeteria staff and students.

10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity which belong to the system and thus lie beyond the power of the work force.

While some schools have slogans on posters or signs throughout their buildings, they were not observed at Gardenview. When slogans are developed by management, they are often ignored by others in the building. When teams of workers develop them, they can be reminders of the purpose or goals of the building.

11a. Eliminate work standard (quotas) on the factory floor. Substitute leadership.
b. Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.

Many schools compare their test data to other schools within their district or those which surround it. These scores can increase or decrease annually, without being statistically significant. In order to examine if a system is stable, control charts can be used. The results from these charts can help determine if changes in teaching have effected changes in the system and the learning of students. It was not evident that Gardenview has used test data in this manner.

12a. Remove barriers that rob the hourly worker of his right to pride of workmanship.

b. Remove barriers that rob people in management and in engineering of their right to pride of workmanship.

Through the Consulting Teacher program and evaluation of staff members on a continuing contract, teachers in the Sheldon City Schools are given the opportunity to set and evaluate goals for themselves, a way of eliminating barriers to workmanship.

Communication and trust are important factors in allowing staff members to improve. If staff members do not trust that the leader listens to them with an open mind and trusts they can be involved in decisions that will improve the system, change can be inhibited.

13. Institute a vigorous program of education and self-improvement.
This point differs from number six in that it strives to prepare for the future needs of the system. At Gardenview, staff development has been provided through the Venture Capital grant where workshops have furnished research and the common understanding necessary to make changes in the system including alternative assessments and the benefits of an all day kindergarten program.

When all people are not included in these staff development opportunities, change throughout the system can be hampered since there is no common understanding of the rationale behind or implementation of the reform initiative.

14. **Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.**

Transformation will not occur without a thorough understanding of the Total Quality philosophy and tools and techniques used to reach decisions. These tools and techniques help insure that all aspects of a problem are examined, that data is gathered upon which to base decisions, and that customer satisfaction is considered. Involving stakeholders who will be affected by the change gives those involved in the decision-making process different perspectives to the problem. When this has not been done, relationships and trust between staff members has been damaged.
Summary

Many of the tenets of the Total Quality philosophy can be viewed at Gardenview Elementary. While there is some confusion as to what constitutes Total Quality and the tools and techniques are not labeled or used, the essence of continuous improvement is evident. There is a commitment to improving the system based upon research done both by experts in the field and the staff. Change is systemic in nature and staff members are able to articulate the reasons for the transformation. However, there is no formal program for sharing structures and transformations with new staff members.

Although the school community will be involved in hiring a new principal and the district has staff development funds available to every building, there are concerns with the upcoming change in principal and completion of the Venture Capital Grant and funds which it brings.

According to Larry Cuban (1988), there are two types of change: first-order change which keeps a present structure and tries to make it more efficient and effective, and second-order change which alters the fundamental ways systems are organized. "Second-order changes introduce new goals, structures, and roles that transform familiar ways of doing things into new ways of solving persistent problems" (p. 342).

Cuban (1988) further explains what he means:

The structure of schools includes the formal and informal goals used to guide funding and organizing activities, including such things as who has authority and responsibility for governing
schools and classrooms; how time and space are allotted; how subject matter in the curriculum is determined; how students are assigned to classes; how those classes are organized; how the different roles of teachers, principals, and superintendents are defined; and how such formal processes as budgeting, hiring, and evaluating are determined and organized. To a large extent, these structures shape the roles, responsibilities, and relationships within schools. (p. 344)

The use of the Total Quality philosophy at Gardenview has allowed staff members to make changes in their school. They:

- share the vision of the school,
- have sought the training they need to make educationally sound decisions based on current research and trends,
- have included parents in staff development activities,
- are not afraid to make mistakes,
- share equally in the decision making process which gives them ownership of decisions made and their implementation, and
- share in the leadership of the building.

Even though aspects of Total Quality are evidenced at Gardenview, improvements would strengthen its use. These would include:

- a thorough knowledge of the philosophy itself so it could be implemented in all aspects of the school,
- decisions based on data collected rather than hunches and informal surveys which do not include all the stakeholders in the process,
• a reduction in the number of committees so shortcuts in the decision-making process, such as gathering data from only some of the stakeholders, are not made, and

• training of new staff members in the TQ philosophy as well as curricular innovations.

Because of empowered staff and parents, their involvement in the decisions governing the school, and the support and guidance from central office, improvements will most likely continue at Gardenview Elementary as they work towards a second-order change which will transform education for their students.

**Conclusion**

Schools are often testing grounds for reform and restructuring movements. Mastery learning, outcome based education, critical thinking skills, cooperative learning, and site-based management are just a few of the many programs that have been tried as a means of improving schools. How does Total Quality differ from these? Total Quality is not a program; it is a philosophy which guides the ways organizations change the system to make improvements. According to Deming, people are only ten percent of the problem; the system itself is responsible for the other ninety percent. Total Quality is adaptable and can include programs or other strategies for change.
The school community used the Total Quality philosophy as a means of determining strategies to improve teaching and learning for students. For instance, Gardenview has multi-age classrooms with teams of teachers. Assessment is done in a variety of ways, including the use of portfolios. Fine arts are incorporated throughout the school day in an effort to respond to the multiple talents of students. None of these concepts is part of the Total Quality philosophy.

Some reform movements are targeted specifically towards elementary students; one of these is Success for All. This nationally accepted program has seen significant gains in the area of reading. Based upon the theory that children who are struggling in reading would benefit from additional individual help, data have shown that the implementation of Success for All has made a significant positive effect on reading scores for participants (Slavin et al., 1994).

In contrast, Total Quality can be used by any educational structure, from the elementary level through post-secondary institutions. No one area is targeted for improvement; the stakeholders of the school community determine areas needing improvement -- academic or nonacademic. Once those areas are identified based on data collected, the stakeholders research the topic, and a possible solution to the problem is determined. This solution is tested in a small setting, data are collected, and, if successful, the solution is implemented in the rest of the school. Evaluations, again, based on data, are done to determine the success of the change. This process allows those most effected
by the change to tailor solutions to their unique settings, taking into
consideration their customers and needs.

In the Sheldon City School District, two other elementary schools are
implementing the TQES report and a Venture Capital grant based upon the
Total Quality philosophy. The schools are not identical to either Gardenview or
to each other. Their translation of those two documents as well as their
interpretation of their customer needs have caused them to develop solutions
that are slightly different, but no less effective than those seen at Gardenview.

At a time when the percentage of people without school-age children is
increasing, it is important for schools to make sure their product -- students --
meet the needs of their customers -- students, parents, higher education
institutions, business and industry, and society -- in order to continue the
financial support necessary to operate. The Total Quality philosophy demands
that customer needs are considered in decisions made.

Even though this solution came out of the business sector, Total Quality
can be used in educational organizations including the classroom. An
understanding of the tenets of Total Quality and the ability to use TQ tools and
techniques have the following advantages:

• There is a constancy of purpose everyone strives to attain.

• It is a philosophy, not a program, which influences the way people
  approach the system.

• It focuses on improving the system, not blaming individuals.
• Trust among stakeholders occurs along with a fearless attitude for trying new ideas.

• All stakeholders in the system are involved in the decision making process.

• Decisions are based on data and not hunches.

• Decision makers have ownership of the solutions and their implementation.

• Many people have the opportunity for leadership roles.

• Curricular innovations can be a part of the solution to educational problems and improvements.

• Continuous education through staff development occurs.

• Continuous improvement is promoted throughout the system.

Children can learn to use Total Quality tools and techniques and, as developmentally appropriate, the philosophy behind them. This gives them the power and ability to make and implement decisions affecting them and their school environment. These tools and techniques can be used to solve classroom problems or as a visual way of organizing content area information.

Disadvantages to the Total Quality philosophy include the following:

• A partial comprehension of the philosophy reduces the effectiveness of its implementation and may damage relationships if people do not understand their role in the decision-making process. The entire learning community,
including parents, should have the opportunity to learn about Total Quality whenever they become part of the school setting.

• The PDSA cycle may seem too long a process to implement in its entirety, and shortcuts may be taken. When incomplete data is gathered from only part of the sources, it can lead to erroneous decisions or changes which may fail because all perspectives were not examined.

• Team decisions not accepted by administration can lead to a perceived lack of administrative support. When the task of solving a problem is given to a committee, any parameters to the solution should be given and pertinent information shared at that time. If the stakeholders involved have done a thorough job of investigating the problem and possible solutions before making their final recommendation, that recommendation should be accepted. If it is not, those involved in the process question the leader's commitment to the Total Quality philosophy. The espoused theory does not then match the theory in action and can lead to a lack of implementation of the philosophy.

• Administrators who do not support this philosophy because they perceive it as a threat to their authority. Also, people who take leadership roles on teams and committees and become very controlling, stifling the decision-making process.

• A hesitancy of using a business initiative in an educational setting or seeing its relevance. There is not a one to one correspondence between
business and education, and terminology, such as raw materials, products, and customers, are oftentimes not seen as appropriate for schools.

- A lack of proof that changes in learning have occurred as a result of the implementation of the Total Quality philosophy. It is sometimes difficult for educators to develop goals that can be measured through data collection or isolate variables to determine causes of success or failure.

The future of the Total Quality philosophy in an educational setting remains to be seen. Other schools such as Canandaigua City Schools, Johnson City Schools, Central Park East, Mt. Edgecumbe High School, and Northview Elementary School have shown that its implementation has been successful and adaptable to an educational setting (Mastro & Kerwin, 1993; Schmoker & Wilson, 1993b, 1993c). While schools, including Gardenview, have incorporated the philosophy into their present structure, they have not necessarily institutionalized the philosophy into their system. This will occur when a complete understanding and use of the tools, techniques, and philosophy are a normal part of the way the school does business, even when the leadership in the building has changed. As Gardenview’s key leader, Dr. Burke, retires, the future of Total Quality rests with those who will stay and succeed her.

In spite of the disadvantages of the Total Quality philosophy and shortage of data demonstrating an improvement in student learning as a result of its implementation, Total Quality can give school districts several advantages:
• The school community shares in the vision.

• Customer opinions are sought and used as a basis for improvements in the school setting.

• The stakeholders of the school are empowered with leadership positions and have the responsibility for making and implementing decisions which are data driven.

• Fear of making mistakes is eliminated as staff members become researchers in their own setting.

• There is a spirit of continuous improvement throughout the system.

Total Quality tools and techniques offer those involved in the school setting a means of accomplishing their innovations in a systematic way. While changes can be made without their use, they simplify the process.

Any school setting which looks at reform would benefit from the philosophy of Total Quality. With this philosophy, existing rules, roles, and relationships can be transformed, improving the school community and, ultimately, learning for students.
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