THE IMPLEMENTATION IMPACT OF CONTINUOUS QUALITY IMPROVEMENT (CQI) ON TEACHER PERCEPTIONS OF CQI CATEGORIES

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by

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The undersigned, appointed by the Dean of Graduate School, have examined a dissertation entitled:

THE IMPLEMENTATION IMPACT OF CONTINUOUS QUALITY IMPROVEMENT (CQI) ON TEACHER PERCEPTIONS OF CQI CATEGORIES

Presented by Justin L. Herrell

A candidate for the degree of Doctorate of education

And hereby certify in their opinion it is worth of acceptance.

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Wow! What a ride. Accomplishing this life goal has been one of the toughest, completely frustrating, and most meaningful things I have ever done; I am very proud to have completed this journey.

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ABSTRACT

School districts and administrators across the country are struggling to meet the mandates of the No Child Left Behind (NCLB) Education Act. In the Executive Summary of NCLB the design of this educational act is clearly spelled out, "The priorities that follow are based on the fundamental notion that an enterprise works best when responsibility is placed closest to the most important activity of the enterprise, when those responsible are given greatest latitude and support, and when those responsible are held accountable for producing results." The mandates and expectations of meeting adequate yearly progress as spelled out by NCLB were clear and the pressure was placed squarely on the shoulders of administrators and educators across the nation. The problem addressed by this study originated from the pressures applied by these federal mandates and the often hasty reactions by districts throughout the nation.

This study was an implementation evaluation of the Continuous Quality Improvement (CQI) process, within three schools within a large urban school district, in southern Missouri. The goal of the study was to measure what, if any, change occurred in the perceptions of teachers within the buildings that had implemented CQI as compared to the year prior to CQI implementation and as compared to similar buildings that had not implemented CQI. The study concentrated on teachers' perceptions of the seven characteristics of CQI: Leadership, Strategic Planning, Student/Stakeholder Focus, Information and Analysis, Faculty/Staff Focus, Process Management, and Results; while utilizing data from the Missouri School Improvement Staff Survey. An implementation evaluation was chosen due to the school district being very early in

its stages of CQI deployment and to ascertain the extent which implementation has changed teacher perceptions.

The purpose of this study was to determine the effect implementation of CQI had on the perceptions held by teachers within this school district concerning each of the seven categories of CQI. The school superintendent began the implementation by modeling behaviors and establishing goals for implementation throughout the District. In the Fall of 2005 discussions began about schools that may volunteer to deploy the CQI process in the 2006-2007 school year. Resources were identified to assist these schools with their deployment and four schools volunteered to pilot the CQI process in 2006-2007. These included two elementary schools, one middle school, and one high school. In order to determine potential change in perceptions this study needed an already existing complex instrument to measure the potential change. Thus, this research utilized the Missouri School Improvement (MSIP) Teacher Survey as a basis for determining what, if any, affect the implementation of CQI had on teacher perceptions.

The research design was quasi-experimental employing a primarily quantitative approach on studying implementation of CQI within the district. The study focused on the comparison of teacher perceptions between teachers in schools that have implemented CQI versus schools that have not implemented CQI. The study then compared these results to that of the similar schools to determine if the implementation of CQI resulted in a significant change in perception different from that of the non-implementing school. In order to obtain these comparisons the total number or responses from each group of three schools made up the analyzed data. Using the total N for each response category a sub-scale score was established. A Chi-square calculation, developed by the University of Kansas and available on that university's website through the psychology department, was performed on the sub-scale scores for the 2006 and 2007 MSIP Faculty Survey

(Preacher, 2001). The Chi-square calculation was performed for each of the 35 selected questions to determine what, if any, change occurred within the pattern of responses that would indicate changes in teacher perception. Any significant change in pattern was determined for each of the 35 items utilizing an alpha of .05.

Findings of this study were very consistent when significant differences were found. In every item identified as having significant difference, more teachers working within buildings that had implemented CQI answered these items as agree or strongly agree than did teachers in buildings that had not implemented CQI. Consistency was also found in items that identified as significantly different when studying perceptions of teachers within CQI buildings comparing pre and post implementation perceptions. In every case where significance was found more teachers answered these items as neither agree or disagree, disagree, or strongly disagree after CQI had been implemented.

CHAPTER ONE

Introduction to the Study

Background

"If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be."

-- Thomas Jefferson, 1816

"Since 1965, when the federal government embarked on its first major elementary-secondary education initiative, federal policy has strongly influenced America's schools. Over the years Congress has created hundreds of programs intended to address problems in education without asking whether or not the programs produce results or knowing their impact on local needs"(White House, 2007, p. 1). Referred to as a "program for every problem" solution, this process has continued to increase in the volume of programs as well as the amount of funds required to run these programs. With over $120 billion in annual spending encompassing the budgets of 39 federal agencies, the expectation would be a visible increase in student performance paralleled with a reduction in the achievement gaps across socio-economic classes and between minority and Caucasian students. However, an overwhelming indication of success accredited to these programs, and at this enormous expense, has not been evident on a national scale, (White House, 2007). In fact some researchers, such Payne (2003) and Marzano, Pickering, and Pollock (2001), have argued that these gaps continue to widen and that current practices must be reviewed and efforts redirected.

According to the *Executive Summary for the No Child Left Behind Act Reauthorization* (NCLB), every American generation has had its own set of federal mandates to accelerate learning and improve achievement beginning with John F. Kennedy's review and insight into the

educational needs of America's children. Kennedy's efforts generated the press for advancement in the areas of mathematics and science, and catapulted the United States into the space race. From these origins a concession of legislation was initiated. From the Elementary and Secondary Education Act signed by Lyndon B. Johnson in 1965, to the Individuals with Disabilities Education Act of 1975, to a Nation at Risk in 1983 (United States Department of Education, n.d.) American educators have been faced with new and more demanding challenges in educating children (White House, 2007). The level of expectation to perform increased drastically for educators in 2001 with the passing of the No Child Left Behind (NCLB) education act that not only placed the high expectations of previous educational acts, but added to that increased individual accountability for administrators with ever increasing achievement targets and possible sanctions (McElroy, 2005). School districts and administrators across the United States have struggled to implement programs that will help their schools meet these annually increasing expectations.

Even prior to the passing of NCLB, the nation's schools were realizing that improvement and change were needed. According to Neuroth (1992), the only disagreement occurred around how this change and improvement should occur. Neuroth noted that many educational institutions were beginning to implement best practices from the business world and adapt them to fit the educational environment. Rinehart (1993) dated the roots of the quality in education movement in the United States to the 1940s and the work of Dr. Walter A. Shewhart and George Radford. At the end of World War II the war had destroyed the industrial infrastructure of Germany and Japan, and the United States began to experience a time of industrial superiority when supplying the world with consumer goods (Rinehart, 1993). Reinhart continued to explain that the new Japanese government began looking for processes to energize their limited

industrial productivity and capability. The Japanese quickly embraced the work of researcher W. Edwards Deming and his quality philosophy. Deming's Total Quality Movement (TQM) approach was designed to address the barriers to change and teach organizations to learn. Glasser (1998), Rhinehart (1993), and Neuroth (1992) celebrated Deming's work and the principals of TQM for the positive affect that they had on Japanese industry. TQM was based on three basic principals: systems thinking, management by data, and continuous learning (Terry, 1996).

Utilizing Deming's processes, Japan quickly gained ground on the American industrial machine and America began to take notice. "The single event that most powerfully exposed Americans to the need for continuous improvement of quality was the 1980 NBC White Paper 'If Japan Can, Why Can't We?'" (Rinehart, 1993, p. 261). Rinehart acknowledged that American industry began to recognize the power of Deming's work and to incorporate his ideas. Following closely behind "If Japan Can, Why Can't We?" was the "A Nation at Risk" educational report of 1983. The Baldrige in Education website accredited corporate America's implementing of Deming's work, and its apparent success, as a stimulus to President Ronald Reagan challenging the nation's educators to incorporate some of this same systems thinking into schools.

President Reagan worked with congressional leaders to establish the Malcolm Baldrige Criteria for Performance Excellence in 1987 (Baldrige in Education, n.d.). These criteria were designed to help American industry compete and excel as compared to other industrial nations. Along with these criteria, Congress developed the Malcolm Baldrige Award, which was named posthumously for former Secretary of Commerce, Malcolm Baldrige. According to the Baldrige in Education web site, President Reagan challenged the educational community to adopt similar practices in the face of "A Nation at Risk." By the mid-1990's the Baldrige Educational Framework had been created and criteria established as a basis for assessment and feedback. In

1999 the National Alliance of Business and the American Productivity and Quality Center created BiE IN, known as the Baldridge in Education Initiative, to assist educational leaders in convincing the public to embrace long-term systemic improvement within education, (Siegel, n.d.). According to eSchool News (n.d.), by 2001 BiE IN included school districts in six states: Illinois, Indiana, Maryland, New Mexico, Ohio, and Texas, in a grant program that utilized the Baldridge criteria to improve teaching and academic performance within the K-16 environment.

The Baldrige National Quality Program criteria established with the Baldrige Educational Framework consisted of seven characteristics: Leadership, Strategic Planning, Student/Stakeholder Focus, Information and Analysis, Faculty/Staff Focus, Process Management, and Results. Brown (2006) described how the seven characteristics compliment one another and support the concepts of systems thinking. Neuroth (1992) described these characteristics as layers that expand throughout the organization; leadership must know the criteria and how it affects the strategic plan and leaders must teach and model the strategic plan throughout the organization. The strategic plan is developed based on a student and stakeholder input and with student success as the ultimate goal. The strategic plan should include a faculty and staff focus that recognizes the employees of the district and with supportive data that is analyzed and utilized. The results of the analysis should spark further improvement and become the process that the district uses to maximize improvement.

The Baldrige Educational Framework originated with Deming's Total Quality Management (TQM) and became known as Total Quality Schools (TQS) within this Framework (Arif and Smiley, 2003). Arif and Smiley explained that the concept of continuous improvement is a focal point for the Baldrige Educational Framework and the entire process is referred to as Continuous Quality Improvement (CQI) and Continuous Classroom Improvement (CCI). The

remainder of this research will employ CQI or CCI when referring to the Baldrige Educational Framework and the Baldrige Method depending on referencing the entire district, the individual buildings, or the individual classroom.

Conceptual Underpinnings for the Study

This study was an evaluation of the implementation of Continuous Quality Improvement (CQI) process within three schools within a large urban district in southern Missouri. The goal of the study was to measure what, if any, change occurred in the perceptions of teachers within the buildings that had implemented CQI as compared to the year prior to CQI implementation and as compared to similar buildings that had not implemented CQI. The study concentrated on teachers' perceptions of the seven characteristics of CQI: Leadership, Strategic Planning, Student/Stakeholder Focus, Information and Analysis, Faculty/Staff Focus, Process Management, and Results; while utilizing data from the Missouri School Improvement Faculty Survey. Items from the survey were gleaned due to their correspondence to each of the seven characteristics, and the results of these items were compared between schools that had implemented CQI to schools that had not implemented CQI.

An implementation evaluation was chosen due to the district being very early in its stages of CQI implementation and to ascertain the extent which teacher perceptions have changed. Patton (1997) stated that when a researcher seeks to determine if a program, and all of its parts, is operating at a level of optimum performance the use of an implementation evaluation was the appropriate choice. However, it was not enough to only study the parts of the implementation; the effect of the program's implementation must also be measured. "It is important to know the extent to which a program attains intended outcomes and meets participants needs, but to answer

those questions it is essential to know what occurred in the program that can reasonably be connected to outcomes" (Patton 1997, p. 197).

The process of CQI is in itself a concept of a change in thinking. Shipley (2006), Kaufman and Zahn (1993), Arcaro (1995) and Borgers and Thompson (1994) all agreed that the systems approach to education is still a philosophical leap in process for the vast majority of educators, but the need for an approach to meeting federal mandates, while supporting children, has school districts within the United States striving to implement new and effective processes. Brown (2006) and Wiedmer and Harris (1997) described systems approach as sequential, complete with inputs, outputs, and processes and, desirably, with opportunities for participant feedback. The value of a systems approach to education and the implementation of CQI within the classroom lay with the process itself, the whole process, not just individual components, and not just results. Utilizing an implementation evaluation allowed the researcher to do a moment in time measure of the depth that the seven characteristics had been implemented, as well as, the change in thinking that was established within the implementing schools. Measuring the change in teacher perceptions helped the researcher to more deeply understand the characteristics themselves, how they affect each other and dovetail into a process, and how they affect the building as a whole at a very formative level as the implementation is still very early. Brown emphasized that the criteria essentially evaluates organizational health.

Statement of the Problem

School districts and administrators across the country are struggling to meet the mandates of the No Child Left Behind (NCLB) Education Act. In the Executive Summary of NCLB the design of this educational act is clearly spelled out, emphasis was placed on responsibility and accountability. NCLB places the accountability and responsibility on to school districts and

individual administrators when in essence the responsibility to perform should be placed on the individual students. NCLB stated the need for latitude and support for those responsible, but many educators argued that the support was not sufficient. The mandates and expectations of meeting adequate yearly progress, as spelled out by NCLB, were clear and the pressure was placed squarely on the shoulders of administrators and educators across the nation. The problem addressed by this study originated from the pressures applied by these federal mandates and the often hasty reactions by districts throughout the nation.

As school districts have scrambled to find ways to boost scores and narrow clearly visible achievement gaps it has become easier to lose focus on the purpose of education, that is, to educate, and who educators are supposed to serve; students. Some administrators began looking for processes that would change their entire buildings, not just aspects of those buildings, by creating a systems approach. For many administrators the Baldrige approach became that possible saving grace that would allow for districts to meet expectations while keeping students first. Byrnes and Baxter (2005) wrote, "How concerned are you about your students achieving the annual yearly progress required by the No Child Left Behind Act?...unless you understand your classroom system and the root causes of why some students don't learn, you can never be certain that you have optimized learning and the educational experience for all students" (p. 2). Seeing the Baldrige approach to education as a tool for improvement throughout a building, Byrnes and Baxter supported their focus by writing, "Teachers who have created Baldrige-based quality classrooms routinely have students who learn more and enjoy learning… report they are less stressed, have more fun watching students get excited about learning, and have greater sense of efficacy" (p. 2). As teacher's become more engaged in teaching process, children become more engaged in the learning process; Byrnes and Baxter would argue that utilizing the Baldrige

method of CQI increases teacher engagement and thus implementing this process would profoundly and positively impact learning within the implementing building. However, the amount of research analyzing the impact of CQI on classrooms or on education as a whole is very limited.

Purpose of the Study

As educational researchers and practitioners strive to improve instructional strategies and student achievement, programs and processes are implemented with the goal of maximizing student potential. Deming's original process of TQM has been enhanced to adapt to individual settings. By utilizing the components from the original process of TQM the process of Continuous Quality Improvement (CQI) has evolved. Neuroth (1992) stated the process of CQI spawned from business practices and is recognized by the federal government as being best practices for insuring quality, efficiency and improvement within business. First described by Senator Malcolm Baldrige, businesses that displayed these characteristics have been recognized by the federal government for their accomplishments. Neuroth (1992) explained how these same characteristics have spilled into the education realm so schools may also have the opportunity to earn the coveted Malcolm Baldrige Award. Zuckerman (2006) described the commonalities, celebrations, and roadblocks experienced by four school districts nationwide that have implemented the Baldridge approach to quality in education and have received the Malcolm Baldridge Award for Performance Excellence.

CQI utilizes seven characteristics: Leadership, Strategic Planning, Student and Customer Focus, Information and Analysis, Faculty and Staff Focus, Process Management, and Business Results. By incorporating a deliberate focus on these characteristics into a systems approach to quality, school leaders may more easily be able to truly affect building performance indicators in

a positive manner by affecting teacher instructional processes and morale. The process of CQI needs to be studied to examine its effectiveness within the educational setting as well as any potential influence that it may have on education as a whole.

The purpose of this study was to determine the effect implementation of CQI had on the perceptions held by teachers within a district concerning each of the seven categories of CQI. The superintendent, Dr. Cliff Peterson began the implementation by modeling behaviors and establishing goals for implementation throughout the district. In the Fall of 2005 discussions began about schools that may volunteer to implement the CQI process in the 2006-2007 school year. Resources were identified to assist these schools with their implementation and four schools volunteered to pilot the CQI process in 2006-2007. These included two elementary schools, one middle school, and one high school. In order to determine potential change in perceptions this study needed an already existing complex instrument to measure the potential change. Thus, this research utilized the Missouri School Improvement Plan (MSIP) Faculty Survey as a basis for determining what, if any, affect the implementation of CQI had on teacher perceptions within the district. The MSIP Faculty Survey has been administered annually since 1998 and is rich with obvious and potential data that could easily fuel any number of studies. Completion of the survey is a state mandate for all certified staff.

If the affect of implementing the CQI process proved as positive as proponents would argue, and as successful as was experienced in the business world, then the eventual goal would be to spark similar studies in other schools. It was the purpose of this study to determine the effect that implementing CQI has had on teacher processes and perceptions within the school district concerning the seven characteristics of CQI. This was accomplished by studying a school district well into the implementation of CQI, utilizing state administered surveys, and focusing

on the results of these surveys and how they differ between schools that have implemented CQI versus schools within the same district that have not implemented CQI. Concurrently impacting how educational leaders might implement change and improvement within their schools; this study will review the impact that implementing CQI had on teacher perceptions concerning the seven characteristics of CQI, and this study was designed to increase a volume of knowledge that may affect education on a much grander scale.

Research Questions

This study will address the following seven research questions that align with the seven characteristics of CQI. These research questions indicate a study of effect as opposed to relationships. Due to the quasi-experimental design of the study, effect or impact can be ascertained:

1. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Leadership* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Leadership* within the district?
    b. As compared to perceptions of teachers within the building prior to implementation?
2. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Strategic Planning* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Strategic Planning* within the district?

b. As compared to perceptions of teachers within the building prior to implementation?

3. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Student and Customer Focus* within schools implementing CQI:
   a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Student and Customer Focus* within the district?
   b. As compared to perceptions of teachers within the building prior to implementation?
4. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Information Analysis* within schools implementing CQI:
   a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Information Analysis* within the district?
   b. As compared to perceptions of teachers within the building prior to implementation?
5. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Faculty and Staff Focus* within schools implementing CQI:
   a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Faculty and Staff Focus* within the district?
   b. As compared to perceptions of teachers within the building prior to implementation?

6. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Process Management* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Process Management* within the district?
    b. As compared to perceptions of teachers within the building prior to implementation?
7. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Results* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Results* within the district?
    b. As compared to perceptions of teachers within the building prior to implementation?

Limitations and Assumptions

Limitations. The following numbered items were considered as elements that limited the scope of this study. These items are reviewed in Chapter 5 as components of further and future research:

1. The study was limited due to the data represented results from one large Missouri school district and did not compare these results with like districts within the state.
2. The study was limited due to the relatively small number of schools in the district (four out of approximately 50) that have incorporated Continuous Quality Improvement within their buildings.

3. The study was limited to data coming from approximately 150 of nearly 1800 teachers surveyed district wide.
4. The study was limited due to the collective data based on a school by school report being utilized for a more general result as opposed to a very specific teacher by teacher approach.
5. The study was limited due to the data being from only two years of data, 2005-2006 and 2006-2007 school years.
6. The study was limited due to major changes in the survey instrument as the Missouri School Improvement Program switched from the Cycle III Survey in 2004-2005 to the Cycle IV Survey in 2005-2006; the Cycle IV Survey was still utilized in 2006-2007. Only items found to match were used in the comparison.
7. The study was limited due to the process of Continuous Quality Improvement only being implemented for one school year at schools within the district.
8. The study was limited due to potential researcher bias. This bias was based on the premise that the researcher not only was a principal within the district, but was also the principal at one of the schools that implemented CQI.

Assumptions. The seven characteristics of Continuous Quality Improvement (CQI) could be considered powerful components to the intricate workings of any organization. Byrnes and Baxter (2005) wrote, "The criteria and framework are widely recognized as the most effective approach to organizational performance excellence" (p. 18). Implementation of a Baldrige systems approach to organizational improvement and quality would utilize these seven characteristics. The primary assumption fueling this research was that the perceptions of teachers concerning these seven characteristics would improve during and after implementation. This

assumption was tested through the analysis of the Missouri School Improvement Faculty Survey data. The study further assumes that the majority of faculty at the subject schools remained the same from 2005-2006 to 2006-2007 and that those faculty members completed the survey honestly. Should change in teacher perceptions occur and be significant enough to infer affect from the implementation of CQI; then it is further assumed that other possible affecting variables, different from the seven characteristics, were limited as were their effect.

Design Controls

"One characteristic of a good research design is that it will provide data that are free from bias" (Wiersma, 2000, p. 92). Bias was listed as a limitation due to the researcher being a principal within the district and the principal of one of the schools that implemented CQI. Design controls for this study were established by utilizing public access data that was originally collected and disaggregated by school by the State of Missouri. This data was collected through the annual administration of the Missouri School Improvement Faculty Survey. Researcher bias was averted by using data that was not collected or organized by the researcher and an instrument that was developed by the State of Missouri. Fink (2006) suggested that when creating a survey instrument one should, "check your own bias, an additional source of bias is present when survey writers are unaware of their own position toward a topic" (p. 20). Though the researcher was aware of their potential bias, utilizing an already created instrument that was universally administered throughout the Sate with a one-hundred percent compliance expectation, helped alleviate bias.

Concerns of comparing data from a limited number of schools were also reduced by closely matching these schools based on size of population, diversity of student make-up, and socio-economic status of the students. The limitation of comparing only two years of data was

diminished by the researcher not only comparing survey results from school to school, but also comparing the same school's data year to year.

Definitions of Key Terms

The following terms were essential in the preparation of this study. The terms are listed in alphabetical order and by category when necessary. These terms were defined in order to assist the reader with specific and frequently used vocabulary that was relevant to the study:

Alpha Level. Alpha level is, "the probability of making a Type I error (usually this value is .05)" (Field, 2005, p. 723).

Chi-square test. "Although this term can apply to any test statistic having a chi-square distribution, it generally refers to Pearson's chi-square test of the independence of two categorical variables. Essentially it tests whether two categorical variables forming a contingency table are associated" (Field, 2005, p.725).

Continuous Quality Improvement (CQI). Originating from the Total Quality Management (TQM) process created by W. Edward Deming, the process of Continuous Quality Improvement (CQI) within education has evolved and expanded to multiple school districts. Neuroth (1992) stated the process of CQI spawned from business practices and was recognized by the federal government as being best practices for insuring quality, efficiency and improvement within business. CQI utilizes seven characteristics: Leadership, Strategic Planning, Student and Customer Focus, Information and Analysis, Faculty and Staff Focus, Process Management, and Business Results. CQI employees eleven Core Values: Visionary Leadership; Learning-centered Education; Organizational and Personal Learning; Valuing Faculty, Staff, and Partners, Agility; Focus on the Future; Managing for Innovation; Management by Fact; Public Responsibility and Citizenship; Focus on Results and Creating Value; and Systems Perspective.

Eleven Core Values of Continuous Quality Improvement. The eleven core values as described by the Baldrige in Education internet website (Baldrige in Education, n.d.) that delineate the principles espoused in CQI are: Visionary Leader, Learning-centered Education, Organizational and Personal Learning, Valuing Faculty, Staff, and Partners, Agility, Focus on the Future, Managing for Innovation, Management by Fact, Public Responsibility and Citizenship, Focus on Results and Creating Value, and Systems Perspective.

1. Visionary Leader—Baldrige in Education (n.d) described a visionary leader as "a leader who creates and balances value for students and stakeholders" (p.2).
2. Learning-centered Education— Baldrige in Education (n.d.) described learning-centered education as "education that places the focus of education on learning and the real needs of students" (p.2).
3. Organizational and Personal Learning— Baldrige in Education (n.d.) described organizational and personal learning as "learning that is directed not only toward better educational programs and services, but also toward being more flexible, adaptive, and responsive to the needs of students and stakeholders" (p.2).
4. Valuing Faculty, Staff, and Partners— Baldrige in Education (n.d.) identified valuing faculty, staff, and partners as evident when they are "modeled by leadership who is not only dependent upon but committed to the knowledge, skills, innovative creativity, and motivation of its workforce" (p.2).
5. Agility— Baldrige in Education (n.d.) described agility as "organizations with an explicit focus on faster and more flexible responses to the needs of students and stakeholders" (p.2).

6. Focus on the Future— Baldrige in Education (n.d.) described an organization focused on the future as "organizations that take into account both short-term and longer-term factors that affect the organization" (p.2).
7. Managing for Innovation— Baldrige in Education (n.d) defined managing for innovation as "management focused to improve the organization and create value for students and stakeholders" (p.2).
8. Management by Fact— Baldrige in Education (n.d) described management by fact as "management that uses performance measurement to focus on improving student learning" (p.2).
9. Public Responsibility and Citizenship— Public responsibility and citizenship as responsibility that "goes beyond mere compliance" (Baldrige in Education, n.d, p.2).
10. Focus on Results and Creating Value— Baldrige in Education (n.d.) determined focusing on results and creating value were "the means to improving student learning and building loyalty" (p.2).
11. Systems Perspective— Baldrige in Education (n.d.) described a systems perspective as a "perspective that provides a keen understanding of alignment strategy for improving the overall organization" (p.2).

Seven Characteristics of Continuous Quality Improvement. The seven characteristics of Continuous Quality Improvement are Leadership, Strategic Planning, Student/stakeholder Focus, Information and Analysis, Faculty/staff Focus, Process Management, and Results. These seven characteristics are described below by Baldrige in Education (n.d.):

1. Leadership—Effective leadership is described by the Baldrige in Education (n.d.) as "to be effective, leaders must understand the Baldrige model and core values and

communicate to the workforce and leadership systems their intention to use that model for assessment and improvement. Leaders need to understand the system and realize that it is their responsibility to share the knowledge and set direction" (p.3).

2. Strategic Planning—According to Baldrige in Education (n.d.) strategic planning is exceedingly valuable. "Critical to this category is that every person in the organization must know the strategic plan and be able to describe how he or she contributes to achieving the plan's goals and objectives" (p.3).
3. Student/stakeholder Focus—Baldrige in Education (n.d.) determined that utilizing a student and stakeholder focus required "engaging students in the educational planning and decisions that affect them will have the largest payback in terms of performance and a positive organizational climate" (p. 3).
4. Information and Analysis—Critical to an effective organization is the utilization of information and analysis of that information. Baldrige in Education (n.d.) stated "key goals need to be measurable in and understandable ways. In the best organizations and classrooms, information is used to drive actions. Mature, high-performing organizations collect data on competitors and similar providers and compare themselves against world-class leaders" (p. 3).
5. Faculty/staff Focus—A great deal of importance should be placed on faculty and staff focus. Baldrige in Education (n.d.) determined "faculty and staff are viewed as the most valuable asset of the organization and investment and development are critical to achieving the organization's mission and goals" (p. 3).
6. Process Management—Process management is a primary component of a successful organization. Baldrige in Education described process management as a "key to

improving organizational performance is the ability to identify key processes and manage them so that student and stakeholder requirements are met consistently" (p. 3).

7. Results—Results are "the proof that what an organization identifies as important is being accomplished and success overtime is evident" (Baldrige in Education, n.d, p. 3).

Type I error. Type 1 error, "occurs when we believe that there is a genuine effect in our population when in fact there isn't" (Field, 2005, p. 748).

System. A system "is a series of processes that are followed sequentially to achieve a desired result. Each of the major components of the system has inputs, processes, outputs of results, and ideally, feedback loops" (Brown, 2006, p.8).

Summary

Chapter one was designed to highlight the increasingly demanding federal mandates that are passed down to building level administrators through the No Child Left Behind (NCLB) Act. Chapter one also reflected a brief history of federal education initiatives and a history of W. Edward Deming's Total Quality Management system for business and industry and the metamorphosis that adapted it to the educational field and into Continuous Quality Improvement.

According to President George W. Bush, the NCLB mandates have positively affected education through improved test scores. In his September 26th, 2007 speech to the education system in New York City, President Bush stated, "The No Child Left Behind Act is working. I say that because the Nation's Report Card says it's working. Scores are improving, in some instances hitting all-time highs" (White House, 2007). The American Federation of Teachers indicated these mandates have also had a bullying affect on schools, administrators and teachers, and several educational organizations have voiced their objections. The National Education Association (NEA) (n.d.) stated NCLB is, "fundamentally flawed. It undermines existing state

and school district structure and authority and shifts public dollars to the private sector through supplemental educational services and takeovers of public schools by for-profit companies" (p.2). In order to meet these mandates superintendents and principals have looked for ways to improve the quality of instruction in each classroom in order to increase achievement scores. Many have turned to the Baldrige Criteria for Education and Continuous Quality Improvement.

Chapter one related conceptual underpinnings and stated the problem the researcher wished to address with the study. Also relayed were the purpose of the study and the research questions, study limitations, and the definition of key terms. The researcher's intent was to draw the reader to understand the impact that Continuous Quality Improvement can have on schools and the need for research to verify these impacts. Later chapters will include a review of related and relevant literature in Chapter two; as well as, research methodology and findings in chapters three and four respectively. The study concludes with an analysis of the research findings and suggestions for further research within chapter five.

CHAPTER TWO

Introduction

"Here is Edward Bear, coming downstairs now, bump, bump, bump, on the back of his head, behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes, he feels that there really is another way…if only he could stop bumping for a moment and think of it."

--A. A. Milne, The Complete Tales of Winnie-the-Pooh

Much like Edward Bear, administrators in school districts across the nation are convinced there is a better way to do things if they could only think of it; for some the quality approach incorporated within the Baldrige in Education model may be that better way. Continuous Quality Improvement (CQI) is a relatively new process in education, but not a new concept. Rinehart (1993) indicated the concept of quality in education has many historical names; excellence, effective schools, or outcomes-based education all relate back to the concept of quality. CQI is a planned approach to improvement throughout the organization; a systemic approach to improvement (Byrnes & Baxter, 2005).

Also new is the adaptation of business quality practices and philosophy into education, a systems way of thinking (Rinehart, 1993). Nationally several school districts have incorporated the concepts of CQI as their primary work process. Brown and Spangler (2006), Hammond (2000), and Conyers (2000) have written research that studied school districts from various states. These states included New Jersey, California, North Carolina, Massachusetts, Colorado, and Illinois and the research discussed the successes and the trials that have encompassed the process of CQI within these various school districts.

Why do educational leaders need to approach improvement from a systemic focus? According to Bolman and Deal (2003) when a leader fails to look for and recognize problems within their organization they are prevented from "seeing old problems in a new light or finding more promising ways to work on perennial challenges. When they don't know what to do, they do more of what they know" (p. 7). In this scenario the same effort equals the same results and the cycle of stagnation continues. Neuroth (1992) used ecology to describe systems thinking; stating that all of the factors are interdependent and work as a web around a common purpose. The Baldrige method emphasized systems thinking in the obtaining of results with those results being different from what has been obtained in the past. In the field of education obtaining the same results used to be an acceptable practice, however that has changed.

Changes within education (educational reform) began surfacing in the early 1960's and first became tangible with President Lyndon Johnson signing the Elementary and Secondary Education Act in 1965 (United States Department of Education, n.d.) and continues today with the pending reauthorization of the No Child Left Behind Act of 2000. School districts and school leaders search to find processes that will not only allow their districts to meet the demands of these federal mandates, but also allow their students to achieve at the highest levels. Terry (1996) wrote, "American schools have the same problems and are faced with the same challenges as American corporations…Reformers have pointed to the need for fundamental structured changes in the way we conduct the business of education" (p. 4). Continuous Quality Improvement, "…is a system designed to review educational performance, issues, and practices while bringing groups of professional educators together to identify, analyze, and resolve educational concerns…[CQI] transfers the terminology and principals of the business environment into

educational settings" (p. 314). CQI and the Baldrige in Education Framework is a vehicle designed to help educators meet these demands.

According to the Baldrige in Education website and the Baldrige National Quality Program website the criteria established with the Baldrige Educational Framework consisted of seven characteristics: Leadership, Strategic Planning, Student/Stakeholder Focus, Information and Analysis, Faculty/Staff Focus, Process Management, and Results. Brown (2006) described how the seven characteristics compliment one another and support the concepts of systems thinking. Neuroth (1992) described these characteristics as layers that expand throughout the organization; leadership must know the criteria and how it affects the strategic plan and leaders must teach and model the strategic plan throughout the organization. The strategic plan is developed based on a student and stakeholder input and with student success as the ultimate goal. The strategic plan should include a Faculty and Staff Focus recognizing the employees of the district and with supportive data that is analyzed and utilized. The results of the analysis should spark further improvement and become the process that the district uses to maximize improvement. The following review of literature describes each of these seven characteristics and how they effect and compliment one another.

Leadership

Choosing to lead is often as difficult as leading itself and can be a life changing decision for more than just the leader. Whittle (2005) indicated that over 13,500 principal positions open or are created every year and that each one influences an average of 500 students. Whittle goes on to say, "…an underperforming principal guarantees an underperforming school, and a good one gives you a chance at a good school" (p. 117). Whitaker (2003) in his book *What Great Principals Do Differently,* and Collins (2001), *Good to Great,* both emphasized the critical

importance of strong leadership and courageous leaders. King (2007) wrote, "Many things go into making a high school great, but a strong, effective principal is always at the top of the list…they set the tone for what happens from the moment the opening bell rings and can turn a troubled school around with a combination of vision, drive, and very hard work" (p. 1). As these researchers indicated, the key component to building a culture of success is leadership.

What is leadership? Leadership is movement within an organization or encompassing the organization; a new direction that may include problem solving or program initiation; however, this movement should initiate positive results and improve quality, (Davis 2003). Gardner (2000) saw leadership as more of a process where individuals persuade others to strive to reach objectives or goals whether created by the leader or collaboratively created by all those involved. Obisesan (1999) wrote "successful leadership operates implicitly or explicitly from a basic set of principals—a theory of change, combined with knowledge about how to influence or alter the organization in favorable directions" (p. 3). Obisesan indicated that effective educational change or change implementation was more of a process and involved a change in thinking a redirection of the organization. McGonagill (1997) wrote that the heart of Deming's model was the perception that effective change required active involvement and participation of all stakeholders, was systematic, and it was the responsibility of all those involved in, or affected by this change, to make any transition a reality. CQI was a process of change, a vehicle for redirecting organizational thinking and process creation.

The seven primary categories of CQI support and compliment one another within the Baldrige systems approach. Leadership "sets the tone and vision, brings passion and care/concern for all stakeholders, is a key participant in classroom strategic planning, sets targets, and makes certain that action plans are aligned with the strategic plan" (Byrnes & Baxter, 2005,

p. 30). The Baldrige in Education website described Leadership as one of the three CQI categories that make up the Driver Triad; the other two being Strategic Planning and Student/Stakeholder Focus. Byrnes and Baxter (2005), Byrnes and Baxter (2006), Shipley (2007), and Brown (2006) all indicated that these three categories were the required, irreplaceable elements that propels the entire system toward continual improvement and maintains the focus of the organization in order for the implementation of CQI to be successful.

The category of Leadership "examines how senior executives guide the organization and how the organization addresses its responsibilities to the public and practices good citizenship" (Arif & Smiley, 2003, p. 755). Neuroth (1992) added the leadership category reflects how school board members, principals, and all administrators not only create but also maintain clear and visible quality values that guide all of the district's activities toward educational excellence. Byrnes and Baxter (2006) stated that role modeling traits such as social responsibility and good citizenship while recognizing all those who strive to improve a community was a critical component to leadership.

Neuroth (1992) also stressed the importance of the district's public responsibilities integrating with its quality practices and values extending to the external community. However, as much as leadership must extend beyond the building and into the community, the community, and society as a whole, influences leadership and extends back into the building. These influences extend from local expectations to state and federal mandates and force educational leaders to undertake reform in order to improve achievement (National Association of Secondary School Principals [NASSP], 2004).

These societal influences place exceedingly high amounts of pressure on educational leaders. The National Association of Secondary School Principals (NASSP, 2004)) and the

National Association of Elementary School Principals (NAESP, 2006) both have criticized the amount of pressure that state and federal mandates have placed on public schools. However, both organizations also agreed that the intention of these mandates has been to improve the achievement of all students and both have supported school districts utilizing quality improvement processes to help meet these demands.

How do leaders adjust to these demands and help their buildings meet these expectations? Obisesan (1999) argued that the role of leadership itself must change; a change from bureaucratic to a democratic approach. This requires a responsibility for maximal efficient use of all resources, including the human resource component; also, leaders must model flexibility and encourage flexibility throughout the organization. In order to accomplish this task, Obisesan indicated that leaders within the organization must have a strong understanding of the dynamics and processes of leadership itself. Byrnes and Baxter (2006) indicated that this level of change would require a leader who can not only display strong leadership traits, but also adjust those traits to each leadership scenario he or she may encounter and empower those around them to lead as well.

Research from Leithwood, Jantzi, & Steinbach (2000), Davis (2003), and Leithwood and Duke (1999) agreed that traits alone are not the components that leaders should develop, but rather leaders should develop multiple models of leadership that they can utilize depending on the situation. The pressures placed on leadership cause ethical dilemmas for leaders as well as for entire school districts. School leaders must be flexible in their leadership styles and incorporate multiple styles that allow them to adjust to the demands of the situation, students, teachers, parents, patrons, and community. School leaders must also be willing to not only collaborate concerning vision creation and decision making, but to also collaborate and delegate

responsibilities in order to ensure stakeholder buy-in and create a culture of success in an era of accountability and finger-pointing. “To be effective, leaders must understand the Baldrige model and core values and communicate to the work force and leadership system their intention to use that model for assessment and improvement. Leaders need to understand the system and realize that it is their responsibility to share the knowledge and set the direction” (Baldrige in Education, n.d.).

Common models of leadership began to emerge as the styles and processes of leadership, as opposed to traits and characteristics, became more of the focus of research. Researchers have developed theory around these models. Leithwood and Duke (1999) and Leithwood, Jantzi, and Steinbach (2000) reviewed volumes of research dating back to the 1930s that focused on educational leadership and, through this review, twenty specific leadership concepts were illuminated. These concepts were assigned to one of six models of educational leadership: instructional, transformational, moral, participative, managerial and contingent. Yukl (2002) identified seven theories of leadership models; these were participative, dyadic, contingency, charismatic, transformational, strategic, and ethical. Similarities were abundant in both bodies of research as each leadership model was examined. Reinforcing Yukl (2002), Leithwood and Duke (1999), Leithwood, Jantzi, and Steinbach (2000), and Bolman and Deal (2003) more broadly described leadership within the four frames of structural, human resource, political, and symbolic. These researchers discussed aspects of contingency, transformational, and situational leadership within these frames while also discussing multiple other aspects of leadership including power, relationships, and change.

Within the Baldrige approach, modeling desired leadership behaviors and traits within systems thinking is a key to the success of CQI. These behaviors and traits have been the topic of

numerous early studies with the desired outcome being a list of characteristics that would describe and define good leaders and leadership. These studies focused on how individuals utilized, "…traits, abilities, behaviors, sources of power, or aspects of the situation…to influence followers and accomplish group objectives" (Yukl, 2002, p. 4). As the study of leadership evolved, more attention was paid to the process of leadership as opposed to characteristics of leaders.

Leithwood, Jantzi, and Steinbach (2000) concluded that specifying traits as indicators of good leadership was much like "trying to hit a moving target…the qualities that are relatively enduring may become clearer in the process, but these qualities will never be more than the 'basic skills' of leadership" (p. 4). Yukl (2002) and Leithwood and Duke (1999) argued that leadership and the concepts that affect it were far more complex than characteristics and traits; leadership was a process for taking an organization in a positive direction. Byrnes and Baxter (2006) described the need for a visionary leader as not only someone who looks at present students, but they must also include future students, parents, teachers, all stakeholders. A visionary leader strives to meet all the needs of all of their customers present and future. Additionally, Grogan (2003) stressed that leadership style should out weigh specific leadership traits when appointing individuals to leadership roles. Within the systems thinking approach of CQI, the visionary leader realizes the systematic approach to relationship management is the way to achieve higher satisfaction. Satisfied customers maintain higher levels of morale and are more willing to help achieve the aim (Byrnes & Baxter, 2006).

"In today's environment, if you are standing still you are falling behind. Making the right decisions at the right time is critical…In a survey of a broad cross section of CEOs, the Malcolm Baldrige Foundation learned that CEOs believed deploying strategy is three times more difficult

than developing strategy"(Maurer & Pedersen, 2004, p. 74). With this in mind, it became critical for leaders to determine if progress was being made, and to create avenues for determining what progress was being made and to what degree. Maurer and Pedersen (2004) indicated that leaders should ask themselves the following questions and answer "how do you know?" for each: Are your vision, mission, values, and plans being implemented? Do your leadership team and all your employees understand them? How effective are your communication systems? How well is the message being received? Within the systems thinking model of CQI these questions are addressed through the collaborative process of Strategic Planning.

Strategic Planning

The Baldrige method embraces systems thinking. By definition, "a system is a series of processes that are followed sequentially to achieve a desired result. Each of the major components of the system has inputs, processes, outputs of results, and ideally, feedback loops" (Brown, 2006, p.8). Strategic Planning is the second category in the Baldrige model and is also the second component of the Driver Triad. Brown (2006) described Strategic Planning as building upon leadership. It is how the organization develops objectives or goals as well as the action plans for achieving these objectives or goals by utilizing the mission and vision. Planning should be done quickly and efficiently while considering a variety of internal and external factors. Byrnes and Baxter (2006), Brown (2006), and Obisesan (1999) all agreed that the content of the plan is far more important than the process of strategic planning and that while goals cover all areas of performance they must also link back to the challenges or threats faced by the organization. When describing Strategic Planning the Baldrige in Education website (n.d.) related that "critical to this category is that every person in the organization must know the strategic plan and be able to describe how he or she contributes to achieving the plan's goals and

objectives" (p.3). According to Karathanos and Karathanos (1996) while the primary focus must be on student performance, the requirements to improve are translated into a performance management system; the plan requirements for this system are determined through Strategic Planning, setting the direction for the entire district.

Direction is a key concept with the Baldrige approach; whether it is the direction of leadership, planning, or goal setting, it is the motor that drives the change vehicle. Maurer and Pedersen (2004) asked, "If you don't know where you are going, how will you know when you've gotten there? All organizations need direction" (p. 30). In education that direction must reflect the needs of the students. However, these needs must be established and reinforced. Maurer & Pederson (2004) urged readers to view their organizations in both the long-term and the short-term and to set direction based on data and information. As school districts develop strategic plans they must expect and be prepared for the challenge that comes with change (Terry, 1996). Kilmer (2000) described CQI as a change in culture at the organizational level, a new process of working and problem solving. Kilmer continued by emphasizing the necessity of change and that organizations must learn from others who have been successful with CQI and the Baldrige method and how they created and responded to change.

Change, and how an organization causes and adapts to change, continues to be a vital component of the efficiency and effectiveness of an organization. As leaders view and analyze their organizations and constituents, they often realize that, to move their organization forward, change must be a factor. According to Bolman and Deal (2003), Machiavelli wrote, " 'It must be realized that there is nothing more difficult to plan, more uncertain of success, or more dangerous to manage than the establishment of a new order of things'" (p. 370). Byrnes and Baxter (2006) agreed, "Change is one of those odd things about life that happens even when we

don't want it or think we need it" (p. 1). Additionally, Palmer (2004) warned that change will always occur; however, it may not be the change that was wanted or expected, so organizations must prepare for and manage change in a systematic approach.

Recognizing change is critical for a leader and implementing the correct change is a must. Davis (2003), Bolman and Deal (2003), and Yukl (2002) saw the leader as a change-agent; a tool for implementing change within the organization. Yukl listed change oriented behaviors as one component of a three-dimensional taxonomy of leadership behaviors. Recognizing the need for and affects of, as well as having the ability to implement change, were key aspects of leadership. In order to implement change a leader must be able to make decisions; how decisions were made was another key indicator of leadership model. Baldrige in Education emphasized that the process of decision making and strategic planning is critical with CQI implementation. As much as the decision itself affected the organization, sometimes the decision making method had even more affect.

"Taking the blame out, putting the support in" is a statement from Siri and Miller (2006, p. 13), but a concept shared with multiple researchers in the area of CQI and the Baldrige Model. Change will cause apprehension and fear, and leaders must work to reduce the levels of apprehension in order to implement change. As educational organization leaders strategically plan for and implement change and the change process, understanding how their organization learns and creates knowledge becomes a critical component. Nonaka and Takeuchi stressed, "Organizational knowledge creation is a never-ending process that upgrades itself continuously" (p. 88). This continual change process includes repetitively evaluating the results and adjusting the process.

When adapting to change, successful organizations as well as individual members must develop the ability to learn by learning how to learn, (Morgan, 1997). Maurer and Pedersen

(2006) stressed that modeling learning and modeling the use of CQI is a key component for implementation of CQI throughout the system and establishing a collaborative approach to strategic planning. Yukl (2006) indicated that an effective leader would instill a desire for learning and change in organizations. Open discussion and active problem solving are important team learning principles focused on sharing and creating knowledge within communities of learners (Bruffee, 1999; Lencioni, 2002; Nonaka & Takeuchi 1995).

Numerous researchers including DuFour and Eaker (1998), Schlechty (2000), Morgan (1998) and Yukl (2006) emphasized the importance not only of change but of strategically planning for and implementing change. The importance and impact that even the smallest of changes made on an organization is emphasized by Morgan (1998) "the idea that in 'edge of chaos' situations, small but critical changes at critical times can trigger major transforming effects" (p. 271). Yukl (2006), Gioia and Thomas (1996) and Schlecty (2000) agreed that when attempting to implement change into any organization, leadership and strategy were key components. Yukl (2006) wrote about the strategies of change, Gioia and Thomas (1996) wrote about strategic change, and Schlecty (2000) down plays the buzz phrase strategic planning by writing, "Engaging in strategic planning…to achieve a long term goal may be fine in theory and textbooks, but…is not all it is cracked up to be" (p.191). However the author supported the need for strategic thinking and purposeful action on the part of the leader. Within the realm of continuous improvement, strategic planning only truly begins once an organization has created a process for customer feedback that allows planning around items of importance to customers and allows for the setting both short and long-termed goals, (Neuroth, 1992).

"Leadership cannot create an adequate strategic plan without knowing what the students and stakeholders need and expect. It follows that the results inform students and stakeholders whether their expectations have been met" (Byrnes & Baxter, 2005, p. 49). The development of

effective strategic plans must begin with a collaborative development process. The collaboration should begin at the onset of the organization or of leadership change with the creation of an organizational mission, vision, and collaborative commitments. Yukl (2002) wrote, "a clear and compelling vision is very useful to guide change in an organization…the vision should appeal to the values, hopes, and ideals of organization members and other stakeholders whose support is needed" (p. 283). Through collaboration, team building, and communication, leadership within an organization acts as the fulcrum for organizational change and growth. Yukl (2002), Bruffee (1998), Katzenbach and Smith (1993) and DuFour and Eaker (1998) saw collaborative decision making as a must for survival let alone a key for success in the world of educational accountability.

Leaders who are aware and model good decision making as an individual will influence how followers make decisions whether as an individual or as a group. Decisions are an everyday part of life for a leader and are necessary in order to implement change; however, when an educational leader collaborates with a leadership team to strategically plan for and make decisions the effect of those decisions more completely radiate throughout the organization (Maurer & Pedersen, 2004).

Utilizing established lines of open communication allows leaders to collaborate with constituents to create a common vision and mission. Davis (2003) not only stressed the importance of creating and communicating a common vision but also how vital it was to obtain support throughout the organization for that vision. Yukl (2002) stated that, "The development of a vision is an interactive, circular process, not a simple, linear progression from vision to strategy to action" (p. 288). Developing a shared vision, one that is owned by all and embraces the aspirations of the school is one of the primary goals of the leadership team when implementing

CQI. Terry (1996) wrote vision "must present a clear picture of what the school wants to achieve and an image that all members can share in, take pride in, and use as a daily criteria for assessing their work" (p.6). However, Terry added that developing a collaborative vision statement is often very difficult.

A leader develops sub groups or committees with representation from all levels of the organization to review data, establish feedback, and utilize open communication to create a vision that is universal in respect to that organization and motivates those individuals to implement the vision (Baldrige in Education, n.d.). A leader also creates a system that allows for review of the decision making process; to revisit and adjust the vision to accommodate changes in the environment, market, or within the organization. Terry (1996) called this auditing the decision making process. Creating that vision is accomplished through open and collaborative conversations and requires a leader to facilitate this process; done properly, it is the first indicator of an organization's focus on stakeholder needs.

Student/Stakeholder Focus

Being the third component of the Driver Triad, Student/Stakeholder Focus centers on the customer within each system; however, the ultimate customer must be the students. Maurer and Pederson (2004) wrote, "You can say that the district or school serves multiple customers: parents, taxpayers, and employees as well as students. This is correct. But it is critical that students be singled out as *the* customer. The other groups are important, but they are stakeholders. No school would be in existence if the students did not exist" (p.66). Student/stakeholder focus is described by Karathanos and Karathanos (1995) as a category that not only determines the needs of its students and stakeholders, but also measures the satisfaction level of those individuals and compares that measure with similar districts. Byrnes and Baxter

(2006) listed three key opportunities for building a system designed for success: "learn as much as possible about the students,… know exactly what the students are expected to know and be able to do at the end of the course or school year and…seek feedback from students and parents or guardians" (p. 33-34). They further indicated that student/stakeholder focus includes feedback on satisfaction, dissatisfaction, perceived value, persistence, and positive referrals. Baldrige in Education (n.d.) wrote, "engaging students in the educational planning and decisions that will effect them will have the largest payback from the terms of performance and positive organizational climate" (p, 3). Siri and Miller (2001) agreed that, within systems thinking, student input is critical in collaborative team decision making. Building leaders must create avenues for acquiring 360-degree feedback from all stakeholders (Brown, 2006).

This information helps leaders and leadership teams to make decisions that profoundly affect schools. Decision making/problem solving is a critical aspect of leadership. Educational leaders make hundreds of decisions everyday that directly affect the lives of teachers and students. Never has the importance of solid decision making skills been more clear than it is today in the era of accountability. The demands of meeting Adequate Yearly Progress (AYP), and the threat of consequences spelled out in No Child Left Behind (NCLB) legislation, placed an incredibly large amount of pressure directly on K-12 educational leaders (United States Department of Education, n.d.). Now, more than ever, the need for well-thought out, collaborative decision making is evident as building leaders strive to ensure that all stakeholders' needs are met, and that all individuals understand the vision and direction of the organization.

Employing the information gathered from 360-degree feedback, leadership teams can collaboratively develop a common vision and mission. Davis (2003) and Yukl (2002) both emphasize the importance of leadership being able to build an organizational vision and mission

through collaborative methods and communicating those in a manner that a builds support and ownership throughout the organization. The vision and mission of the organization must embrace the organization's customers and involve the customers in all aspects of the organization's function and decision making. Yukl (2002), DuFour and Eaker (1998), and Byrnes and Baxter (2006) stressed the need for a common vision developed collaboratively. The school's vision should carry "enthusiasm, deep desire, and willingness to do whatever it takes to achieve it" (Byrnes & Baxter, 2006, p. 46). All stakeholders must have played a part in creating the school's vision. Bolman and Deal (2003) wrote, "A vision needs to address both the challenges of the present and the hopes and values of the followers" (p. 362). A leader creates the vision through collaboration. The established vision must help the educational organization meet the increased demands of the local community and accountability-focused federal and state legislatures.

To meet the needs of the school's customers, primarily the students, a leader develops sub groups or committees with representation from all levels of the organization to review data, establish feedback, and utilize open communication to create a vision that is universal in respect to that organization and motivates those individuals to implement the vision (Pusser, 2003). A leader also creates a system that allows for review of the decision making process, to revisit and adjust the vision to accommodate changes in the environment, market, or within the organization (Kilmer, 2000). Creating that vision is accomplished through open and collaborative conversations and requires a leader to facilitate this process and manage leadership teams that include all stakeholders.

Teaming was an encompassing theme evident in Katezenbach and Smith (1993) and Lencioni's (2005) works dealing with creating a highly efficient organization through the development of an efficient team. Supporting the importance of teaming, Bolman and Deal

(2003) dedicated an entire chapter on the importance of team building and team effectiveness in creating a top performing organization; DuFour and Eaker (1998) emphasized the need for a strong leadership team as well as teaming efforts in developing a learning community; and Kotter (1994) stated that the lack of an effective guiding team was one of the primary reasons organizational transition efforts fail. Katzenbach and Smith (1993) wrote, "We also found that teams and good performance are inseparable, you cannot have one without the other" (p.112). They continued, "We believe that teams will become the primary unit of performance in high-performance organizations" (p. 119). The continuous quality process within the Baldrige model targets high performance by embracing customer needs through student and stakeholder focus and feedback and utilizing viable data and information.

Information and Analysis

"The Information and Analysis category examines the scope, validity, analysis, management and use of data and information to drive quality excellence and improve competitive performance" (Neuroth, 1992, p. 40). Neuroth continued by stressing the importance of utilizing adequate and viable data in order to move the district forward; not just data for the sake of having data. Karathanos and Karathanos (1996) agreed, stating that this category, "…examines the management and effectiveness of use of data and information to support overall mission-related performance excellence" (p.274). Maurer and Pederson (2006) stressed that leaders within a quality focused organization must learn to manage by data; this requires many kinds of information gathered from multiple indicators. These indicators might include current performance, customer satisfaction concerning school services, indicators that predict customer satisfaction while still in process, the needs of the district's suppliers, or the morale and the well being of the workers (Neuroth, 1992). Reviewing data is critical to CQI and the Baldrige method,

but what is equally important is what data/measurements does an organization utilize and when is this data reviewed. “Waiting until the year is over to discover problems is too late to ensure that goals and objectives will be met for that year. Worse, there is no way to make midcourse corrections to improve the chances of meeting the goals” (Byrnes & Baxter, 2006, p.4). The leader is responsible for creating and protecting processes that track goal achievement.

When implementing the CQI process, each system within the district must utilize the same basic cycle of improvement; this is the Plan, Do, Study, Act (PDSA) cycle. Baldrige in Education explains that systems exist at the student, classroom, department/grade, building, and district levels. Maurer and Pedersen (2004) wrote, “Continuous-improvement school districts…use this same plan-do-study-act template for all of their students and stakeholder needs. Not only do they consider the needs of students currently enrolled in their schools, they also anticipate the needs of their future customers” (p. 16).

The PDSA cycle is the driving force within each system without it the process of continuous improvement cannot exist. Byrnes and Baxter (2006) described the PDSA cycle as, “a seven-step quality improvement process that eliminates the problems provided the true root cause is understood” (p. 190). Byrnes and Baxter continued by breaking down the PDSA cycle into a seven step process. As data analysis drives improvement and produces information for next steps, the PDSA cycle begins. During the Plan stage, organizations must define the problem, assess the current situation or process, analyze the root cause through 360 degree data gathering, and write an improvement theory. Stage two is the Do stage; organizations put the plan into action by testing or implementing the theory which leads to stage three, Study. During the Study stage, organizations use result data to determine if the theory did work and how it might be improved upon. The results data may come from a variety of sources both quantitative and

qualitative. The fourth, but not final, stage is Act. During the Act stage organizations use the information gathered from the Study to improve, standardize, or abandon the theory. In the purest form of CQI the Act stage should lead to a new and improved Plan and the cycle begins again (Byrnes & Baxter, 2006).

The PDSA cycle is an excellent example of what Morgan (1997) described as double-loop learning when organizations "examine the status quo and consider alternative modes of operation. They encourage us to understand key organizational attributes from the standpoint of a new frame" (p. 93). It is important to understand that organizations must review *all* data during the Study stage not just achievement data and not just the *pats-on-the-back* that may come from stakeholders. "Quality organizations also learn the value of complaints. Complaints provide insight into satisfaction—both satisfaction levels and areas of satisfaction. Schools committed to continuous improvement have a process in place to respond to complaints and use the data they collect on complaints to improve their service to students" (Maurer & Pedersen, 2004, p. 16). A true 360-degree assessment/feedback process utilizes all of the data.

In a school setting data is kept on many different topics from attendance to discipline to performance levels. The data can be disaggregated to indicate to schools how certain groups of students are performing. Strategically planning for change must be motivated by data, both quantitative and qualitative. It is the gathering and reviewing of data that allows each of the seven categories of CQI to support and influence one another (Baldrige in Education, n.d.). In the field of education it is the success of the student measured through achievement, mirrored with comprehensive, 360 degree stakeholder feedback, which generates the needed data. This data represents the quality of the educational product. If the data indicates a need for change then the decision maker or decision making entity/committee proctors the needed changes through

collaborative problem solving (Sutherland, 2004). Yukl (2006) wrote, "A change program is less likely to be successful if top management tries to dictate in detail how it will be implemented in each part of their organization. Supporters in key positions should be empowered to implement it in their own way" (p. 294). How do building leaders empower workers in key positions? According to Sutherland (2004), data mixed with constructive collaborative conversations is the key; not only is the data critical, but so is the process. In reaching their goals, Sutherland emphasized the importance of organizations having discussions and arguments that surround the data.

The actions taken and further plans made through the PDSA will continue to nurture a culture of change. These changes may mean more individualized instruction, more frequent and difficult assessments, or curriculum aligned to national grade level expectations; all of which may indeed produce an increase in achievement but may not truly stimulate change at the root of the organization (Nueroth, 1992). Educational leaders and leadership teams must fully comprehend their job to team build, to produce and disperse relevant data, and to guide the individuals that make up the organization toward making the most effective decision about how to initiate needed change (Obisesan, 1999).

Faculty/Staff Focus

Faculty/Staff Focus is often referred to as the Human Resource Development and Management category depending on which researcher one reads. Nueroth (1992) stated that the Human Resource Development and Management category "examines the key elements of how the district develops and realizes the full potential of the work force to pursue the district's quality and performance objectives. Also examined are the district's efforts to build and maintain an environment for quality excellence conducive to full participation, and personal and

organizational growth" (p. 47). Brown (2006) broke this category down into three specific components; work systems, employee learning and motivation, and employee well-being and satisfaction. Brown listed multiple indicators of how an organization can measure the degree to which they meet each of these three components.

When organizations review their work systems, Brown (2006) suggested that organizations avoid using just any new management processes that may come along, but instead, mold their current human resource system to the culture of the organization focusing on the organization's mission. Organizations should create incentive systems that celebrate and compensate workers for high levels of performance. Brown continued by emphasizing that organizations need to thoroughly screen applicants, as well as promotion candidates, not only for skills and knowledge, but also for alignment between the candidates work processes and organizational values. Lastly, Brown suggested designing jobs that promote collaboration and creativity and which align with the organization's vision.

Employee professional development was a critical component for an organization's success; as an organization reviews its processes for employee learning and motivation, Brown recommended organizations invest as much as five percent of their total payroll value toward professional development and worker training. A focus on adequate training supports workers and encourages their efforts to reach their highest level of performance. Optimal professional development was derived from training that was specific to each individual job or process and was designed for those individuals who will be performing these jobs and based upon their needs and feedback (Brown, 2006). Finally, when reviewing employee well-being and satisfaction, Brown suggested, "Focus on making your organization a great place to work; establish goals for safety and employee satisfaction based on world-class companies; implement a prevention-based

approach to safety and employee health…and frequently collect data on a wide variety of measures of employee satisfaction" (p. 40-41). It was also vital that organizations stress the importance of individuals personal/family lives in order to build moral and sustain a devoted and diverse workforce.

Reflective of Brown's suggestions, Yukl (2002) described one of three primary effective leadership behaviors as relations-oriented behaviors. These are behaviors that, "included showing trust and confidence, acting friendly and considerate, trying to understand subordinate problems, helping to develop subordinates and further their careers, keeping subordinates informed, showing appreciation of subordinates' ideas, and providing recognition for subordinates' contributions and accomplishments" (p. 53). Within the process of CQI organizations must develop a team concept in order to truly collaborate and maximize their effectiveness (Katzenbach and Smith, 1993). A team's performance includes both individual results and what we call "collective work-products" simply stated, a team is more than the sum of its parts" (p. 112). Collaboration is a key component to an effective team. True collaboration requires trust, and trust is difficult to establish. Individuals must have trust in order to depend on each other. Katzenbach and Smith (1993) and Lencioni (2002) agreed that trust is primary to building a team.

As educational accountability increases the ability and desire of individuals to trust one another is threatened and leaders must strive to strengthen the level of trust. Trust can be strengthened through mutual accountability. Lencioni described accountability as "the willingness of team members to call their peers on performance or behaviors that might hurt the team" (p. 212). Lencioni continued, building trust required team members to have a deep understanding of one another and their individual attributes. This understanding broadens

through shared experiences and opportunities. In other words, educational entities/organizations wishing to build true team efficiency and effectiveness through a focus on collaboration and human resource management must be willing to invest time and energy into the developmental process of team building and improving worker morale and satisfaction. Baldrige in Education (n.d.) stressed organizations must view the systems as teams that work within it and continue strategic planning that utilizes faculty/staff input and participation.

Yukl (2002), DuFour and Eaker (1998), and Byrnes and Baxter (2006) emphasized the need for a common vision developed collaboratively. The school's vision should carry, "…enthusiasm, deep desire, and willingness to do whatever it takes to achieve it" (Byrnes & Baxter, 2006, p. 46). All stakeholders must have played a part in creating the school's vision, Bolman and Deal (2003) wrote, "A vision needs to address both the challenges of the present and the hopes and values of the followers" (p. 362). A leader creates the vision through collaboration. The established vision must help the educational organization meet the increased demands of a fearful public and accountability focused federal and state legislatures. Gardner (2000) added that leaders were essential parts to the system and subject to the same forces that the system and the workers within it were subject. The process of CQI helps organizations recognize these forces and create processes that guide them toward continuous improvement.

Process Management

However one may choose to view an organization may not be as important as their taking the *time* to view the organization in order to improve. DuFour and Eaker (1998), Maurer and Pedersen (2004), Byrnes and Baxter (2006), all supported the importance of creating an organizational profile: an understanding of how the organization works and what needs to be done to improve it. Yukl (2002) described the organization metaphorically with the use of an

organizational life cycle that he compared to that of a biological organism and emphasized the importance of studying the organization in the last stage of development to keep it from *dying.* Yukl (2002) wrote, "The success of this effort will determine whether the organization declines or is revitalized" (p. 38). Schlecty (2000) wrote almost a step-by-step guide to implementing change at the district level and strongly believed in the Baldrige approach to implementing change and incorporating Continuous Quality Improvement into the actions of the district and eventually, each individual building.

Creating organizational processes may not be as simple as it sounds because it involves change. Kelly (2007) wrote, "…the structure of education has remained basically unchanged for over 100 years. It is producing what it was designed to produce, and if everyone in the existing system performs up to capacity, there can be no more than marginal improvement in that system" (p. 152). Change within a culture requires that the leader play a prominent role by "walking the talk" described by Kilmer (2000) as "when a person's expressed values and assumptions are consistent with how he or she behaves" (p. 90). This was often difficult for leaders to do especially if a competing culture already existed within the organization. Schein (2000) stressed that new directions or values implemented within an organization must be compared and contrasted with current, established organizational vision and values. According to Deming's guides for school based models, educational organizations must structure management to accomplish change, or in this case, transformation. "Educational leaders must move toward processes that are geared toward problem prevention. Everyone in the system is responsible for helping to bring about the transformation" (Terry, 1996, p. 6). Transformation was most effectively brought about by management by fact utilizing measurement information data and analysis (Karathanos & Karthanos, 1995). What, then, is process management?

"The main vehicle employed to ensure quality in products and services is process management which is mostly about the prevention of errors or the prevention of waste" (Maguad, 2003, p. 415). Baldrige in Education (n.d.) defines process management as "key to improving organizational performance is the ability to identify key processes and manage them so that student and stake holder requirements are met consistently" (p. 4). Byrnes and Baxter (2006) specified these key processes in two categories: learning centered processes which included curriculum, instruction, assessment, and special education, and support processes such as custodial, transportation, or administrative services. Brown (2006) added that process management was the vehicle to improvement of key work processes. This improvement was accomplished by how an organization controls, manages, and completes work. Brown (2006) went on to state that the importance lays in the consistency of how the work is done, which required controls, and allows the organization to view and analyze its self. Process management is the vehicle of CQI implementation.

CQI approaches each setting as a system and the district as an interweaving series of systems where all participants take on the role of leader, worker, and customer, depending on which system is being reviewed (Brown, 2006). Creating processes within these systems required collaboration and commitment from all stakeholders (Davis, 2003; DuFour & Euker, 1998; Yukl, 2002). All stakeholders must play a part. Schlecty (2000) wrote, "Teachers will not be inspired by goals like reducing dropout rates or improving test scores. They will, however, respond to the challenge to invent schools in which both teachers and students have increased opportunities for success" (p. 191).

Crucial to organizational improvement was the utilization of the same process improvement strategies throughout the organization from the individual to the Board of

Education (Siri & Miller, 2001). Siri and Miller continued "Principals model the use of quality tools and data analysis in staff meetings. They track the results of the students and involve teachers as leaders of their learning processes" (p. 14). Teachers peer share best practices and data that indicate the success of these practices. School level administrators share results and information with district-level managers and these practices are also displayed by district superintendents and the board of education when reporting progress toward district goals to parents and patrons. Byrnes and Baxter (2005) added that a critical component of maintaining consistency throughout the organization is the utilization of the Plan-Do-Study-Act cycle for continuous process improvement.

Byrnes and Baxter (2005) described the Plan-Do-Study-Act cycle (PDSA) as an improvement process developed in the 1920s by Dr. William Shewhart, popularized by Deming, and vital to achieving performance excellence. PDSA is a:

> seven-step quality improvement process that eliminates problems provided the true root cause is understood. P = Plan (four steps—identify the opportunity for improvement, assess the current situation, analyze root cause, write an improvement theory), D = Do (put the improvement theory into practice), S = Study (analyze the results from the improvement theory), A = Act (make decisions about expanding the improvement to the whole system; go back and understand the root cause, or move to a new improvement opportunity. (Byrnes & Baxter, 2005, p. 190)

The structured PDSA process produces better results quicker than unstructured processes through the use of graphical techniques. PDSA utilizes those involved in the work and recognizes these individuals as having the best opportunity to resolve the problem because they do the work and know the job (Byrnes & Baxter, 2006).

Baldrige in Education (n.d.) indicated that not only is the PDSA cycle critical within process management, but should also be utilized to audit the process management system itself. DuFour and Eaker (1998), Maurer and Pedersen (2004), Byrnes and Baxter (2006), and Yukl (2002) all emphasized that studying the organization is a critical component to the improvement, or even survival, of the organization. Byrnes and Baxter (2006) recommended that an organization, "use a self-assessment approach to identify the gaps in efficiency and effectiveness" and use it as, "a guide to teach you to align and integrate all aspects of your system" (p. 14). Brown (2006) listed six tasks that organizations should perform when evaluating processes:

> Identify and document major support processes, define internal customer requirements for support processes, establish process measures and service standards and monitor performance against those standards, evaluate and improve support processes and apply benchmarks obtained from other organizations where appropriate, and employ a systematic approach to financial management and emergency planning. (p. 44)

Byrnes and Baxter (2005) added that key requirements must be meet by all process designs. These designs must include implementation, training, and measurement plans. Karathanos and Karathanos (1995) stated that it is critical that processes be reviewed by organizations to determine if they are getting the desired results.

Results

Baldrige in Education (n.d.) described results as "the proof that what an organization identifies as important is being accomplished and success overtime is evident" (p.3). The results of organizational processes are not only indicators of what was accomplished or learned, but are also indicators of how organizations learn. This is critical because as knowledge of the world

increases exponentially, the need for organizations to create knowledge grows as well. Patton (1997) wrote that knowledge use is a major challenge facing organizations today during an age of information and communication, "information leads to knowledge; knowledge reduces uncertainty; reduction of uncertainty facilitates action; and action is necessary to the accumulation of power" (p. 347). Coghlan and Brannick (2005) insisted that the ability to create knowledge may indicate an organization's ability to survive in a world that doubles the amount of information it has every three to four years "the development and dissemination of knowledge are what will separate successful from less successful organizations in the coming years" (p. 8).

"The term *learning organization* has been used to describe organizations that learn rapidly and use the knowledge to become more effective" (Yukl, 2006, p. 295); over the last ten years, new definitions of learning have emerged. Much like individuals, organizations are learning new ways of doing business (Morgan, 1997). Gathering the information that allows organizations to learn requires collecting and analyzing results. Results are the most important of the seven categories of Continuous Quality Improvement according to Brown (2006). Results are the product of your system, and include students learning results, student enthusiasm for learning, behavior results, attendance/tardy results and student and stakeholder satisfaction (Byrnes & Baxter, 2005). "These data are used to prepare for the next strategic planning cycle and to inform leadership and stakeholders how effective and efficient the system was…By the time results are collected, it is too late to build in quality. Students will be gone, and opportunities for improvement will be lost with that group" (Byrnes and Baxter, 2005, p.9). This is why the gathering of in-process data, through utilization of the PDSA cycle, is such a critical component of organizational improvement. Data collection, leading toward data-based decision making, was the primary key to success within any organizational process (Lehman, 2006).

Organizations must focus on their results; in the case of education a large portion of those results are student achievement results. Unless organizations are brave enough to look, analyze, and own their students' achievement results, they will never be able to make informed decisions about how to improve instruction so future students can be more successful (Byrnes & Baxter, 2006).

Brown (2006), Byrnes and Baxter (2005, 2006), Kelly (2007) and Obisesan (1999), all emphasized the importance of looking at multiple results throughout all of the systems. Brown (2006) listed six types of results that organizations must focus on: product and service outcomes, financial and market results, organizational effectiveness results, human resource results, customer-focused results, and leadership and social responsibility results. Byrnes and Baxter (2005) listed similar but more specific items:

> Student learning; student-stakeholder-focused feedback, such as satisfaction, dissatisfaction, perceived value, persistence and positive referrals; budgetary, financial, and market (including cost containment, and measures of market performance such as increase in enrollment); faculty and staff, such as work system performance and effectiveness, education and training, well-being, satisfaction/dissatisfaction; organizational effectiveness (performance of learning-centered processes—capacity to improve student performance, responsiveness to students and stakeholder needs, school climate and support processes—cycle time, supplier and partner performance, and other measures of effectiveness and efficiency); and leadership and social responsibility (accomplishment of organizational strategy and action plan ethical behavior, stakeholder trust, fiscal accountability, regulatory, safety, accreditation, and legal compliance, and organizational citizenship). (p 25)

According to Maguad (2003) the improvement process begins with the gathering, analyzing, and establishing baseline data for all systems; however, the continuous collection of data and evaluation of results is the key to continuous improvement.

Conclusion

When analyzing an organization and its effectiveness one must consider how that organization learns. How an organization learns is critical in identifying, analyzing, and solving organizational problems as well as creating knew organizational knowledge. "An organization cannot create knowledge on its own without individuals. It is, therefore, very important for the organization to support and stimulate the knowledge-creating activities of individuals" (Nonaka & Takeuchi, 1995, p. 239). Nonaka and Takeuchi (1995) defined organizational knowledge creation as a method "to create new knowledge, disseminate it throughout the organization, and embody it in products, services, and systems" (p. viii). Coghlan and Brannick (2005) reinforced the need for embodying knowledge creation within an organization; they described it as a goal to "forge a more direct link between intellectual knowledge/theory and action" (p. 14). Patton (1997) added that organizations must develop a culture of learning when discussing program evaluation and that the evaluation itself must address the training of participants in logic and skill of the evaluation process. Thus organizations must not only create knowledge, but must also create a learning culture and train members of that culture to evaluate learning.

Change is always difficult and often painful. In this era of accountability, educational organizations find themselves in the midst of change or needing to undergo change in order to become or remain effective. When beginning the change process leaders must first determine a need and plan for change. Leaders can act as the change catalyst. To be a catalyst for change requires courage, the courage to initiate ideas, to relinquish control to followers in order for them

to be the change engine, and to move forward. Kaser, et al. (2002) wrote, "Unless you are content to be paralyzed by your fear or to attempt escape to a more peaceful place and time, you have no choice other than to move ahead. Move ahead despite the continuous ambiguity, continuous change, and continuous confusion" (p. 19). Both Yukl (2006) and Schlecty (2000) place a great deal of importance on the leader and his/her approach to bringing about organizational change. Gioia and Thomas (1996) stated that strategic change is a revision in schemes and how they are interpreted not only by leadership, but as well as by constituents throughout the organization (p.372). Coghlan and Brannick (2005) stated that change is a way of organizational life and that leaders must become prepared to deal with change issues; this is not change that occurs once every several years, but rather "…something that happens daily"(p.11). The process of Continuous Quality Improvement (CQI) may be that engine that allows for structured dynamic change.

Kelly (2007) wrote, "Leaders must recognize the indisputable fact that current school reform policy, no matter how well intended, has failed to bring about increased student achievement. Leaders at all levels must recognize, practice, and advocate W. Edwards Deming's system of continuous improvement, and must advocate and model continuous self-assessment and self-improvement" (p. 152). Leaders must view excellence as a choice and expect excellence at all levels from the individual student to the state board of education Kelly continued stating that school improvement is not happening because the present system prevents it; he stated that the educational structure has not changed in 100 years and that this system produces what it is designed to produce and that is all that it will continue to produce. Kelly indicated that the problem in school reform is not a lack of concern or a lack of good intentions. The problem is at the policy level, and it is there one must start to seek solutions. Constructive

policies that empower teachers to teach and students to learn and that restructure the system to remove obstacles to improvement must be enacted and implemented. Present policies defeat their own purpose and become obstacles to improvement, while constantly driving up costs, and must be abandoned and replaced with the proven systems ideas of Deming; “when these principles are applied to education, we will experience a renaissance in learning” (Kelly, 2007, p. 152).

CHAPTER THREE

Research Design and Methodology

Introduction

Change remains a constant within any organization. Change may have occurred due to organizational leaders recognizing a need for change or it may have occurred without any intention and often without notice until the effect of that change had already been experienced. Change has frequently been described as inevitable and the ability of individuals and organizations to deal with change has often been used as a measure of success. The field of education is not immune to change; change factors and accountability requirements from the federal and state governments have stemmed recent educational change in the United States. According to Byrnes and Baxter (2006), these requirements, "…resulted from increasing discontent from the corporate world, politicians, taxpayers, and others over the lack of basic skills and abilities students have when they leave our public educational system" (p. 2). This renewed focus on accountability and achievement has educational leaders across the nation striving to find new approaches to remedy many of the issues facing education and methods of instilling quality as a process within their buildings.

When writing about the No Child Left Behind Act, McElroy (2005) indicated that most school administrators agree that change focused on school improvement was needed not only to assist school districts trying to meet the high stakes requirements that have been placed upon them, but, most importantly, to help better prepare American children for the global society they face. How to incorporate this change and bring about improvement has been the question on many administrators' minds and several school leaders began looking at the world of business for clues to possible methods of improvement. According to Neuroth (1992), what many in the

business world had embraced were approaches that focused solely on quality, quality within every aspect of the day to day functioning of these organizations. These approaches to quality were embodied by W. Edwards Deming's work instilling his Total Quality Management (TQM) process in post World War II Japan. During the mid to late part of the past century Japan quickly took control of the global corporate world. Terry (1996) stated that Japan's business leaders insisted the rise of the Japanese as a global corporate power would not have happened without Deming's work. How then does that relate to the American Educational System? According to Terry (1996), American schools are confronted with similar problems that plague American corporations, "In order to improve schools we must be committed to high performance in the processes and products…When Deming's philosophy is applied to educational organizations, it provides a path to employee empowerment and educational improvement" (p. 4).

Deming's TQM approach was designed to address the barriers to change and teach organizations to learn. TQM was based on three basic principals: systems thinking, management by data, and continuous learning. As American businesses adopted these principals and techniques, the federal government adopted a set of criteria to assess quality in business, and established these as criteria to help American businesses regain a competitive edge in the global economy. These criteria were indicators of success, and a coveted award was established in 1987. Posthumously named for former Secretary of Commerce Malcolm Baldrige, the Baldrige Award for Performance Excellence has become the goal of many businesses, as well as educational institutions, and a prestigious measure of success.

Purpose of the Study

As educational researchers and practitioners strive to improve instructional strategies and student achievement, programs and processes are implemented with the goal of maximizing

student potential. Deming's original process of TQM has been adapted to fit individual settings. By utilizing the components from the original process of TQM the process of Continuous Quality Improvement (CQI) has evolved. CQI employs eleven Core Values and is described through seven characteristics. The eleven Core Values are: Visionary Leadership; Learning-centered Education; Organizational and Personal Learning; Valuing Faculty, Staff, and Partners, Agility; Focus on the Future; Managing for Innovation; Management by Fact; Public Responsibility and Citizenship; Focus on Results and Creating Value; and Systems Perspective. The seven characteristics include: Leadership, Strategic Planning, Student and Customer Focus, Information and Analysis, Faculty and Staff Focus, Process Management, and Business Results. The focus of this study will specifically be on the seven characteristics of CQI.

Neuroth (1992) stated the process of CQI spawned from business practices and is recognized by the federal government as being best practices for insuring quality, efficiency and improvement within business. First described by Senator Malcolm Baldrige, businesses that displayed these characteristics were recognized by the federal government for their accomplishments. Neuroth (1992) explained how these same characteristics have spilled into the education realm so schools may also have the opportunity to earn the coveted Malcolm Baldrige Award. CQI utilizes seven characteristics: Leadership, Strategic Planning, Customer and Market Focus, Information and Analysis, Human Resource Focus, Process Management, and Business Results. By incorporating a deliberate focus on these characteristics into a systems approach to quality; school leaders may more easily be able to truly affect building performance indicators in a positive manner by affecting teacher instructional processes and morale. The process of CQI needs to be studied to examine its effectiveness within the educational setting as well as any potential influence that it may have on education as a whole. The purpose of this study was to

determine the effect implementation of CQI had on the perceptions held by teachers within the district studied concerning each of the seven categories of CQI. The superintendent began the implementation by modeling behaviors and establishing goals for implementation throughout the district. In the Fall of 2005 discussions began about schools that may volunteer to implement the CQI process in the 2006-2007 school year. Resources were identified to assist these schools with their implementation and four schools volunteered to pilot the CQI process in 2006-2007. These included two elementary schools, one middle school, and one high school. It is important to note that data from only three of the four implementation schools was utilized in this study. In order to determine potential change in perceptions this study needed an already existing complex instrument to measure the potential change. Thus, this research utilized the MSIP Faculty Survey as a basis for determining what, if any, affect the implementation of CQI had on teacher perceptions within the district. The MSIP Faculty Survey has been administered annually since 1998 and is rich with obvious and potential data that could easily fuel any number of studies; completion of the survey is a state mandates for all certified staff.

If the affect of implementing the CQI process proved as positive as proponents would argue and as successful as was experienced in the business world, then the eventual goal would be to spark similar studies in other schools. It was the purpose of this study to determine the effect that implementing CQI has had on teacher processes and perceptions within the district. This was accomplished by studying a school district well into the implementation of CQI, utilizing state administered surveys, and focusing on the results of these surveys and how they differ between schools that have implemented CQI versus schools within the same district that have not implemented CQI. Concurrently impacting how educational leaders might implement

change and improvement within their schools; thus this study was designed to increase a volume of knowledge that may affect education on a much grander scale.

Research Questions

This study will address the following seven research questions that align with the seven characteristics of CQI:

1. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Leadership* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Leadership* within the district?
    b. As compared to perceptions of teachers within the building prior to implementation?
2. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Strategic Planning* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Strategic Planning* within the district?
    b. As compared to perceptions of teachers within the building prior to implementation?
3. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Student and Customer Focus* within schools implementing CQI:

a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Student and Customer Focus* within the district?
b. As compared to perceptions of teachers within the building prior to implementation?

4. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Information Analysis* within schools implementing CQI:
   a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Information Analysis* within the district?
   b. As compared to perceptions of teachers within the building prior to implementation?
5. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Faculty and Staff Focus* within schools implementing CQI:
   a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Faculty and Staff Focus* within the district?
   b. As compared to perceptions of teachers within the building prior to implementation?
6. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Process Management* within schools implementing CQI:
   a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Process Management* within the district?

b. As compared to perceptions of teachers within the building prior to implementation?

7. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Results* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Results* within the district?
    b. As compared to perceptions of teachers within the building prior to implementation?

Design of the Study

This was a comparative study utilizing a quasi-experimental design that focused on the effect implementation of the seven components of Continuous Quality Improvement (CQI) had on teacher perceptions of those seven components within buildings that implemented CQI (treatment group) as compared to similar buildings that did not implement CQI (comparison group). This study utilized schools that were determined to be most similar within the district based on size of population and socio-economic status of the students within the buildings. The annual MSIP Faculty Survey was the data basis of this research. The MSIP Faculty Survey consisted of 103 individual questions administered to all certified staff and 100% compliance was an expectation of the State of Missouri.

The research was conducted as a primarily quantitative study centering implementation of CQI within the district. The study focused on the comparison of teacher perceptions between teachers in schools that have implemented CQI versus schools that have not implemented CQI. These comparisons were based on the seven categories of CQI utilizing teacher responses to the

MSIP Faculty Survey. In the Spring of 2005 the superintendent was hired and immediately began using the vocabulary of CQI and discussing the seven broad categories that are the basis to the process. According to Schlechty (2000) utilizing a common vocabulary was one of the primary steps to implementing a change program or process. The superintendent very openly, but very gradually, shared that he intended to implement this process throughout all the district systems, from the board of education to the individual student. The superintendent continually voiced the need for this process to go slowly in order to more deeply root the process within all systems of the district.

The research for this study was designed to measure and determine any significant change in teacher perceptions of: *Leadership, Strategic Planning, Student and Customer Focus, Information and Analysis, Faculty and Staff Focus, Process Management,* and *Results* within each of the four schools that implemented CQI by comparing those same perceptions with four similar schools within the district that did not implement the components of CQI. The study compared MSIP Faculty Survey change in results from the school year prior to implementation (2006) against data after a year of implementation (2007) within implementing buildings. This data was then compared to that of the similar schools to determine if the implementation of CQI resulted in a significant change in perception different from that of the non-implementing school. If the effect of this program proved as positive as proponents would argue, the eventual goal would be to spark further research in other schools so improvement may be mirrored in any school through the implementation of CQI. This study was also designed as a catalyst for further study to increase a volume of knowledge that may impact education on a much larger scale then just one school district. White (2005) stated that replication is one of the five Rs of data analysis used to share the wealth of knowledge and expertise into every school. To replicate, one must

utilize research methodologies that are as structured and representative as possible and that most greatly reduce researcher bias supporting the use of quantitative research techniques. Gay and Airasian (2000) wrote, "The quantitative researcher wants to generalize to a larger population, while the qualitative researcher wants to get the deepest understanding of the single setting studied" (p. 209). Since breadth within the research was critical to truly understanding the effects CQI may have on the Your Town School District, quantitative methods were required in order to maximize the study's impact.

This research was quasi-experimental utilizing a quantitative focus on comparative data between similar schools. The determination of similarity was partially based on research findings of Dr. Michael Pepper (a pseudo-name), the Coordinator of Research and Development for the district. Dr. Pepper used number of students, percentage of students qualifying for free or reduced priced meals, and percentage of minority students to group all of the approximately 50 schools within the Your Town District with schools within the district and with similar schools across the state. The comparison to like schools within the district was used for this study. This research was an *in-house* project developed to assist the district in comparing itself with like buildings across the state. Each similarity group contained ten schools; schools within the district may or may not have been identified in the same group as being the most similar. Two schools were chosen from each division for comparative analysis; one school that had implemented CQI as compared to one school that had not implemented CQI but qualified as being the most similar within the district.

By utilizing a quantitative approach, the intent of the study was to generate data in the form of hard numbers that provide evidence of the effectiveness of CQI in positively affecting teacher perceptions. Prior research existed that had utilized quantitative data within program

evaluation. Reutzel, Fawson, and Smith's (2006) study: *Words To Go!: Evaluating a First-grade Parent Involvement Program for "Making" Words at Home*; and Warren, Jenkins, and Kulick's (2004) study: *High School Exit Examinations and State-level Completion and GED Rates, 1975 Through 2002* both utilized quantitative procedures to evaluate an educational program. In each case the research was not only designed to gain insight into what was happening within that setting, but to foster far-reaching implications of how these programs may affect all students. The ultimate goal of this current research was to catapult further study into the effectiveness of CQI in school improvement as a whole, not simply what is going on at Your Town.

Population and Sample

Population. The population utilized in this study consisted of anonymous survey results of teachers employed at three schools implementing CQI and teachers employed at three schools not implementing CQI. In 2006 the schools implementing CQI had approximately 143 teachers take the survey while the non-CQI schools had 172; in 2007 the numbers of teachers taking the MSIP Faculty Survey were 143 and 169 respectively. In order to protect and maintain privacy for the district and the schools involved in this study; the name of both the district and the individual schools have been changed. The schools chosen were: (See Table 1)

Table 1

Schools Utilized Within This Study

Schools Implementing CQI	Schools Not Implementing CQI
North High School	Coolidge High School
Sutton Middle School	Patton Middle School
Moon Elementary School	Geoffrey Elementary School

Sample. The quantitative data utilized for this study was obtained from the Missouri Department of Elementary and Secondary Education (DESE). The selected district is a large urban school district serving 24,000+ students within 38 elementary schools, 9 middle schools, and 5 high schools as well as several alternative schools and programs. These samples were the results of the annual Missouri School Improvement Faculty Survey from 2006 as compared to that same survey in 2007. The schools selected for this project were grouped as having similar demographic information with other schools throughout the state. North High School (CQI) was paired with Middle High School (non-CQI), Sutton Middle School (CQI) was paired with Patton Middle School (non-CQI) and Moon Elementary School was paired with Geoffrey Elementary School for the item comparisons.

Data Collection

Results of the annual MSIP Faculty Survey are available on-line to the school districts throughout the state. Gatekeeper permission from the district was required in order to utilize this data within a university research project. That data from each of the schools' 2006 and 2007 MSIP Faculty Survey results was utilized in this analysis. Permission to utilize the data from the district was obtained by the written request of the researcher and granted by the Executive Director of Accountability and Related Federal Programs for the district.

Instrument. The Missouri School Improvement Faculty Survey consisted of 103 items in 2006 and 104 items in 2007. The Missouri Department of Elementary and Secondary Education required the Faculty Survey be administered annually to all certified staff. The MSIP Faculty Survey is reviewed annually by the MSIP Survey Committee and the focus of the survey is adjusted with each cycle. A Crombach Alpha test of reliability was performed on each item

annually and recorded over the length of time the item is used in the survey; some items are used in multiple cycles.

Dr. Keith Jamtgaard (personal communication, November 7, 2007), Research Associate for the Missouri Office of Social and Economic Development Analysis, has been on the Missouri Department of Elementary and Secondary Education MSIP Survey Committee for the last two MSIP cycles. According to an interview with Dr. Jamtgaard, the survey is reviewed and minor changes are implemented annually; however, the survey is completely reconfigured every cycle. These reconfigurations reflect what the most current trends are in education and are intended to measure the extent to which school districts are utilizing current research. At present, Missouri is in the fourth cycle of the Missouri School Improvement Program. This most recent cycle concentrates heavily on the research of Dr. Robert Marzano and attempts to determine the extent that Missouri school district utilizes Dr. Marzano's instructional strategies.

The MSIP Faculty Survey consists of 103 items. These items were reviewed by the researcher and grouped into the seven categories of CQI: *Leadership, Strategic Planning, Student and Customer Focus, Information and Analysis, Faculty and Staff Focus, Process Management,* and *Results*. The Research Brief "Examining the Relationship Between School Climate and Student Achievement" the comparative schools lists compiled by Dr. Matt Pepper, and a collaborative review with this study's research advisor Dr. Cynthia MacGregor (personal communication, December 14, 2007) was utilized in the selection process. Once the questions were categorized, the five questions that most closely represented each of the seven characteristics, as defined by the Baldrige Criteria, were chosen for the item analysis. These questions were placed in a document titled: MSIP-CQI Question Index (Appendix A). A match between items from the MSIP 2006 survey results were matched to identical items from the

MSIP 2007 survey results. This established a 35 item subset and comparison for each of the six schools selected. Minor complications resulted in the 2006 survey varied slightly from the 2007 survey; though the wording of the items was identical that item's number may have changed by one digit (i.e. item 95 in 2006 was item 96 in 2007). Both sets of data will be from MSIP Cycle IV. Survey information was not available on a survey by survey (individual basis), but was available by number of responses per category per question.

Data Analysis

The research questions focused on teacher perceptions toward each of the seven categories and identified what, if any, change was recognized between schools that had implemented the CQI process and schools that had not implemented the process. Seventy separate item analyses were conducted to generate the results of this study. Items from the 2007 MSIP Faculty Survey were grouped across all three educational divisions paring schools that implemented CQI and compared them to schools that have not implemented CQI for each of the items selected to determine what if any changes in perception were apparent from teacher responses. In addition, item responses from the 2006 MSIP Faculty Survey were compared to responses from the 2007 MSIP Faculty Survey, within CQI implementation schools only, to determine any change in teacher perception during implementation.

The data that was obtained from the Missouri Department of Elementary and Secondary Education (DESE) web-site has only information concerning the total number of responses in each of the five possible response categories for each of the 35 questions. The response categories were defined as strongly agree, agree, neither agree or disagree, disagree, and strongly disagree for questions numbered 1 through 82. The response categories were defined as regularly, often, occasionally, rarely, and not at all for questions 83 through 103 or 104; survey

items 2006 or 2007 respectively. The value in each category was the total number of responses; the individual survey data was not obtainable. Using the 2007 MSIP Faculty Survey results, the total numbers of responses per category, per question were compiled from those schools that had implemented CQI and were compared to the total responses of the schools which had not implemented CQI.

Additionally, the same process was followed in order to determine change in teacher perceptions from 2006 to 2007 but only within schools that had implemented CQI. Using the total N for each response category a sub-scale score was established. A Chi-square calculation, developed by the University of Kansas and available on that university's website through the psychology department, was performed on the sub-scale scores for the 2006 and 2007 MSIP Faculty Survey (Preacher, 2001). The Chi-square calculation was performed for each of the 35 selected questions to determine what, if any, change occurred within the pattern of responses that would indicate changes in teacher perception. Any significant change in pattern was determined for each of the 35 items utilizing an alpha of .05.

Summary

Chapter Three described the approach to the research design and methodology that were utilized for this study. This chapter also included an explanation of why W. Edward Deming's Total Quality Management descriptors and the process of Continuous Quality Improvement were being utilized in the educational setting. Quantitative research questions were revealed and reasoning for utilizing a quasi-experimental quantitative study was explained. The study's population and sampling techniques were explained, followed by data collection and methods for analysis.

CHAPTER FOUR

Results

Introduction

The purpose of this study was to determine the effect implementation of CQI had on the perceptions held by teachers within a district concerning each of the seven categories of CQI. To fulfill this purpose, the researcher utilized a comparative study with a quasi-experimental design that focused on the effect implementation of the seven components of Continuous Quality Improvement (CQI) had on teacher perceptions of those seven components within buildings that implemented CQI (treatment group) as compared to similar buildings that did not implement CQI (comparison group). This study also compared MSIP Faculty Survey changes in results from the school year prior to implementation (2006) against data after a year of implementation (2007) within implementing buildings.

The population utilized in this study consisted of anonymous survey results of teachers employed at three schools implementing CQI and teachers employed at three schools not implementing CQI. In 2006 the schools implementing CQI had approximately 143 teachers take the survey while the non-CQI schools had 172; in 2007 the numbers of teachers taking the MSIP Faculty Survey were 143 and 169 respectively. This study utilized schools that were determined to be most similar within the district based on size of population and socio-economic status of the students within the buildings. The annual MSIP Faculty Survey supplied the data for this research. The MSIP Faculty Survey consisted of 103 individual questions administered to all certified staff and 100% compliance was an expectation of the State of Missouri.

Data Analysis

The research design was quasi-experimental employing a primarily quantitative approach on studying implementation of CQI within the district. The study focused on the comparison of teacher perceptions between teachers in schools that have implemented CQI versus schools that have not implemented CQI. The study then compared these results to that of the similar schools to determine if the implementation of CQI resulted in a significant change in perception different from that of the non-implementing school. In order to obtain these comparisons the total number or responses from each group of three schools made up the analyzed data.

The data that was obtained from the Missouri Department of Elementary and Secondary Education (DESE) web-site has only information concerning the total number of responses in each of the five possible response categories for each of the 35 questions. The response categories were defined as strongly agree, agree, neither agree or disagree, disagree, and strongly disagree for questions numbered 1 through eighty-two. The response categories were defined as regularly, often, occasionally, rarely, and not at all for questions 83 through 103 or 104; survey items 2006 or 2007 respectively. The value in each category was the total number of responses; the individual survey data was not obtainable. Using the 2007 MSIP Faculty Survey results, the total numbers of responses per category, per question were compiled from those schools that had implemented CQI and were compared to the total responses of the schools which had not implemented CQI.

Additionally, the same process was followed in order to determine change in teacher perceptions from 2006 to 2007 but only within schools that had implemented CQI. Using the total N for each response category a sub-scale score was established. A Chi-square calculation, developed by the University of Kansas and available on that university's website through the

psychology department, was performed on the sub-scale scores for the 2006 and 2007 MSIP Faculty Survey (Preacher, 2001). The Chi-square calculation was performed for each of the 35 selected questions to determine what, if any, change occurred within the pattern of responses that would indicate changes in teacher perception. Any significant change in pattern was determined for each of the 35 items utilizing an alpha of .05. Several of the items utilized had less than 5 responses in more than twenty percent of the cells. This occurred only in the categories of disagree and strongly disagree and was predominantly in the responses from the CQI schools. In order to keep the data as viable as possible these cells were added together during analysis, but the individual responses still appear separately within each table. Tables where cells were combined are indicated within the table as (cells adjusted).

The remainder of this chapter is presented in seven sub-sections based on each of the seven research question. The results of the study, based on data analysis, will be presented in chart form along with a description of the findings. Five questions from the Missouri School Improvement (MSIP) Staff Survey were analyzed for each of the seven categories of CQI: *Leadership, Strategic Planning, Student/Stakeholder Focus, Information and Analysis, Faculty/Staff Focus, Process Management,* and *Results* equaling thirty five individual questions. Two separate analyses were performed for each of the thirty five questions for a total of seventy separate analyses. These analyses were performed at an alpha level of $p = .05$, findings for each of the research questions were considered significant when $p < .05$. Each analysis will appear in chart form including all related data and findings regardless of the level of significance.

For each of the following sub-sections, the questions are listed below and are represented by tables that will appear throughout this chapter as Tables 1 through 35; additionally, Table 36, *Summary of Findings,* is located at the end of Chapters Four and Five to assist the reader. For

each item, the table is a reflection of the comparison of schools that have implemented CQI as compared to schools that have not implemented CQI utilizing the 2007 MSIP Staff Survey results and also reflects staff perceptions within buildings that have implemented CQI by comparing results from the year prior to implementation, school year 2006, as compared to results from the year after implementation, school year 2007. A brief description of the findings precedes the two tables that represent each of the five questions. After each sub-section is a description of the finding results that reflect the entire sub-section. The reader will also find Appendix B helpful at the end of this study. Appendix B is a color matrix titled Summary of Significant Difference that gives a visual perspective to which of the seven categories of CQI saw significant differences from 2006 to 2007 as well as when comparing CQI schools to Non-CQI schools involved in this study.

Leadership

Leadership—Effective leadership is described by Baldrige in Education (n.d.) as "to be effective, leaders must understand the Baldrige model and core values and communicate to the workforce and leadership systems their intention to use that model for assessment and improvement. Leaders need to understand the system and realize that it is their responsibility to share the knowledge and set direction" (p.3). The research question regarding *Leadership* was:

1. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Leadership* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Leadership* within the district?

b. As compared to perceptions of teachers within the building prior to implementation?

MSIP Item 15

For collegiality and professionalism (MSIP item 15); the Chi-square analysis (χ^2) indicated a significant difference between perceptions of teachers working within buildings that have implemented CQI as compared to perceptions of teachers working within non-CQI buildings. Teachers within schools that have implemented CQI tend to more frequently answer this item as agree or strongly agree then do teachers working within non-CQI buildings.

Table 1 similarly reflected a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. The Chi-Square analysis indicated that more teachers within CQI buildings tended to answer this item as neither agree or disagree or disagree after the implementation of CQI.

Table 1

Question 15: Norms for conduct that foster collegiality and professionalism among professional staff and administrators are clear and routinely followed.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 309) = 15.11, $p < .01$]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	51	72	18	2	0	143
2007 Not CQI	41	82	24	12	7	166
Total	92	154	42	14	7	309

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 288) = 11.49, $\underline{p}$ = .01]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	75	63	6	1	0	145
2007 CQI	51	72	18	2	0	143
Total	126	135	24	3	0	288

MSIP Item 31

For teachers encouraged to be instructional leaders (MSIP item 31): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 2) after the implementation of CQI.

Table 2

Question 31: In our school, teachers are encouraged to be instructional leaders.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 309) = 2.92, p = .40]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	80	54	7	2	0	143
2007 Not CQI	84	64	11	5	2	166
Total	164	118	18	7	2	309

2006 CQI Compared to 2007 *CQI* [χ^2 (3, N = 289) = 8.55, p = .04]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	103	40	3	0	0	146
2007 CQI	80	54	7	2	0	143
Total	183	94	10	2	0	289

MSIP Item 32

For fostering a shared belief (MSIP item 32) the Chi-square analysis (χ^2) indicated a significant difference between perceptions of these two groups of teachers. Teachers within schools that have implemented CQI tend to more frequently answer this item as agree or strongly agree then do teachers working within non-CQI buildings.

Table 3 similarly reflected a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. The Chi-Square analysis indicated that more teachers within CQI buildings tended to answer this item as neither agree or disagree or disagree after the implementation of CQI.

Table 3

Question 32: My school's principal fosters shared beliefs and a sense of community and cooperation.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 311) = 12.55, p = .01]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	76	56	5	4	2	143
2007 Not CQI	71	60	19	12	6	168
Total	147	116	24	16	8	311

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 289) = 10.92, p = .01]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	100	44	1	1	0	146
2007 CQI	76	56	5	4	2	143
Total	176	100	6	5	2	289

MSIP Item 35

For the systematic engagement of faculty and staff in discussions about current research (MSIP item 35); the Chi-square analysis (χ^2) indicated a significant difference between perceptions of teachers working within buildings that have implemented CQI as compared to perceptions of teachers working within non-CQI buildings. Teachers within schools that have

implemented CQI tend to more frequently answer this item as agree or strongly agree then do teachers working within non-CQI buildings.

Table 4 similarly reflected a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. The Chi-Square analysis indicated that more teachers within CQI buildings tended to answer this item as neither agree or disagree or disagree after the implementation of CQI.

Table 4

Question 35: My school's principal systematically engages faculty and staff in discussions about current research on teaching and learning.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 311) = 10.21, $p < .04$]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	68	57	12	4	2	143
2007 Not CQI	67	62	14	19	6	168
Total	135	119	26	23	8	311

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 289) = 23.01, $p < .01$]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	106	36	4	0	0	146
2007 CQI	68	57	12	4	2	143
Total	174	93	16	4	2	289

MSIP Item 43

For our principal promotes innovation (MSIP item 43): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 5) after the implementation of CQI.

Table 5

Question 43: Our principal promotes innovation.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 307) = 4.77, p = .19]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	57	66	13	2	2	140
2007 Not CQI	75	61	21	4	6	167
Total	132	127	34	6	8	307

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 285) = 15.93, $p < .01$]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	92	46	5	2	0	145
2007 CQI	57	66	13	2	2	140
Total	149	112	18	4	2	285

The results of this study indicated a significant difference in the perceptions of teachers that work within buildings that have implemented CQI as compared to teachers who work in buildings that have not implemented CQI concerning *Leadership*. Three of the five items used to identify this category indicated that a significantly higher number of teachers answered agree or strongly agree when working within buildings that have implemented CQI as compared to teachers who work in non-CQI buildings. Further, the study indicated that the perceptions of teachers working within buildings implementing CQI significantly changed from the year before CQI implementation to the year after implementation. A larger number of teachers answered all five items as disagree or strongly disagree after CQI had been implemented then did the year prior to implementation.

Strategic Planning

Strategic Planning—According to Baldrige in Education (n.d.) strategic planning is exceedingly valuable. "Critical to this category is that every person in the organization must know the strategic plan and be able to describe how he or she contributes to achieving the plan's goals and objectives" (p.3). The research question regarding *Strategic Planning* was:

2. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Strategic Planning* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Strategic Planning* within the district?
    b. As compared to perceptions of teachers within the building prior to implementation?

MSIP Item16

For teachers involvement in formulating school-wide decisions and policies (MSIP item 16): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 6) after the implementation of CQI.

Table 6

Question 16: Teachers in my school are routinely involved in formulating school-wide decisions and policies.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 311) = 8.39, p = .08]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	44	67	22	7	3	143
2007 Not CQI	39	74	26	22	7	168
Total	83	141	48	29	10	311

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 288) = 18.80, p< .01]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	72	62	10	1	0	145
2007 CQI	44	67	22	7	3	143
Total	116	129	32	8	3	288

MSIP Item 17

For teacher engagement in collaborative problem-solving around instructional issues (MSIP item 17): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more

teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 7) after the implementation of CQI.

Table 7

Question 17: Teachers are routinely engaged in collaborative problem-solving around instructional issues.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 310) = 4.30, p = .37]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	47	72	19	5	0	143
2007 Not CQI	60	82	14	9	2	167
Total	107	154	33	14	2	310

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 289) = 21.20, p<01]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	84	54	7	1	0	146
2007 CQI	47	72	19	5	0	143
Total	131	126	26	6	0	289

MSIP Item 49

For professional development related to the Comprehensive School Improvement Plan (MSIP item 49): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a

significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 8) after the implementation of CQI.

Table 8

Question 49: The professional development activities I attend are related to my district's Comprehensive Improvement Plan.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 307) = 0.57, p = .90]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	62	62	11	3	0	138
2007 Not CQI	77	78	12	0	2	169
Total	139	140	23	3	2	307

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 283) = 9.53, p = .02]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	86	54	5	0	0	145
2007 CQI	62	62	11	3	0	138
Total	148	116	16	3	0	283

MSIP Item 53

For teacher perceptions on a clearly defined mission (MSIP item 53): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 9).

Table 9

Question 53: The mission of this school is clearly defined.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 309) = 5.94, p = .11]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	80	54	7	0	0	141
2007 Not CQI	83	74	6	2	3	168
Total	163	128	13	2	3	309

2006 CQI Compared to 2007 CQI [χ^2 (2, N = 287) = 1.95, p = .38]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	93	49	4	0	0	146
2007 CQI	80	54	7	0	0	141
Total	173	103	11	0	0	287

MSIP Item 76

For teacher perceptions on systematic collaboration across subject areas (MSIP item 76): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 10) after the implementation of CQI.

Table 10

Question 76: There is a systematic collaboration across subject areas in our building.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 308) = 4.04, p = .40]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	34	61	28	14	3	140
2007 Not CQI	49	78	20	17	4	168
Total	83	139	48	31	7	308

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 286) = 18.08, $p < .01$]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	62	63	14	7	0	146
2007 CQI	34	61	28	14	3	140
Total	96	124	42	21	3	286

When reviewing the results from the category *Strategic Planning* there is no indication of a change in perception between teachers in buildings that have implemented CQI versus the perceptions of teachers within buildings that have not implemented CQI. Four of the five items utilized for this sub-section of the study indicated no significant difference. However, four out of the five items indicated a significant difference in the perceptions of teachers within buildings that have implemented CQI from the year prior to implementation as compared to post-implementation. For each of the four items where a significant difference was noted; teachers more frequently marked these items as neither agree or disagree, disagree, or strongly disagree on the 2007 data after a year of implementation, which would indicate a change in teacher perception within those buildings concerning *Strategic Planning*.

Student and Customer Focus

Student and Customer Focus—Baldrige in Education (n.d.) determined that utilizing a student and stakeholder focus required "engaging students in the educational planning and decisions that affect them will have the largest payback in terms of performance and a positive organizational climate" (p. 3).The research question for *Student and Customer Focus* was:

3. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Student and Customer Focus* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Student and Customer Focus* within the district?
    b. As compared to perceptions of teachers within the building prior to implementation?

MSIP Item 18

For teacher perceptions on effective vehicles for parent, community, and school communication (MSIP item 18): the Chi-square analysis (χ^2) indicated a significant difference between perceptions of these two groups of teachers. Significantly more teachers working within buildings that had not implemented CQI tended to answer this item as neither agree or disagree, disagree, or strongly disagree then did teachers working within buildings that had implemented CQI (Table 11). However, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007.

Table 11

Question 18: Effective vehicles are in place for parents and community to communicate with the school.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 312) = 7.73, p = .05]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	61	67	15	0	0	143
2007 Not CQI	55	89	18	6	0	169
Total	116	156	34	6	0	312

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 289) = 6.77, p = .08]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	79	56	9	2	0	146
2007 CQI	61	67	15	0	0	143
Total	140	123	24	2	0	289

MSIP Item 26

For teacher perceptions on valuing student opinions by teachers and administrators (MSIP item 26): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 12).

Table 12

Question 26: Student opinions are valued by teachers and administrators.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 309) = 4.93, p = .18]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	54	73	11	3	0	141
2007 Not CQI	45	101	16	4	2	168
Total	99	174	27	7	2	309

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 287) = 6.26, p = .10]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	73	67	5	1	0	146
2007 CQI	54	73	11	3	0	141
Total	127	140	16	4	0	287

MSIP Item 27

For teacher perceptions of faculty and staff soliciting input from diverse student groups (MSIP item 27): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 13) after the implementation of CQI.

Table 13

Question 27: Faculty and staff solicit input from diverse student groups regarding the improvement of our school.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 304) = 4.64, p = .33]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	40	65	27	9	0	141
2007 Not CQI	38	79	29	13	4	163
Total	78	144	56	22	4	304

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 286) = 9.34, p = .03]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	61	58	24	2	0	145
2007 CQI	40	65	27	9	0	141
Total	101	123	51	11	0	286

MSIP Item 65

For teacher perceptions on specific strategies to better involve parents (MSIP item 65): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 14).

Table 14

Question 65: My school has created specific strategies to better involve parents in the education of their child.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 305) = 3.69, p= .45]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	37	67	27	9	0	140
2007 Not CQI	42	85	28	7	3	165
Total	79	152	55	16	3	305

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 285) = 5.03, p = .17]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	55	58	21	11	0	145
2007 CQI	37	67	27	9	0	140
Total	92	125	48	20	0	285

MSIP Item 69

For teacher perceptions on their school making students feel they belong (MSIP item 69): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 15).

Table 15

Question 69: This school makes students feel they belong.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N =308) = 3.42, p= .33]]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	51	69	18	3	0	141
2007 Not CQI	68	67	24	5	3	167
Total	119	136	42	8	3	308

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 286) = 1.84, p= .61]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	61	69	13	1	1	145
2007 CQI	51	69	18	3	0	141
Total	112	138	31	4	1	286

Data from the sub-section *Student and Customer Focus* did not indicate an overall significant difference between the perceptions of teachers working within buildings that have implemented CQI as compared to perceptions of teachers working within buildings that have not implemented CQI. Only item 18, effective vehicles are in place for parents and community to communicate with the school, indicated any significant difference between these two groups of teachers with more teachers working within buildings that have not implemented CQI marking this item as neither agree or disagree, disagree, or strongly disagree.

Furthermore, data from this sub-section did not indicate an overall significant difference in perceptions of teachers working within buildings that have implemented CQI from the year prior to implementation as compared to perceptions of those teachers post-implementation. Only item 27, faculty and staff solicit input from diverse student groups regarding the improvement of our school, with more teachers marking this item as neither agree or disagree, disagree, or strongly disagree in 2007 after a year of CQI implementation.

Information and Analysis

Information and Analysis—Critical to an effective organization is the utilization of information and analysis of that information. Baldrige in Education (n.d.) stated "key goals need to be measurable in and understandable ways. In the best organizations and classrooms, information is used to drive actions. Mature, high-performing organizations collect data on competitors and similar providers and compare themselves against world-class leaders" (p. 3). The research question regarding *Information and Analysis* was:

4. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Information Analysis* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Information Analysis* within the school district?
    b. As compared to perceptions of teachers within the building prior to implementation?

MSIP Item 21

For teacher perceptions on routinely using disaggregated student data to plan instruction (MSIP item 21): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 16).

Table 16

Question 21: I routinely analyze disaggregated student data and use it to plan my instruction.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 297) = 4.19, p = .38]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	34	61	31	10	2	138
2007 Not CQI	35	87	29	6	2	159
Total	69	148	60	16	4	297

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 284) = 2.35, p=.67]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	40	64	32	10	0	146
2007 CQI	34	61	31	10	2	138
Total	74	125	63	20	2	284

MSIP Item 22

For teacher perceptions on using an assessment system that affords timely feedback to students (MSIP item 22): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 17).

Table 17

Question 22: An assessment system is used that provides timely feedback on specific knowledge and skills for individual students.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 303) = 2.66, p = .62]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	55	63	16	5	0	139
2007 Not CQI	56	81	20	5	2	164
Total	111	144	36	10	2	303

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 285) = 0.69, p = .87]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	53	69	20	4	0	146
2007 CQI	55	63	16	5	0	139
Total	108	132	36	9	0	285

MSIP Item 23

For teacher perceptions on guiding instruction based on assessments that are administered throughout the year (MSIP item 23): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within

buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 18).

Table 18

Question 23: My school administers assessments throughout the school year that are used to guide instruction.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 307) = 3.28, p = .51]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	46	67	22	6	2	143
2007 Not CQI	57	84	15	5	3	164
Total	103	151	37	11	5	307

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 289) = 6.33, p = .10]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	62	60	22	2	0	146
2007 CQI	46	67	22	6	2	143
Total	108	127	44	8	2	289

MSIP Item 19

For teacher perceptions on using assessment data to evaluate and align curriculum (MSIP item 24): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant

change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 19).

Table 19

Question 24: My school uses assessment data to evaluate and align curriculum.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 307) = 6.82, p=.08]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	50	65	15	8	3	141
2007 Not CQI	76	74	11	3	2	166
Total	126	139	26	11	5	307

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 287) = 6.44, p = .17]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	66	64	11	5	0	146
2007 CQI	50	65	15	8	3	141
Total	116	129	26	13	3	287

MSIP Item 37

For teacher perceptions on the systematic identification of students who are prone to violence (MSIP item 37): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a

significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 20).

Table 20

Question 37: Students who are prone to violence are systematically identified.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 306) = 5.18, p= .27]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	40	55	33	9	3	140
2007 Not CQI	46	53	39	21	7	166
Total	86	108	72	30	10	306

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 286) = 7.51, p= .06]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	54	58	31	2	1	146
2007 CQI	40	55	33	9	3	140
Total	94	113	64	11	4	286

Data from the sub-section *Information and Analysis* did not indicate an overall significant difference between the perceptions of teachers working within buildings that have implemented CQI as compared to perceptions of teachers working within buildings that have not implemented CQI. None of the five items utilized in this sub-section indicated any significant difference in

perceptions of these two groups of teachers. Furthermore, data from this sub-section did not indicate an overall significant difference in perceptions of teachers working within buildings that have implemented CQI from the year prior to implementation as compared to perceptions of those teachers post-implementation. Data did indicate that perceptions of both groups of teachers were very similar on these items with p values ranging from $p = .11$ to $p = .87$.

Faculty/Staff Focus

Faculty/Staff Focus—A great deal of importance should be placed on faculty and staffs focus. Baldrige in Education (n.d.) determined "faculty and staff are viewed as the most valuable asset of the organization and investment and development are critical to achieving the organization's mission and goals" (p. 3).The research question regarding *Faculty and Staff Focus* was:

5. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Faculty and Staff Focus* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Faculty and Staff Focus* within the school district?
    b. As compared to perceptions of teachers within the building prior to implementation?

MSIP Item 15

For collegiality and professionalism (MSIP item 15); the Chi-square analysis (χ^2) indicated a significant difference between perceptions of teachers working within buildings that have implemented CQI as compared to perceptions of teachers working within non-CQI

buildings. Teachers within schools that have implemented CQI tend to more frequently answer this item as agree or strongly agree then do teachers working within non-CQI buildings.

Table 21 similarly reflected a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. The Chi-Square analysis indicated that more teachers within CQI buildings tended to answer this item as neither agree or disagree or disagree after the implementation of CQI.

Table 21

Question 15: Norms for conduct that foster collegiality and professionalism among professional staff and administrators are clear and routinely followed.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 309) = 15.11, p< .01]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	51	72	18	2	0	143
2007 Not CQI	41	82	24	12	7	166
Total	92	154	42	14	7	309

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 288) = 11.49, p =.01]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	75	63	6	1	0	145
2007 CQI	51	72	18	2	0	143
Total	126	135	24	3	0	288

MSIP Item 59

For teacher perceptions on their feeling safe at school (MSIP item 59): the Chi-square analysis (χ^2) indicated a significant difference between perceptions of these two groups of teachers. Significantly more teachers working within buildings that had not implemented CQI tended to answer this item as neither agree or disagree, disagree, or strongly disagree then did teachers working within buildings that had implemented CQI (Table 22). However, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007.

Table 22

Question 59: I feel safe at this school.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 312) = 15.86, p< .01

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	70	61	9	2	0	142
2007 Not CQI	65	66	21	13	5	170
Total	135	127	30	15	5	312

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 288) = 4.60, p = .20]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	90	48	6	2	0	146
2007 CQI	70	61	9	2	0	142
Total	160	109	15	4	0	288

MSIP Item 62

For teacher perception on professional development improving the way they teach (MSIP item 62): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 23) after the implementation of CQI.

Table 23

Question 62: My professional development has improved the way I teach.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 304) = 1.17, p = .88]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	38	74	16	8	3	139
2007 Not CQI	49	85	22	6	3	165
Total	87	159	38	14	6	304

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 283) = 13.45, p<.01]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	63	70	8	3	0	144
2007 CQI	38	74	16	8	3	139
Total	101	144	24	1	3	283

MSIP Item 71

For teacher perceptions on their looking forward to each working day (MSIP item 71): the Chi-square analysis (χ^2); indicated a significant difference between perceptions of these two groups of teachers. Significantly more teachers working within buildings that had not implemented CQI tended to answer this item as neither agree or disagree, disagree, or strongly disagree then did teachers working within buildings that had implemented CQI (Table 24). However, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007.

Table 24

Question 71: I usually look forward to each working day as a teacher.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 305) = 12.44, p = .01]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	54	73	11	1	0	139
2007 Not CQI	76	65	12	7	6	166
Total	130	138	23	8	6	305

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 284) = 7.02, *p*=.07]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	78	57	8	1	1	145
2007 CQI	54	73	11	1	0	139
Total	132	130	19	2	1	284

MSIP Item 81

For teacher perceptions on their choosing to teach all over again if given the opportunity (MSIP item 81): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 25).

Table 25

Question 81: If I had a chance to choose all over again, I would still choose teaching as a career.

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 309) = 2.77, *p*= .43]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	72	48	15	3	1	139
2007 Not CQI	83	58	17	10	2	170
Total	155	106	32	13	3	309

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 285) = 3.77, p= .29]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	92	38	12	3	1	146
2007 CQI	72	48	15	3	1	139
Total	164	86	27	6	2	285

When viewing the data from the group of items for sub-section *Faculty/Staff Focus,* it is difficult to determine if there is a difference in teacher perceptions. Comparing perceptions of teachers working within buildings that have implemented CQI compared to perceptions of teachers working within buildings that have not implemented CQI, 3 out of 5 items indicated a significant difference in perception; these items were numbers 15, 59, and 71 with teachers working within non-CQI buildings more often marking items as neither agree or disagree, disagree, or strongly disagree. When comparing the perceptions of teachers working within buildings that have implemented CQI pre to post implementation, only 2 of 5 items reflected significant differences. For both of the studied scenarios, teachers more often marked these items as neither agree or disagree, disagree, or strongly disagree in 2007 after a year of implementation then did the year prior and respectively more teachers in non-CQI building marked these items in a more negative manner. These items had an intriguing focus including professional norms and development, school safety, and teacher morale. This sub-section will be discussed on an item by item basis in Chapter 5.

Process Management

Process Management—Process management is a primary component of a successful organization. Baldrige in Education (n.d.) described process management as a "key to improving organizational performance is the ability to identify key processes and manage them so that student and stakeholder requirements are met consistently" (p. 3). The research question regarding *Process Management* was written as:

6. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Process Management* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Process Management* within the school district?
    b. As compared to perceptions of teachers within the building prior to implementation?

MSIP Item 22

For teacher perceptions on using an assessment system that affords timely feedback to students (MSIP item 22): the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 26).

Table 26

Question 22: An assessment system is used that provides timely feedback on specific knowledge and skills for individual students.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 303) = 2.66, p = .62]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	55	63	15	5	0	139
2007 Not CQI	56	81	20	5	2	164
Total	111	114	36	10	2	303

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 285) = 0.69, p = .87]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	53	69	20	4	0	146
2007 CQI	55	63	16	5	0	139
Total	108	132	36	9	0	285

MSIP Item 34

For teacher perceptions on principals identifying issues that could potentially become problems (MSIP item 34): the Chi-square analysis (χ^2); indicated a significant difference between perceptions of these two groups of teachers. Significantly more teachers working within buildings that had not implemented CQI tended to answer this item as neither agree or disagree,

disagree, or strongly disagree then did teachers working within buildings that had implemented CQI (Table 27). However, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007.

Table 27

Question 34: Our principal identifies issues in the school that could potentially become problems.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 311) = 18.35, $p < .01$]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	79	53	6	4	1	143
2007 Not CQI	75	50	22	10	11	168
Total	154	103	28	14	12	311

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 289) = 7.33, $p = .06$]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	98	45	2	1	0	146
2007 CQI	79	53	6	4	1	143
Total	177	98	8	5	1	289

MSIP Item 40

For teacher perception on their school systematically ensuring that teachers address essential content (MSIP item 40); the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 28) after the implementation of CQI.

Table 28

Question 40: My school systematically ensures that teachers address essential content

2007 CQI Compared to 2007 Not CQI [χ^2 (3, N = 306) = 5.06, p= .17]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	51	78	9	2	0	140
2007 Not CQI	65	78	14	6	3	166
Total	116	156	23	8	3	306

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 285) = 15.38, p<.01]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	86	50	8	1	0	145
2007 CQI	51	78	9	2	0	140
Total	137	128	17	3	0	285

MSIP Item 55

For teacher perceptions on open channels of communication between students, staff, and administrators (MSIP item 55); the Chi-square analysis (χ^2) indicated a significant difference between perceptions of teachers working within buildings that have implemented CQI as compared to perceptions of teachers working within non-CQI buildings. Teachers within schools that have implemented CQI tend to more frequently answer this item as agree or strongly agree then do teachers working within non-CQI buildings.

Table 29 similarly reflected a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. The Chi-Square analysis indicated that more teachers within CQI buildings tended to answer this item as neither agree or disagree or disagree after the implementation of CQI.

Table 29

Question 55: There are open channels of communication among students, staff, and administrators.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 312), = 24.04, $p < .01$]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	51	73	14	4	0	142
2007 Not CQI	51	60	31	20	8	170
Total	102	133	45	24	8	312

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 288) = 9.74, $p = .02$]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	79	55	9	3	0	146
2007 CQI	51	73	14	4	0	142
Total	130	128	23	7	0	288

MSIP Item 95/96

For teacher perceptions on their altering of instructional strategies when students are having difficulty learning (MSIP item 95/96); the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within

buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 30).

Table 30

Question 95/96: I alter instructional strategies when students are having difficulty learning the material.

2007 CQI Compared to 2007 Not CQI [χ^2 (2, N = 292) = 0.42, p = .81]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	87	43	4	0	0	134
2007 Not CQI	101	50	7	0	0	158
Total	188	93	11	0	0	292

2006 CQI Compared to 2007 CQI [χ^2 (2, N = 279) = 0.50, p = .78]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	99	41	5	0	0	145
2007 CQI	87	43	4	0	0	134
Total	186	84	9	0	0	279

Analysis of the data from the five items that were utilized in the sub-section *Faculty/Staff Focus* did not indicate an overall significant difference between the perceptions of teachers working within buildings that had implemented CQI and the perceptions of teachers within

buildings that have not implemented CQI. Further, there was not an indication of significant difference in the perceptions of teachers working within buildings implementing CQI pre and post implementation. In both situations only two of five items indicated a significant difference in perceptions concerning *Faculty/Staff Focus*. However, item 55, there are open channels of communication among students, staff, and administrators; indicated a significant difference in both situations studied with teachers working within non-CQI buildings and teachers working within CQI buildings in 2007 both more frequently marking these items as neither agree or disagree, disagree, or strongly disagree then did teachers working within CQI buildings in 2006. These findings will be discussed further in Chapter five.

Results

Results—Results are "the proof that what an organization identifies as important is being accomplished and success overtime is evident" (Baldrige in Education, n.d, p. 3).The research question regarding *Results* was written as:

7. What effect did the implementation of the Continuous Quality Improvement process have on the perceptions of teachers regarding *Results* within schools implementing CQI:
    a. As compared to the perceptions of teachers within similar schools that have not implemented CQI concerning *Results* within the school district?
    b. As compared to perceptions of teachers within the building prior to implementation?

MSIP Item 33

For teacher perceptions on principals monitoring the effectiveness of school practices and their impact on student learning (MSIP item 33); the Chi-square analysis (χ^2) indicates a

significant difference between perceptions of teachers working within buildings that have implemented CQI as compared to perceptions of teachers working within non-CQI buildings. Teachers within schools that have implemented CQI tend to more frequently answer this item as agree or strongly agree then do teachers working within non-CQI buildings.

Table 31 similarly reflected a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. The Chi-Square analysis indicated that more teachers within CQI buildings tended to answer this item as neither agree or disagree or disagree after the implementation of CQI.

Table 31

Question 33: My school's principal monitors the effectiveness of school practices and their impact on student learning.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 311) = 21.23, p< .01]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	81	51	8	2	1	143
2007 Not CQI	63	66	14	16	9	168
Total	144	117	22	18	10	311

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 289) = 9.85, p = .02]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	102	42	2	0	0	146
2007 CQI	81	51	8	2	1	143
Total	183	93	10	2	1	289

MSIP Item 39

For teacher perceptions on the identification of essential content as compared to supplemental and the communication of these differences (MSIP item 39); the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. Similarly, the Chi-square analysis did not indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007 (Table 32).

Table 32

Question 39: The content considered essential for all students to learn versus that considered supplemental has been identified and communicated to teachers.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 306) = 4.05, p = .40]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	48	74	13	6	0	141
2007 Not CQI	53	78	24	8	2	165
Total	101	152	37	14	2	306

2006 CQI Compared to 2007 CQI [χ^2 (3, N = 287) = 3.85, p = .28]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	64	61	16	5	0	146
2007 CQI	48	74	13	6	0	141
Total	112	135	29	11	0	287

MSIP Item 47

For teacher perception on whether or not their professional development has improved student achievement (MSIP item 47); the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007.

Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 33) after the implementation of CQI.

Table 33

Question 47: Our professional development improves student achievement.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 305) = 2.04, p = .73]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	44	62	19	6	7	138
2007 Not CQI	55	72	27	9	4	167
Total	99	134	46	15	11	305

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 281) = 18.75, $p < .01$]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	71	61	8	3	0	143
2007 CQI	44	62	19	6	7	138
Total	115	123	27	9	7	281

MSIP Item 54

For teacher perception on all staff holding high expectations for student learning (MSIP item 54); the Chi-square analysis (χ^2) indicated no significant difference between perceptions of these two groups of teachers. However, the Chi-square analysis did indicate a significant change in perception of teachers who work within buildings that have implemented CQI when

comparing item results from 2006 to item results from 2007. Significantly more teachers within CQI buildings tended to answer this item as neither agree or disagree, disagree, or strongly disagree (Table 34) after the implementation of CQI.

Table 34

Question 54: All staff in our school hold high expectations for student learning.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 310) = 1.39, p = .85]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	50	63	14	13	1	141
2007 Not CQI	63	77	17	10	2	169
Total	113	140	31	23	3	310

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 287) = 13.82, p = .01]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	82	49	6	8	1	146
2007 CQI	50	63	14	13	1	141
Total	132	112	20	21	2	287

MSIP Item 56

For teacher perceptions on avenues available to recognize and reward the accomplishments of all students (MSIP Item 56); the Chi-square analysis (χ^2) indicated a significant difference between perceptions of teachers working within buildings that have

implemented CQI as compared to perceptions of teachers working within non-CQI buildings. Teachers within schools that have implemented CQI tend to more frequently answer this item as agree or strongly agree then do teachers working within non-CQI buildings.

Table 35 similarly reflected a significant change in perception of teachers who work within buildings that have implemented CQI when comparing item results from 2006 to item results from 2007. The Chi-Square analysis indicated that more teachers within CQI buildings tended to answer this item as neither agree or disagree or disagree after the implementation of CQI.

Table 35

Question 56: There are avenues for recognizing and rewarding the accomplishments of all students.

2007 CQI Compared to 2007 Not CQI [χ^2 (4, N = 308) = 9.63, p = .05]

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2007 CQI	57	71	7	3	1	139
2007 Not CQI	54	82	16	12	5	169
Total	111	153	23	15	6	308

2006 CQI Compared to 2007 CQI [χ^2 (4, N = 285) = 12.22, p = .01]
(Cells Adjusted)

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Total
2006 CQI	88	54	2	2	0	146
2007 CQI	57	71	7	3	1	139
Total	145	125	9	5	1	285

The data analysis of the *Results* sub-section did not indicate a significant difference between teacher perceptions in buildings with CQI as compared to perceptions within non-CQI buildings. Similarly, no significant difference was noted between the perceptions of teachers within CQI building pre and post implementation, when you view all five items as a group. However, two items did show a significant difference when comparing pre and post implementation teacher perceptions within CQI buildings. Items numbered 47 and 54 both indicated that teachers within CQI buildings more often marked these items as neither agree or disagree, disagree, or strongly disagree after one year of implementation. These items determined perceptions on whether or not professional development was improving student achievement and if all staff held high expectations for student achievement, respectively.

Summary

The purpose of this study was to determine the effect implementation of CQI had on the perceptions held by teachers within this school district concerning each of the seven categories of CQI. To fulfill this purpose, the researcher utilized a comparative study with a quasi-experimental design that focused on the effect implementation of the seven components of

Continuous Quality Improvement (CQI) had on teacher perceptions of those seven components within buildings that implemented CQI (treatment group) as compared to similar buildings that did not implement CQI (comparison group). This study also compared MSIP Faculty Survey changes in results from the school year prior to implementation (2006) against data after a year of implementation (2007) within implementing buildings.

The population utilized in this study consisted of anonymous survey results of teachers employed at three schools implementing CQI and teachers employed at three schools not implementing CQI. In 2006 the schools implementing CQI had approximately 143 teachers take the survey while the non-CQI schools had 172; in 2007 the numbers of teachers taking the MSIP Faculty Survey were 143 and 169 respectively. This study utilized schools that were determined to be most similar within the district based on size of population and socio-economic status of the students within the buildings. The annual MSIP Faculty Survey supplied the data for this research. The MSIP Faculty Survey consisted of 103 individual questions administered to all certified staff and 100% compliance was an expectation of the State of Missouri.

Two analyses were performed on each of thirty five MSIP items that were utilized for this study for a total of seventy separate analyses performed. Findings of this study were very consistent when significant differences were found. In every item identified as having significant difference, more teachers working within buildings that had implemented CQI answered these items as agree or strongly agree than did teachers in buildings that had not implemented CQI. Consistency was also found in items that identified as significantly different when studying perceptions of teachers within CQI buildings comparing pre and post implementation perceptions. In every case where significance was found more teachers answered these items as neither agree or disagree, disagree, or strongly disagree after CQI had been implemented.

In Chapter Five the assumptions first identified at the beginning of this study were reviewed, discussed and determined to be validated or not. Chapter Five also included discussion of the overall results of each of the seven categories of CQI as well as individual item discussion when these items appear out of the norm for that particular group of items within this study.

CHAPTER FIVE

Discussion

Introduction

This body of research analyzed the impact that Continuous Quality Improvement (CQI) may have on schools that implement the process. This was accomplished by studying the perceptions of teachers working within three buildings that have embraced and implemented CQI and comparing those perceptions with teachers working within three buildings that have not implemented CQI. These buildings were chosen based on their similarities in size, location, and socio-economic status of their students. Also studied was any change in teacher perceptions within buildings that had implemented CQI, pre-implementation as compared to post-implementation.

Chapter Five includes a review of the purpose of the study, assumptions of the study, and the limitations of the study. Chapter Five contains the discussion of specific findings and their possible implications toward education and the process of Continuous Quality Improvement. Recommendations for further study and for improving a similar study were included along with a brief summary of the entire study. It is important to note that a copy of Table 36, *Summary of Findings,* is also located at the end of Chapter Five to assist the reader.

Purpose of the Study

CQI utilizes seven characteristics: Leadership, Strategic Planning, Student and Customer Focus, Information and Analysis, Faculty and Staff Focus, Process Management, and Business Results. By incorporating a deliberate focus on these characteristics into a systems approach to quality, school leaders may more easily be able to truly affect building performance indicators in a positive manner by affecting teacher instructional processes and morale. The process of CQI

needs to be studied to examine its effectiveness within the educational setting as well as any potential influence that it may have on education as a whole.

The purpose of this study was to determine the effect implementation of CQI had on the perceptions held by teachers within a district concerning each of the seven categories of CQI. The superintendent began the implementation by modeling behaviors and establishing goals for implementation throughout the district. In the Fall of 2005 discussions began about schools that may volunteer to implement the CQI process in the 2006-2007 school year. Resources were identified to assist these schools with their implementation and four schools volunteered to pilot the CQI process in 2006-2007; however only three of these schools were utilized in this study. Studied schools included one elementary school, one middle school, and one high school. In order to determine potential change in perceptions this study needed an already existing complex instrument to measure the potential change. Thus, this research utilized the Missouri School Improvement Plan (MSIP) Faculty Survey as a basis for determining what, if any, affect the implementation of CQI had on teacher perceptions within the district. The MSIP Faculty Survey has been administered annually since 1998 and is rich with obvious and potential data that could easily fuel any number of studies. Completion of the survey is a state mandate for all certified staff.

If the affect of implementing the CQI process proved as positive as proponents would argue, and as successful as was experienced in the business world, then the eventual goal would be to spark similar studies in other schools. It was the purpose of this study to determine the effect that implementing CQI has had on teacher processes and perceptions within the school district concerning the seven characteristics of CQI. This was accomplished by studying a school district well into the implementation of CQI, utilizing state administered surveys, and focusing

on the results of these surveys and how they differ between schools that have implemented CQI versus schools within the same district that have not implemented CQI. Concurrently impacting how educational leaders might implement change and improvement within their school; this study will review the impact that implementing CQI had on teacher perceptions concerning the seven characteristics of CQI. This study was designed to increase a volume of knowledge that may affect education on a much grander scale.

Assumptions

The seven characteristics of Continuous Quality Improvement (CQI) could be considered powerful components to the intricate workings of any organization. Byrnes and Baxter (2005) wrote, "The criteria and framework are widely recognized as the most effective approach to organizational performance excellence" (p. 18). Implementation of a Baldrige systems approach to organizational improvement and quality would utilize these seven characteristics. The primary assumption fueling this research was that the perceptions of teachers concerning these seven characteristics would improve during and after implementation. This assumption was tested through the analysis of the Missouri School Improvement Faculty Survey data. The study further assumed that the majority of faculty at the subject schools remained the same from 2005-2006 to 2006-2007 and that those faculty members completed the survey honestly. Should change in teacher perceptions occur and be significant enough to infer affect from the implementation of CQI; then it is further assumed that other possible affecting variables, different from the seven characteristics, were limited to their effect.

Design Controls

"One characteristic of a good research design is that it will provide data that are free from bias" (Wiersma, 2000, p. 92). Bias was listed as a limitation due to the researcher being a principal within the district and the principal of one of the schools that implemented CQI. Design controls for this study were established by utilizing public access data that was originally collected and disaggregated by school by the State of Missouri. This data was collected through the annual administration of the Missouri School Improvement Faculty Survey. Researcher bias was averted by using data that was not collected or organized by the researcher and an instrument that was developed by the State of Missouri. Fink (2006) suggested that when creating a survey instrument one should, "check your own bias, an additional source of bias is present when survey writers are unaware of their own position toward a topic" (p. 20). Though the researcher was aware of their potential bias, utilizing an already created instrument that was universally administered throughout the Sate with a one-hundred percent compliance expectation, helped alleviate bias.

Study Limitations

Several concerns or items were considered as elements that limited the scope of this study. Concerns of comparing data from a limited number of schools were reduced by closely matching these schools based on size of population, diversity of student make-up, and socio-economic status of the students. The limitation of comparing only two years of data was diminished by the researcher not only comparing survey results from school to school, but also comparing the same school's data year to year.

Other limitations included that the data represented results from one large Missouri school district and did not compare these results with like districts within the state, in

conjunction, the relatively small number of schools in the district (four out of approximately 50 schools; only three were used in the study) that have incorporated Continuous Quality Improvement within their buildings also limited the study. The smaller number of buildings equals a smaller number of teachers responding and the data was generated from approximately 150 of nearly 1800 teachers surveyed district wide, in addition the collective data based on a school by school report being utilized for a more general result as opposed to a very specific teacher by teacher approach was another limitation that could be addressed in future studies.

Additionally, the study was limited due to major changes in the survey instrument as the Missouri School Improvement Program switched from the Cycle III Survey in 2004-2005 to the Cycle IV Survey in 2005-2006; the Cycle IV Survey was still utilized in 2006-2007. Only items found to match were used in the comparison. The study was further limited due to the process of Continuous Quality Improvement only being implemented for one school year at schools within the district. Finally, the study was limited due to potential researcher bias. This bias was based on the premise that the researcher not only was a principal within the district, but was also the principal at one of the schools that implemented CQI.

Discussion and Implications

Leadership

When analyzing the data from the CQI category of Leadership, the data indicated a change in perceptions of teachers within buildings that have implemented CQI compared to the perceptions of teachers within buildings that have not implemented CQI. Three of the five items showed a significant difference in these perceptions. The two items that did not indicate a difference in perception were items 31, “in our school, teachers are encouraged to be instructional leaders”; and item 43, “our principal promotes innovation”. For both groups of

teachers the majority of answers indicated that teachers agreed or strongly agreed with these two statements. This may imply that leaders in both types of buildings promote innovation and encourage teachers to be instructional leaders; if accurate, this supports Davis (2003) and Gardner's (2000) statements which supported the need for positive persuasive leaders in the change process.

A review of the data comparing perceptions of teachers within buildings implementing CQI, pre-implementation as compared to post-implementation, indicated that perceptions of those teachers did in fact change. It was an assumption of this study that those perceptions would change. However, the assumption was that the perceptions would change to be even more positive, that was not the case. In every item the perceptions of teachers within buildings implementing CQI changed significantly with more teachers marking neither agree or disagree, disagree, or strongly disagree than they had the year prior to implementation. It seems that the process of implementation has had a negative effect on the perceptions of those teachers concerning leadership within the building. Eaker and Dufour (1998) indicated that all change processes bring with them "mess," and that with change both leaders and participants must be prepared to slosh around in this mess. "They must realize that even with the most careful planning, misunderstandings will occur occasionally, uncertainty will prevail, people will resort to old habits, and things will go wrong" (p. 283). Collins (2001) echoed these thoughts when discussing great companies. He shares that no organization is without back-slides and blemishes and adds, "The critical factor is not the absence of difficulty but the ability to bounce back and emerge stronger" (Collins, 2001, p. 213). With these thoughts in mind are we witnessing an implementation dip of sorts? Is this indicating a reduced amount of trust in building leadership? More research would be needed to answer those questions.

Strategic Planning

A review of the data analysis comparing teacher perceptions within CQI buildings to teacher perceptions within non-CQI buildings did not indicate a significant difference in these two groups of teachers. Only one of the five items utilized for this sub-section indicated a significant difference in perception. Item 17, "teachers are routinely engaged in collaborative problem-solving around instructional issues", indicated significantly more teachers within schools implementing CQI agreed or strongly agreed to this statement. Sutherland (2006) wrote that data analysis through collaborative conversations was critical to continuous improvement. For this item, both groups of teachers predominately answered these items positively, which may imply a culture of inclusion district wide in the planning process.

These same five items were reviewed comparing pre and post implementation perceptions of teachers within CQI buildings. These results did indicate an overwhelming change in perception. Four out of the five items indicated significant differences in perceptions. Only item 17 did not indicate a significant difference. It is noteworthy that for this category the two data tables were nearly mirror images of one another. It is also interesting that the results of the change in perceptions from pre to post implementation did indicate a more negative response from teachers within CQI buildings for this category, which was contrary to the pre-study assumptions. Is this possibly another indicator of an implementation dip? Did an increase of focus on *Strategic Planning* cause a more reflective effort on the part of these teachers when taking this survey after implementation of CQI? If so, this would be a reflection of Karanthos and Karanthos (1995), these researchers indicated that the strategic planning category requires frequent measurement of the level of understanding and satisfaction for workers within an

organization. However, this study did not address those possibilities and would need to be elongated in order to address them.

Student/Stakeholder Focus

Both studied scenarios indicated that overall no change in perception was seen for this category; however, there were two exceptions to this statement. When comparing perceptions of teachers in schools implementing CQI against perceptions of teachers in schools that have not implemented CQI a significant difference was seen in item 18, "effective vehicles are in place for parents and community to communicate with the school". This indicated that teachers within CQI buildings perceived more of these vehicles were in place than did teachers in non-CQI buildings.

In addition a significant difference in the perceptions of teachers pre-implementation compared to post-implementation of CQI was also evident on item 27, "faculty and staff solicit input from diverse student groups regarding the improvement of our school". The process of CQI requires a deliberate focus on acquiring student input. Siri and Miller (2001) and Baldridge in Education (n.d.) emphasized that student input was a critical component in the CQI process; additionally, Pederson (2004) stated that the primary customer, and focus, must always be the student. This focus includes documented incidents of the gathering of student input. With this in mind, it was not surprising to see a change in teacher perceptions concerning this item. What was surprising was that the change was negative. Less teachers within CQI buildings marked this item as agree or strongly agree post-implementation. One assumption as to why this occurred may again be the increased focus on student feedback and input may cause an increase in teacher reflection and thus more scrutiny when answering this item.

Information and Analysis

Neither of the comparisons performed for this study saw any significant difference in teacher perceptions for this category. Not only did the Chi-square analysis not show significant differences, but very high alpha levels were found indicating that teachers in both types of buildings have common perceptions about data gathering and analysis. In addition, the results for these five items were heavily toward the agree and strongly agree responses, which possibly indicates a culture of information and data gathering and analysis. This is not only a critical finding concerning data analysis, but it is also critical for organizations to use these analyses to solve problems. According to Sutherland (2004), data mixed with constructive collaborative conversations is the key; not only is the data critical, but so is the process. In reaching their goals, Sutherland emphasized the importance of organizations having discussions and arguments that surround the data.

Faculty/Staff Focus

Results in this category were again splintered. Significant differences were shown between perceptions of teachers within CQI buildings compared to teachers in non-CQI buildings in three of the five items. This report reviewed each of the five items in this category separately.

Teacher perceptions on the norms for conduct that foster collegiality and professionalism among professional staff and administrators are clear and routinely followed. A significant difference was noted in the perceptions of teachers in CQI buildings as compared to teachers in non-CQI buildings concerning this item. This may indicate a cultural shift as buildings reach a point of preparedness to implement this type of program or it may indicate leadership that more

strongly focuses on relationship building. Katzenbach and Smith (1993) and Lencioni (2002) both emphasize the importance of trust in relationship building prior to an organization implementing any change or change process. However, a change in perception was also noted between pre and post implementation perceptions of teachers in CQI buildings. This may be an indicator of stress placed on relationships when any change is introduced.

"I feel safe at this school," (MSIP item 59). This is a powerful statement and a significant difference was noted when comparing the two groups of teachers; however, no significant difference was noted in pre and post CQI implementation perceptions. The significant difference between teacher perceptions in CQI buildings compared to non-CQI buildings may be another indicator of components that must be in place prior to effective implementation of CQI or any change mechanism.

Some variation did occur on the item, "my professional development has improved the way I teach". No significant differences were noted between perceptions of teachers within CQI buildings and teachers within non-CQI buildings. What was interesting is that the perceptions of teachers pre and post implementation within CQI buildings significantly moved in a negative direction with more teachers marking this item as neither agree or disagree, disagree, or strongly disagree. This was a critical piece of information since the basis to CQI is a change in process, in how teachers teach. This would indicate that teachers did not see CQI as improving how they teach. Brown (2006) found that focusing professional development around the mission of the organization was important. The findings of this study joined with Brown's findings may indicate a necessity for the CQI process to be a specific part of the school's mission statement.

"I usually look forward to each working day as a teacher," (MSIP item 71). A significant difference in perception was noted between teachers in CQI buildings as compared to teachers

within non-CQI buildings. More teachers in non-CQI buildings indicate that they do not look forward to each day as a teacher. This may be another indicator of buildings needing a certain culture or aspects of a certain culture before they can effectively implement CQI. Karanthos and Karanthos (1996) wrote that frequent measurement of worker satisfaction was a vital component of successful change implementation; the results of this item analyses would support this need in order to develop a culture ready for change. This was further reinforced since the CQI buildings saw no notable change in this perception pre to post implementation.

"If I had a chance to choose all over again, I would still choose teaching as a career," (MSIP item 81). This was another item where both components of the study answered in a predominately positive manner and no significant differences were found.

Process Management

In this category, two of the five items indicated a significant difference between the perceptions of teachers within CQI buildings as compared to perceptions of teachers in non-CQI buildings. Item 34, "our principal identifies issues in the school that could potentially become problems, indicated a significant difference in the perceptions of these two groups of teachers". Is this an indicator of the type of leadership necessary for a building to be prepared to implement CQI? Does the focus on feedback that accompanies CQI increase the perception that principals are aware of problems in the buildings? These questions were generated, and not answered, by this study.

Teacher perceptions concerning whether there are open channels of communication among students, staff, and administrators, also indicated a significant difference in the perceptions of these two groups of teachers as well as when comparing pre and post CQI implementation teacher perceptions. Byrnes and Baxter (2006) listed three key opportunities for

building a system designed for success: "learn as much as possible about the students,… know exactly what the students are expected to know and be able to do at the end of the course or school year and…seek feedback from students and parents or guardians" (p. 33-34). They further indicated that student/stakeholder focus includes feedback on satisfaction, dissatisfaction, perceived value, persistence, and positive referrals. This feedback can only be acquired through open channels of communication and viable vehicles for feedback. This was the second item in this study dealing with communication that indicated a significant difference between CQI and non-CQI teacher perceptions with teachers in CQI buildings answering these items more positively. However, a significant difference in perceptions was also noted on item 55 when comparing pre and post implementation perceptions of teachers within CQI buildings and those results show more teachers marking this item as neither agree or disagree, disagree, or strongly disagree. This indicated a downturn in perceptions of teachers within CQI buildings; this was very intriguing since communication and input are critical components of CQI.

Results

Much like the *Faculty/Staff Focus* category, the *Results* category will be reviewed on an item by item basis. Results are the most important of the seven categories of Continuous Quality Improvement according to Brown (2006). Results are the product of your system, and include students learning results, student enthusiasm for learning, behavior results, attendance/tardy results and student and stakeholder satisfaction (Byrnes & Baxter, 2005).

There were differences in both studied scenarios on MSIP item 33 which reads; my school's principal monitors the effectiveness of school practices and their impact on student learning. Baldrige in Education (n.d.) described results as "the proof that what an organization identifies as important is being accomplished and success overtime is evident" (p.3). Comparing

the perceptions of teachers in CQI buildings against perceptions of teachers in non-CQI buildings demonstrated a significant difference and may indicate that teachers in non-CQI buildings and post-CQI buildings do not perceive their principals as monitoring what is important. This may possibly be due to the type of leadership shown prior to a building being prepared to implement CQI. Is there a certain point a building must get to before it can embrace these concepts? When comparing perceptions of teachers within CQI buildings pre and post implementation a significant difference was indicated. Again, contrary to pre-study assumptions, a negative change in perception was documented with more teachers answering this item as disagree or strongly disagree after CQI has been implemented. Is this an indicator that teachers are failing to see this process as effective? Or is this an indicator that the principal is not viewed as monitoring processes as well after implementation?

The content considered essential for all students to learn versus that considered supplemental has been identified and communicated to teachers (MSIP item 39), recorded no significant differences in perceptions for either component of this study. All three groups of teachers marked this item predominantly agree or strongly agree

Teacher perceptions on whether or not professional development improves student achievement found no significant difference in perception was noted between teachers in CQI buildings as compared to teachers in non-CQI buildings. However, a significant difference was noted in the perceptions of teachers in CQI building pre-implementation as compared to post-implementation. Again, contrary to pre-study assumptions, these perceptions moved in a negative direction with more teachers marking this item as neither agree or disagree, disagree, or strongly disagree. This may indicate a lack of support for the CQI process or an implementation dip for the process.

All staff in our school hold high expectations for student learning (MSIP item 54). There was not a significant difference between perceptions of teachers within CQI buildings as compared to teachers in non-CQI buildings. However, a significant difference was indicated in the perceptions of teachers within CQI buildings pre and post CQI implementation. Again, these perceptions moved in a negative direction with more teachers marking this item as neither agree or disagree, disagree, or strongly disagree. This may indicate an implementation dip or an increase on the focus process reducing the perception of the focus on learning.

Teacher perceptions on MSIP item 56 centered on avenues for recognition and rewarding the accomplishments of all students. Avenues for recognizing students are crucial, Maurer and Pederson (2004) wrote, "You can say that the district or school serves multiple customers: parents, taxpayers, and employees as well as students. This is correct. But it is critical that students be singled out as *the* customer. The other groups are important, but they are stakeholders. No school would be in existence if the students did not exist" (p.66). A significant difference was noted between perceptions of teachers in CQI buildings as compared to teachers in non-CQI buildings. This may indicate that CQI buildings had initially more focus on student input as part of that school's culture thus increasing recognition and student rewards. However, a decrease in positive perception was again noted in pre and post implementation perceptions of teachers in CQI buildings.

Table 36

Summary of Findings (alpha=.05)

Category	Item	CQI compared To Non-CQI		Pre-CQI compared to Post-CQI	
		Sig.	Not Sig.	Sig.	Not Sig.
Leadership	MSIP 15	X		X	
	MSIP 31		X	X	
	MSIP 32	X		X	
	MSIP 35	X		X	
	MSIP 43		X	X	
Strategic Planning	MSIP 16		X	X	
	MSIP 17		X	X	
	MSIP 49		X	X	
	MSIP 53		X		X
	MSIP 76		X	X	
Student/ Customer Focus	MSIP 18	X			X
	MSIP 26		X		X
	MSIP 27		X	X	
	MSIP 65		X		X
	MSIP 69		X		X
Information and Analysis	MSIP 21		X		X
	MSIP 22		X		X
	MSIP 23		X		X
	MSIP 24		X		X
	MSIP 37		X		X
Faculty and Staff Focus	MSIP 15	X		X	
	MSIP 59	X			X
	MSIP 62		X	X	
	MSIP 71	X			X
	MSIP 81		X		X
Process Management	MSIP 22		X		X
	MSIP 34	X			X
	MSIP 40		X	X	
	MSIP 55	X		X	
	MSIP 95/96		X		X
Results	MSIP 33	X		X	
	MSIP 39		X		X
	MSIP 47		X	X	
	MSIP 54		X	X	
	MSIP 56	X		X	

Note: When significance was indicated comparing CQI to Non-CQI there were more positive perception within CQI schools 100% of the time; Additionally, when significance was indicated comparing pre and post-CQI perceptions a more negative perception occurred within the Post-CQI schools 100% of the time.

Recommendations for Further Study

The foremost conclusion to this study was that few conclusions were reached. The study in itself was encompassing and drilled deeper into a vast amount of data available through the MSIP survey, but so much more is possible. Questions were answered, but more were generated and the fact that all of the post implementation results moved in a negative direction was not expected and is very intriguing.

A critical component that appeared throughout the results of this study was the culture of the buildings prior to CQI implementation. Many of these results indicated a culture of collegiality, safety, and trust that did not appear in the non-CQI buildings. Framing this or a similar study around what the cultures of those building that have successfully implemented CQI was like prior to implementation may generate a critical group of findings. The question of whether or not a building is ready to embark on implementing any quality program, or for that case any change program at all, may need to be answered by identifying key components needed prior to change.

Further recommendation would include a mirror study administered after each year post implementation searching for trends and improvement. On every item in this study that indicated a significant change in perceptions of teacher's pre and post CQI implementation, that change was in a negative direction. In discussions with the Coordinator of Quality Research and Design for the studied school district; they stated that the results of this study had significant relevance to future studies they would like to conduct. Namely would this pattern continue or was this part of an implementation dip phenomenon? And does this study in essence outline specific qualities/teacher perceptions that are needed prior to implementing any type of quality program? The Coordinator felt that the common trends among teacher perception in the CQI

buildings both pre and post implementation may indicate the need for certain cultural components to be in place prior to implementation.

Another component that would need to be addressed would be expanding this study beyond only one school district and into other areas of the state and the nation. Increasing the total number of schools involved, utilizing teacher by teacher instead of school by school data, and incorporating focus groups and other qualitative components to a future study.

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Appendix A

MSIP-CQI QUESTION INDEX

This index lists the items utilized from the Missouri School Improvement (MSIP) Program Faculty Survey and analyzed for this study. The items are divided into the seven categories of CQI and listed numerically by how they appear in the original survey. It is important to note that the response selections vary depending on the item itself. The response categories were defined as strongly agree, agree, neither agree or disagree, disagree, and strongly disagree for questions numbered 1 through 82. The response categories were defined as regularly, often, occasionally, rarely, and not at all for questions 83 through 103 or 104; survey items 2006 or 2007 respectively.

Leadership

15. Norms for conduct that foster collegiality and professionalism among professional staff and administrators are clear and routinely followed.

31. In our school teachers are encouraged to be instructional leaders.

32. My school's principal fosters shared beliefs and a sense of community and cooperation.

35. My school's principal systematically engages faculty and staff in discussions about current research on teaching and learning.

43. Our principal promotes innovation.

Strategic Planning

16. Teachers in my school are routinely involved in formulating school-wide decisions.

17. Teachers are routinely engaged in collaborative problem solving around instructional issues.

49. The professional development activities I attend are related to my district's Comprehensive Improvement Plan.

53. The mission of this school is clearly defined.

43. There is systematic collaboration across subject areas in our building.

Student and Customer Focus

18. Effective vehicles are in place for parents and community to communicate with the school.

26. Student opinions are valued by teachers and administrators.

27. Faculty and staff solicit input from diverse student groups regarding the improvement of our school.

65. My school has created specific strategies to better involve parents in the education of their child.

69. This school makes students feel they belong.

Data Analysis

21. I routinely analyze disaggregated student data and use it to plan my instruction.

22. An assessment system is used that provides timely feedback on specific knowledge and skills for individual students.

23. My school uses assessment data to evaluate and align curriculum

24. My school administers assessments throughout the school year that are used to guide instruction.

36. Students who are prone to violence are systematically identified.

Faculty and Staff Focus

37. 15. Norms for conduct that foster collegiality and professionalism among professional staff and administrators are clear and routinely followed.

38. 59. I feel safe at this school.

62. My professional development has improved the way I teach.

71. I usually look forward to each working day as a teacher.

35. If I had a chance to choose all over again, I would still choose teaching as a career.

Process Management

22. An assessment system is used that provides timely feedback on specific knowledge and skills for individual students.

33. Our principal identifies issues in the school that could potentially become problems.

39. My school systematically ensures that teachers address essential content.

35. There are open channels of communication among students, staff, and administrators.

95. I alter instructional strategies when students are having difficulty learning the material.

Results

34. My school's principal monitors the effectiveness of school practices and their impact on student learning.

40. The content considered essential for all students to learn versus that considered supplemental has been identified and communicated to teachers.

47. Our professional development improves student achievement.

54. All staff in our school hold high expectations for student learning.

57. There are avenues for recognizing and rewarding the accomplishments of all students.

Appendix B

Summary of Significant Differences

Category	Question	2007 CQI vs. 2007 Not CQI		2006 CQI vs. 2007 CQI	
		Regular	Yates	Regular	Yates
Leadership	15: Norms for conduct that foster collegiality and professionalism among professional staff and administrators are clear and routinely followed.	Yes		Yes	Yes
	31: In our school, teachers are encouraged to be instructional leaders.	No	No	Yes	No
	32: My school's principal fosters shared beliefs and a sense of community and cooperation.	Yes		Yes	No
	35: My school's principal systematically engages faculty and staff in discussions about current research on teaching and learning.	Yes		Yes	Yes
	43: Our principal promotes innovation.	No	No	Yes	Yes
Strategic Planning	16: Teachers in my school are routinely involved in formulating school-wide decisions and policies.	No		Yes	
	17: Teachers are routinely engaged in collaborative problem solving around instructional issues.	Yes		No	

	49: The professional development activities I attend are related to my district's Comprehensive Improvement Plan.	No		Yes	No
	53: The mission of this school is clearly defined.	No	No	Yes	
	76: There is a systematic collaboration across subject areas in our building.	No		Yes	
	18: Effective vehicles are in place for parents and community to communicate with the school.	Yes		No	No
	26: Student opinions are valued by teachers and administrators.	No	No	No	No
Student & Customer Focus	27: Faculty and staff solicit input from diverse student groups regarding the improvement of our school.	No		Yes	
	65: My school has created specific strategies to better involve parents in the education of their child.	No		No	
	69: This school makes students feel they belong.	No	No	No	No

	21: I routinely analyze disaggregated student data and use it to plan my instruction.	No		No	No
Data Analysis	22: An assessment system is used that provides timely feedback on specific knowledge and skills for individual students.	No	No	No	No
	23: My school administers assessments throughout the school year that are used to guide instruction.	No		No	No
	24: My school uses assessment data to evaluate and align curriculum.	No		No	
	37: Students who are prone to violence are systematically identified.	No		No	
	15: Norms for conduct that foster collegiality and professionalism among professional staff and administrators are clear and routinely followed.	Yes		Yes	Yes
	59: I feel safe at this school.	Yes		No	No

	62: My professional development has improved the way I teach.	No		Yes	
	71: I usually look forward to each working day as a teacher.	Yes	No	No	No
Faculty & Staff Focus	81: If I had a chance to choose all over again, I would still choose teaching as a career.	No		No	No
	22: An assessment system is used that provides timely feedback on specific knowledge and skills for individual students.	No	No	No	No
Process Management	34: Our principal identifies issues in the school that could potentially become problems.	Yes		No	No
	40: My school systematically ensures that teachers address essential content.	No	No	Yes	Yes
	55: There are open channels of communication among students, staff, and administrators.	Yes		Yes	Yes
	95/96: I alter instructional strategies when students are having difficulty learning the material.	No		No	No
		Yes		Yes	No

	Question 33: My school's principal monitors the effectiveness of school practices and their impact on student learning.				
	Question 39: The content considered essential for all students to learn versus that considered supplemental has been identified and communicated to teachers.	No	No	No	
	Question 47: Our professional development improves student achievement.	No		Yes	Yes
	Question 54: All staff in our school hold high expectations for student learning.	No		Yes	Yes
Results	Question 56: There are avenues for recognizing and rewarding the accomplishments of all students.	Yes		Yes	

VITA

Justin Lee Herrell was born on August 21st, 1970 in Mansfield, Missouri to William Ausburn and Dorothy Kay (Switzer) Herrell. Justin is the fourth child of six and has one sister and four brothers. He graduated from Ava High School in Ava, Missouri in May, 1988 and then completed a Bachelors of Science Degree in Secondary Education, Physical Education and Health in 1992; Masters in Education, Educational Administration in 2000; and a Specialist in Educational Administration, Secondary Education in 2003; all three degrees were earned from what was then Southwest Missouri State University and is now Missouri State University, Springfield. In May, 2008, Justin completed requirements for a doctorate degree in Educational Leadership and Policy Analysis from the University of Missouri-Columbia.

Justin began his teaching career in Bradleyville, Missouri in the Fall of 1992 and taught and coached in Mt. View, Missouri and MacDonald County, Missouri prior to going to the Springfield School District in Springfield, Missouri. In 1996, Justin began his tenure in Springfield at Central High School; in 2000 he worked as Administrative Intern at the District's central offices; in 2001 as an Assistant Principal at Parkview High School; in 2004 as Principal of Hillcrest High School; and in 2007 as Executive Director of Secondary Education back at the District's central offices. At the time of this writing, Justin had completed sixteen years in the field of education with twelve of those years in the Springfield School District.

Justin is happily and fortunately married to Suzanne Nicole (Polly) Herrell and has been for thirteen years. Nicole is also in education and currently serves as Elementary Principal in Mt. Vernon, Missouri and as Justin's constant support and focus. The Herrell's have two sons Colton (9) and Alexander (5); three dogs, one cat, multiple extended family and complete happiness.