SCHOOL BOARD ACCOUNTABILITY:

THE ROLE OF CONTINUOUS IMPROVEMENT

A Dissertation

by

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ABSTRACT

School Board Accountability: The Role of Continuous Improvement

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Under the mandated challenges of the *No Child Left Behind* Act, the accountability for student achievement results has been in clear view of the public (Irons & Harris, 2006). Today's school boards have been called to provide leadership, governance, and increased student achievement results in the school systems they serve (Gemberling, Smith, & Villani, 2000). This study measured the extent to which school board presidents utilized continuous improvement practices in their boardsmanship, which has been identified as an effective practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; Iowa Association of School Boards, 2000).

This study consisted of a sample of 853 school board presidents in the state of Illinois and included 164 participants which represented 19.2% of the school board presidents in the state. The results of this study revealed that school board presidents perceived the extent to which they were implementing continuous improvement practices in their boardsmanship was somewhere between "slightly true of our board and somewhat true of our board" as measured by a mean score of 4.91 (out of a total possible

of 6.0 on a Likert scale) on a 31-item survey. Pearson Product Moment Correlations, One Way Analysis of Variance and *t*-tests revealed no statistically significant correlations with the independent variables and the application of continuous improvement practices in boardsmanship.

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I am grateful for my incredible wife, Laura. Her relentless support, understanding, encouragement, and love have carried me through the toughest of times in life and in the graduate program. Without her, I would not have been able to achieve this accomplishment. Special thanks to my four children, Jessica, Joey, Matthew and Grace who made their own sacrifices by giving up time with their father.

Lastly, I need to thank my Lord and savior Jesus Christ. I do not deserve the mercy and grace that has been shown to me in this life, but am grateful for it, nonetheless.

DEDICATION

This dissertation is dedicated to the memory of my father, John Alan Marino. Dad was a kind, gentle, loving father who always put family first. It was obvious to everyone who knew him that his first love was his family. There was not a man that was more proud of his children, no matter what they accomplished, than my dad.

Although he died shortly after the writing of this work began, his memory and encouragement were with me every step of the way.

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CHAPTER I

INTRODUCTION

Background of the Problem

Under the demanding challenges of the *No Child Left Behind* Act, also known as the reauthorization of the *Elementary and Secondary Education Act*, the accountability for student achievement results has been in clear view of the public (Irons & Harris, 2006). While the challenges of increased accountability seem clear, the actualization of systemic improvement has not been (Rothstein, 1998). In response to addressing these challenges, State Departments of Education have responded by: (a) the establishment of new state standards for achievement; (b) the creation of high-stakes tests to measure academic progress; (c) the sanctioning of low-performing schools that have not made adequate yearly progress; (d) the allowing of charter schools and vouchers; and (e) the implementation of a variety of programs and improvement models (Irons & Harris, 2006; Lashway, 2002).

Boards of education have maintained governance responsibilities of public schools and have been accountable for assuring that all students achieve at grade levels of defined proficiency (Iowa Association of School Boards, 2000; Irons & Harris, 2006; Land, 2002). To ensure students achieve at grade level, school boards have implemented several approaches including: (a) securing financial equity; (b) obtaining fiscal accountability; (c) control over teacher quality; and (d) compliance with governing procedures (National Association of State Boards of Education, 1998).

Statement of the Problem

Dobyns and Crawford-Mason (1994) stated that in every decade since the 1940s, there has been at least one major study of American public education and all of them concluded that public education was bad and getting worse. Americans and American employers have become increasingly dissatisfied with their public schools and their school boards (Danzberger, Kirst, & Usdan, 1992; National Center on Education & the Economy, 2007; Organisation for Economic Co-operation and Development, 2006; Partnership for 21st Century Skills, 2006; Smoley, 1999; Speer, 1998). Public opinion held that schools fell short of expectations and produced students who could not perform basic functions in math, reading, writing, and civic skills (Edds, 2000).

Continuing this theme of public dissatisfaction, the Partnership for 21st Century Skills (2006) concluded that "The United States workforce is woefully ill-prepared for the demands of today's (and tomorrow's) workplace" (p. 9). The report (Partnership for 21st Century Skills, 2006) looked at readiness skills of new entrants to the workforce to determine the future success of the United States on a global economic playing field. The results of the report reflected that "employers are growing frustrated over the lack of skills they see in new workforce entrants" (p. 10). Reinforcing this finding, the *Program for International Student Assessment* (Organisation for Economic Co-operation and Development, 2006), which measured academic competencies of students, reported that United States students scored below the average of other participating countries. The National Center on Education and the Economy (2007) stated that "if we continue on our current course, and the number of nations outpacing us in the education race continues to

grow at its current rate, the American standard of living will steadily fall relative to those nations, rich and poor, that are doing a better job" (p.8).

There has been increased awareness of the failures of public schools and the need for reform in education (Kopel, 1997; Organisation for Economic Co-operation and Development, 2006; Partnership for 21st Century Skills, 2006). One cause of these failures has been a lack of a systems approach to school reform which has been attributed to: (a) a lack of understanding of systems theory; (b) the failure to operationalize the concepts and principles of systems theory; and (c) the difficulties in applying the systems model from concept to reality (Kopel, 1997; Walpole & Noeth, 2002).

School boards in America have been ideally positioned to address this needed change in education and have been charged with governance responsibilities over the public schools (Lashway, 2002; Land, 2002; Price, 2001). Given their function and responsibility in an era of accountability and high expectations for student achievement results, school boards have needed to implement proven and effective practices in their boardsmanship (Furhman, 1999; Gemberling, Smith, & Villani, 2000; Iowa Association of School Boards, 2000; Lashway, 2002; Land, 2002; Price, 2001). Finding viable and systemic solutions to the challenges in education has been complicated by the lack of research corresponding to the work of school boards and their impact on student achievement (Bracey & Resnick, 1998; Land, 2002; Smoley, 1999).

A review of the literature of effective school boards identified the application of continuous improvement as one effective practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000). School boards that have applied continuous improvement through a systems approach to their boardsmanship have

ensured consistency among goals, resources, plans, capacity, and assessment in their school systems (McKay & Newcomb, 2002). Adding to the complexity of this issue, a thorough review of the literature yielded no research studies that measured the extent to which school boards utilized continuous improvement practices in their boardsmanship, even though it has been an identified practice of effective school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

The study addressed the following research questions:

1. What is the relationship between the number of years serving on the board of education and the use of continuous improvement practices in boardsmanship?
2. What is the relationship between the number of years serving as school board president and the use of continuous improvement practices in boardsmanship?
3. What is the relationship between the education level of the school board president and the use of continuous improvement practices in boardsmanship?
4. What is the relationship between school district size and the use of continuous improvement practices in boardsmanship?

Purpose of the Study

The purpose of the study was to examine the extent to which school board presidents utilized continuous improvement practices in their boardsmanship. Three sets of variables were studied including school board president demographics, school district demographics, and continuous improvement variables. School board president demographic variables included: (a) gender; (b) age; (c) ethnicity; (d) years serving on the board; (e) years serving as board president; and (f) educational level. The following

school district variables were studied: (a) school district size; and (b) school district classification. The following continuous improvement variables based on the *Malcolm Baldrige Criteria for Performance Excellence* (National Institute of Standards & Technology, 2000) were studied: (a) leadership; (b) strategic planning; (c) student, stakeholder, and market focus; (d) measurement, analysis, and knowledge management; (e) workforce focus; (f) process management; and (g) results.

Significance of the Study

School boards in America have been seeking effective practices to meet the public's high demand for student achievement results (Gemberling, Smith, & Villani, 2000; IASB, 2000). The significance of this study was derived from the lack of research measuring the extent to which school boards have implemented continuous improvement practices in their boardsmanship, an identified effective practice of school boards. Two major publications provided the foundation for this study: (a) the *Iowa Lighthouse Study*, a seminal study of effective school board practices conducted by the *Iowa Association of School Boards* (2000); and (b) the *Key Work of School Boards*, a book indicating key focus areas of effective school boards, published by the *National School Board Association* (Gemberling, Smith, & Villani, 2000). Independently, each publication (Gemberling, Smith, & Villani, 2000; IASB, 2000) identified continuous improvement as an effective school board practice.

Specifically, the *Iowa Lighthouse Study* (Iowa Association of School Boards, 2000) identified the differences between school boards in low-achieving and high-achieving school districts based on student achievement results on state tests. In the study, the research team interviewed 159 school board members, superintendents, and

school staff to determine the difference between low-achieving and high-achieving school boards. The study identified seven critical conditions for school renewal based on the research of effective schools, school improvement, and change. The conditions discovered by the researchers were: (a) shared leadership; (b) continuous improvement and shared decision making; (c) ability to create and sustain initiatives; (d) supportive workplace; (e) staff development; (f) support for school sites through data and information; and (g) community involvement.

In a separate publication, Gemberling, Smith, and Villani (2000) identified eight key action areas of effective school boards that have a positive impact on student achievement. The authors' framework was not a sequence of steps, but rather a system on which successful boards based their action. The eight areas identified and endorsed by the *National School Boards Association* included: (a) vision; (b) standards; (c) assessment; (d) accountability; (e) alignment; (f) climate; (g) collaborative relationships; and (h) continuous improvement.

Gemberling, Smith, and Villani (2000) based their framework on systems thinking and continuous improvement models such as *The Malcolm Baldrige Criteria for Performance Excellence* (National Institute of Standards & Technology, 2000) and *Total Quality Management* (Kopel, 1997; Langford, 1994; Schargel, 1994; Schmidt & Finnegan, 1993). Gemberling, Smith, and Villani's (2000) encouraged school boards to implement systems thinking. They directed school boards to provide leadership through governance to create conditions under which excellent teaching and accelerated student performance occurred.

School boards have historically taken a hands-off approach to student learning, believing that educational decisions should be determined by teachers and administrators (Furhman, 1999; Lashway, 2002; Ziebarth, 2002). However, in a national survey of local school board members, the vast majority of respondents reported that the percentage of school board time spent on issues directly related to student achievement had increased during their board tenure (Hess, 2002).

School boards have persisted in searching for effective practices to meet the demands of the high-profile, *No Child Left Behind* accountability system (Irons & Harris, 2006). Often, externally imposed change has resulted in "overload, unrealistic timelines, uncoordinated demands, simplistic solutions, misdirected efforts, inconsistencies, and underestimation of what it takes to bring about reform" (Fullan, 1991, p. 27). Organizations have frequently been thrust into change work because of a sense of urgency to adapt to external influences (Heifetz, 1994). To meet the demands of urgency and accountability, it has been recommended that school boards apply continuous improvement strategies and systems thinking in their boardsmanship, rather than using isolated, non-systems approaches (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000; Maus, 1981).

Implementing systemic change requires leadership. Fullan (1991) stated that in complex change efforts, change agents (such as school boards) have used external mandates as catalysts to re-examine what they are doing. Nadler, Shaw, and Walton (1995) added that in a period of disequilibrium, organizations have needed to "find new ways of organizing to generate and nurture new types of capabilities that are more relevant to the new environment" (p. 9). Whatever the determining incentive, where

quality management and continuous improvement initiatives have been applied systemically to education, it has made a measurable difference (Dobyns & Crawford-Mason, 1994).

Although much research (Bonstingl, 2001; Edds, 2000; Eisner, 2001; Gemberling, Smith, & Villani, 2000; Hackman & Wageman, 1995; IASB, 2000; Kopel, 1997; Langford, 1994; Schmoker, 1996; Walpole & Noeth, 2002) exists regarding the application of continuous improvement approaches implemented in the operation of school districts, schools, and classrooms, an extensive literature review revealed that no studies could be found that measured the extent to which school boards applied continuous improvement practices in their boardsmanship. The application of continuous improvement in school boardsmanship has been identified as an effective school board practice (Furhman, 1999; Gemberling, Smith, & Villani, 2000; Grismer et al., 2000; IASB, 2000), yet no research could be found to determine its effectiveness with school boards or the extent to which school boards have used it in their boardsmanship (Hess, 2002; Land, 2002).

Assumptions

The procedural assumptions of this study were:

1. The results from the survey provided data which indicated school board presidents' application of continuous improvement practices in their boardsmanship.
2. School board presidents provided accurate responses to the survey.
3. School board presidents avoided selecting socially desirable or perceived "correct" responses on the survey.

4. Survey procedures and instructions were followed by participants.

The substantive assumptions of this study were:

1. Performance of school board members could be improved by increasing awareness and application of continuous improvement practices in school boardsmanship.
2. There was interest in identifying and distributing strategies for effective boardsmanship through the application of continuous improvement practices.
3. A research study about school board application of continuous improvement practices could provide more readily available information that could positively impact school board training and effective boardsmanship.

Limitations

Limitations of this study were:

1. The study focused on a population of 853 school board presidents in the state of Illinois.
2. The study was limited to school board presidents serving public school districts in grades K-12, K-8, and 9-12 in the state of Illinois.
3. The study measured school board presidents' perceived application of continuous improvement practices in their boardsmanship. It did not address the other six elements of school renewal described in the *Iowa Lighthouse Study* (IASB, 2000) including: (a) shared leadership; (b) ability to create and sustain initiatives; (c) supportive workplace; (d) staff

development; (e) support for school sites through data and information; and (f) community involvement.

4. The study measured school board presidents' perceived application of continuous improvement practices in their boardsmanship. It did not address the other seven focus areas of the *Key Work of School Boards* (Gemberling, Smith, & Villani, 2000) including: (a) vision; (b) standards; (c) assessment; (d) accountability; (e) alignment; (f) climate; and (g) collaborative relationships.
5. The results of the study cannot be generalized to the remaining school board member populations.

Delimitations

Delimitations of this study were:

1. The study did not consider academic achievement results of the school district.
2. The study did not measure the extent to which continuous improvement was implemented in the school district, individual schools, or classrooms.

Definition of Terms

Accountability

Accountability has often been used synonymously with such concepts as answerability, responsibility, blameworthiness, liability, and other terms associated with the expectation of account-giving. It has also been an aspect of educational governance associated with the *No Child Left Behind* Act (Irons & Harris, 2006; Rothman, 1995).

Achievement

Achievement has often been defined as students' performance on standardized or norm-referenced state accountability tests (Goodman & Zimmerman, 2000; IASB, 2000; Land, 2002).

Boardsmanship

Boardsmanship has been defined as the functions carried out by local school board members through the establishment of the direction and policies for the operation of the school system (Furhman, 1999; Gemberling, Smith, & Villani, 2000).

Continuous Improvement

Continuous improvement has been defined as constant efforts to eliminate waste, reduce response time, simplify the design of both products and processes, and improve quality and customer service. It has been referred to as a quality philosophy that assumes further improvements are always possible and that processes should be continuously reevaluated and improvements implemented using a systems approach (Dobyns & Crawford-Mason, 1994; Eisner, 2001).

Malcolm Baldrige Criteria for Performance Excellence

The *Malcolm Baldrige National Quality Award*, created by Public Law 100-107, was signed into law in 1987. The criteria focused on seven areas including: (a) leadership; (b) strategic planning; (c) student, stakeholder, and market focus; (d) measurement, analysis, and knowledge management; (e) workforce focus; (f) process management; and (g) results (National Institute of Standards & Technology, 2000).

No Child Left Behind Act

The reauthorized *Elementary and Secondary Education Act* (Public Law 107-110) commonly known as *No Child Left Behind* (NCLB), is a United States federal law that reauthorized a number of federal programs that aimed to improve the performance of United States' schools by increasing the standards of accountability for states, school districts and schools, as well as providing parents more flexibility in choosing which schools their children will attend (American Productivity & Quality Center; 2000; Irons & Harris, 2006).

Online Survey

Online surveys refer to a system of communication and information retrieval and exchange that arises from a network of interconnected computers and telecommunication equipment and includes the Internet, the World Wide Web, and email systems (Smith, 2004).

Quality

Quality is the totality of features and characteristics of a product or service that bears on its ability to satisfy given needs. The ability to satisfy the given needs reflects the value of the product or service to the customer, including the economic value, as well as safety, reliability, and maintainability. Quality is the integrity of how the teaching and learning process is executed (Freeston, 1993; Kopel, 1997; Tribus, 1993).

School Board

A school board is the title of the board of directors of a local school district. This elected council helps determine educational policy in a small regional area, such as a city, state, or province. It usually shares power with a larger institution, such as the

government's department of education (Carol et al., 1986). In the State of Illinois, it is the governing body of any district created or operating under authority of the Illinois School Board of Education, including board of school directors and board of education. When the context so indicates, it also means the governing body of any non-high school district and of any special charter district, including board of school inspectors (Illinois School Board of Education, 2007).

School Board President

The school board president is an elected official who oversees the school board and facilitates public school board meetings (Carol et al., 1986).

School District

A school district is a unique body, usually with districts being coequal to that of a city or a county, and has similar powers including taxation and eminent domain (Goodman & Zimmerman, 2000).

Stakeholder

Stakeholders are referred to as individuals or groups that possess and maintain a personal interest in the operation of a school system. Stakeholders of a school system may be students, parents, teachers, school administrators or taxpayers of a school district with not tangible ties to the schools (Edds, 2000).

Systems Thinking

Systems thinking is an approach to improvement that is based on the belief that the component parts of a system will act differently when isolated from its environment or other parts of the system (Hackman & Wageman, 1995; Senge, 1990).

Total Quality Management

Total Quality Management (TQM) is a philosophy of organizational management that emphasizes meeting the requirements of the customer as the driving force behind continuous improvement efforts in outcomes and processes (Bonstingl, 1992; Bradley, 1993; Edds, 2000).

Organization of the Study

Chapter I of this study provided a statement and introduction of the research problem. Chapter II consists of a review of the related literature regarding the role of school boards with particular attention to effective practices of school boards, accountability issues, systems theory and the application of continuous improvement in boardsmanship. The methods and procedures used to conduct the study are described in Chapter III. Chapter IV will present the findings related to the research questions. Chapter V will provide a summary of the research findings, state conclusions, describe implications for practice, and make recommendations for further research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Organization of the Present Chapter

The purpose of this chapter is to provide a review of the literature related to this study. The sections of this chapter include: (a) the theory base of continuous improvement; (b) systems theory, quality and continuous improvement; (c) application of variations of systems theory in education; (d) the application of systems theory and school board practices; (e) historical background of school boards; (f) roles and responsibilities of the board of education and the superintendent; (g) board/superintendent: a team approach; (h) educational governance systems and reform models; (i) holding leadership accountable and accountability systems; (j) the school board of education and its impact on student achievement; (k) indicators of school board effectiveness; (l) summary of the literature review; and (m) the contribution of the study.

Local school boards have played a specific role in the public education system (Campbell & Greene, 1994; Kowlaski, 2006). They have been a governing body that have provided leadership, maintained a forum in which the public could be heard, discussed key issues and voted to take action (Resnick, 1999). School boards have provided public credibility, stewardship and direction for local education and have been accountable to the public for results in student achievement (Carver, 2000).

Research related to the work of school boards and their impact on student achievement has been limited (Bracey & Resnick, 1998; IASB, 2000; Land, 2002; Smoley, 1999). With the exception of one partially-related study (Scribner, 1966), no

studies could be found that examined school board presidents' use of continuous improvement practices, even though it has been cited in the literature as an effective school board practice (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

The Theory Base of Continuous Improvement

Continuous improvement has been an approach that effective school boards have practiced in their boardsmanship (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000) and has been defined as: (a) the practice of improving results on a constant basis and the process of establishing goals; (b) collecting and analyzing data; (c) making a determination of accomplishment of goals; and (d) setting new goals (Bonstingl, 1992; Edds, 2000). Continuous improvement has been grounded in systems theory which has spawned various approaches to systemic improvement efforts in the form of programs such as: the *Malcolm Baldrige Criteria for Performance Excellence, Total Quality Management,* and *Total Quality Education* (Bonstingl, 1992; Edds, 2000; Gemberling, Smith & Villini, 2000).

Systems Theory, Quality and Continuous Improvement

Systems theory took form in the United States in the 1970s as American industry realized it was losing its competitive edge to international companies, particularly ones located in Japan (Walpole & Noeth, 2002). Many American products and services were costly and of increasingly poor quality, while Japanese automobiles and electronics were of high quality and reasonably priced (Bonstingl, 2001; Deming, 1986; Dobyns & Crawford-Mason, 1994). Ironically, this focus on quality was American in origin but was

largely rejected by American companies after World War II because United States business leaders did not see the need for improvement (Walpole & Noeth, 2002).

Deming (1986) was identified as the leader of Japan's quality movement following World War II. Japan's national award, the Deming Prize for Quality, was named after the man who provided such valuable assistance in rebuilding Japan's economy. The Deming approach was predicated on the continuous improvement of work processes, which were the core operating functions of an organization (Bonstingl, 2001; Dobyns & Crawford-Mason, 1994; Hackman & Wageman, 1995). Deming believed that improving processes was the key to improving quality. His approach included managers working with employees to gather information, collecting data, and implementing process improvements. In essence, all leadership, management, and effort were directed toward ensuring quality through continuous improvement (Bonstingl, 2001; Dobyns & Crawford-Mason, 1994). Deming (1986) understood the importance of viewing an organization as a system in which all components had a function that blended together for increased productivity and efficiency.

Systems theory, also referred to as systems thinking, has been guided by the premise that the behavior of systems follows common principles and the elements of systems interact in predictable ways (Gemberling, Smith, & Villani, 2000; Senge, 1990). Senge (1990) defined systems thinking as the fifth discipline and found that when integrating the other four disciplines: (a) shared vision; (b) personal mastery; (c) mental models; and (d) team learning, with the fifth discipline, organizational change occurred. Senge (2000) stated that systems thinking required organizations to make a paradigm shift of thinking differently and was about creating something new based on an

exploration of possibilities. He asserted that this approach required a “discipline of planned abandonment” (p. 24), or letting go of the old in order to create something new. Systems thinking has been defined as a discipline for seeing wholes, recognizing patterns and interrelationships, and learning how to structure those interrelationships in more effective, efficient ways (Senge, 1990).

Systems thinking has included methods, tools and principles for understanding the nature of interactions to create more effective systems (Gemberling, Smith, & Villani, 2000). It has involved understanding the interdependence of functions and people in an organization (Bradley, 1993) and has been a shift from a fragmented view of individual and independent tasks to seeing the world as a connection of the individual tasks into a connected whole (Edds, 2000). Educational organizations that have learned and improved were those that approached change from a systems perspective (Senge et al., 2000).

Sustaining organizational change recognizes the need to do things differently, diagnosing the current status of the organization, and determining a course of action (Beckhard & Pritchard, 1992; Conner & Lake, 1994; Saraph & Sebastian, 1993). Planning for change and communicating identified strategies have been necessary elements of effective organizational growth and, as stated previously, have been the responsibility of school boards. Strategies for implementing change have needed to be developed with stakeholders along with the development of strategies for changing the attitudes of members of the organization in order to accomplish systemic and lasting change (Beckhand & Prichard, 1992).

Involving the members of the organization as participants in the change process has been the responsibility of leadership, namely the administration and board of

education (Evans, 1993; Parker, 1990). Many school districts have been reluctant to make the necessary systemic changes and lasting solutions have not typically been found within the current paradigms of existing educational systems. Morris (1996) stated that "the idea is that if successful and widely accepted, a systems perspective that changes the mental models of administrators, reformers, and policy makers can modify the cultural framework on which the institutionalized school district is constructed" (p. 443).

One of the weaknesses of educational organizations has been the lack of systems thinking and the absence of stakeholders' insight into the idea that the individual components of the organization must be aligned to improve the quality of results (Kopel, 1997; Gemberling, Smith, & Villani, 2000). Because of this lack of systems thinking in education, many attempts at improvement have failed (Kopel, 1997). Failed attempts to use a systems approach in education have been due to: (a) a lack of understanding of systems theory; (b) the failure to operationalize the concepts and principles of systems theory; and (c) the difficulties in applying the systems model from concept to reality (Walpole & Noeth, 2002). In search of effective ways to implement change and improvements within an organization, a variety of reform approaches have been introduced.

Application of Variations of Systems Theory in Education

Systems theory has been implemented through a variety of related initiatives in education. One approach to continuous improvement has been the application of *Total Quality Management* which has incorporated: (a) viewing the organization as a whole, rather than its parts; (b) applying a team approach to decision-making; and (c) encouraging improvement of processes that take place across standard organizational

lines (Lannon-Kim, 1991). The term *Total Quality Management* (TQM) has been used to describe the implementation of continuous improvement and systems thinking in the educational setting (Bonstingl, 1992). *Total Quality Management* has represented a process of change in the way members of an organization think about their work (Bradley, 1993) and has been applied in the educational setting resulting in the improvement of student learning (Bonstingl, 1992; Cornesky, 1993; Schargel, 1994; Swan, 1994).

Kopel (1997) defined *Total Quality Management* as a philosophy that involved everyone in continuously improving processes in order to meet and exceed customer expectations. Without customers (students, parents and the community), there is no school or school system, and without a school system, there is no need for students to attend. To that end, a primary focus for a school system has been to strive for customer satisfaction by implementing effective systems and processes to provide the customers (students) with quality services (Deming, 1986). *Total Quality Management* has been predicated on improving a product, which in the case of public schools, has been increased student achievement (Spring, 1996; Kopel, 1997).

Another variation of systems theory, derived from *Total Quality Management*, has been *Total Quality Education*. Glasser (1990) related quality management principles to his own ideas of learning and believed that if schools were to follow Deming's principles, it would require students to evaluate both the quality of the work they do and the quality of the processes used to produce the work which he called *Total Quality Education*. Quality in education has been described as the integrity of how the teaching and learning process is executed (Tribus, 1993). Cornesky (1993), described *Total*

Quality Education as an avenue which allowed students to actively participate in classroom decision-making processes, the development of critical thinking skills, and the establishment of becoming life-long learners.

Empowerment and ownership have been key elements of *Total Quality Education*. Educators that have empowered students by allowing them to assess their own work and provide input about changes in the classroom have improved student performance (Cornesky, 1993; Edds, 2000; Eisner, 2001). When students and teachers have been empowered and worked together collaboratively, a process that improved performance was established (Eisner, 2001). The total quality approach in education has focused on students, teachers, administrators and the school board applying systems thinking, rather than on one person's performance to improve the system.

The total quality philosophy has allowed the customer (students) to communicate with the decision-maker (teacher) in the interest of continually improving classroom processes (Cornesky, 1993; Glasser, 1990; Juran, 1989). Five key points were offered by Cornesky (1993) in the implementation and development of a total quality philosophy in an educational setting included: (a) helping students develop an understanding of total quality; (b) developing trust; (c) developing pride in work; and (d) changing the classroom culture. The terms quality and total quality were often used synonymously in the literature review of continuous improvement.

Quality has been defined as a system of continuous improvement that has met customer needs (Freeston, 1993). Quality has also been identified as the pursuit of customer satisfaction and the elimination of variation in the production process (Capper & Jamison, 1993). Quirke (1995) described quality as being "about 'connectedness'

where people had a sense of the whole relationships with their internal and external customers, and an understanding of how the process of which they are a part fits together to produce the desired result" (p. 162). Quality has been described as a commitment to excellence by each individual that could be achieved through teamwork and a process of continuous improvement (Cornesky, 1993; Langford, 1994).

The concept of continuous improvement has encompassed the common quality processes that have been derived from systems thinking. A continuous improvement approach has required a desire for improvement among stakeholders (Juran, 1989). Educational organizations that have applied the concept of continuous improvement have articulated a clear and well-defined vision and have engaged stakeholders in order to continuously improve their systems (Edds, 2000; Juran, 1989).

To apply a systems approach in education, Betts (1992) recommended the following: (a) development of increased capacity for self-reference, self-correction, self-direction, self-organization, and self-renewal in the educational environment; (b) viewing system change as a process of problem-solving; (c) putting emphasis on participation of the organization to the whole systems; (d) focusing on cooperation rather than on competition; (e) seeing everyone as responsible for the system; (f) focusing on long-term consequences and root causes; and (g) incorporating conflicting goals of the system into a single, clear goal which the system can attain.

Schmoker (1996) summarized the discussion of continuous improvement by saying "Leaders must recognize teachers and others that are instrumental in the change process, and school improvements are the results of solid goals and data collection to determine progress toward goal accomplishment" (p. 59). The general framework of

educational institutions implementing continuous improvement through a systems approach has included the following components (Bonstingl, 1992; Kopel, 1997; Leonard, 1996):

1. Customer Focus. Organizations had well-defined customers and allowed them to define and judge quality based on their needs and requirements.
2. Continuous Improvement. Incremental and breakthrough improvements were embedded in the way school systems functioned. Modifications, revisions, and improvements were based on collection and analysis of data gathered.
3. Data driven decision making. The collection of data on key processes and outcomes was used to make decisions for improvement. The Plan Do Study Act cycle of continuous improvement (and similar variations) was often used in a data-driven approach.
4. Leadership. Setting direction for achievement, establishment of clear mission and vision, determining core values, and establishing high expectations was evident.
5. Systems thinking. Stakeholders were striving to understand their role and their contribution to organizational results. There was a strong focus on the parts of the system and their interactions as a whole.
6. Training. Skills and motivation of the workforce remained a priority. Employees were involved in the planning and development of training processes.

To produce a precise, comprehensive, and consistent approach to the application of continuous improvement, the *Malcolm Baldrige Criteria for Performance Excellence*

were created by the Federal government's National Institute of Standards and Technology to assist organizations in the implementation of a systems approach to organizational effectiveness (National Institute of Standards & Technology, 2000). The *Malcolm Baldrige Criteria for Performance Excellence* incorporated various principles of initiatives such as: (a) *Total Quality Management*; (b) *Total Quality Education*; and (c) continuous improvement approaches, to serve as a comprehensive organizational model (Edds, 2000; Siegel & Bryne, 1994).

The *Malcolm Baldrige Criteria for Performance Excellence* has enabled educators to transform their organizations into high-performing institutions (Collins & Shipley, 1997). In 1999, the *Malcolm Baldrige Criteria for Performance Excellence* criteria were made available to educational organizations to serve as a holistic, inclusive, and systemic approach to applying continuous improvement (National Institute of Standards & Technology, 2000). The criteria have not prescribed absolutes or any single step to be taken; rather, they have helped organizations assess both qualitative and quantitative aspects of the system through a self-assessment process (Evanich, 1997; Kopel, 1997; Spring, 1996).

The *Malcolm Baldrige Criteria for Performance Excellence* were developed around seven key categories including: (a) leadership; (b) strategic planning; (c) student, stakeholder, and market focus; (d) measurement, analysis, and knowledge management; (e) workforce focus; (f) process management; and (g) results (National Institute of Standards & Technology, 2000). The criteria have provided a common vocabulary of management principles for schools and have required the demonstration of outstanding results, not just for achievement, but for processes and levels of satisfaction throughout

the school community (Edds, 2000; Quattrone, 1999). The *Malcolm Baldrige Criteria for Performance Excellence* has been widely-recognized as a comprehensive model of continuous improvement and has been used effectively in schools (Edds, 2000).

The Application of Systems Theory and School Board Practice

Continuous improvement models such as *Total Quality Management, Total Quality Education* and the *Malcolm Baldrige Criteria for Performance Excellence* have been effectively applied in schools, yet no research could be found that measured the implementation of continuous improvement practices in school boardsmanship (Evanich, 1997; Kopel, 1997; Spring, 1996). Only one partially-related study (Scribner, 1966) was found that investigated school boards' use of systems theory. Scribner (1966) studied the application of a systems approach through the analysis of school board meeting agendas. The purposes of his study were: (a) to determine a set of concepts for classifying events related to the performance of school boards; (b) to specify properties of the concepts; and (c) to ascertain the applicability of a systems approach for future research in the field of educational administration. Scribner (1966) examined the minutes of six meetings of the board of education and concluded that a systems approach does have utility for future research in educational administration. Because this study was conducted in 1966, it was not organized around the widely accepted model of continuous improvement through the *Malcolm Baldrige Criteria for Performance Excellence* (National Institute of Standards & Technology, 2000).

Historical Background of School Boards

In order to have a complete understanding of the role of the school board and their accountability to the public, it was necessary to research their foundation. Today's school

board originated from the town meetings and governments established in Massachusetts in the late 1700s. In early times, the actual everyday governance of public schools, in a mostly rural nation, was a grassroots affair conducted by local elected trustees who had extensive powers and duties (Education Commission, 1999). School boards controlled almost all aspects of school administration. Tasks that school boards involved themselves with included: (a) establishment of curriculum; (b) selection of textbooks; (c) building schools; (d) collecting taxes; (e) managing school facilities; (f) testing students; and (g) hiring teachers (Institute for Educational Leadership, 2001; Education Commission, 1999). It was not until the late 1830s that school boards started hiring superintendents as growing school populations made it nearly impossible for untrained, unpaid, and part-time school board members to manage the daily operations of schools (Educational Commission, 1999). Founders of public education systems generally shared the beliefs that the purpose of public education was to train model citizens by including a common denominator of nonsectarian morality and nonpartisan civic instruction and that the common school should be free, open to all children and public in support and control (Bracey & Resnick, 1998; Education Commission, 1999; Land, 2002; Smoley, 1999; Speer, 1998).

The general public and employers have become increasingly dissatisfied with the public schools and school boards (Danzberger, Kirst, & Usdan, 1992; National Center on Education & the Economy, 2007; Organisation for Economic Co-operation and Development, 2006; Partnership for 21st Century Skills, 2006; Smoley, 1999; Speer, 1998). Education scholars Danzberger, Kirst, and Usdan (1992) charged that school boards: (a) were not providing far-reaching or politically risk-taking leadership for

education reform; (b) had become another level of administration, often micromanaging the school district; (c) were so splintered by their attempts to represent special interests or board members' individual political needs that they could not govern; (d) were not exercising sufficient policy oversight or adequately communicating about schools and the school system with the public; and (e) exhibited little capacity to develop positive and productive lasting relationships with their superintendents (p. 91).

More recent publications have discussed the lack of readiness found in graduates of the public school system (National Center on Education & the Economy, 2007; Organisation for Economic Co-operation and Development, 2006; Partnership for 21st Century Skills, 2006). A report which looked at readiness skills of new entrants to the workforce by the Partnership for 21st Century Skills (2006) described the workforce in the United States as "woefully ill-prepared for the demands of today's (and tomorrow's) workplace" (p. 91). The results of the report reflected "employers growing frustrations over the lack of skills they see in new workforce entrants (Partnership for 21st Century Skills, 2006; p. 10). Continuing this theme, the report indicated that "our nation's long-term ability to succeed in exporting to the growing global marketplace hinges on the abilities of today's students" (p.11).

Reinforcing this finding, the *Program for International Student Assessment* (Organisation for Economic Co-operation and Development, 2006) which measured academic competencies of students reported that United States students scored below the average of other participating countries. The National Center on Education and the Economy (2007) stated that "if we continue on our current course, and the number of nations outpacing us in the education race continues to grow at its current rate, the

American standard of living will steadily fall relative to those nations, rich and poor, that are doing a better job" (p.8).

Roles and Responsibilities of the Board of Education and the Superintendent

Since their beginning, school boards have struggled with the role they play in the educational system (Bracey & Resnick, 1998; Carol et al., 1986; Price, 2001). From the onset of the *No Child Left Behind Act*, and in an era of public accountability for student achievement results, it has not been possible or credible for boards of education to serve as passive reviewers and judges of the work of others (Gemberling, Smith, & Villani, 2000). Today's school boards have been called to provide leadership, governance, and increased student achievement results of the school systems they serve (Gemberling, Smith, & Villani, 2000).

To advance student achievement, Bracey and Resnick (1998) offered "*The Four Pillars*" of the local school board role which consisted of four broad but interrelated categories. The authors (Bracey & Resnick, 1998) stated that each pillar was a necessary component of successful school board leadership. These pillars included: (a) vision setting for student achievement; (b) establishing a successful learning environment; (c) exercising accountability for results; and (d) using advocacy to build support, and are consistent with other models that have attempted to describe school board functions and effective board leadership (Danzberger, Kirst, & Usdan, 1992; Horn, 1996; Johnston, 2000; Land, 2002; Resnick, 1999; Smoley, 1999).

Providing specific findings about the role of the board of education, a report by the Education Commission of the States (Ziebarth, 2002) listed responsibilities of the board of education including:

1. Hiring, evaluating and, if necessary, dismissing the superintendent.
2. Adopting a vision for the district, in partnership with the superintendent and after gaining input from individuals in the school system such as central office staff, principals, teachers, parents and students, and individuals from outside the school system such as businesspeople, higher education officials, social-service providers, and community members.
3. Adopting district wide academic content and performance standards.
4. Creating measures for the district wide academic content and performance standards.
5. Adopting district wide policies that provide incentives for progress and consequences for failure for all decision makers in the district, as well as for students.
6. In partnership with the superintendent, tracking progress toward, and keeping attention focused on, the student learning goals and the academic content and performance standards and measures.
7. Setting financial goals, monitoring finances, ensuring that accounts are audited annually and publishing an end-of-year financial report to the community.
8. Approving an annual budget that organizes the district's resources in support of student learning goals and academic content and performance standards, and ensures that school facilities meet health, safety and educational requirements.
9. Issuing bonds, levying taxes and ensuring that taxes are collected

10. Establishing a minimum dollar amount for contracts requiring school board approval.
11. Approving contracts with employee groups.
12. Approving plans for renovating and building school facilities, after seeking and considering community input.
13. Evaluating its own performance, and periodically taking part in workshops, sometimes with the superintendent, aimed at improving the effectiveness of the school board in raising student achievement (p.1).

Another role of the school board has been to ask the right questions of the superintendent and administrative staff (Gemberling, Smith, & Villani, 2004; McCaw & Watkins, 2005). School boards that have asked the right questions of administrators have impacted student achievement (Bracey & Resnick, 1998; Danzberger, Kirst, & Usdan, 1992; McCaw & Watkins, 2005). In addition, "through the power of the question, local school boards can learn the key issues and can provide the leadership necessary to elevate student achievement" (Bracey & Resnick, 1998, p. 23).

Effective school boards have asked questions (Gemberling, Smith, & Villani, 2004) such as:

1. What do we want to accomplish?
2. What actions will be taken?
3. How will we know that we have done what we said we would do?
4. How will we know whether what we did made a difference?
5. What kind of difference did it make?
6. How will we know when we have achieved our objectives?

7. What is the measure of success?

Bracey and Resnick (1998) suggested that school board members should be asking the following questions to help initiate a plan of action in their school system:

1. How does our school system define student achievement?
2. Does our school system have a vision and a plan for raising the achievement of all children?
3. Are our student achievement goals, plans, and progress reports set forth in clear and quantifiable terms and broadly disseminated with the school system to parents and the general public?
4. Are our teachers, administrators, and other staff committed to, and held accountable for, achieving the goals and standards of our school system?
5. How do we involve parents, the business community, and other members of the public in the development and implementation of, and the accountability for, our student achievement goals?
6. What next steps can our school board take to lead the effort to raise student achievement in our school system?
7. Are our students prepared to meet the challenges of the 21st century- not just in an academic sense, but also in terms of the technological, organizational, and sociocultural demands of the next century (p. 23)?

In contrast to the role of the board of education, the superintendent has traditionally been responsible for overseeing and managing the daily operations of a school district, ideally focused on implementing the school board's vision and priorities (Horn, 1996; Land, 2002). The superintendent has worked with the school board to build

a unity of purpose focused on increasing academic achievement for all students. The Education Commission of the States reported that the superintendent was responsible for:

1. Leading a process, in partnership with the school board, to create a vision for the district that includes input from individuals in the school system such as central office staff, principals, teachers, parents and students, as well as individuals from outside the school system such as businesspeople, higher education officials, social-service providers and community members;
2. Developing an annual budget that organizes the district's resources in support of student learning goals and academic content and performance standards, and ensures that school facilities meet health, safety and educational requirements;
3. Within the context of the district's vision and goals, deciding which instructional areas will receive priority attention and maintaining the focus on these areas, as well as keeping school-site decisions focused on these areas;
4. Working with each school's staff to define instructional objectives, design the curriculum and engage in professional development, using student performance data as the basis for these decisions;
5. In partnership with the school board, tracking progress toward, and keeping attention focused on, the student learning goals and academic content and performance standards and measures adopted by the school board;
6. After adoption by the school board, providing incentives for progress and consequences for failure for all decision makers in the district, as well as for students;

7. Tailoring and leading the provision of assistance to the district's low-performing schools;
8. Hiring, evaluating and, if necessary, dismissing central office staff;
9. Hiring, evaluating and, if necessary, dismissing principals, in collaboration with a school's staff, parents and others;
10. Recruiting principals and teachers;
11. Leading bargaining discussions with employee groups and presenting contracts to the school board for its approval;
12. Completing reports on district spending and student achievement using a variety of indicators, and disaggregating the data by race, ethnicity, income, gender, special education and bilingual status, as appropriate;
13. Implementing strategies to involve parents and community members in the district and to create partnerships between the district and public and private organizations (Ziebarth, 2002; p. 2).

The roles and responsibilities of superintendents, central office administrators, and school board members have become increasingly complex and unclear, which has resulted in role confusion (Carol et al., 1986; Price, 2001). Price (2001) stated that it is possible that clear role separation may not be realistic. The school board's role has been governance and "the leadership responsibility of every governing board, working closely and in tandem with its chief executive officer, is to keep the organization focused on achieving its central purpose" (Resnick, 1999, p. 8).

Unfortunately, the defined role of the school board, superintendent and central office staff has not always been carried out as intended (Carol et al., 1986). School board

members have been frequently under heavy political pressure to intervene in management issues. Superintendents have been increasingly trained as leaders rather than managers and superintendents and boards have needed to continually discuss who is responsible for what (Price, 2001). When role confusion has occurred in the school system, micromanagement has been the key reason (Carol et al., 1986; Price, 2001).

Micromanagement issues have likely been the most common criticisms of the school board that have inhibited board effectiveness (Resnick, 1999). Goodman and colleagues (1997) found that role confusion between the board and superintendent and the board practicing micromanagement were two elements of low-quality governance that characterized low achieving school districts. Case study and survey data indicated that a negative board-superintendent relationship contained the following characteristics: (a) an overload of information and work on the board; (b) too much board involvement in administrative matters; (c) lack of board independence; and (d) haste on the part of the superintendent to resolve issues too quickly (Carol et al., 1996; Goodman, Fulbright, & Zimmerman, 1997; Resnick, 1999).

The superintendent's role in the school district has been to provide leadership and management of the system (Institute for Educational Leadership, 2001). Traditionally, there has been consensus that school boards focus on the "big picture" of education and the hiring, evaluating, and firing the superintendent. According to Halverson and Watkins (2005), hiring and supporting quality superintendents is essential if districts are to thrive in the 21st century. Continuous improvement is an effective practice which requires a collaborative approach to leadership (Goodman & Zimmerman, 2000).

Board/Superintendent: A Team Approach

Waters & Marzano (2006) shared the importance of superintendent's and school boards working together and stated "In districts with higher levels of student achievement, the local board of education is aligned with and supportive of the non-negotiable goals for achievement and instruction. They ensure these goals remain the primary focus of the district's efforts and that no other initiatives detract attention or resources from accomplishing these goals" (p. 4).

Rather than contrast the roles of the school board of education and the superintendent, Goodman and Zimmerman (2000) focused their research on successful leadership teams in which the superintendent and board of education worked together. The researchers reported that in an atmosphere of cooperation and mutual support, an effective leadership team could focus on: (a) student, teacher, and community needs; (b) policy development; (c) long-range planning; and (d) effective allocation of resources. Further, Goodman and Zimmerman (2000) reported that the board/superintendent leadership team, if freed from political distractions, could work successfully on its most important task: promoting high achievement for all students. Seven key strategies were developed by Goodman and Zimmerman (2000) to strengthen board/superintendent leadership and teamwork:

1. A redefinition of student achievement to include a broad array of educational goals.
2. A strong, unified leadership and governance body at the school district level, with the overriding goal of providing quality education for all children.

3. New state laws on school district governance to support the unified school board/superintendent leadership team.
4. Mobilizing communities and staff to focus on high student achievement.
5. A new approach to preparing and training school boards and superintendents that will support their coming together as unified leadership teams.
6. Public consciousness-raising for high student achievement.
7. The establishment of a National Center for Board/Superintendent Leadership, which will be responsible for advocating and implementing these strategies and for carrying out research to support continuous improvement in the leadership of local school systems (p. 6).

To accomplish a board/superintendent team approach, the board and superintendent needed to become a unified leadership team, with unity of purpose, a clear mission, and a sense of responsibility for action to achieve a long-term vision (Goodman, Fulbright, & Zimmerman, 1997; Goodman & Zimmerman, 2000). Goodman and Zimmerman (2000) identified five standards for board/superintendent team leadership:

1. Vision. The board/superintendent team, using a participatory process, involves the community and staff in creating and continually developing a shared vision for all children. This team leadership mobilizes the community to give the highest priority to children, and keeps the schools and community focused on meeting the needs of all children. Further, the board/superintendent team uses the vision to guide its deliberations, decisions, and actions.
2. Structure. The board/superintendent team provides policy, goals, a management plan, and financial resources to support the vision. The team sets high standards

for teaching and learning based on the best available information about the knowledge and skills students will need in the future. It ensures progress toward the vision through feedback from students, staff, parents, and the community at-large, as well as by providing the necessary financial resources. The team establishes a management system that results in participatory decision making and encourages and supports quality approaches to teaching and learning.

3. Accountability. The board/superintendent team adopts an accountability plan to evaluate community and school progress toward accomplishing the vision, and reports the results to the public. The team receives regular reports on all students using a variety of measurement tools to evaluate the quality and equity of the educational program. It makes sure that long- and short-term plans are evaluated and revised with the needs of the students as their top priority. The accountability plan holds students, teachers, parents, and administrators accountable for progress toward the goal of high achievement and healthy development of all children.
4. Advocacy. The board/superintendent team becomes the community's leading advocate for children, insisting on the necessary resources to support the educational system, and celebrating the achievements of students, quality teachers, and the accomplishments of others who contribute to the education of children. The team establishes partnerships throughout the community and ensures effective communications with students, teachers, other employees, media, and the community. The leadership team supports the professional development and professional status of all teachers and other staff. The board and superintendent find opportunities to build relationships with other local leaders

and state and federal legislators to help them understand the need for adequate funding for children.

5. Unity. The board and superintendent work as a unified team to lead the district toward the vision. The leadership team develops skills in teamwork, problem solving, and decision making, and is committed to continually improving its collaborative work for children. The board and superintendent periodically evaluate the effectiveness of their leadership, governance, and teamwork for high student achievement, and report to the community on aspects of the vision that need more attention and support (p. 12).

Educational Governance Systems and Reform Models

Applying systems thinking through a continuous improvement approach to school boardsmanship has required attention to the governance model (Gemberling, Smith, & Villani, 2004). There have been a variety of performance standards by which American schools have been judged (Educational Commission of the States, 1999) and although there is little quantitative evidence that governance structures affect student academic achievement, people have seemed willing to consider altering the configuration of school boards in hopes that the changes would stimulate increased academic achievement (Bracey & Resnick, 1998; Land, 2002; Smoley, 1999).

The *Educational Commission of the States* (1999) determined there were attributes within K-12 public education governance arrangements that were critical to maintaining America's commitment to public education including: (a) public funding; (b) schools that are free and open to all children; (c) constitutional structure (e.g., federal and

state authority, due process, equal protection, separation of church and state); (d) public responsibility through elected officials; and (e) student entitlement and obligation.

Other strategies, such as the model for school governance (Carver, 2000), assigned the school superintendent a role that was similar to that of a corporate CEO. Carver (2000) reported that the role of the school board has been to govern the system, rather than administer it, and stated that school boards have traditionally micromanaged the educational process, a practice that would not be accepted in a business setting. A radical redesign of the function of school boards, according to Carver (2000), would include: (a) a focus on educational results rather than on the methods by which they were achieved; (b) newly defined relationships with the general public and parents; and (c) a commitment on the part of the board to speak with one voice rather than as a group of individuals with individual agendas. Reformers have continued to focus on organizational structure and educational governance in effort to improve the performance of school systems, even though these mechanisms may offer an indirect and uncertain strategy for improving classroom performance (Carver & Carver, 1997; Kirst & Buckley, 2000).

Much of the work of school board governance has been the development, revision and enforcement of school board policy. Several studies found that boards spent only a small part of their meeting time on policy review and development (Bracey & Resnick, 1998; Land, 2002; Speer, 1998). The *National School Boards Association* has emphasized the importance of alignment and how board policies have been a key tool to ensuring alignment within the school system (McKay & Newcomb, 2002). Policies have allowed boards to communicate their priorities and expectations which have sent a clear message to staff, parents and the community about the district's values and goals (Carver,

2000; Illinois Association of School Boards, 1998). Effective school board policy and governance have been important, but have not been enough to bring about desired systemic results. School boards have held administrators accountable for deployment of the vision, mission, core values and goals of the educational organization in anticipation of increased academic achievement (Conley, 2002; Land, 2002).

Holding Leadership Accountable and Accountability Systems

School boards have utilized policy to oversee the functions of the school district. However, in order to meet the demands of accountability for student achievement, school boards have needed to hold the superintendent and administrators accountable for results (Southern Regional Educational Board, 1998). School districts have felt the effects of policies that have struggled to find the right balance between holding students accountable and holding educators accountable (Conley, 2002).

New accountability systems have predominantly called for measurable results in student achievement (Furhman, 1999; Southern Regional Educational Board, 1998). Accountability systems have been increasingly applied to school boards and have been defined as the systematic collection of input, process, and outcome data, as well as the use of these data, to make decisions about the effectiveness of schools (American Productivity & Quality Center, 2000). In 1998, a comprehensive group including the *Council of Great City Schools*, *National Alliance for Business,* and the *American Productivity and Quality Center* launched a benchmarking study to identify best practices in accountability systems. The report concluded that effective accountability systems incorporated a focus on the following criteria: (a) leadership; (b) climate; (c) operations;

(d) human resources; (e) data measurement/management; (f) communications; and (g) standards for teaching/learning.

The benchmarking study (American Productivity & Quality Center, 2000) identified best practices from each of the seven identified areas to assist school boards in their implementation. Within the context of the benchmarking project, "best practice" was defined as a process, system, or activity that enables an organization to meet or surpass its goals. The study intended to share best practices with school districts across the nation in hopes of improving performance in schools (American Productivity & Quality Center, 2000).

In another study, the *Southern Regional Educational Board* (1998) identified five essential elements in modern educational accountability systems including: (a) rigorous content standards; (b) the assessment of student progress; (c) professional development that is aligned with standards; (d) publicly reported results; and (e) results that lead to rewards, sanctions, and targeted assistance. Similarly, Furhman (1999) reported additional elements in newer accountability systems included: (a) a focus on the school rather than the district as the unit of improvement; (b) the use of continuous improvement strategies rather than a one-time fix; and (c) more sophisticated measurement that went beyond pass-fail results in student achievement.

Locally created accountability systems have provided checks and balances to state and federal actions that have mobilized local support and have served as a source for innovation and creativity for school boards (McCary, Peel & McColskey, 1997; Elmore, 1993). The *Study Group on Educational Accountability* (National Association of State Boards of Education, 1998) examined accountability systems to determine what was

working in the area of educational accountability. Their efforts resulted in a framework titled *Public Accountability for Student Success* which was a comprehensive blueprint for state and local accountability systems. The framework incorporated ten standards based on important contextual conditions affecting accountability as a means for helping schools become high achieving organizations (National Association of State Boards of Education, 1998). The ten standards included:

> Standard 1: Legal authorities clearly specify accountability goals and strategies that focus on student academic performance.
>
> Standard 2: At each level of the education system, designated authorities are charged with the efficient governance of the accountability system.
>
> Standard 3: Specific responsibilities for student learning and performance are assigned to designated agents.
>
> Standard 4: Accountability is based on accurate measures of agent performance as informed by assessments that are administered equitably to all students.
>
> Standard 5: Those responsible for governing accountability regularly report student and school performance information in useful terms and on a timely basis to school staff, students and their families, state and local policymakers, and the news media.
>
> Standard 6: Incentives are established that effectively motivate agents to improve student learning. Consequences, which could include rewards, interventions or sanctions, are predictably applied in response to performance results.
>
> Standard 7: Agents are provided sufficient support and assistance to ensure they have the capacity necessary to help students achieve high performance standards.

Standard 8: Policymakers work to ensure that education policies, mandated programs, financial resources, and the accountability system are well aligned so that consistent messages are communicated about educational goals and priorities.

Standard 9: The accountability system has widespread support.

Standard 10: Various established partnerships work together to support districts, schools and teachers in their efforts to improve student achievement (p. 6-8).

The School Board of Education and its Impact on Student Achievement

The role of the school board has been to govern the school system in an effort to produce increased academic achievement results (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000). To do this, school boards have been expected to implement effective practices, such as continuous improvement, with the intent of positively impacting student achievement (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000). As citizens have focused their attention on student achievement, there has been much debate about the accountability systems in schools (Bracey & Resnick, 1998; Henderson et al., 2001; Speer, 1998).

Accountability has often been referred to as increased academic achievement and defined as the students' ability to perform well on standardized state achievement tests (Land, 2002; Resnick, 1999; Smoley, 1999). In addition, the public has also expected the accomplishment of a variety of other goals such as: (a) academic attainment; (b) job skills and preparation; (c) citizenship skills; (d) appreciation of the arts; and (e) the development of character and values (Bracey & Resnick, 1998). Not only have school boards of education been charged with helping students accomplish beyond proficiency on state tests, but also for: (a) jobs skills and preparation; (b) sound physical development

and optimal health of all children throughout their formative years to prepare them for healthy productive lives as adults; and (c) helping children and youth understand and value the growing diversity of American society (Goodman & Zimmerman, 2000).

School boards have been putting more emphasis on student achievement than they have in the past (Hess, 2002; Resnick, 1999). In a national survey of local school board members, 73% of respondents said that attention to student achievement had increased while only 3% admitted it had decreased (Hess, 2002). In a thorough review of the literature, little research could be found to substantiate board characteristics that have positively impacted student achievement (Bracey & Resnick, 1998; Henderson et al., 2001; Land, 2002; Smoley, 1999).

Two studies were found that researched the school board's effect on academic achievement (Goodman, 1997; IASB, 2000). Goodman and colleagues (1997) studied ten school districts in five different states and found that districts with effective governance had greater academic achievement as measured by dropout rates, achievement test scores, and the percentage of students going to college. In their study, Goodman & Zimmerman (2000), identified elements of effective school board governance including: (a) focus by the board on student achievement and policy; (b) effective management by the board without micromanagement; (c) a trusting and collaborative relationship between the board and superintendent; (d) creation by the board of conditions and structures that allowed the superintendent to function as the CEO and instructional leader of the district evaluation of the superintendent according to mutually agreed upon procedures; (e) effective communication between the board chair and superintendent and among board members; (f) effective board communication with the community; (g) board adoption of a

budget that provided needed resources; (h) governance retreats for evaluation and goal setting purposes; (i) monthly school board meetings for which the superintendent drafted the agenda; and (j) long-term service of board members and superintendents.

In contrast to effective school boards, Goodman and colleagues (1997) found that ineffective school board governance was characterized by: (a) micro-management by the board; (b) role confusion between the board and superintendent; (c) interpersonal conflict between the board chair and the superintendent; (d) poor communication by the superintendent to the board; (e) lack of trust and respect between the superintendent and the board; (f) bickering among board members or between board members and the superintendent; (g) board member actions reflecting their personal interests; (h) board members' disregard for the agenda process and the chain-of-command; (i) board members' playing to the news media; and (j) limited commitment by board members to improving governance.

In an effort to identify board practices that had a positive impact on student achievement, the Iowa Association of School Boards (2000) *Lighthouse Study* closely examined how school boards and superintendents functioned in three high and three low performing school districts. In the study, the research team members, who did not know ahead of time if they were interviewing participants from a low or high performing school district, interviewed 159 board members, superintendents, and school staff regarding seven critical conditions for school renewal based on the research of effective schools, school improvement, and change. The conditions identified were: (a) shared leadership; (b) continuous improvement and shared decision making; (c) ability to create and sustain initiatives; (d) supportive workplace; (e) staff development; (f) support for

school sites through data and information; and (g) community involvement. Major differences were found between the high and low-achieving districts.

In high-achieving districts, board members and superintendents believed they could positively impact students' academic achievement while those in low-achieving school districts believed there were significant barriers to obtaining high student achievement. High-achieving school district board members and staff demonstrated greater understanding of the seven conditions for school improvement and could identify and describe the board's role in supporting those efforts. In high achieving districts, the school boards' focus on school improvement efforts was shared by school staff and linked to school and classroom-level actions (IASB, 2000).

In contrast to Goodman and colleagues' (1997) study, all the school boards in the Iowa Association of School Boards (2000) *Lighthouse Study* had peaceable relationships with their superintendents and were satisfied with their performance. Both the Lighthouse Study (IASB, 2000) and Goodman, Fulbright, and Zimmerman's (1997) study found differences between high and low-achieving school districts; however, neither study analyzed if or how strongly each difference was related to student achievement.

Continuing the pursuit of promoting effective school board practices that could positively impact student achievement, Gemberling, Smith, and Villani (2000) identified eight key action areas that school boards in high-achieving school districts focused on including: (a) vision; (b) standards; (c) assessment; (d) accountability; (e) alignment; (f) climate; (g) collaborative relationships; and (h) continuous improvement. Gemberling, Smith, and Villani (2000) based their work on systems theory which drew upon frameworks such as the *Malcolm Baldrige Criteria for Performance Excellence* and *Total*

Quality Management continuous improvement models. The *National School Boards Association's* publication (Gemberling, Smith, & Villani, 2000: 2004) promoted systems thinking and enabled school boards to provide leadership through governance that could create the conditions under which excellent teaching and accelerated student performance could take place (Gemberling, Smith, & Villani, 2000: 2004). School boards that have incorporated effective practices have brought about positive results in the school systems in which they served (IASB, 2000).

Indicators of School Board Effectiveness

Identified effective school board practices have been consistent and in alignment with a systems approach to continuous improvement (Gemberling, Smith, & Villani, 2000: 2004). School board members, superintendents, principals, teachers and students have all been accountable for increased academic achievement (Henderson et al., 2001). School boards have been charged with the task of establishing conditions for designing and sustaining a leadership system that can improve academic excellence. Working collaboratively, boards of education have needed to develop a shared vision of the school and have needed to commit themselves to developing policies and supporting programs that would advance the vision of the school district (Danzberger, Kirst, & Usdan, 1992).

In a survey of local school boards (Hess, 2002), respondents recognized that a well-functioning leadership team provided a foundation for effective governance and administration and an environment in which student achievement could be fostered. Danzberger, Kirst, and Usdan (1992) submitted that an effective school board:

1. Provided leadership for public education and was an advocate for the educational needs and interests of children and youth,

2. Worked to influence policies of state and local governmental bodies and other organizations whose decisions affected children and youth,
3. Responded to many forms of parent and community participation in the school district,
4. Had a comprehensive program for communications with its various constituencies and included policies and procedures for working with the media,
5. Encouraged and respected diversity, dealt openly and straight-forwardly with controversy within the board and the community, and followed democratic decision-making processes,
6. Used strategic planning to set educational goals and determined the means to accomplish them,
7. Worked to ensure an adequate flow of resources and achieved equity in their distribution,
8. Established and followed policy to govern its own policy-making decisions,
9. Exercised continuing policy oversight of education programs and their management, drew information for this purpose from many sources and knew enough to ask the right questions,
10. Established and implemented procedures for selecting and evaluating the superintendent,
11. Recognized the dilemma of distinguishing policy from administration and periodically clarified these separate areas of responsibility in consultation with the superintendent,

12. Promoted constructive relations with its employees and worked to create conditions that enhanced productivity,
13. Established clear expectations for the conduct of its members,
14. Established and followed policies and procedures to manage its own operations, and
15. Had procedures for self-assessment and invested in its own development, used diverse approaches that addressed the needs of the board as a whole, as well as those of individual board members (p. 7).

Summary of the Literature Review

Under the mandated challenges of the No Child Left Behind Act, the accountability for student achievement results has been in clear view of the public (Irons & Harris, 2006). While the challenges have been apparent, the actualization of systemic improvement has been difficult (Rothstein, 1998). School boards have been accountable for student achievement results and are expected to apply effective practices in the governance of the school districts in which they have served (Gemberling, Smith, & Villani, 2000).

A review of the literature cited the application of continuous improvement in school boardsmanship as an effective practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000). An exhaustive review of the literature found no research studies that measured the extent to which school boards utilized continuous improvement practices in their boardsmanship, even though it has been cited as a practice of effective school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

School boards that have understood systems theory and have implemented continuous improvement practices in their boardsmanship have provided effective leadership which has created the conditions under which excellent teaching and accelerated student performance has taken place (Furman, 1999; Gemberling, Smith & Villini, 2000; IASB, 2000). Many attempts at improvements have failed, in part, due to a lack of systems thinking in education caused by: (a) a lack of understanding of systems theory; (b) the failure to operationalize the concepts and principles of systems theory; and (c) the difficulties in applying the systems model from concept to reality (Kopel, 1997; Walpole & Noeth, 2002).

Contribution of the Study

The purpose of the study was to examine the extent to which school board presidents utilized continuous improvement practices in their boardsmanship. The following school board president variables will be researched: (a) gender; (b) age; (c) ethnicity; (d) years serving on the board; (e) years serving as board president; and (f) educational level. The following school district variables will be researched: (a) school district size; and (b) school district classification. The following continuous improvement factors based on the Malcolm Baldrige Criteria for Performance Excellence (National Institute of Standards & Technology, 2000) will be researched: (a) leadership; (b) strategic planning; (c) student, stakeholder, and market focus; (d) measurement, analysis, and knowledge management; (e) workforce focus; (f) process management; and (g) results.

School boards in America have been seeking effective practices to meet the public and high demands for student achievement results, and continuous improvement has been

one of the identified effective practices of school boards (Gemberling, Smith, & Villani, 2000; IASB, 2000). The significance of this study is derived from the lack of research measuring the extent to which school boards have implemented the identified effective practice of continuous improvement in school boardsmanship. The results of this study will provide needed information that will help support the use of continuous improvement in school boardsmanship, a cited practice of effective school boards (Furman, 1999; Gemberling, Smith & Villini, 2000; IASB, 2000). Additionally, results of this study will provide findings that have not been previously researched, measured, or available to the educational community.

Chapter III provides a description of the participants who responded to the study as well as a detailed explanation of the methods that were utilized to conduct the study. Chapter IV presents the findings related to the research questions. Chapter V provides a summary of the research findings, states conclusions, describes implications for practice, and makes recommendations for further research.

CHAPTER III

METHODOLOGY

Overview/Introduction

The purpose of this chapter is to provide a detailed description and explanation of the research methods employed to conduct the study. The chapter consists of the following sections: (a) statement of the problem and research questions; (b) description of research methods and research design; (c) description of the population and sample; (d) instrumentation; (e) procedures; and (f) summary.

Statement of the Problem and Research Question

School boards are charged with governance responsibilities of the public schools (Land, 2002; Lashway, 2002; Price, 2001). Given the importance of this responsibility, research is surprisingly limited in the area of school boards' work and their impact on student achievement (Bracey & Resnick, 1998; Land, 2002; Smoley, 1999). With the exception of one partially-related study (Scribner, 1966), no other research could be found that measured the extent to which school boards utilized continuous improvement in their boardsmanship, even though it is cited in the literature as an effective school board practice (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000). The purpose of the study was to examine the relationship between school board president variables and the use of continuous improvement practices in boardsmanship. More specifically, the study addressed the following research questions:

1. What is the relationship between the number of years serving on the board of education and the use of continuous improvement practices in boardsmanship?

2. What is the relationship between the number of years serving as school board president and the use of continuous improvement practices in boardsmanship?
3. What is the relationship between the education level of the school board president and the use of continuous improvement practices in boardsmanship?
4. What is the relationship between school district size and the use of continuous improvement practices in boardsmanship?

Description of Research Methods and Research Design

This cross-sectional study was designed to examine the extent to which school board presidents utilized continuous improvement practices in their boardsmanship and incorporated techniques consistent with descriptive research. “A descriptive study determines and reports the way things are and are typically concerned with the assessment of attitudes, opinions, demographic information, conditions and procedures” (Gay, 1992, p. 217).

Description of the Population and Sample

The population included 853 school board presidents from all public school districts in the state of Illinois. The Illinois Association of School Boards directory of school board presidents was used to identify the population. School board presidents were selected as the unit of analysis because the position is standardized and assumes perceived leadership by election of peers. Because of this, it was believed that the school board president would likely be the most capable of discussing and evaluating the use of continuous improvement practices in their boardsmanship.

Instrumentation

The data were gathered through the completion of the *School Board Continuous Improvement Survey* (see Appendix A). The survey consisted of school board president and school district demographic variables and 31 survey items that measured the application of continuous improvement practices in school boardsmanship. The continuous improvement survey (see Appendix A) contained a six-point Likert-type response scale anchored with very untrue of our board (coded as "one") to very true of our board (coded as "six"). An instrument that has too many scaling alternatives could introduce an element of random error in responses that render scores less reliable and thus less valid (Clark & Watson, 1995). The survey instrument was intended to gather data on questions specifically identified in the problem statement (Gay & Arisian, 2000).

Part one of the survey consisted of the following demographic variables: (a) gender; (b) age; (c) ethnicity; (d) years serving on the board; (e) years serving as board president; (f) educational level; (g) school district size; and (h) school district classification. Each of these variables was used to describe the sample and identify response patterns that were associated with the extent to which school board members utilized continuous improvement practices in their boardsmanship.

Part two of the survey consisted of the following continuous improvement factors based on the *Malcolm Baldrige Criteria for Performance Excellence*: (a) leadership; (b) strategic planning; (c) student, stakeholder, and market focus; (d) measurement, analysis, and knowledge management; (e) workforce focus; (f) process management; and (g) results (National Institute of Standards & Technology, 2000).

Three primary sources were utilized in the development of the survey items and response scales: (a) The *Key Work of School Boards* (Gemberling, Smith & Villani; 2000); (b) *Leading Change: The Case for Continuous Improvement* (Gemberling, Smith & Villani; 2004); and (c) *Systems Quick Check for School Boards* (Shipley, 2001). All three sources (Gemberling, Smith & Villani; 2001: 2004; Shipley, 2001) were reviewed for the purposes of identifying potential survey items to be included in the school board continuous improvement survey (see Appendix A). As potential survey items were identified, they were reviewed and coded to one of the appropriate categories of the *Malcolm Baldrige Criteria for Performance Excellence* (National Institute of Standards & Technology, 2000) including: (a) leadership; (b) strategic planning; (c) student, stakeholder, and market focus; (d) measurement, analysis, and knowledge management; (e) workforce focus; (f) process management; and (g) results.

After thorough review of the literature and examination of the three referenced texts: (a) *The Key Work of School Boards* (Gemberling, Smith, & Villani; 2000); (b) *Leading Change: The Case for Continuous Improvement* (Gemberling, Smith & Villani; 2004); and (c) *Systems Quick Check for School Boards* (Shipley, 2001), 52 items met the criteria for initial inclusion in the survey, including: (a) item clarity which included clear language that was free of ambiguity; (b) item readability which included easy to understand language which avoided bias; and (c) item content validity which ensured that items were included within one of the seven *Malcolm Baldrige Criteria for Performance Excellence* categories (National Institute of Standards & Technology, 2000). The seven categories include: (a) leadership; (b) strategic planning; (c) student, stakeholder, and market focus; (d) measurement, analysis, and knowledge management; (e) workforce

focus; (f) process management; and (g) results. Although the *Malcolm Baldrige Criteria for Performance Excellence* criteria were used as the primary continuous improvement categories for survey items, the weighting of each criterion was not considered in the development of the survey instrument.

The initial collection of 52 items served as the basis for the *School Board Continuous Improvement Survey* (see Appendix A). After closer analysis, 14 items were of similar nature or duplicates and were removed from the collection of items. To further refine the collection of items, seven items were discarded because they were not in alignment with one of the seven categories of the *Malcolm Baldrige Criteria for Performance Excellence*. Two items were discarded due to their unclear wording and biased nature. Twenty-six of the remaining 29 items were slightly revised or reworded, but maintained their original context while three items were included and left completely unedited. As a result of the refinement process, a set of 29 items met the criteria for inclusion in the survey and were sent to an expert review panel for content validation.

A content-valid survey was necessary to appropriately measure the extent to which school board presidents utilize continuous improvement practices in their boardsmanship. According to Gay (1992):

> Content validity is determined by expert judgment. There is no formula by which it can be computed and there is no way to express it quantitatively. When selecting a test for a research study, the researcher assumes the role of "expert" and determines whether the test is content valid for her or his study (p. 157).

The goals of content validity were to clarify the domain of a concept and judge whether the measure adequately represented the domain. Content validation was intended to result in a theoretical definition that explained the meaning of the variables in question

(Bollen, 1989). To establish content validity, an expert review panel reviewed the *School Board Continuous Improvement Survey* (see Appendix A).

The expert review panel consisted of the following ten individuals: two school board members, two superintendents, two consultants from an *Area Educational Agency*, the Director of the *Iowa Quality Center*, a university professor, a continuous improvement consultant and the Director of the *Illinois School Board Association*. Members of the expert review panel were selected to participate in the expert review process because of their varied expertise and involvement with the *Malcolm Baldrige Criteria for Performance Excellence* and continuous improvement practices in schools.

An introductory letter and packet of information (see Appendix D) was sent to members of the expert review panel which provided directions for analyzing the survey instrument and responding to the following questions:

1. Clarity
    a) Are the survey items clearly worded?
    b) Is the language free of ambiguity?
    c) Would the average school board president be able to understand what the questions are asking?
    d) What wording changes would you suggest to make the survey items more clear?
2. Readability
    a) Is the wording easily to understand?
    b) Are the items free from cultural, gender, racial or other bias?

c) Would the average school board president be able to read the items and understand their meaning?

d) What wording changes would you suggest to make the survey items more clear?

3. Proper inclusion of items within the seven *Malcolm Baldrige Criteria for Performance Excellence* continuous improvement categories-

a) Have the survey items been placed in the appropriate Baldrige category?

b) Would you recommend moving any of the survey items to another category? If so, which ones?

The expert review panel members were instructed to provide specific feedback to the survey using the *Expert Review Analysis Form* (see Appendix E). In summary, all feedback confirmed that the survey items were accurately placed in one of the seven *Malcolm Baldrige Criteria for Performance Excellence* categories. Therefore, all items remained in the assigned category as originally drafted.

As a result of the expert review, item 17 (Our school board routinely reviews board policies and updates them as necessary) was added to the survey instrument in the category of Leadership. Another common theme reported by the expert review panel was the need for clarity in items that had multiple adjective descriptors. In response to the feedback, the term “routinely” was used to replace a variety of descriptors that were used in the item wording such as: regularly, frequently, and often. It was suggested by the panel that the term “routinely” indicated that the school board practice was systematic

and would be interpreted as a more standard measure of the identified continuous improvement practice.

In summary, the expert review panel suggested the following changes to the survey instrument: (a) the inclusion of one additional item (Item 17: Our school board routinely reviews board policies and updates them as necessary); (b) the use of a single descriptor to define the frequency of specific board practices (replace adjectives with "routinely"); and (c) items were properly coded and placed in the specific *Malcolm Baldrige Criteria for Performance Excellence* category as no changes were suggested by the expert review panel members.

A final item was added to the instrument as a result of discussion during the dissertation proposal defense meeting. The dissertation committee members recommended adding an additional item (Item 28: Our school board routinely uses our core values to guide decision making). With the additional item, the final survey instrument included 31 survey items in total (see Appendix A).

In summary, all 31 survey items were coded to one of the seven categories of the *Malcolm Baldrige Criteria for Performance Excellence* (See Table 3.1) as follows:

1. Leadership. Items: 2, 7, 11, 17 and 28
2. Strategic Planning. Items: 1, 12, 24, 25 and 31
3. Student, stakeholder, and market focus. Items: 5, 9, 15, 21 and 27
4. Information and Analysis. Items: 10, 19, 20 and 26
5. Human Resource Focus. Items: 3, 4, 16, 18 and 23
6. Management of School Board Processes. Items: 8, 13, 14 and 30
7. Results. Items: 6, 22 and 29

Table 3.1

Survey Items Grouped by Baldrige Category

Baldrige Category	Item No.	Survey Item
Category 1 Leadership	2	Our school board routinely seeks input from students, parents, staff and community members before making key decisions.
	7	Our school board routinely uses our vision/mission statement to guide decision-making.
	11	Our school board avoids micromanagement by keeping our focus on governance and policy issues.
	17	Our school board routinely reviews board policies and updates them as necessary.
	28	Our school board routinely uses our core values to guide decision-making.

(Table 3.1 continued)

Baldrige Category	Item No.	Survey Item
	1	Our school board routinely works with students, parents, staff and community members to develop strategies and action plans for board goals.
	12	Our school board routinely practices prevention rather than reaction as our primary mode of operation.
Category 2		
Strategic	24	Our school board ensures that board goals meet the needs of students,
Planning		parents, staff and community members.
	25	Our school board members understand the specific strategies and action plans we will use to improve our board practices.
	31	Our school board routinely engages the community in identifying goals.
	5	Our school board routinely builds positive relationships with students, parents, staff and the community.
	9	Our school board treats students, parents, staff and community members
Category 3		as important customers of the school system.
Student and	15	Our school board treats students, parents, staff and community members
Stakeholder		with respect.
Focus	21	Our school board routinely focuses on students, parents, staff and community members designing and delivering educational services.
	27	Our school board routinely monitors and reviews data on the satisfaction levels of students, parents, staff and community members.

(Table 3.1 continued)

Baldrige Category	Item No.	Survey Item
	10	Our school board routinely monitors progress toward board goals.
Category 4 Information and Analysis	19	Our school board routinely asks administrators important questions about student achievement data.
	20	Our school board routinely uses data to guide decision-making.
	26	Our school board puts quality first among all other considerations.
	3	Our school board routinely monitors and collects data on the satisfaction levels of our board members.
Category 5 Human Resource Focus	4	Our school board acts collectively as a whole rather than as individuals.
	16	Our school board strives to develop a culture that helps board members achieve board goals.
	18	Our school board routinely recognizes individual board member contributions toward achieving board goals.
	23	Our school board members routinely participate in training to improve board member knowledge and performance.

(Table 3.1 continued)

Baldrige Category	Item No.	Survey Item
	8	Our school board routinely self-evaluates our board meetings.
Category 6 Managmnt. of School Board Processes	13	Our school board can determine the effectiveness of our decisions and actions.
	14	Our school board promotes effective meetings through collaborative decision-making.
	30	Our school board ensures that all new board members understand their role and responsibility in serving on the board.
	6	Our school board is making consistent progress toward board goals compared to our own past performance.
Category 7 Results	22	Our school board routinely practices benchmarking by researching what effective school boards are doing.
	29	Our school board performance is constantly improving compared to other school boards.

Procedures

An introductory letter from the director of the *Illinois Association of School Boards* (see Appendix C) was sent to all 853 school board presidents in the state of Illinois. Included in the letter was: (a) an overview of the study; (b) the importance of the study; (c) an invitation to participate in the survey; (d) the process and timelines for completing the survey; (e) safeguards for confidentiality and privacy; and (f) notice of informed consent. The information was sent from the *Illinois Association of School*

Boards to the population via United States Postal Service and included a self-addressed stamped envelope. Participants were asked to respond to the survey either online via the *Illinois Association of School Boards* web site or by the traditional paper format which was included with the letter. Multiple methods consisting of traditional formats and the use of electronic formats were used to produce a higher rate of participation in the study.

Anonymity, confidentiality and privacy of responses were ensured by not asking participants to indicate any personally identifiable information on the survey and all responses were treated as confidential. As communicated in the letter to participants, by completing the survey, participants provided consent to participate in the study. Once school board presidents received the invitation to participate in the study, they had three weeks to complete the survey.

Participants choosing to respond via the traditional paper format were instructed to return the completed survey in the self-addressed stamped envelope to the *Illinois Association of School Boards.* A representative of the *Illinois Association of School Boards* collected all surveys (both paper and electronic format) and forwarded them to the researcher after the three-week survey window had closed. Results from the paper surveys were manually entered into an Excel spreadsheet by the researcher and were then imported into *Statistical Package for Social Sciences* software version 14 and combined with the online survey data collected in the study.

Summary

Eight hundred fifty-three school board presidents in all K-12 school districts in the state of Illinois were surveyed to measure the extent to which they utilized continuous

improvement practices in their boardsmanship. An expert review panel validated the 31-item survey instrument and provided feedback to ensure content validity.

Chapter IV will present the findings related to the research questions. Chapter V will provide a summary of the research findings, state conclusions, describe implications for practice, and make recommendations for further research.

CHAPTER IV

ANALYSIS OF DATA

Introduction

The purpose of the study was to examine the extent to which school board presidents utilized continuous improvement practices in their boardsmanship. Three sets of variables were studied including: (a) school board president demographics; (b) school district demographics; and (c) continuous improvement variables. School board president demographic variables included: (a) gender; (b) age; (c) ethnicity; (d) years serving on the board; (e) years serving as board president; and (f) educational level. The following school district variables included: (a) school district size; and (b) school district classification. The following continuous improvement variables based on the *Malcolm Baldrige Criteria for Performance Excellence* (National Institute of Standards & Technology, 2000) were studied and included: (a) leadership; (b) strategic planning; (c) student, stakeholder, and market focus; (d) measurement, analysis, and knowledge management; (e) workforce focus; (f) process management; and (g) results.

This chapter provides the major findings of this study as well as a description of the respondents. A statistical analysis of the school board presidents' responses to the Continuous Improvement Survey (see Appendix A) was performed to answer the four research questions that guided this study.

Description of Subjects

The population in this study consisted of 853 school board presidents in the state of Illinois. Of the 853 surveys distributed, 200 surveys were returned resulting in a 23.4%

return rate. Out of the 200 returned surveys, 36 surveys were rejected because they were not complete or did not conform to the survey protocol. Therefore, 164 surveys were included in the study which represented 19.2% of the school board presidents in the state of Illinois.

Overall, 111 of the 164 respondents were male (67.7%), and 53 were female (32.3%). Respondents' age ranged from 30 years old to over 60 years old. An age range of ten years was used to stratify the population. The highest percentage of respondents (71 participants) was in the 50-59 year old category which represented 43.3% of the population. The lowest percentage of respondents (12 participants) was in the 30-39 years old category which represented 7.3% of the sample population. Appendix F details the respondents' age.

Respondents indicated their ethnicity according to a range of six different categories of race including: (a) White; (b) Black; (c) Hispanic; (d) Mixed Race; (e) Native American; and (f) Other. The majority of the respondents (155) indicated they were White/Caucasian which represented 94.5% of the population. Appendix F details the respondent's ethnicity.

Respondents' number of years serving on the board of education ranged from less than one year to over 25 years. Of the respondents, 82.3% reported serving as the board president between less than one year and six years. Appendix F details the respondents' number of years serving as the school board president.

Respondents' education level ranged from high school diploma to doctoral degree. The highest percentage of respondents (56 participants) reported obtaining a bachelors degree which represented 34.1% of the population. The lowest percentage of

respondents (17 participants) reported obtaining a doctoral degree and represented 10.4% of the population. Appendix F details the respondents' self-reported education level.

Respondents represented school districts ranging in size from less than 250 students to districts of over 40,000 students. The highest percentage of respondents (58 participants) reported serving in school districts between 1,000 to 2,999 students which represented 35.4% of the sample population. The lowest percentage of respondents (1 participant) reported serving in a school district with over 40,000 students which represented 0.6% of the population. Appendix F details the respondents' school district size.

Respondents represented school districts within one of three school district categories including: (a) K-8 district; (b) 9-12 district; and (c) K-12 district. The highest percentage of respondents (147 participants) reported serving in K-8 school districts (42.7%) and K-12 school districts (47%). The lowest percentage of respondents (17 participants) reported serving in a 9-12 school district. Appendix F details the respondents' school district classification.

Instrument Validity and Reliability

Content validity for the survey instrument (see Appendix A) was established using an expert review process (Borg & Gall, 1989; Gay, 1992). Ten individuals comprised the expert review panel and included: (a) two local school district board members; (b) two local school district superintendents; (c) two *Area Education Agency* administrators; (d) a university professor; (e) a consultant in the application of continuous improvement practices in school systems; (f) the Director of the Illinois Association of School Boards; and (g) the Director of the Iowa Quality Center. The panel was instructed

to review the survey items for the following characteristics: (a) clarity; (b) readability; and (c) content validity through proper inclusion of items within the seven *Malcolm Baldrige Criteria for Performance Excellence* continuous improvement categories. Feedback from the panel of experts was aggregated and reviewed. Revisions based on feedback from the expert review panel were incorporated to finalize the survey for use with school board presidents in the state of Illinois.

Further evidence of the instrument's validity was determined using Principal Axis Factor Analysis with Varimax rotation after data collection. Factor analysis represented a broad category of approaches and mathematical procedures for determining the latent variable structure of observed variables (Nunnually, 1978) and were intended to provide an empirical basis for reducing all these variables to a few factors by combining variables that were moderately or highly correlated with each other (McDonald, 1985).

The factor solution was determined by examining the scree plot (Huck, 2008). The criteria for item loadings were set at .40 or higher which was reliable since the sample size was greater than 150 (Stevens, 1992). The factor solution was composed of 31-items grouped into six factors which accounted for 42.79% of the variance (see Table 4.1).

Table 4.1

Summary of Factor Loadings for Principal Axis Factoring Using Varimax with Kaiser Normalization Rotation Method (Displaying Values Equal or Greater than .40).

	Factor Loading					
Item	1	2	3	4	5	6
4. Our school board acts collectively as a whole rather than as individuals.	.827	--	--	--	--	--
11. Our school board avoids micromanagement by keeping our focus on governance and policy issues.	.704	--	--	--	--	--
15. Our school board treats students, parents, staff and community members with respect.	.572	--	--	--	.420	--
12. Our school board routinely practices prevention rather than reaction as our primary mode of operation.	.538	--	--	--	--	--
9. Our school board treats students, parents, staff and community members as important customers of the school system.	.515	--	--	--	.457	--
14. Our school board promotes effective meetings through collaborative decision-making.	.503	.451	--	--	--	--

(Table 4.1 Continued)

Item	Factor Loading 1	2	3	4	5	6
5. Our school board routinely builds positive relationships with students, parents, staff and the community.	.407	--	--	--	--	--
28. Our school board routinely uses our core values to guide decision-making.	--	--	--	--	--	--
29. Our school board performance is constantly improving compared to other school boards.	--	--	--	--	--	--
24. Our school board ensures that board goals meet the needs of students, parents, staff and community members.	--	.620	--	--	--	--
17. Our school board routinely reviews board policies and updates them as necessary.	--	.535	--	--	--	--
25. Our school board members understand the specific strategies and action plans we will use to improve our board practices.	--	.525	.524	--	--	--
18. Our school board routinely recognizes individual board member contributions toward achieving board goals.	--	.514	--	--	--	--

(Table 4.1 Continued)

	Factor Loading					
Item	1	2	3	4	5	6
23. Our school board members routinely participate in training to improve board member knowledge and performance.	--	.479	--	--	--	--
30. Our school board ensures that all new board members understand their role and responsibility in serving on the board.	--	.470	--	--	--	--
16. Our school board strives to develop a culture that helps board members achieve board goals.	--	.465	--	--	--	--
13. Our school board can determine the effectiveness of our decisions and actions.	--	.455	--	--	--	--
26. Our school board puts quality first among all other considerations.	--	.435	--	--	--	--
27. Our school board routinely monitors and reviews data on the satisfaction levels of students, parents, staff and community members.	--	--	.704	--	--	--
3. Our school board routinely monitors and collects data on the satisfaction levels of our board members.	--	--	.588	--	--	--

(Table 4.1 Continued)

Item	Factor Loading 1	2	3	4	5	6
22. Our school board routinely practices benchmarking by researching what effective school boards are doing.	--	--	.528	--	--	--
10. Our school board routinely monitors progress toward board goals.	--	--	--	.710	--	--
6. Our school board is making consistent progress toward board goals compared to our own past performance.	--	--	--	.675	--	.423
8. Our school board routinely self-evaluates our board meetings.	--	--	.423	.473	--	--
7. Our school board routinely uses our vision/mission statement to guide decision-making.	--	--	--	.461	--	--
21. Our school board routinely focuses on students, parents, staff and community members when designing and delivering educational services.	--	--	--	--	.772	--
20. Our school board routinely uses data to guide decision-making.	--	--	--	--	.505	--

(Table 4.1 Continued)

Item	Factor Loading 1	2	3	4	5	6
19. Our school board routinely asks administrators important questions about student achievement data.	--	--	--	--	.501	--
2. Our school board routinely seeks input from students, parents, staff and community members before making key decisions.	--	--	--	--	--	.721
31. Our school board routinely engages the community in identifying goals and outcomes for our board.	--	--	--	--	--	.525
1. Our school board routinely works with students, parents, staff and community members to develop strategies and action plans for board goals.	--	--	--	--	--	.504

Note. N = 164.

Analysis of Factors

Six factors were identified in the factor analysis (see Table 4.1). However, a review of the factor loadings revealed that factors did not load within the seven Baldrige Criteria categories as originally predicted. The factor analysis findings are summarized below.

Factor 1. There were seven items identified in factor one. The combination of seven items represented five different categories of the *Malcolm Baldrige Criteria for Performance Excellence* including: (a) Leadership (item 11); (b) Strategic Planning (item 12); (c) Student, stakeholder, and market focus (items 5, 9 and 15); (d) Human Resource Focus (item 4); and (e) Management of School Board Processes (item 14). In addition, three individual items within factor one loaded in more than one factor (items 9, 14 and 15). A logical category grouping could not be identified because of the inconsistency of items that loaded in Factor 1.

Factor 2. There were nine items that loaded in Factor 2. The combination of nine items represented five different categories of the *Malcolm Baldrige Criteria for Performance Excellence* including: (a) Leadership (item 17); (b) Strategic Planning (items 24 and 25); (c) Information and Analysis (item 26); (d) Human Resource Focus (item 16, 18 and 23); and (e) Management of School Board Processes (items 13 and 30). In addition, one item within Factor 2 loaded in more than one factor (item 25). A logical category grouping could not be identified because of the inconsistency of items that loaded in factor 2.

Factor 3. There were three items that loaded in Factor 3. The combination of three items represented three different categories of the *Malcolm Baldrige Criteria for Performance Excellence* including: (a) Student, stakeholder, and market focus (item 27); (b) Human Resource Focus (item 3); and (c) Results (item 22). A logical category grouping could not be identified because of the inconsistency of items that loaded in Factor 3.

Factor 4. There were four items that loaded in Factor 4. The combination of four items represented four different categories of the *Malcolm Baldrige Criteria for Performance Excellence* including: (a) Leadership (item 7); (b) Information and Analysis (item 10); (c) Management of School Board Processes (item 8); and (d) Results (item 6). In addition, two items within Factor 4 loaded in more than one factor (items 6 and 8). A logical category grouping could not be identified because of the inconsistency of items that loaded in Factor 4.

Factor 5. There were three items that loaded in Factor 5. The combination of three items represented two different categories of the *Malcolm Baldrige Criteria for Performance Excellence* including: (a) Student, stakeholder, and market focus (item 21); and (b) Information and Analysis (items 19 and 20). A logical category grouping could not be identified because of the inconsistency of items that loaded in Factor 5.

Factor 6. There were three items that loaded in Factor 6. The combination of three items represented two different categories of the *Malcolm Baldrige Criteria for Performance Excellence* including: (a) Leadership (item 2); and (b) Strategic Planning (items 1 and 31). A logical category grouping could not be identified because of the inconsistency of items that loaded in Factor 6.

Non-Loading Items. There were two items that did not load into any of the six factors (items 28 and 29) and a logical category grouping could not be identified because of the variance of the two items.

Item Analysis

Because the factor analysis did not produce factors aligned with the *Malcolm Baldrige Criteria for Performance Excellence*, a descriptive analysis of all items was

conducted. Descriptive statistics were computed for the 31-items (See Table 4.2) and included the following: (a) skewness; (b) median; (c) mean; and (d) standard deviation. Histograms of the item analysis were also reviewed (see Appendix G).

Table 4.2

Descriptive Item Analysis

Item	Skew.	Med.	M	SD
1. Our school board routinely works with students, parents, staff and community members to develop strategies and action plans for board goals.	-0.814	5	4.52	1.318
2. Our school board routinely seeks input from students, parents, staff and community members before making key decisions.	-1.258	5	4.95	1.134
3. Our school board routinely monitors and collects data on the satisfaction levels of our board members.	-0.126	4	3.43	1.602
4. Our school board acts collectively as a whole rather than as individuals.	-1.939	6	5.45	.846
5. Our school board routinely builds positive relationships with students, parents, staff and the community.	-1.054	5	5.13	.908

(Table 4.2 Continued)

Item	Skew.	Med.	M	SD
6. Our school board is making consistent progress toward board goals compared to our own past performance.	-1.589	5	4.99	1.154
7. Our school board routinely uses our vision/mission statement to guide decision-making.	-1.188	5	4.70	1.348
8. Our school board routinely self-evaluates our board meetings.	-0.341	4	3.76	1.578
9. Our school board treats students, parents, staff and community members as important customers of the school system.	-2.468	6	5.58	.775
10. Our school board routinely monitors progress toward board goals.	-1.418	5	4.88	1.242
11. Our school board avoids micromanagement by keeping our focus on governance and policy issues.	-1.566	5	5.02	1.206
12. Our school board routinely practices prevention rather than reaction as our primary mode of operation.	-1.539	5	4.95	1.008

(Table 4.2 Continued)

Item	Skew.	Med.	M	SD
13. Our school board can determine the effectiveness of our decisions and actions.	-1.283	5	4.91	.916
14. Our school board promotes effective meetings through collaborative decision-making.	-1.374	6	5.36	.813
16. Our school board strives to develop a culture that helps board members achieve board goals.	-1.496	5	5.19	.944
17. Our school board routinely reviews board policies and updates them as necessary.	-1.986	6	5.41	.990
18. Our school board routinely recognizes individual board member contributions toward achieving board goals.	-0.847	5	4.48	1.231
19. Our school board routinely asks administrators important questions about student achievement data.	-1.307	6	5.51	.687
20. Our school board routinely uses data to guide decision-making.	-1.738	6	5.35	.898
21. Our school board routinely focuses on students, parents, staff and community members when designing and delivering educational services.	-1.585	6	5.38	.809

(Table 4.2 Continued)

Item	Skew.	Med.	M	SD
22. Our school board routinely practices benchmarking by researching what effective school boards are doing.	-0.737	4	4.04	1.394
23. Our school board members routinely participate in training to improve board member knowledge and performance.	-0.725	5	4.64	1.172
24. Our school board ensures that board goals meet the needs of students, parents, staff and community members.	-1.634	5	5.16	.959
25. Our school board members understand the specific strategies and action plans we will use to improve our board practices.	-1.266	5	4.72	1.231
26. Our school board puts quality first among all other considerations.	-0.805	5	5.10	.901
27. Our school board routinely monitors and reviews data on the satisfaction levels of students, parents, staff and community members.	-0.774	5	4.36	1.277
28. Our school board routinely uses our core values to guide decision-making.	-1.623	5	5.13	1.004

(Table 4.2 Continued)

Item	Skew.	Med.	M	SD
29. Our school board performance is constantly improving compared to other school boards.	-1.227	5	4.80	1.002
30. Our school board ensures that all new board members understand their role and responsibility in serving on the board.	-1.618	5	5.05	1.005
31. Our school board routinely engages the community in identifying goals and outcomes for our board.	-0.901	5	4.42	1.311

Given the negatively skewed response pattern (Skewness = -1.246), further analysis of the 31-items was conducted to more thoroughly examine how school board presidents responded to the individual items. To further stratify and analyze the responses, items that had the lowest and highest mean scores were identified.

In reviewing the range of mean scores within the complete data set of 31-items, the lowest mean score of 3.44 (SD= 1.602) was identified in item three (Our school board routinely monitors and collects data on the satisfaction levels of our board members). A complete review of the five items with the lowest mean scores is included in Table 4.3.

Table 4.3

Five Items with the Lowest Mean Scores

Item	N	M	SD
3. Our school board routinely monitors and collects data on the satisfaction levels of our board members.	164	3.43	1.602
8. Our school board routinely self-evaluates our board meetings.	164	3.76	1.578
22. Our school board routinely practices benchmarking by researching what effective school boards are doing.	164	4.04	1.394
27. Our school board routinely monitors and reviews data on the satisfaction levels of students, parents, staff and community members.	164	4.36	1.277
31. Our school board routinely engages the community in identifying goals and outcomes for our board.	164	4.42	1.311

In reviewing the range of mean scores within the complete data set of 31 items, the highest mean score of 5.76 (SD= .530) was reported in item 15 (Our school board treats students, parents, staff and community members with respect). A complete review of the five items with the highest mean scores is included in Table 4.4.

Table 4.4

Five Items with the Highest Mean Scores

Item	N	M	SD
15. Our school board treats students, parents, staff and community members with respect.	164	5.76	0.530
9. Our school board treats students, parents, staff and community members as important customers of the school system.	164	5.58	0.775
19. Our school board routinely asks administrators important questions about student achievement data.	164	5.51	0.687
4. Our school board acts collectively as a whole rather than as individuals.	164	5.45	0.846
17. Our school board routinely reviews board policies and updates them as necessary.	164	5.41	0.990

A review of all 31items (see Table 4.2) revealed school board presidents provided negatively skewed responses (Skewness = -1.246). Further analysis of the skewed responses was performed by calculating mean responses within the combined categories of (4) slightly true of our board (coded as “three”), (5) somewhat true of our board (coded as “four”) and (6) very true of our board (coded as “six”) in the Likert response scales. Data analysis revealed that 29 of 31 items (93.5%) displayed a range of 73.2% to 98.8% within the combined response categories (see Table 4.5).

Table 4.5

Summary of Response Pattern Combining Likert Categories 4, 5, & 6

Survey Item	% Response in Likert Scales 4, 5, & 6
1. Our school board routinely works with students, parents, staff and community members to develop strategies and action plans for board goals.	81.7
2. Our school board routinely seeks input from students, parents, staff and community members before making key decisions.	91.5
3. Our school board routinely monitors and collects data on the satisfaction levels of our board members.	56.7
4. Our school board acts collectively as a whole rather than as individuals.	96.3
5. Our school board routinely builds positive relationships with students, parents, staff and the community.	95.7
6. Our school board is making consistent progress toward board goals compared to our own past performance.	90.9
7. Our school board routinely uses our vision/mission statement to guide decision-making.	84.8
8. Our school board routinely self-evaluates our board meetings.	64.0
9. Our school board treats students, parents, staff and community members as important customers of the school system.	97.6

(Table 4.5 continued)

Survey Item	% Response in Likert Scales 4, 5, & 6
10. Our school board routinely monitors progress toward board goals.	90.2
11. Our school board avoids micromanagement by keeping our focus on governance and policy issues.	89.0
12. Our school board routinely practices prevention rather than reaction as our primary mode of operation.	94.5
13. Our school board can determine the effectiveness of our decisions and actions.	94.5
14. Our school board promotes effective meetings through collaborative decision-making.	98.2
15. Our school board treats students, parents, staff and community members with respect.	98.8
16. Our school board strives to develop a culture that helps board members achieve board goals.	95.7
17. Our school board routinely reviews board policies and updates them as necessary.	93.9
18. Our school board routinely recognizes individual board member contributions toward achieving board goals.	83.5

(Table 4.5 continued)

Survey Item	% Response in Likert Scales 4, 5, & 6
19. Our school board routinely asks administrators important questions about student achievement data.	98.8
20. Our school board routinely uses data to guide decision-making.	95.7
21. Our school board routinely focuses on students, parents, staff and community members when designing and delivering educational services.	97.0
22. Our school board routinely practices benchmarking by researching what effective school boards are doing.	73.2
23. Our school board members routinely participate in training to improve board member knowledge and performance.	85.4
24. Our school board ensures that board goals meet the needs of students, parents, staff and community members.	95.7
25. Our school board members understand the specific strategies and action plans we will use to improve our board practices.	88.4
26. Our school board puts quality first among all other considerations.	94.5
27. Our school board routinely monitors and reviews data on the satisfaction levels of students, parents, staff and community members.	77.4

(Table 4.5 continued)

Survey Item	% Response in Likert Scales 4, 5, & 6
28. Our school board routinely uses our core values to guide decision-making.	95.7
29. Our school board performance is constantly improving compared to other school boards.	91.5
30. Our school board ensures that all new board members understand their role and responsibility in serving on the board.	93.3
31. Our school board routinely engages the community in identifying goals and outcomes for our board.	80.5

Given that the factor analysis did not provide evidence to support the seven logical category groupings of the *Malcolm Baldrige Criteria for Performance Excellence* and responses to survey items were negatively skewed (Skewness = -1.246); it was decided to combine all 31 items into a single variable labeled "continuous improvement." The continuous improvement variable would serve as the single metric to measure the extent to which school board presidents were implementing continuous improvement practices in their boardsmanship.

Cronbach's alpha was computed to specify the reliability of the new continuous improvement variable. Given the reliability of the combined set of 31 items (Cronbach's Alpha = .95), the continuous improvement variable was selected as the measure to answer all four research questions:

1. What is the relationship between the number of years serving on the board of education and the use of continuous improvement practices in boardsmanship?
2. What is the relationship between the number of years serving as school board president and the use of continuous improvement practices in boardsmanship?
3. What is the relationship between the education level of the school board president and the use of continuous improvement practices in boardsmanship?
4. What is the relationship between school district size and the use of continuous improvement practices in boardsmanship?

Analysis Related to Research Questions

Research Question One. To examine the relationship between the number of years serving on the board of education and the use of continuous improvement practices in boardsmanship, correlations were computed. There was no significant relationship between the number of years serving on the board of education and the use of continuous improvement practices in boardsmanship as measured by the Pearson Product Moment Correlation coefficient (r= .075).

Research Question Two. To examine the relationship between the number of years serving as school board president and the use of continuous improvement practices in boardsmanship, correlations were computed. There was no significant relationship between the number of years serving as school board president and the use of continuous improvement practices in boardsmanship as measured by the Pearson Product Moment Correlation coefficient (r= .081).

Research Question Three. Descriptive statistics were computed (Table 4.6) to compare the education level of the school board president and the implementation of continuous improvement practices in boardsmanship.

Table 4.6

Descriptive Statistics for the Education Level of the School Board President and Continuous Improvement Implementation.

Education Level	N	M	SD
High school diploma	36	4.9659	0.75313
Associate's degree	25	4.9406	0.62047
Bachelor's degree	56	4.8721	0.66781
Master's degree	30	4.8925	0.75359
Doctoral degree	17	4.8880	0.71671
Total	164	4.9085	0.69415

One-Way Analysis of Variance (ANOVA) was conducted to examine the relationship between the education level of the school board president and the implementation of continuous improvement practices in boardsmanship. The results of the ANOVA indicated there were no significant differences (p= .976) among the groups (see Table 4.7).

Table 4.7

Analysis of Variance Summary Table of the Education Level the School Board President and Continuous Improvement Implementation.

Source	df	SS	MS	F	p
Between Groups	4	0.234	0.058	0.119	0.976
Within Groups	159	78.308	0.493		
Total	163	78.542			

Research Question Four. Descriptive statistics were computed to compare school size and the application of continuous improvement practices (see Table 4.8).

Table 4.8

Descriptive Statistics for the Size of the School District and Continuous Improvement Implementation.

Size of School District	N	M	SD
Less than 250 students	13	4.8859	.57049
250-499 students	22	4.8358	.63243
500-999 students	38	4.8862	.72829
1,000-2,999 students	58	4.9021	.73958
3,000-4,999 students	19	5.1986	.56758

(Table 4.8 continued)

Size of School District	N	M	SD
5,000-9,999 students	7	4.9493	.48489
10,000-19,999 students	4	5.0081	.42744
20,000-39,999 students	2	3.4677	1.30016
40,000 students or more	1	4.7097	--
Total	164	4.9085	.69415

The data set was split into two logical categories with acceptable N counts: (a) school districts with less than 1,000 students (N=73); and (b) school districts with more than 1,000 students (N=91) in order to conduct a *t*-test. Table 4.9 analyzes descriptive statistics of response patterns including school board presidents representing school districts with less than 1,000 students and those representing school districts with more than 1,000 students.

Table 4.9

Descriptive Statistics for School Districts with Less Than 1,000 students and More Than 1,000 students and Continuous Improvement Implementation.

	N	M	SD
Less Than 1000 Students	73	4.8710	.66634
More Than 1000 Students	91	4.9387	.71792
Total	164	4.9085	.69415

Once the two groups were identified, a *t*-test was conducted to examine the relationship between school district size and the use of continuous improvement practices in boardsmanship. Prior to conducting the *t*-test, Levene's Test for Equality of Variances was computed and indicated there was no significance in the unequal number within each group (p= .208). The results of the *t*-test revealed there were no significant differences; *t*(162)= -.620, p=.536, among the groups (see Table 4.10).

Table 4.10

t-test Summary Table of the Differences Between School Districts with More Than and Less Than 1000 Students and Continuous Improvement Implementation.

	Levene's Test for Equality of Variances		*t*-test for Equality of Means			
	F	Sig.	*t*	df	p	Mean Difference
Continuous Improvement	1.598	.208	-.620	162	.536	-.06771

Results Summary

The purpose of the study was to examine the extent to which school board presidents utilized continuous improvement practices in their boardsmanship. To answer the research questions, all survey items were combined into a new variable titled "continuous improvement." This single measure (Cronbach's Alpha = .95) was used to answer the research questions and determine the extent to which school board presidents implemented continuous improvement practices in their boardsmanship. A summary of the data analysis indicated that overall, school board presidents perceived the extent to

which they were implementing continuous improvement practices in their boardsmanship was somewhere between “slightly true of our board and mostly true of our board” as measured by a mean score of 4.91 (on a six point Likert scale). Results of the survey of 164 school board presidents in the state of Illinois were analyzed through the use of descriptive statistics, Pearson Product Moment Correlations, One-way Analysis of Variance, and *t*-tests.

Descriptive statistics revealed that 67.7% of the respondents were male. The 50-59 year old category represented 43.3% of the sample population and 94.5 % of the respondents indicated they were White/Caucasian. Of respondents, 82.3% indicated serving as the board president between less than one year and six years. The highest percentage of respondents (56 participants) reported obtaining a bachelors degree and represented 34.1% of the sample population and 35.4% of respondents reported serving in school districts between 1,000-2,999 students.

A review of the participant response patterns (see Appendix G) revealed school board presidents provided negatively skewed responses with a range of 73.2% to 98.8% within the combined Likert scale categories of (4) slightly true of our board (coded as “three”), (5) somewhat true of our board (coded as “four”) and (6) very true of our board (coded as “six”) on 29 of 31 (93.5%) of the items. The factor analysis results (Table 4.1) could not be logically interpreted into the seven *Malcolm Baldrige Criteria for Performance Excellence* and thus required the combination of all 31 items to create a single, reliable measure of continuous improvement implementation (Cronbach’s Alpha = .95).

Pearson Product Moment Correlations, One Way Analysis of Variance and *t*-tests were computed to examine the relationship between the implementation of continuous improvement practices in school boardsmanship and the independent variables. No statistically significant correlations were found in any of the four research questions including:

1. What is the relationship between the number of years serving on the board of education and the use of continuous improvement practices in boardsmanship?
2. What is the relationship between the number of years serving as school board president and the use of continuous improvement practices in boardsmanship?
3. What is the relationship between the education level of the school board president and the use of continuous improvement practices in boardsmanship?
4. What is the relationship between school district size and the use of continuous improvement practices in boardsmanship?

Chapter V will provide an analysis of data summary, conclusions, contributions to the literature, recommendations for further study and a summary of the study.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

There has been increased awareness of the failures of public schools and the need for reform in education (Kopel, 1997; Organisation for Economic Co-operation and Development, 2006; Partnership for 21st Century Skills, 2006). Among the causes for these failures has been a lack of a systems approach to school reform which has been attributed to: (a) a lack of understanding of systems theory; (b) the failure to operationalize the concepts and principles of systems theory; and (c) the difficulties in applying the systems model from concept to reality (Kopel, 1997; Walpole & Noeth, 2002). Continuous improvement practices are rooted in systems theory (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

Today's school boards are called to provide leadership, governance, and increased student achievement results of the school systems they serve (Gemberling, Smith, & Villani, 2000). School boards in America are ideally positioned to address this needed change in education and are charged with governance responsibilities over the public schools (Lashway, 2002; Land, 2002; Price, 2001). Given this function and responsibility in an era of accountability and high expectations for student achievement, school boards must implement proven and effective practices in their boardsmanship (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000; Land, 2002; Lashway, 2002; Price, 2001).

The purpose of the study was to measure the extent to which school board presidents utilized continuous improvement practices in their boardsmanship, a practice that has been cited in the literature as an effective practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

The results of the current study indicated that school board presidents perceived the extent to which they were implementing continuous improvement practices in their boardsmanship was somewhere between "slightly true of our board and mostly true of our board" as measured by a mean score of 4.91 (out of a total possible of 6.0 on the Likert scale). A review of the participant response patterns (see Appendix G) revealed school board presidents provided negatively skewed responses (Skewness = -1.246) with a range of 73.2% to 98.8% within the combined Likert scale categories of (4) slightly true of our board (coded as "three"), (5) somewhat true of our board (coded as "four") and (6) very true of our board (coded as "six") on 29 of 31 (93.5%) of the items.

Pearson Product Moment Correlations, One Way Analysis of Variance, and *t*-tests were computed to examine the relationship between the implementation of continuous improvement practices in school boardsmanship and the independent variables. No statistically significant correlations were found in all four research questions including:

1. What is the relationship between the number of years serving on the board of education and the use of continuous improvement practices in boardsmanship?
2. What is the relationship between the number of years serving as school board president and the use of continuous improvement practices in boardsmanship?

3. What is the relationship between the education level of the school board president and the use of continuous improvement practices in boardsmanship?
4. What is the relationship between school district size and the use of continuous improvement practices in boardsmanship?

However, the study produced several unexpected results: (a) factor analysis revealed that items did not load according to the seven *Malcolm Baldrige Criteria for Performance Excellence* categories; (b) school board presidents reported high levels of continuous improvement implementation; and (c) there was no correlation found between: number of years serving on the board of education; number of years serving as school board president; education level of the school board president; and school district size and the implementation of continuous improvement in boardsmanship. These findings are discussed further.

The first unexpected finding was that survey items did not load according to the seven categories identified in the *Malcolm Baldrige Criteria for Performance Excellence*. A thorough review of the literature indicated a repetitive definition and description of continuous improvement based on the *Malcolm Baldrige Criteria for Performance Excellence* (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000; Land, 2002; Lashway, 2002; Price, 2001). The seven categories include: Leadership; Strategic Planning; Student, stakeholder, and market focus; Information and Analysis; Human Resource Focus; Management of School Board Processes; and Results. Unfortunately, the seven categories did not hold up in the factor analysis.

One possible explanation for the unexpected results of the factor analysis is that the *Malcolm Baldrige Criteria for Performance Excellence* does not provide statistically

valid categories of continuous improvement as they relate to school boardsmanship. It is possible that the *Malcolm Baldrige Criteria for Performance Excellence* criteria do not provide an accurate description of continuous improvement practices in school application.

Another possible explanation of survey items not loading within the anticipated *Malcolm Baldrige Criteria for Performance Excellence* categories was that participant responses were negatively skewed for a majority of the items. For the factor analysis to provide more reliable results, greater variation in participant responses was necessary. It is possible that the lack of variation in responses was a result of school board presidents not truly understanding the meaning of continuous improvement practices in boardsmanship or that school board presidents responded to items in a socially desirable way.

Another unexpected finding was that no correlation could be found between: number of years serving on the board of education; number of years serving as school board president; education level of the school board president; and school district size and the implementation of continuous improvement in boardsmanship. It was anticipated there would be positive relationship between the variables and extent to which school board presidents were implementing continuous improvement. According to this data, school board presidents appear to be implementing continuous improvement practices at a similar level, and therefore, no relationship could be found.

Contributions to the Literature

School boards are charged with governance responsibilities of public schools (Land, 2002; Lashway, 2002; Price, 2001). Given the importance of this responsibility,

research has been surprisingly limited in the area of school boards' work and their impact on student achievement (Bracey & Resnick, 1998; Land, 2002; Smoley, 1999). With the exception of one partially-related study (Scribner, 1966), no other research could be found that measured the extent to which school boards utilize continuous improvement in their boardsmanship, even though it is cited in the literature as an effective school board practice (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000). This study examined the extent to which school board presidents utilized continuous improvement practices in their boardsmanship and provided information that had not been previously available in the literature. The findings of this study have implications for further research and for school boards in America.

Recommendations

Recommendations for Further Research

The current study provided information that had not been available in the literature. Further research is needed to contribute to the knowledge base of effective school board practices. To improve the field of research related to school boards and the practice of continuous improvement in boardsmanship, several recommendations are given.

The first recommendation for further research is to expand this study to include a wider variety of participants including all school board members and their superintendents. This study only targeted school board presidents and not the entire school board. It is recommended that the entire board of education participate in the study along with the board president. By comparing school board presidents' responses with

the rest of the school board members, comparisons can be made within the board to study consistency of responses.

Additionally, the superintendent has a unique and valid perception of the practices of the school board and the board president. By including superintendents as a sample group in the study, comparisons can be made between school board responses and the perception of the superintendent. The outside perspective could further clarify and validate the board's use of continuous improvement practices. By including the additional participants, a triangulation of the data could be conducted to validate and further clarify the extent to which school boards are implementing continuous improvement practices in their boardsmanship.

Another recommendation for further research is to conduct a study that compares and contrasts survey responses between school board members whose school districts are identified as implementing continuous improvement and those who are not. In the state of Illinois, there are several schools who have earned recognition from the *Lincoln Foundation for Performance Excellence*, the state's quality award program.

Survey results from school board members associated with school districts that have received the Illinois state quality award (control group) could be compared with those school board members who have not served a school district that has not received the award (experimental group). School board members serving school districts that have been recognized for their continuous improvement efforts may provide a more realistic description of the implementation of continuous improvement in boardsmanship. This data could be compared to districts that have not participated in the state quality award program and provide comparative data analysis.

The third recommendation for further research is to expand the study to include a mixed method design. This study only included a quantitative design. It is recommended that an expanded study incorporate qualitative data within each of the research questions. Interviews, historical document reviews, and focus groups could provide additional data to answer the research questions. The expansion of qualitative data could further explain and validate the practice of continuous improvement in school boardsmanship.

The fourth recommendation for further research is to expand the study to compare the practice of continuous improvement in boardsmanship to other research-based practices of school boards, specifically: (a) the *Iowa Lighthouse Study;* and (b) the *Key Work of School Boards*. Specifically, the *Iowa Lighthouse Study* (Iowa Association of School Boards, 2000) identified seven critical conditions for school renewal based on the research of effective schools, school improvement and change including: (a) shared leadership; (b) continuous improvement and shared decision making; (c) ability to create and sustain initiatives; (d) supportive workplace; (e) staff development; (f) support for school sites through data and information; and (g) community involvement.

In a separate publication, Gemberling, Smith, and Villani (2000) identified eight key action areas that effective school boards focus on that have a positive impact on student achievement. The eight areas identified and endorsed by the *National School Boards Association* included: (a) vision; (b) standards; (c) assessment; (d) accountability; (e) alignment; (f) climate; (g) collaborative relationships; and (h) continuous improvement. An expanded study should measure the extent to which any of these other best school board practices are being implemented in boardsmanship compared to the practice of continuous improvement.

Implications for School Boards

The practice of continuous improvement has been cited in the literature as an effective practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000). Successful school boards apply effective techniques, such as continuous improvement practices, in school boardsmanship (Gemberling, Smith, & Villani, 2000; IASB, 2000).

The results of this study identified areas of focus for the expansion of school board training and development. Specifically, results of the data analysis indicated that there were five survey items with the lowest Mean responses (see Table 4.3). These five lowest Mean areas of the study serve as continuous improvement training topics for future development of school board members.

The first area of focus based on the findings of the study is that school boards need to implement systems to monitor the satisfaction levels of school board members. Item three asked school board presidents to rate the extent that their board routinely monitors and collects data on the satisfaction levels of board members (Mean = 3.43). School board presidents that monitor the satisfaction level of school board members, would be able to make improvements in category five (Human Resource Focus) of the *Malcolm Baldrige Criteria for Performance Excellence*.

Quirke (1995) described quality as being “about ‘connectedness’, where people have a sense of the whole relationships with their internal and external customers, and an understanding of how the process of which they are a part fits together to produce the desired result” (p. 162). Board presidents would be able to improve areas of dissatisfaction among the board which may be hindering the implementing effective

school board practices. School board presidents cannot fix what they do not know about. Results of this study recommended that school board presidents should implement a system to monitor satisfaction of school board members, an effective continuous improvement practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

The next area of focus based on the findings of the study is that school boards need to implement a process to regularly self-evaluate school board meetings. Item eight asked school board presidents to rate the extent that the school board routinely self-evaluate board meetings (Mean = 3.76). Danzberger, Kirst, and Usdan (1992) indicated that an effective school board has procedures for self-assessment and invests in its own development, using diverse approaches that address the needs of the board as a whole, as well as those of individual board members.

By regularly evaluating school board meetings, school board presidents can make improvements in category six (Management of School Board Processes) of the *Malcolm Baldrige Criteria for Performance Excellence*. By systematically reviewing board meeting feedback over time, board presidents can target key issues found in the data and focus improvement efforts in those areas which can lead to a higher functioning school board. Implementing processes to regularly self-evaluate school board meetings is an effective practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

Another area of focus based on the findings of the study is that school boards need to implement a process to benchmark other school boards to share effective board practices. Item 22 asked school board presidents to rate the extent that the school board

routinely practices benchmarking by researching what effective school boards are doing (Mean = 4.04).

By benchmarking effective school boards, school board presidents can make improvements in category seven (Results) of the *Malcolm Baldrige Criteria for Performance Excellence*. School boards would benefit from observing, reading and learning about effective school board practices around the nation. Currently, there is not a standardized or formal process in the State of Illinois for school boards to systematically learn from each other. State and National school board associations should establish venues for school board members to network, share best practices and allow for benchmarking of school board practices across the state and nation. Implementing processes to benchmark other school boards to share effective board practices is an effective practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

Another area of focus based on the findings of the study is that school boards need to implement systems to monitor the satisfaction of students, parents, staff and community members. Item 27 asked school board presidents to rate the extent that the school board routinely monitors and reviews data on the satisfaction levels of students, parents, staff and community members (Mean = 4.36).

Strategies for implementing change must be developed with stakeholders along with the development of strategies for changing the attitudes of members of the organization in order to accomplish systemic and lasting change (Beckhand & Prichard, 1992). Involving the members of the organization as participants in the change process is

the responsibility of leadership, namely the administration and board of education (Evans, 1993; Parker, 1990).

To that end, a primary focus for a school system has been to strive for customer satisfaction by implementing effective systems and processes to provide the customers (students) with quality services (Deming, 1986). By regularly monitoring stakeholder satisfaction levels, school board presidents can make improvements in category three (Student, stakeholder, and market focus) of the *Malcolm Baldrige Criteria for Performance Excellence*.

School board presidents can use stakeholder satisfaction data to determine the effectiveness of the board. This data can also help identify key areas for improvement. Implementing systems to monitor the satisfaction of students, parents, staff, and community members is an effective practice of school boards (Furhman, 1999; Gemberling, Smith, & Villani, 2000; IASB, 2000).

The last area of focus based on the findings of the study is that school boards need to implement systems to engage the community in identifying goals and outcomes for the board. Item 31 asked school board presidents to rate the extent that the school board routinely engages the community in identifying goals and outcomes for our board (Mean = 4.42). By implementing systems to engage the community in goal setting, school board presidents can make improvements in category two (Strategic Planning) of the *Malcolm Baldrige Criteria for Performance Excellence*.

School boards of education have been directed to apply the identified effective practice of continuous improvement in their boardsmanship, measured in the current study (Gemberling, Smith, and Villani, 2004; IASB, 2000). This researcher would agree

with Gemberling, Smith, and Villani (2004), who state that the continuous improvement journey begins in the boardroom:

> Board members cannot stand on the sidewalk watching the continuous improvement parade pass them by. The board must lead the parade… We all know that what we do speaks more loudly than what we say. Most of us (board members) are familiar with the principle in organizational development that leaders should not just "talk the talk but walk the walk." But do we understand the efforts required to make such a transition? Talking the talk is the easy part. First, we become familiar with the basic concepts and tools available through continuous improvement. Then we must get our feet wet- we try the tools. Next, we reflect on what happened. What did we learn? How did it help us do our work better? Then, and only then, can we develop our skill level to the point that we internalize continuous improvement as the way we do business. Only then will we walk the walk (p. 47).

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APPENDIXES

APPENDIX A

School Board President Survey

School Board President Survey

Thank you for your participation in this survey. You will not be asked to identify yourself or the school district that you represent. All responses will be kept confidential and will only be reported in aggregated summary form. At th end of the study, all survey data will be destroyed by paper shredding and through the deletion and reformatting of electronic sources. By completing the survey, you are giving voluntary consent to participate in the study.

Section I – Board President and School District Demographic Information
Please circle the letter of the most appropriate response.

1.) Gender:

A.) Male
B.) Female

2.) Age:

A.) Less than 20 years old
B.) 20-29 years old
C.) 30-39 years old
D.) 40-49 years old
E.) 50-59 years old
F.) 60 years old or older

3.) Ethnicity:

A.) White/Caucasian
B.) Black/African-American
C.) Hispanic
D.) Asian
E.) Mixed racial background
F.) Native American
G.) Other

4.) Total number of years <u>serving on the board of education</u>:

A.) Less than 1 year

B.) 1	G.) 6	L.) 11	Q.) 16	V.) 21
C.) 2	H.) 7	M.) 12	R.) 17	W.) 22
D.) 3	I.) 8	N.) 13	S.) 18	X.) 23
E.) 4	J.) 9	O.) 14	T.) 19	Y.) 24
F.) 5	K.) 10	P.) 15	U.) 20	Z.) 25 or more

5.) Total number of years <u>serving as "School Board President"</u>:

A.) Less than 1 year

B.) 1	G.) 6	L.) 11	Q.) 16	V.) 21
C.) 2	H.) 7	M.) 12	R.) 17	W.) 22
D.) 3	I.) 8	N.) 13	S.) 18	X.) 23
E.) 4	J.) 9	O.) 14	T.) 19	Y.) 24
F.) 5	K.) 10	P.) 15	U.) 20	Z.) 25 or more

6.) Highest educational degree earned:

A.) Less than high school diploma or General Education Development (GED) degree
B.) High school diploma or General Education Development (GED) degree
C.) Associate's degree
D.) Bachelor's degree
E.) Master's degree
F.) Doctoral degree

7.) School district size

A.) Less than 250 students
B.) 250-499 students
C.) 500-999 students
D.) 1,000-2,999 students
E.) 3,000-4,999 students
F.) 5,000-9,999 students
G.) 10,000-19,999 students
H.) 20,000-39,999 students
I.) 40,000 students or more

8.) School district classification that most closely characterizes your school district

A.) K-8 district
B.) 9-12 district
C.) K-12 district

Section II – School Board Practices

Please respond to the statements below by indicating the response that most closely represents the practices of your school board. The terms "WE" and "OUR" refer to your school board collectively as a whole. The statements are intended to be specific to your school board practices and NOT the practices of the school district, administration and staff. Place an "X" in the appropriate response column.

	Very untrue of our board	Somewhat untrue of our board	Slightly untrue of our board	Slightly true of our board	Somewhat true of our board	Very true of our board
1.) Our school board routinely works with students, parents, staff and community members to develop strategies and action plans for board goals.						
2.) Our school board routinely seeks input from students, parents, staff and community members before making key decisions.						
3.) Our school board routinely monitors and collects data on the satisfaction levels of our board members.						
4.) Our school board acts collectively as a whole rather than as individuals.						
5.) Our school board routinely builds positive relationships with students, parents, staff and the community.						
6.) Our school board is making consistent progress toward board goals compared to our own past performance.						
7.) Our school board routinely uses our vision/mission statement to guide decision-making.						
8.) Our school board routinely self-evaluates our board meetings.						
9.) Our school board treats students, parents, staff and community members as important customers of the school system.						

	Very untrue of our board	Somewhat untrue of our board	Slightly untrue of our board	Slightly true of our board	Somewhat true of our board	Very true of our board
10.) Our school board routinely monitors progress toward board goals.						
11.) Our school board avoids micromanagement by keeping our focus on governance and policy issues.						
12.) Our school board routinely practices prevention rather than reaction as our primary mode of operation.						
13.) Our school board can determine the effectiveness of our decisions and actions.						
14.) Our school board promotes effective meetings through collaborative decision-making.						
15.) Our school board treats students, parents, staff and community members with respect.						
16.) Our school board strives to develop a culture that helps board members achieve board goals.						
17.) Our school board routinely reviews board policies and updates them as necessary.						
18.) Our school board routinely recognizes individual board member contributions toward achieving board goals.						
19.) Our school board routinely asks administrators important questions about student achievement data.						
20.) Our school board routinely uses data to guide decision-making.						
21.) Our school board routinely focuses on students, parents, staff and community members when designing and delivering educational services.						
22.) Our school board routinely practices benchmarking by researching what effective school boards are doing.						
23.) Our school board members routinely participate in training to improve board member knowledge and performance.						
24.) Our school board ensures that board goals meet the needs of students, parents, staff and community members.						
25.) Our school board members understand the specific strategies and action plans we will use to improve our board practices.						
26.) Our school board puts quality first among all other considerations.						
27.) Our school board routinely monitors and reviews data on the satisfaction levels of students, parents, staff and community members.						
28.) Our school board routinely uses our core values to guide decision-making.						
29.) Our school board performance is constantly improving compared to other school boards.						
30.) Our school board ensures that all new board members understand their role and responsibility in serving on the board.						
31.) Our school board routinely engages the community in identifying goals and outcomes for our board.						

APPENDIX B

Institutional Review Board

1

Date of Preparation: 7-29-07
WIUIRB #: (Include, if known)

WESTERN ILLINOIS UNIVERSITY
INSTITUTIONAL REVIEW BOARD
(FWA 00005865)
Sherman Hall, Room 320, Macomb, IL 61455-1390
Phone: 309/298-1191 FAX: 309/298-2091
Website: http://www.wiu.edu/users/misp/ E-mail: IRB-Administrator@wiu.edu

Human Subjects in Research
Request for Claim of Exemption from Board Review[1]

Project Title:	School Board Accountability: The Role of Continuous Improvement		
Principal Investigator/Faculty	Dr. Donna McCaw & Dr. Greg Montalvo		
Address:	Horrabin Hall 99		
Telephone Number:	309-298-1070	*Fax Number:*	
E-Mail Address:	ds-mccaw@wiu.edu gp-montalvo@wiu.edu		
Co-PI or Student Investigator	J. Jay Marino		
Address	2815 28th Ave SW Cedar Rapids IA 52404		
Telephone Number:	319-213-0236	*Fax Number:*	319-558-2224
E-mail Address:	jmarino@cr.k12.ia.us		
Primary Contact Person:	Jay Marino		

II. Funding	
☐ External Funding Agency (Name) Not Applicable ☐ Internal Grant Program ☐ None	
Contract or Grant Title if applicable*:	
Contract or Grant if applicable #:	

III. Principal Investigator's Assurance

Signature certifies that the Principal Investigator understands and accepts the following obligations to protect the rights and welfare of research subjects in this study.

- I recognize that as the Principal Investigator it is my responsibility to ensure that this research and the actions of all project personnel involved in conducting the study will conform to the IRB approved protocol, IRB requirements/policies, and all applicable Health and Human Services (HHS)/Family Education Rights and Privacy Act (FERPA)/Protection of Pupils Rights Amendment (PPRA)/Health Insurance Portability and Accountability Act (HIPAA) regulations.
- I recognize that it is my responsibility to ensure that the study has been reviewed for scientific merit.
- I recognize that it is my responsibility to ensure that the study has been reviewed for ethical content.
- I recognize that it is my responsibility to ensure that there is constant open dialogue between myself and the co-investigators to ensure that the study is conducted correctly, and the safety and protection of the subjects are ensured.
- I recognize that it is my responsibility to ensure that valid informed consent/assent has been obtained from all research subjects or their legally authorized representatives. I will ensure that all project personnel involved in the process of consent/assent are trained properly and are fully aware of their responsibilities relative to the obtainment of informed consent/assent according to the IRB guidelines and applicable federal regulations. I will use only the currently approved, IRB stamped informed consent form or script for recruiting subjects.
- I will inform the IRB of any unanticipated adverse event or injury no later than two (2) business days following the time it becomes known that a subject suffered an adverse event/injury.
- I will not initiate any change in protocol without IRB approval except when it is necessary to reduce or eliminate a risk to the subject in which case the IRB will be notified as soon as possible.
- I will maintain all required research records and recognize the IRB is authorized to inspect these records.
- I will inform the IRB immediately of *any* significant negative change in the risk/benefit relationship of the research as originally presented in the protocol and approved by the IRB.
- I understand that IRB approval is valid for a maximum period of one year with continuing review by the IRB required at least annually in order to maintain approval status. I will not enter subjects on the study before IRB approval or if IRB approval expires. In the latter case, I will immediately contact the IRB to obtain permission to continue subjects in the research study.
- I will inform the IRB immediately if I become aware of any violations of HHS regulations (45 CFR 46), FERPA regulations (34 CFR 99), PPRA regulations (34 CFR 98), HIPAA regulations (45 CFR 164.530), or IRB Policies and Procedures for the protection of human subjects.
- I understand that failure to comply with all applicable HHS/FERPA/PPRA/HIPAA regulations, IRB Policies and Procedures and the provisions of the protocol as approved by the IRB may result in suspension or termination of my research project, notification of appropriate governmental agencies by the IRB, and/or suspension of my freedom to present or publish results.
- I certify that as faculty sponsor that the student investigator is knowledgeable about the IRB Policies and applicable federal regulations governing research with human subjects and has sufficient training and experience to conduct this study in accord with the approved protocol. In addition I will meet with the student investigator on a regular basis to monitor study progress. Should problems arise I agree to be available personally to supervise the student investigator in solving them. If I will be away, I will arrange for an alternate faculty sponsor to assume my responsibilities.
- I certify that all study personnel have completed the IRB education program and are certified, if applicable.
- I certify that all study personnel have completed the HIPAA education program and are certified, if applicable.
- I understand that, per Office of Human Research Protection/Federal Drug Administration guidelines, the IRB will be monitoring adherence to approved research protocols. The oversight process does not end with approval of a proposal. I understand that I am part of the collaborative effort to maintain the integrity of the human subjects' research approval process and procedures to ensure continuous quality improvement and academic excellence at WIU.

Donna S McCaw Donna McCaw 8/16/07
PRINCIPAL INVESTIGATOR (FACULTY SPONSOR) Print Name, Signature & Date

8/16/07
CO-PRINCIPAL INVESTIGATOR Print Name, Signature & Date

10/5/07
DESIGNATED REVIEWER (Chair/IRB Administrator) Print Name, Signature & Date

IV. Student Investigator's Assurance (if applicable)

Student Investigator's (Co-Principal Investigator's) Assurance: By my signature as student investigator, I certify the above applicable assurances and that I will meet with my faculty sponsor on a regular basis to monitor study progress. If my faculty sponsor is away, I will meet with his/her arranged alternate faculty sponsor who will assume his/her responsibilities.

John Jay Marino - J. Jay Marino 8-3-07
CO-PRINCIPAL INVESTIGATOR (STUDENT) Print Name, Signature & Date

APPENDIX C

Letter to School Board President Participants

ILLINOIS ASSOCIATION
OF SCHOOL BOARDS

Lighting The Way To Excellence In School Governance

PLEASE REPLY TO:

❑ 2921 Baker Drive
Springfield, Illinois
62703-5929
217/528-9688
Fax: 217/528-2831

❑ One Imperial Place
1 East 22nd Street
Suite 20
Lombard, Illinois
60148-6120
630/629-3776
Fax: 630/629-3940

OFFICERS
Marie Slater
President

Mark C. Metzger
Vice President

Joseph Alesandrini
Treasurer

Raymond W. Zimmerman
Immediate Past President

Michael D. Johnson, Ed.D.
Executive Director

October 2007

Dear School Board President,

The Illinois Association of School Boards invites you to participate in a Doctoral research study to measure the extent to which school board presidents are implementing continuous improvement practices in their boardsmanship. Although much research exists regarding the application of continuous improvement in the operation of school districts, schools and classrooms, there has been no research in the school boards' application of continuous improvement practices in their boardsmanship.

The application of continuous improvement has been identified as an effective school board practice in several publications including "The Key Work of School Boards" published by the National School Boards Association and the "Lighthouse Study" conducted by the Iowa Association of School Boards. It is our hope that the results of this study will:

- measure the extent to which continuous improvement is being practiced by school board presidents in the state of Illinois
- determine what support and training might be necessary to increase this identified best practice in school boardsmanship.

The survey will take approximately 10 minutes to complete and may be submitted online via Schoolboardnet or in the enclosed paper format. For your convenience, a self-addressed stamped envelope has been provided for a paper response. If you prefer, the survey can be completed online by logging on to *http://il.schoolboard.net*. Once logged in, use the "My Groups" drop down menu to navigate to the Board Presidents page and click on the "WIU Doctoral Survey" link listed under the Survey heading. If you respond electronically, please do not return the paper survey. **Survey responses are due on or before Friday, Nov. 2, 2007.**

This study has been deemed exempt from review by the Institutional Review Board (IRB) of Western Illinois University in Macomb, IL. While we know of no personal risk or discomfort you may experience

as part of this study, every attempt will be made to protect your privacy. The survey will not ask you to provide your name or the name of your school district. All responses will be confidential and will only be reported in summary form. At the conclusion of the study, all data and information related to the study will be destroyed. By completing the survey voluntarily, you are, in effect providing consent to participate.

If you have questions about this project, please contact us. Thanks in advance for your cooperation and support of this study. Your participation is appreciated. Questions concerning your rights as a participant may be directed to John Smith, IRB Administrator at *JW_Smith@wiu.edu* or (309)298-1191.

Sincerely,

Michael D. Johnson, Ed.D.
Executive Director
Illinois Association of School Boards
217/528-9688

J. Jay Marino
Researcher & Doctoral Student
jmarino@cr.k12.ia.us
319-213-0236

Approved Consent Form
Western Illinois University
Institutional Review Board
Dates 10/5/07 - 10/4/08

APPENDIX D

Expert Panel Participation Letter

August 7, 2007

Thanks for agreeing to participate on the "Expert Review" panel of my dissertation. I have drafted a survey for use with school board presidents in hopes of measuring "the extent to which school board presidents utilize continuous improvement practices in their boardsmanship." The survey will be sent to all 853 school board presidents in the state of Illinois sometime in late September.

You have been selected to participate in the content validity process because of your expertise and involvement with continuous improvement practices in schools. In short, I would ask you to review the attached survey instrument and comment specifically on the following:

(a) Clarity- Are the survey items clearly worded? Is the language free of ambiguity? Would the average school board president be able to understand what the questions are asking? What wording changes would you suggest to make the survey items more clear?

(b) Readability- Is the wording easily to understand? Are the items free from cultural, gender, racial or other bias? Would the average school board president be able to read the items and understand their meaning? What wording changes would you suggest to make the survey items more clear?

(c) Proper inclusion of items within the seven *Malcolm Baldrige Criteria for Performance Excellence* continuous improvement categories- Have the survey items been placed in the appropriate Baldrige category (see below). Would you recommend moving any of the survey items to another category? If so, which ones?

(1) Leadership
(2) Strategic Planning
(3) Student and Stakeholder Focus
(4) Information and Analysis
(5) Human Resource Focus
(6) Management of School Board Processes
(7) Results

Thanks for your assistance in the content validation process of the continuous improvement survey for school board presidents. Please contact me if you have any questions or need further clarification. You only need to return the "Expert Review Analysis Form" and can send it electronically or in paper format. **I'm hoping to receive your feedback by Friday, August 17th if at all possible.**

Sincerely,

Jay Marino

APPENDIX E

Expert Review Analysis Form

Directions:

1.) Review through the survey instrument one time to get a feel for the overall survey and the items

2.) Review the criteria below: (a) *Clarity*; (b) *Readability*; and (c) *Proper Inclusion*- to fully understand the criteria for which to judge each item

3.) Reread each item and apply the 3 criteria

4.) Use the "Issues Table" on the following page to record any suggestions or comments based on the criteria

5.) **Return the "Issues Table" to me by August 17th**

(a) Clarity- Are the survey items clearly worded? Is the language free of ambiguity? Would the average school board president be able to understand what the questions are asking? What wording changes would you suggest to make the survey items more clear?

(b) Readability- Is the wording easily to understand? Are the items free from cultural, gender, racial or other bias? Would the average school board president be able to read the items and understand their meaning? What wording changes would you suggest to make the survey items more clear?

(c) Proper inclusion of items within the seven *Malcolm Baldrige Criteria for Performance Excellence* continuous improvement categories- Have the survey items been placed in the appropriate Baldrige category (see below). Would you recommend moving any of the survey items to another category? If so, which ones?

(1) Leadership
(2) Strategic Planning
(3) Student and Stakeholder Focus
(4) Information and Analysis
(5) Human Resource Focus
(6) Management of School Board Processes
(7) Results

Issues Table

Name of Reviewer:

Use the space below to make specific suggestions for items. Only comment on items that do not meet the criteria. If an item is "ok" the way it is, you do not need to comment on it. *(The first item is an example of how to communicate suggested changes to the survey items.)*

Item #	A.) Clarity Issues?	B.) Readability Issues?	C.) Correct Category?

Appendix F

Subject Demographic Information

Respondent's Gender

	Frequency	Percent	Cumulative Percent
Male	111	67.7	67.7
Female	53	32.3	100.0
Total	164	100.0	

Respondent's Age

	Frequency	Percent	Cumulative Percent
30-39 years old	12	7.3	7.3
40-49 years old	61	37.2	44.5
50-59 years old	71	43.3	87.8
60 years old or older	20	12.2	100.0
Total	164	100.0	

(Appendix F Continued)

Respondent's Ethnicity

	Frequency	Percent	Cumulative Percent
White/Caucasian	155	94.5	94.5
Black/African-Am.	5	3.0	97.6
Hispanic	1	.6	98.2
Mixed Racial	1	.6	98.8
Native American	1	.6	99.4
Other	1	.6	100.0
Total	164	100.0	

Respondent's Number of Years Serving on the Board

	Frequency	Percent	Cumulative Percent
Less than 1 year	1	.6	.6
1	1	.6	1.2
2	9	5.5	6.7
3	12	7.3	14.0
4	2	1.2	15.2
5	13	7.9	23.2
6	18	11.0	34.1
7	12	7.3	41.5
8	11	6.7	48.2
9	14	8.5	56.7

(Appendix F Continued)

Respondent's Number of Years Serving on the Board (Continued)

	Frequency	Percent	Cumulative Percent
10	15	9.1	65.9
11	1	.6	66.5
12	9	5.5	72.0
13	8	4.9	76.8
14	6	3.7	80.5
15	4	2.4	82.9
16	1	.6	83.5
17	4	2.4	86.0
18	3	1.8	87.8
19	2	1.2	89.0
20	3	1.8	90.9
21	2	1.2	92.1
22	4	2.4	94.5
24	1	.6	95.1
25 or more	8	4.9	100.0
Total	164	100.0	

(Appendix F Continued)

Respondent's Number of Years Serving as School Board President

	Frequency	Percent	Cumulative Percent
Less than 1 year	38	23.2	23.2
1	12	7.3	30.5
2	14	8.5	39.0
3	31	18.9	57.9
4	15	9.1	67.1
5	13	7.9	75.0
6	12	7.3	82.3
7	3	1.8	84.1
8	4	2.4	86.6
9	4	2.4	89.0
10	5	3.0	92.1
11	2	1.2	93.3
12	3	1.8	95.1
14	1	.6	95.7
15	2	1.2	97.0
16	2	1.2	98.2
17	1	.6	98.8
18	1	.6	99.4
25 or more	1	.6	100.0
Total	164	100.0	

(Appendix F Continued)

Respondent's Education Level

	Frequency	Percent	Cumulative Percent
High school diploma or (GED)	36	22.0	22.0
Associate's degree	25	15.2	37.2
Bachelor's degree	56	34.1	71.3
Master's degree	30	18.3	89.6
Doctoral degree	17	10.4	100.0
Total	164	100.0	

Respondent's School District Size

	Frequency	Percent	Cumulative Percent
Less than 250 students	13	7.9	7.9
250-499 students	22	13.4	21.3
500-999 students	38	23.2	44.5
1,000-2,999 students	58	35.4	79.9
3,000-4,999 students	19	11.6	91.5
5,000-9,999 students	7	4.3	95.7
10,000-19,999 students	4	2.4	98.2
20,000-39,999 students	2	1.2	99.4
40,000 students or more	1	.6	100.0
Total	164	100.0	

(Appendix F Continued)

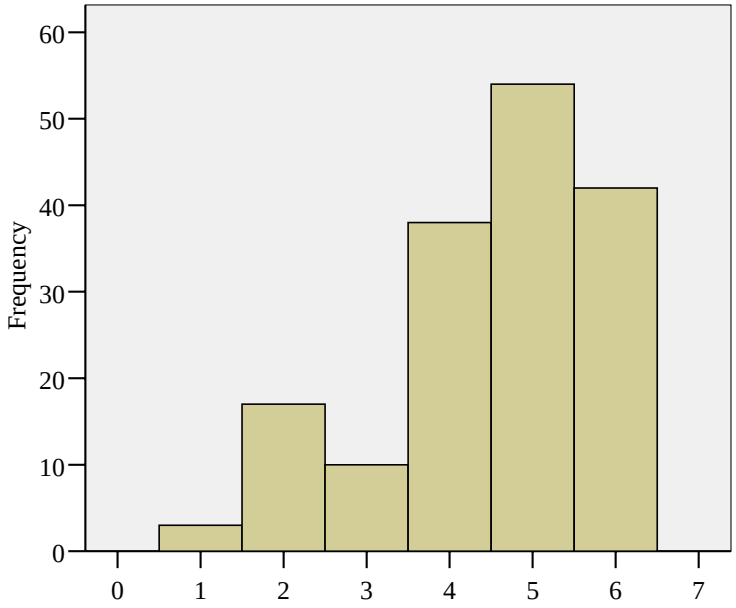
Respondent's School District Classification

	Frequency	Percent	Cumulative Percent
K-8 district	70	42.7	42.7
9-12 district	17	10.4	53.0
K-12 district	77	47.0	100.0
Total	164	100.0	

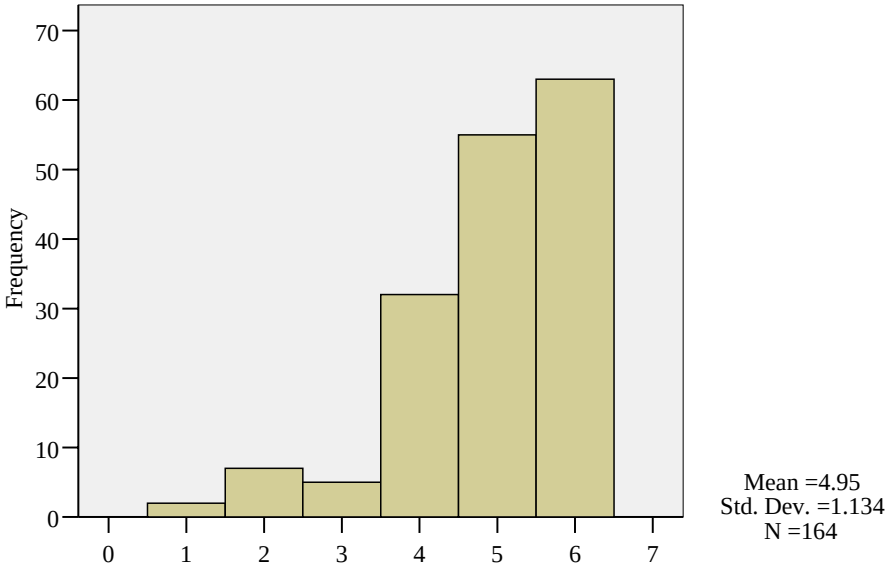
APPENDIX G

Histograms of Item Response Distribution

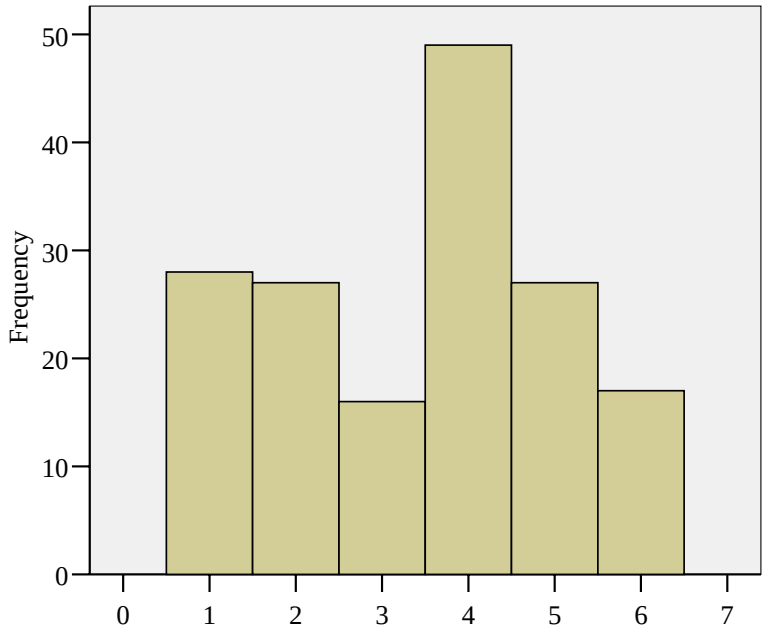
1. Our school board routinely works with students, parents, staff and community members to develop strategies and action plans for board goals.



2. Our school board routinely seeks input from students, parents, staff and community members before making key decisions.

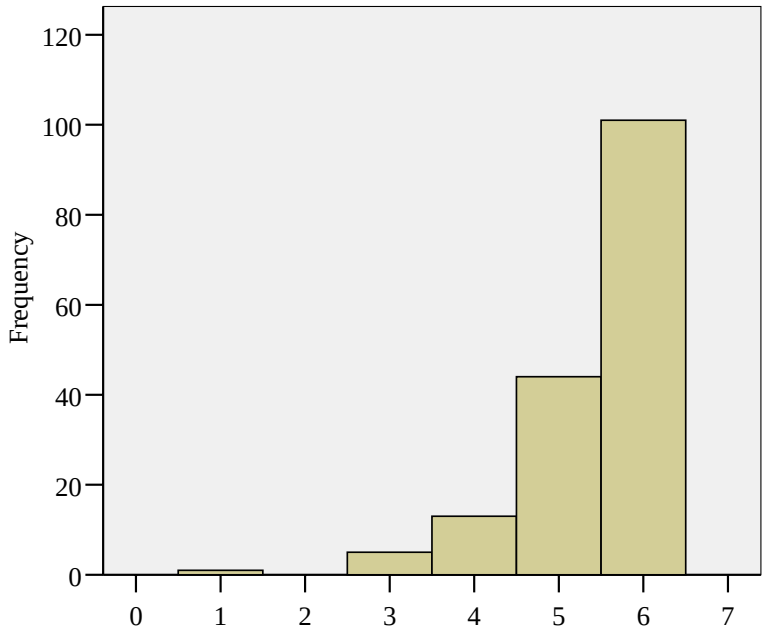


3. Our school board routinely monitors and collects data on the satisfaction levels of our board members.



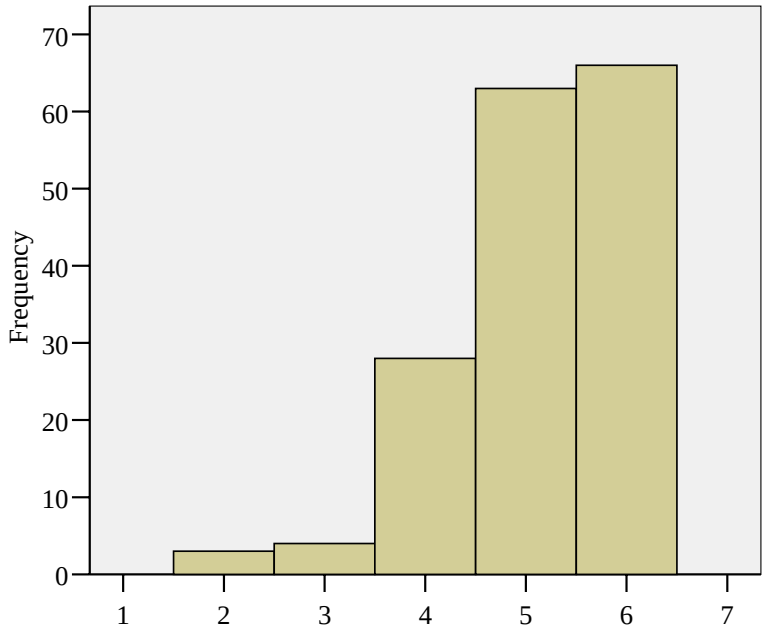
Mean =3.43
Std. Dev. =1.602
N =164

4. Our school board acts collectively as a whole rather than as individuals.



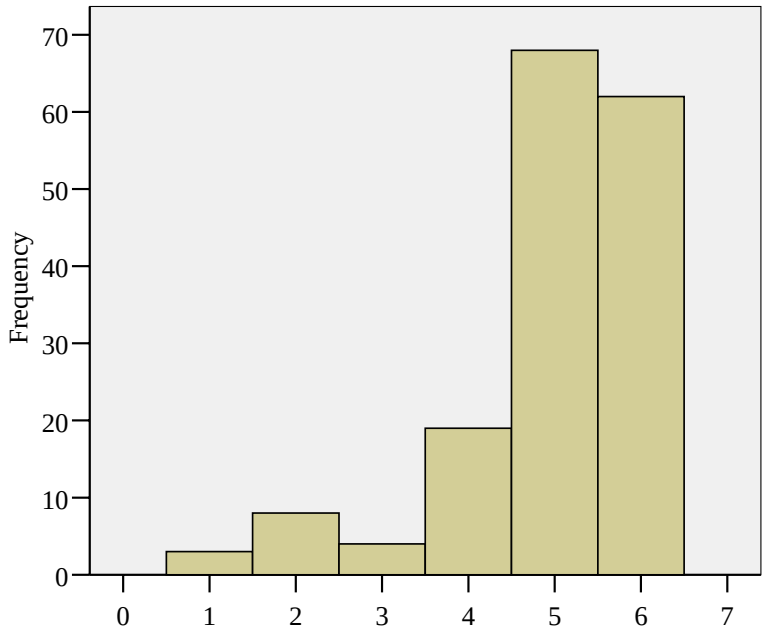
Mean =5.45
Std. Dev. =0.846
N =164

5. Our school board routinely builds positive relationships with students, parents, staff and the community.



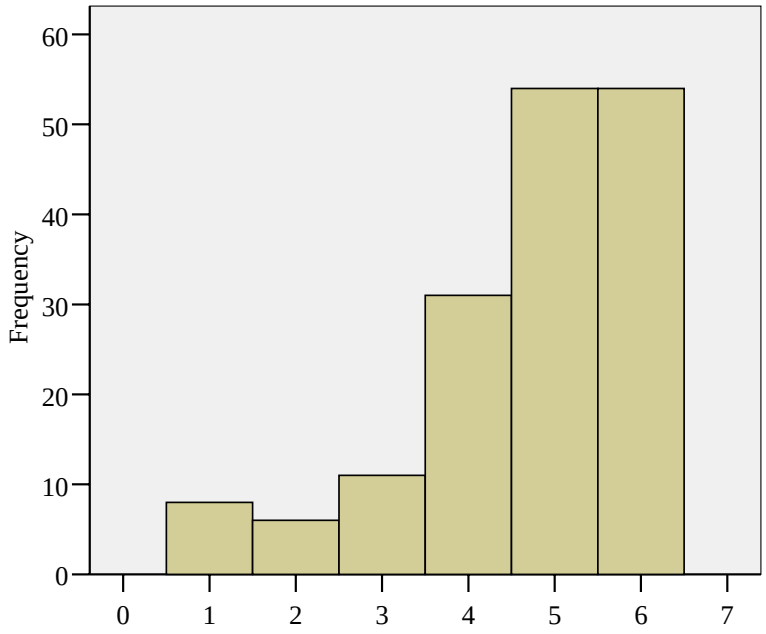
Mean =5.13
Std. Dev. =0.908
N =164

6. Our school board is making consistent progress toward board goals compared to our own past performance.



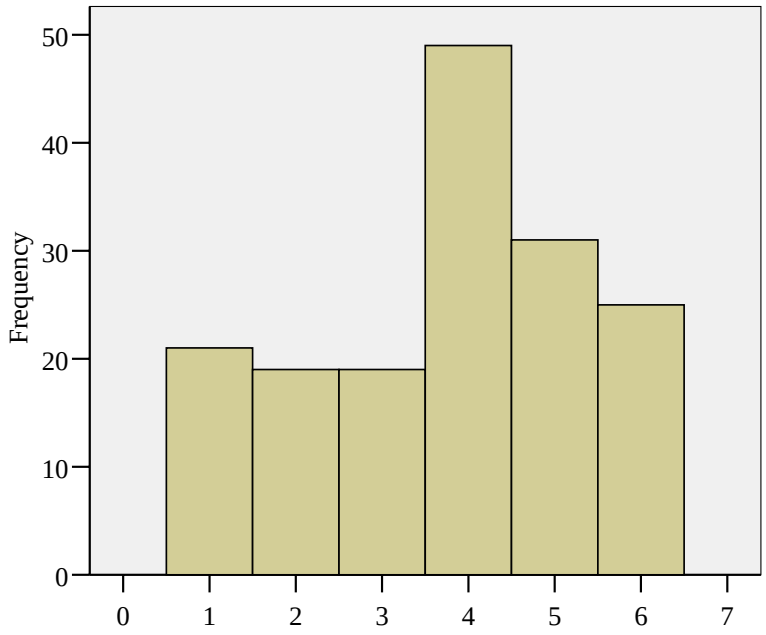
Mean =4.99
Std. Dev. =1.154
N =164

7. Our school board routinely uses our vision/mission statement to guide decision-making.



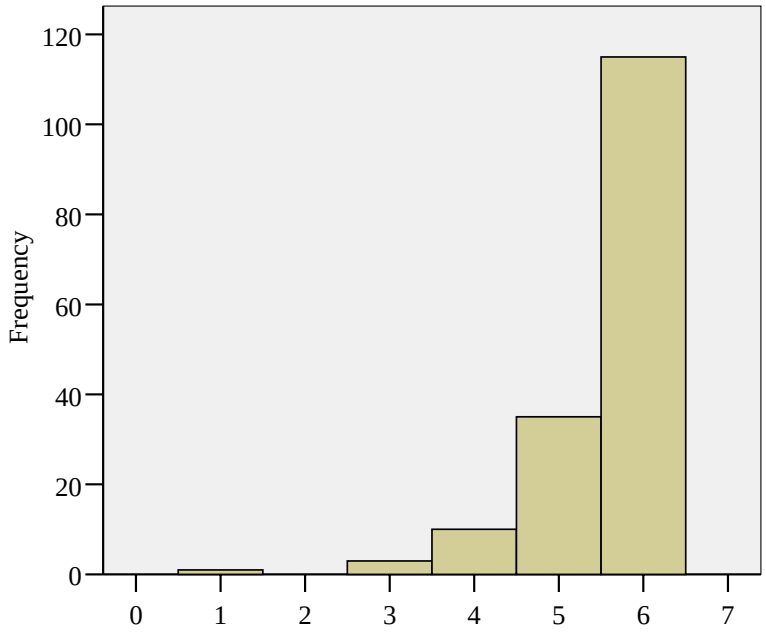
Mean =4.7
Std. Dev. =1.348
N =164

8. Our school board routinely self-evaluates our board meetings.



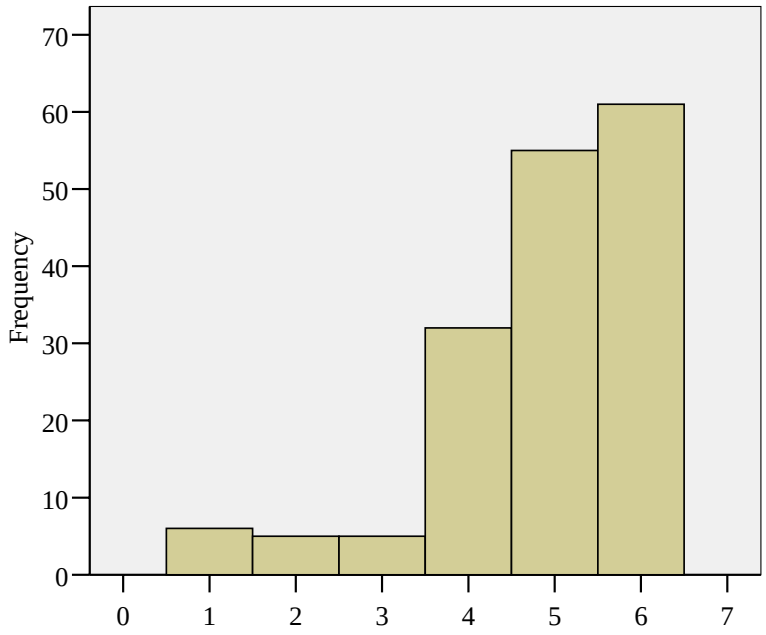
Mean =3.76
Std. Dev. =1.578
N =164

9. Our school board treats students, parents, staff and community members as important customers of the school system.



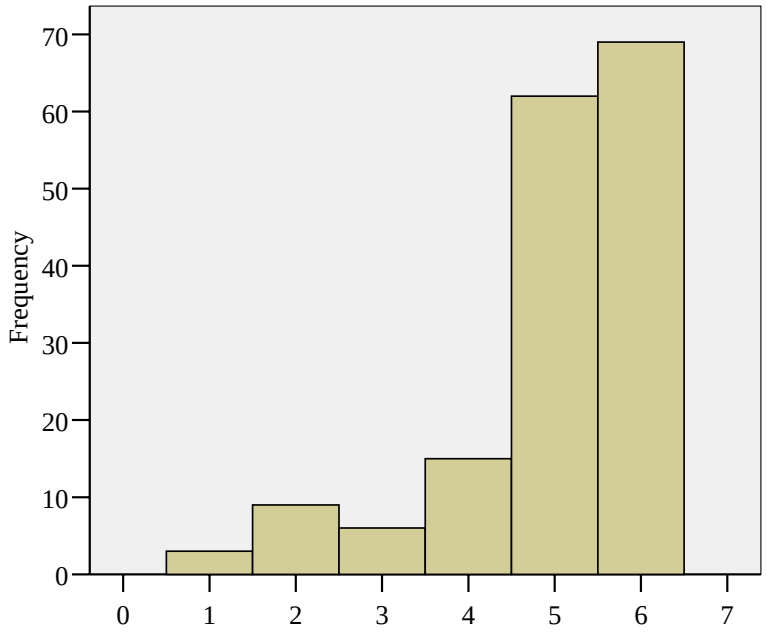
Mean =5.58
Std. Dev. =0.775
N =164

10. Our school board routinely monitors progress toward board goals.



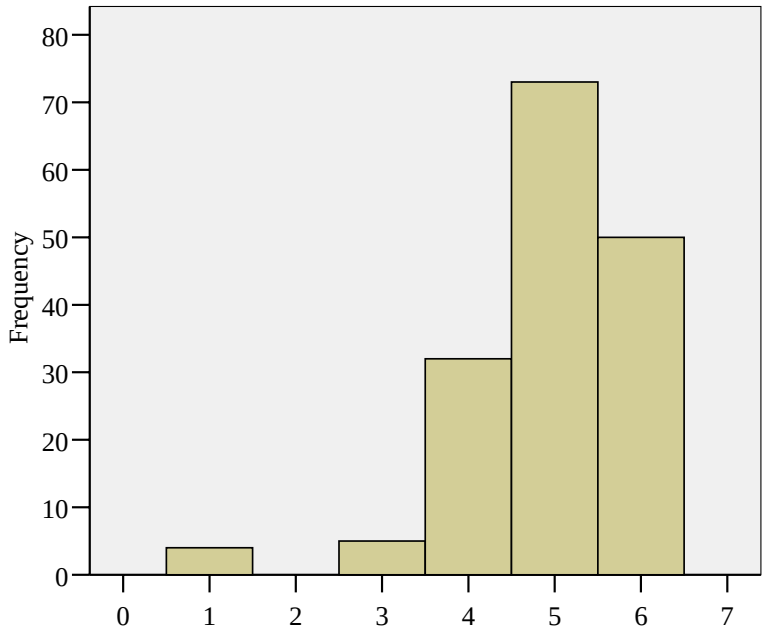
Mean =4.88
Std. Dev. =1.242
N =164

11. Our school board avoids micromanagement by keeping our focus on governance and policy issues.



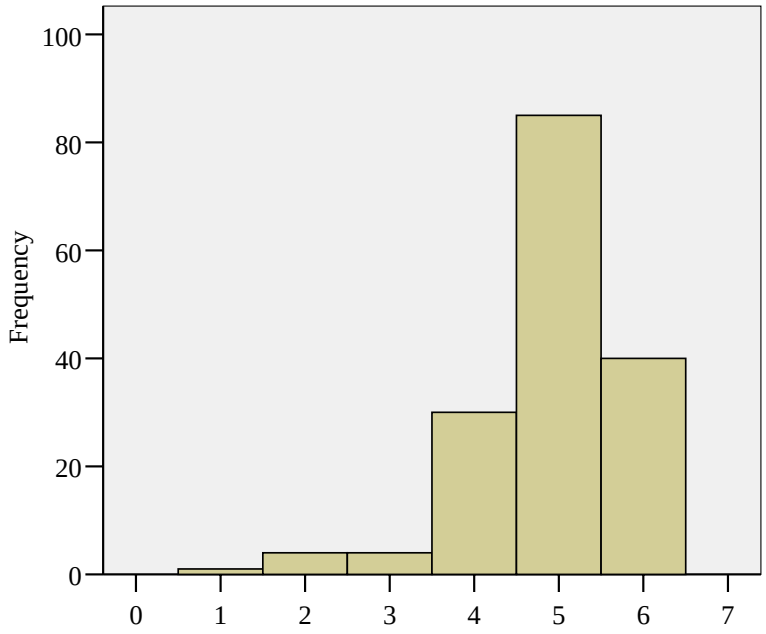
Mean =5.02
Std. Dev. =1.206
N =164

12. Our school board routinely practices prevention rather than reaction as our primary mode of operation.



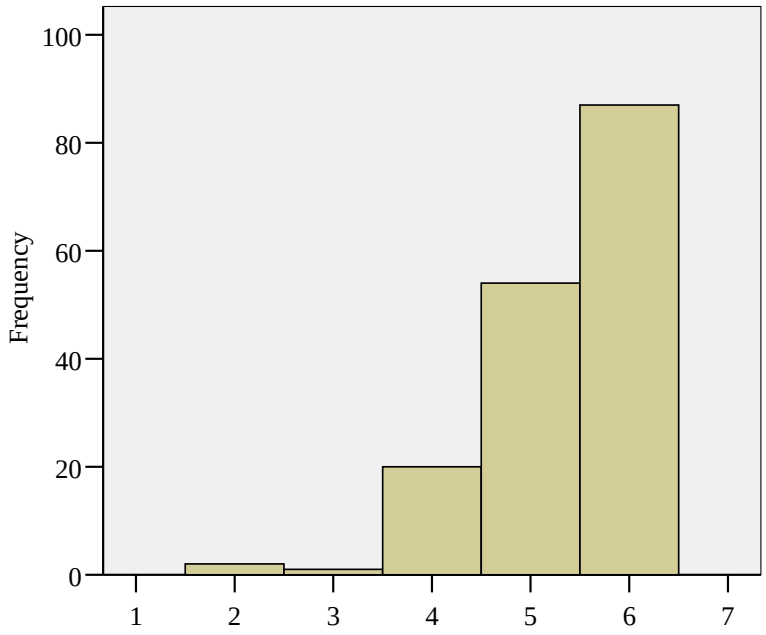
Mean =4.95
Std. Dev. =1.008
N =164

13. Our school board can determine the effectiveness of our decisions and actions.



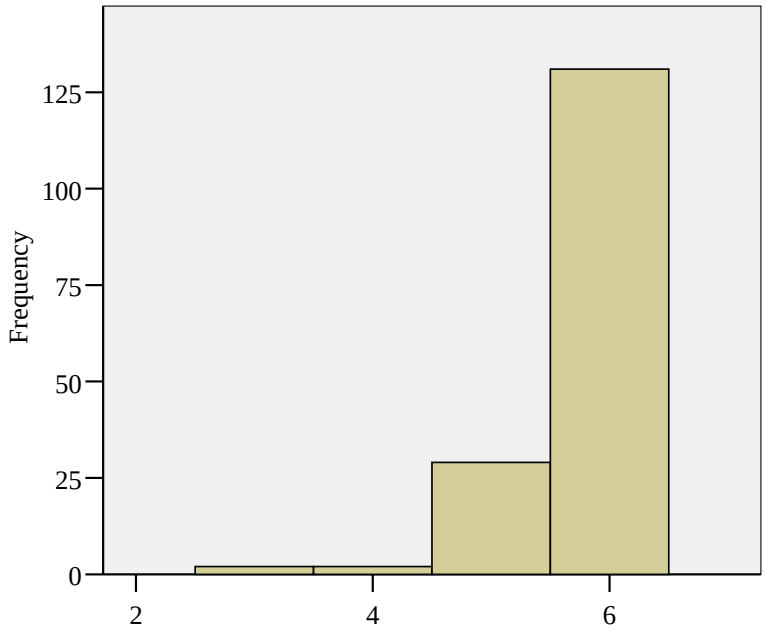
Mean =4.91
Std. Dev. =0.916
N =164

14. Our school board promotes effective meetings through collaborative decision-making.



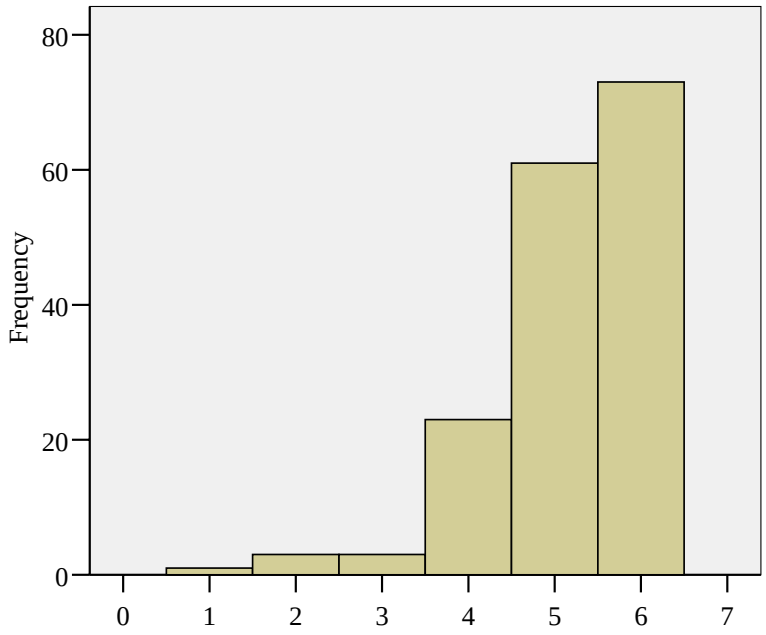
Mean =5.36
Std. Dev. =0.813
N =164

15. Our school board treats students, parents, staff and community members with respect.



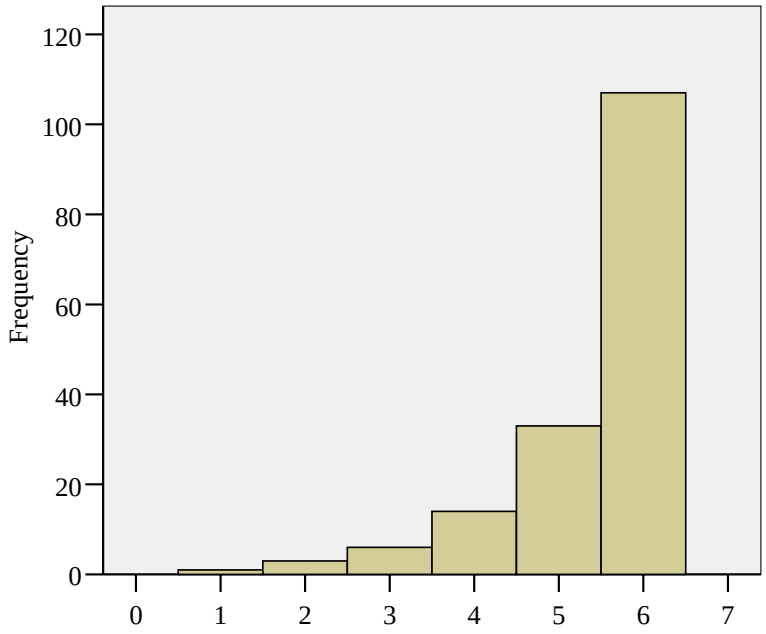
Mean =5.76
Std. Dev. =0.53
N =164

16. Our school board strives to develop a culture that helps board members achieve board goals.



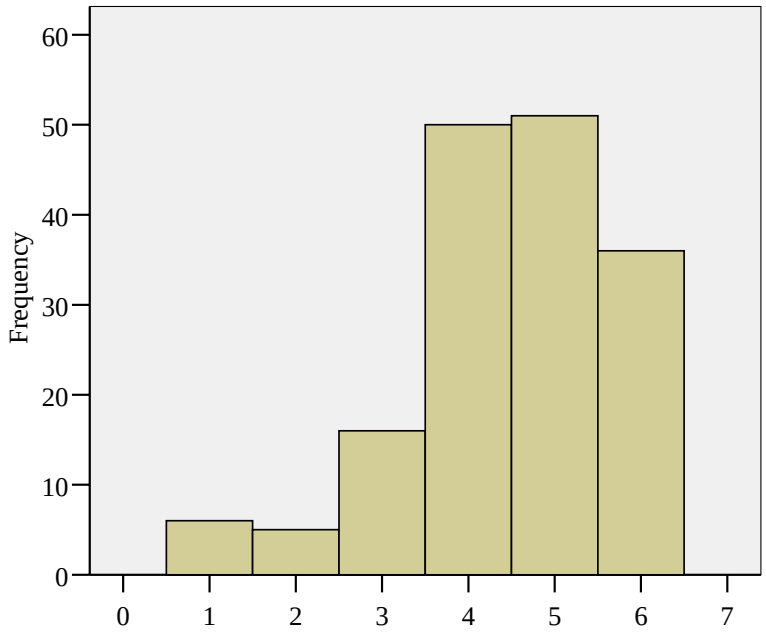
Mean =5.19
Std. Dev. =0.944
N =164

17. Our school board routinely reviews board policies and updates them as necessary.



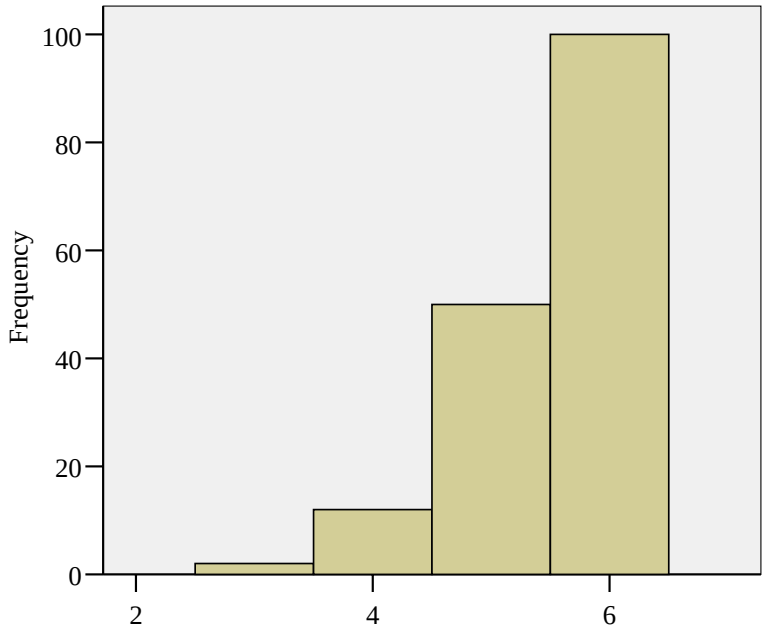
Mean =5.41
Std. Dev. =0.99
N =164

18. Our school board routinely recognizes individual board member contributions toward achieving board goals.



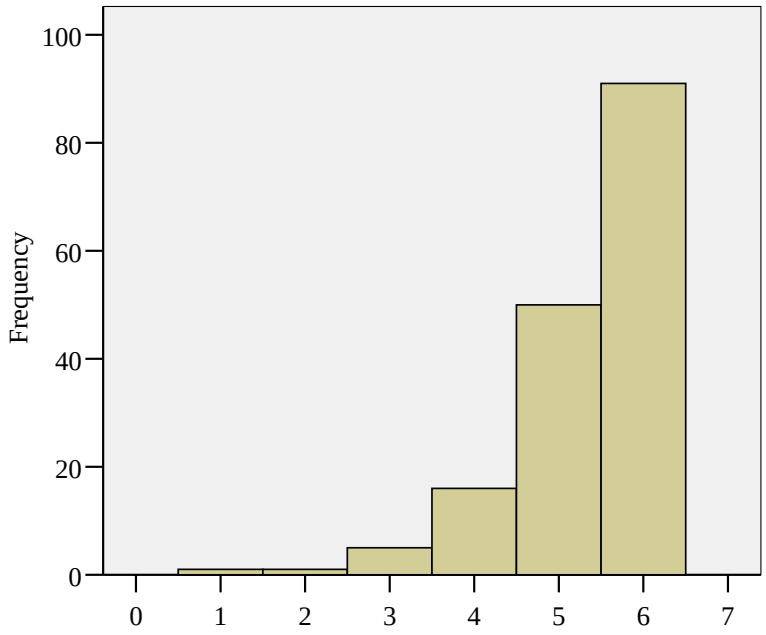
Mean =4.48
Std. Dev. =1.231
N =164

19. Our school board routinely asks administrators important questions about student achievement data.



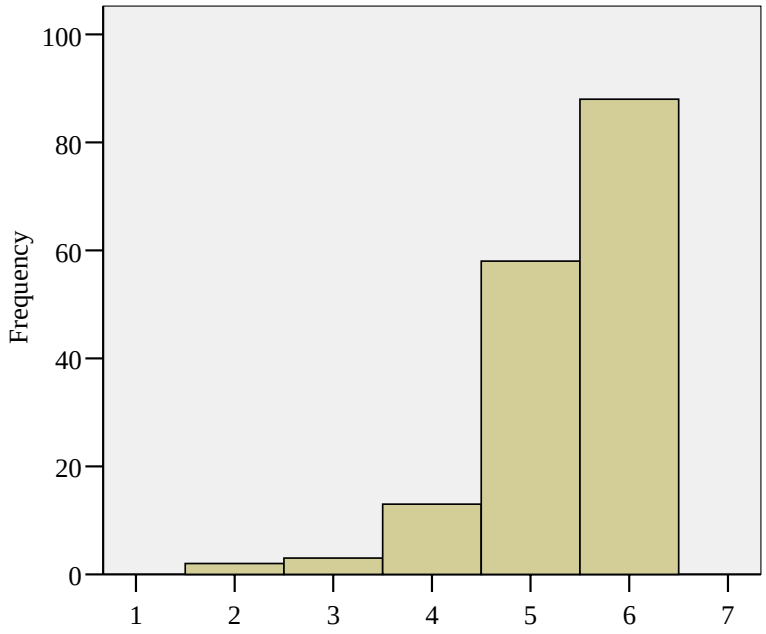
Mean =5.51
Std. Dev. =0.687
N =164

20. Our school board routinely uses data to guide decision-making.



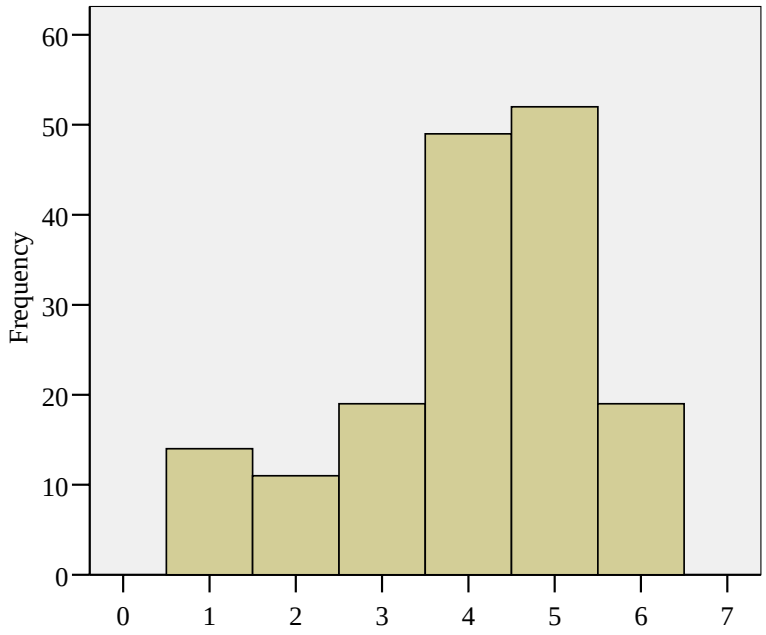
Mean =5.35
Std. Dev. =0.898
N =164

21. Our school board routinely focuses on students, parents, staff and community members when designing and delivering educational services.



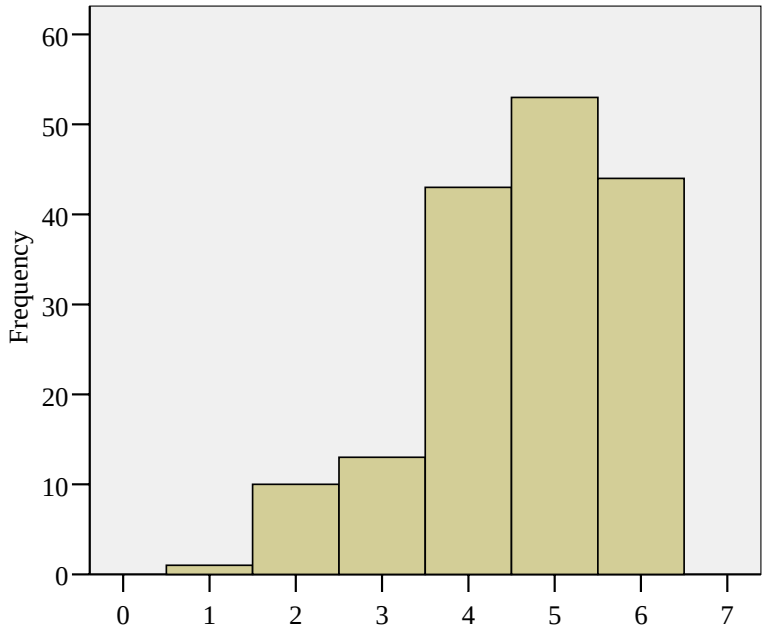
Mean =5.38
Std. Dev. =0.809
N =164

22. Our school board routinely practices benchmarking by researching what effective school boards are doing.

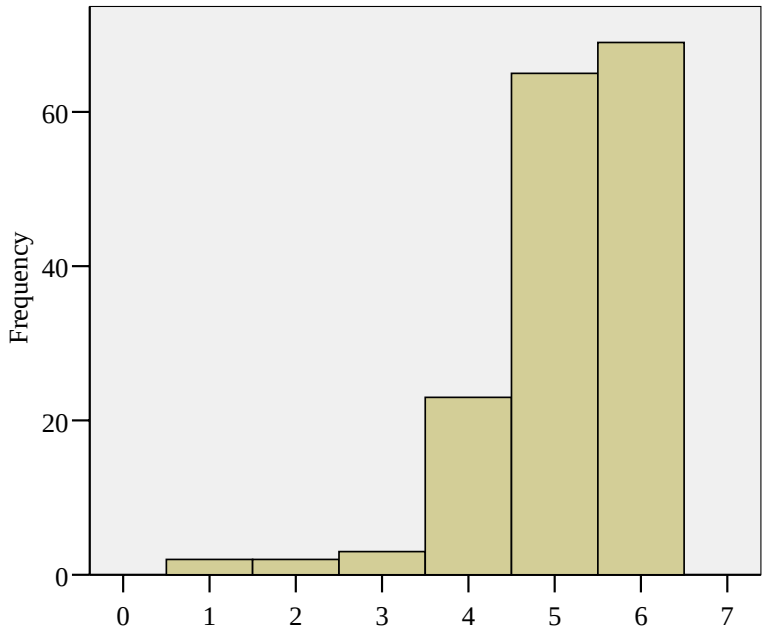


Mean =4.04
Std. Dev. =1.394
N =164

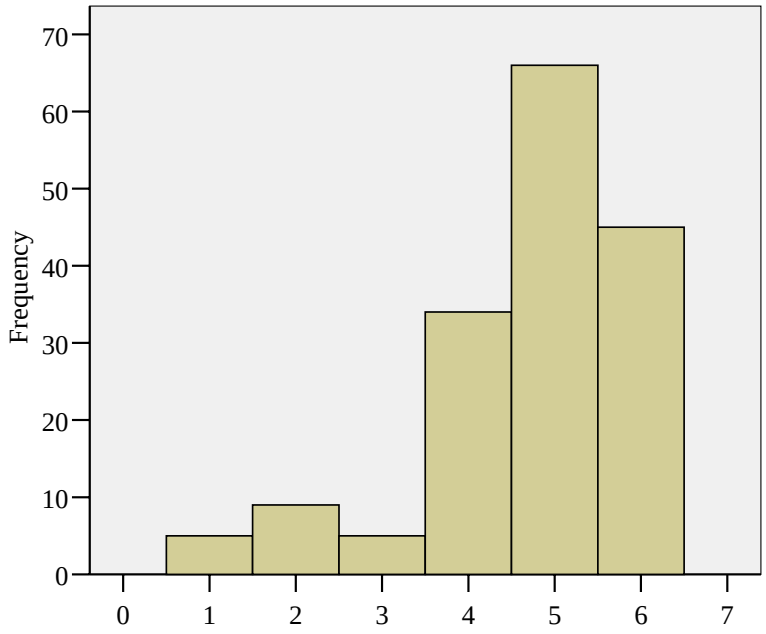
23. Our school board members routinely participate in training to improve board member knowledge and performance.



24. Our school board ensures that board goals meet the needs of students, parents, staff and community members.

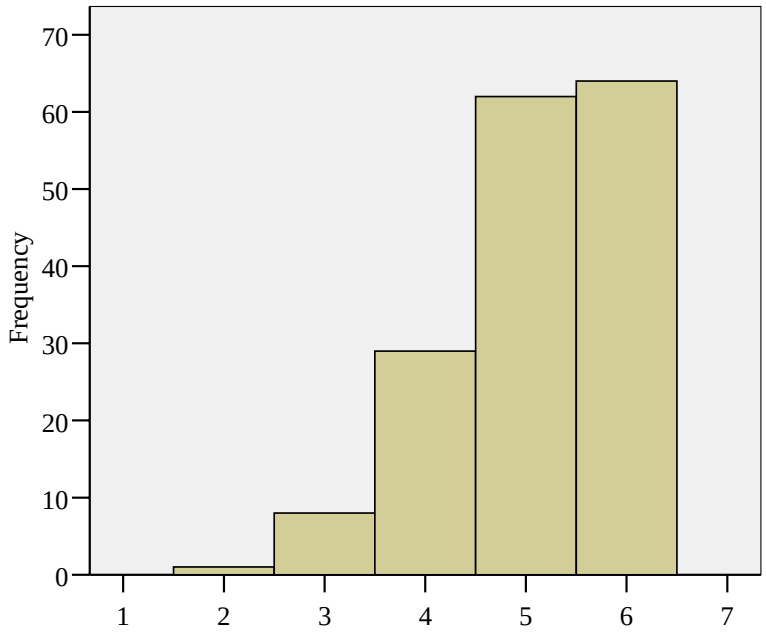


25. Our school board members understand the specific strategies and action plans we will use to improve our board practices.



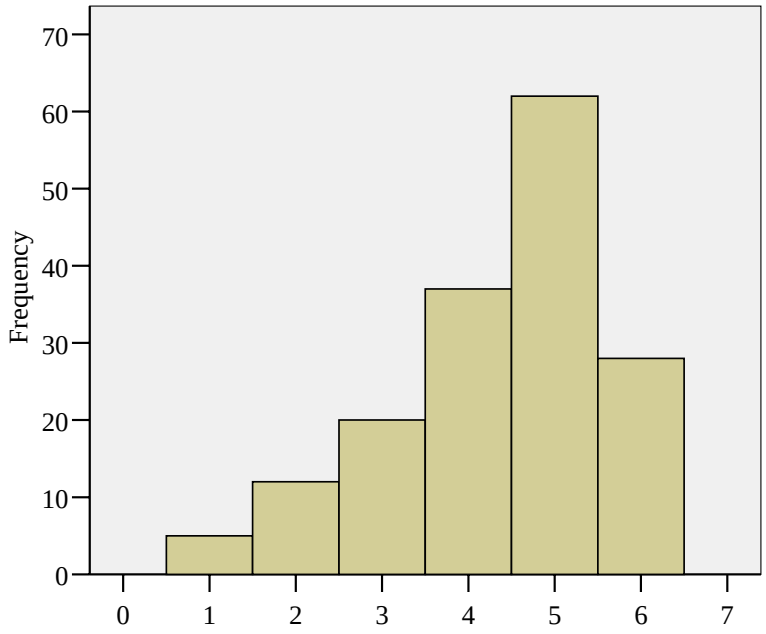
Mean =4.72
Std. Dev. =1.231
N =164

26. Our school board puts quality first among all other considerations.

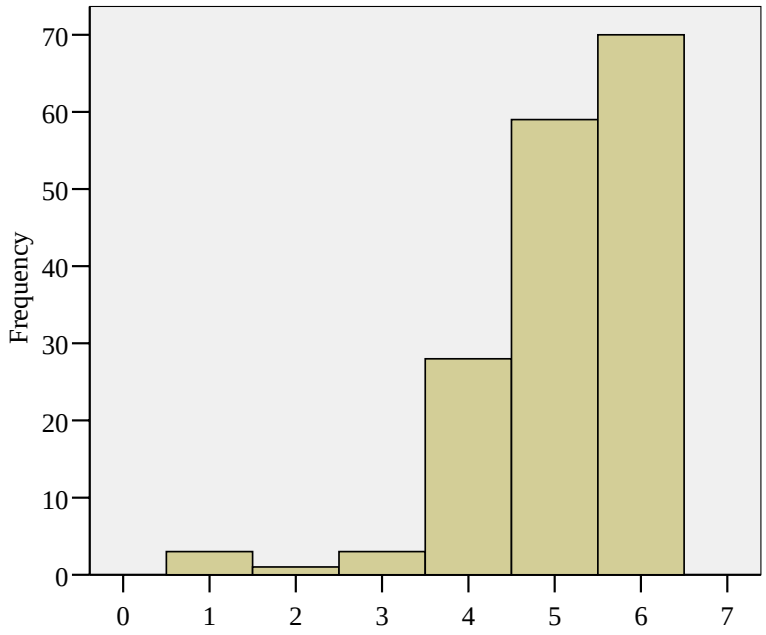


Mean =5.1
Std. Dev. =0.901
N =164

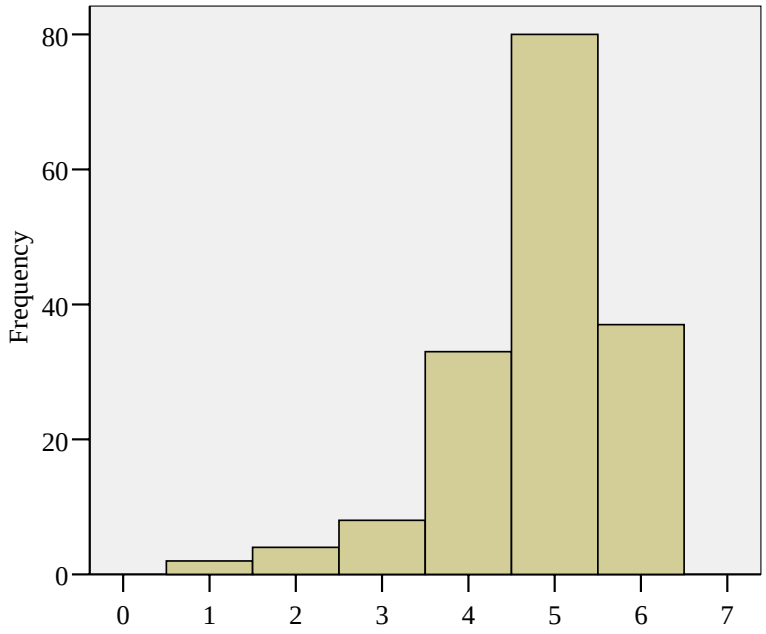
27. Our school board routinely monitors and reviews data on the satisfaction levels of students, parents, staff and community members.



28. Our school board routinely uses our core values to guide decision-making.

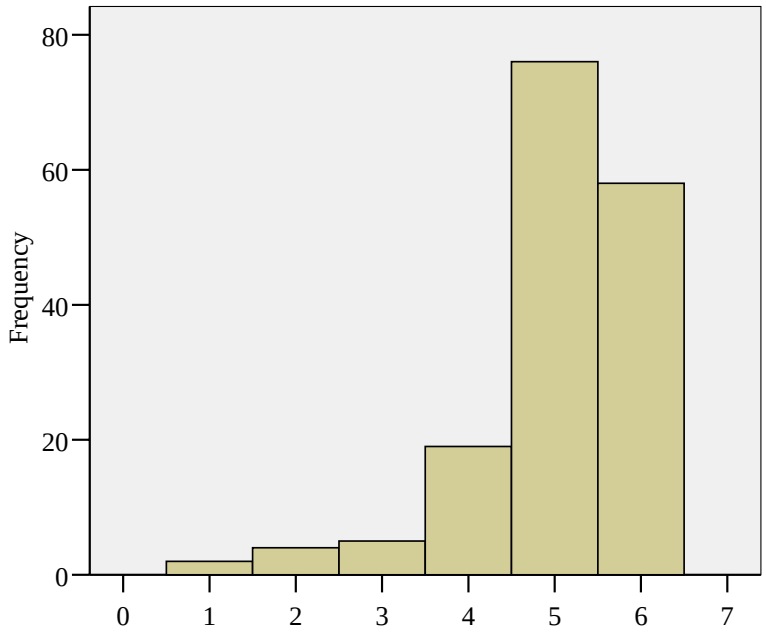


29. Our school board performance is constantly improving compared to other school boards.



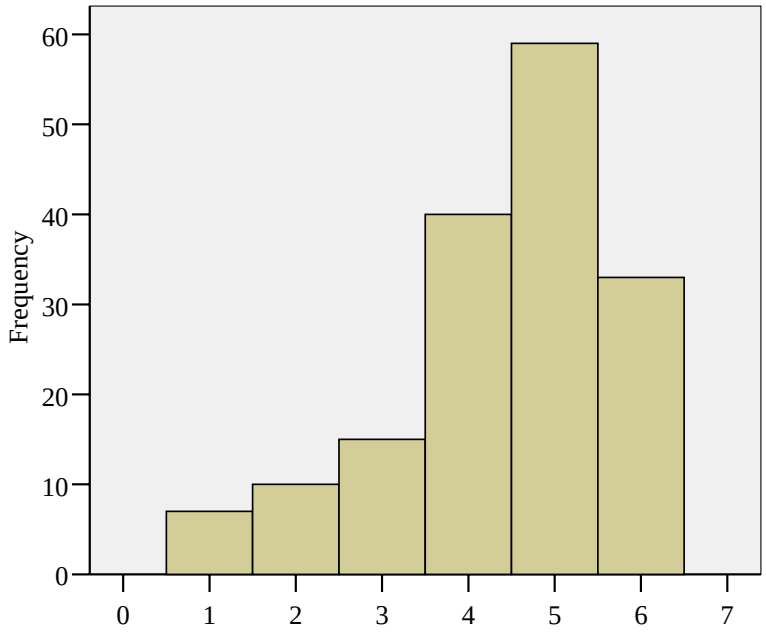
Mean =4.8
Std. Dev. =1.002
N =164

30. Our school board ensures that all new board members understand their role and responsibility in serving on the board.



Mean =5.05
Std. Dev. =1.005
N =164

31. Our school board routinely engages the community in identifying goals and outcomes for our board.



Implementation of Continuous Improvement Practices in School Boardsmanship (All 31 Item Combined)