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Perceived degree of continuous improvement principles and degree of role effectiveness of local school boards in Iowa

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Perceived degree of continuous improvement principles and
degree of role effectiveness of local school boards in Iowa

by

David J. Scala

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Education (Educational Administration)
Major Professors: William K. Poston and Anton J. Netusil

Iowa State University
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1998
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INTRODUCTION

Today's world is constantly changing and it is characterized by a highly mobile society and one which is growing more dependent upon technology. This is also an era when much criticism is focused on the public school.

Since publication of "A Nation At Risk" in 1983, public education in the United States has received close scrutiny, and state departments of education and local schools across the country have struggled with the dilemma of perceived deficiencies of public education. The response in many states has been to establish standards of achievement and/or mandatory testing. Local districts followed by increasing the number of courses required for graduation and receipt of a high school diploma.

Business and industry have been critical of K-12 public education as well. Reports, such as the 1991 survey sponsored by the Committee for Economic Development, revealed that only 12% of employers felt high school graduates wrote well. Only 22% of the employers surveyed said graduates had a good mastery of math. Some employers also point to reports like one from the Secretary's Commission on Achieving Necessary Skills (SCANS) appointed by the United States Secretary of Labor.
In 1991, SCANS issued the report, "What Work Requires of Schools." It points out that a high performance work place requires workers who have a solid foundation in basic literacy and computational skills, in the thinking skills necessary to put knowledge to work, and in the personal qualities that make workers dedicated and trustworthy. The report further identified five essential workplace skills: the ability to manage resources, the ability to work cooperatively and productively with others, the ability to acquire and process information, the ability to master complex systems, and the ability to utilize a variety of technologies. These particular skills have not traditionally been required in most public schools for obtaining a high school diploma.

Developing ways for high school graduates to demonstrate skills and competencies requires new strategies in the teaching and learning process. Learners require the opportunity to be actively involved in the learning process, teachers must function as facilitators of learning, and students need assistance to obtain and utilize a variety of tools and resources to enhance learning.

A report prepared for the Council of Chief State School Officers points out that to compete in the global economy of the 21st century, education standards must be raised, and more
appropriate curriculum must be taught with restructured delivery of instruction (Daggett, 1991). The report also contends that today’s curriculum and assessment methods still mirror the model of the industrial society of 1950. In today’s schools, each subject is still treated independently, and students are viewed as passive learners. Teachers function as disseminators of knowledge rather than managers of the instructional process.

As American educators acknowledge the reality of a global economy and begin to understand the skills necessary to compete in the 21st century, they are beginning to look at how the educational process can be improved. Educators are now examining the needs of their customers, in a way similar to business and industry, by studying and applying principles of quality improvement first introduced by W. Edwards Deming.

Applying improvement strategies leads educators to look at the organization of the school as a system of interdependent functions and processes. They are now looking within the system for answers to improving educational quality including clarification of organizational purposes and means for assessing progress or status.

Criteria for a quality school would be found less in external standards such as Carnegie units and more in the
system's intrinsic ability to identify and respond to differing needs of students (Roades, 1990). This is further supported by Deming's assertion that total quality requires a commitment to quality by everyone in the organization.

Deming contends that quality can have no meaning without some reference to the customer. Quality involves meeting and exceeding the customer's needs and expectations and then continuing to improve.

Deming (1989) notes that it will not suffice to have customers who are merely satisfied. He contends that what an organization requires to get ahead is loyal customers. This is an extremely important concept for public education to embrace in these times when such forces as open enrollment, private school formation, home schooling, and the threat of vouchers are prevalent across the nation. Public education must produce results developing customer loyalty and thus resistance to the temptation to explore alternatives to public schools.

Deming (1986) also cites the adoption of a system perspective as a major breakthrough in Japanese management thinking as it related to manufacturing. Leonard (1991) stated that by the same token, there is a need for educators to adopt a similar system perspective. Leonard further looks at
education as a system for skills and knowledge development and continues by noting that viewing the school in this context provides numerous insights, among which, is that most differences among students will be caused by variations in the complex and dynamic system in which they work and learn.

Educational experts see students as both workers and customers in relation to the educational system (Glaser, 1992). Glaser speaks to the role of students as workers, with almost none doing high quality work. Bonstingl (1992), on the other hand, believes students are the school’s customers. They are the main beneficiaries of the school’s work, and as they grow and mature, they become primary customers of the school. Because students are viewed as having dual roles, of customer and worker, educators must meet their needs not only in order to gain satisfied customers, but to enable students to work toward their own continuous improvement.

In looking at education as a system and its need to change, the role of leadership, as in any organization, is a key factor in achieving quality.

The responsibility of upper management to institutionalize quality improvement in an organization is important (Juan, 1989). Deming also believes managers must
assume a leadership position in the creation of a climate for improvement of quality and productivity.

Houlihan (1991) cites that a school district's quality improvement must begin with top management, including the board of education, superintendent, and each principal. Attributes of leaders are described as helping people, facilitating change, creating a climate for growth, and understanding change through sources of power.

Traditionally, the leadership function in a public school district has been delegated to the administration by an elected governing board that serves as the link between the school system and the public. The governing board receives its authority from state statutes and the board exerts leadership through policy and by hiring an executive officer to implement its policies.

Fisher (1992) states that, "School boards epitomize the United States' tradition of representative local government." However, there has been discussion in recent years concerning the need for changes in how schools are governed. English (1993) cites local school board organization as one of the factors influencing underachievement by American students. Also, two reports, "Facing the Challenge" and "Governing
Public Schools" recommend sweeping changes in the way school boards are organized and operated (Harrington, 1993).

According to Hall (1993), in order for schools to be world class, they must be led by world class boards of education that have the knowledge, skills, and abilities required for success. However, the tremendous turnover of board members and superintendents results in a lack of consistent leadership for public school districts and creates a barrier to real school reform.

The importance attached to local boards of education in school governance was underscored by (Schlechty, 1992) in his assertion that the fundamental job of school board members is to view themselves as moral and cultural leaders. He further contended, in an interview, that an additional role of a board member is to understand the issues deeply and to educate the community about the condition of the schools (Brandt, 1993). The role of a local school district board member is one of the most critical roles in society and board members should be the wisest people in the community.

Writing from the perspective of a previous board of education member, Zlotkin (1993) cited that policy decisions traditionally made by boards mostly concern legally required actions. "Visionary stuff" has been left to the
professionals, but policy makers should concern themselves with more important policy matters such as what the community wants its children to be able to do.

Recognizing that traditional school board policy functions dealt with legal mandates, and recognizing the board’s leadership function, the National School Boards Association (NSBA) proposed four leadership functions for local boards which closely follow much of Deming’s philosophy. In a report to its membership, the NSBA asserted that a four-fold thrust for leadership by local school boards will ensure excellence and equity in the public schools and will be pivotal in keeping America free and first among the nations of the world as we enter the 21st century.

Vision, structure, accountability, and advocacy make up the four components of the NSBA’s thrust. The NSBA believes concentration of local boards on these functions will help preserve the nation’s liberty, prepare a prosperous economy, and enrich people’s lives, while continually fostering excellence in our schools.

If there is concern that local boards of education need to change, and this view was acknowledged by the National School Boards Association, there must be reasons why this is true. Is it possible that the knowledge, skills and
perceptions of local board of education members concerning their role functions may have a relationship to the quality of education within their school district? This question will serve as the central purpose of this research study.

Since it has been established that the board of education has a major leadership role in ensuring quality in our schools, the study to be undertaken in this research project will examine the relationship between the manner in which local boards of education perceive their responsibilities and the extent to which perceptions of total quality improvement principles exist within their school districts.

Research Questions

The problem to be researched in this study can more specifically be defined by the following questions:

1. What is the difference between the perceived ideal situation and the perceived actual current situation in school districts as measured by the Perceived Quality Assessment Instrument?

2. What is the difference between the perceived ideal situation and the perceived current situation as measured by the School Board Perceived Role Assessment Instrument?
3. What is the correlation between the Perceived Quality Index and the Perceived Role Index obtained for a given school district?

4. How do perceived board role scores compare between districts with high perceived quality index scores and districts with low perceived quality index scores?

5. How do the perceived quality index scores compare among schools classified in various school enrollment categories?

6. How do the perceived role perception index scores compare among schools classified in various school enrollment categories?

7. Is there a significant difference in the perceived quality index scores of those districts designated as "rural" as compared to those designated as "urban"?

8. Is there a significant difference in the perceived role perception index scores of those districts designated as "rural" as compared to those designated as "urban"?

9. What is the correlation between the average term of service of boards of education and their district's perceived quality index score?
10. What is the correlation between the average term of service of boards of education and their perceived role perception index score?

**Significance of the Study**

This study can have great significance because of the two areas which are being examined. The first area studies the extent of utilization of principles of continuous quality improvement. There has been considerable research on the Deming philosophy and application of improvement strategies in the industrial world but considerably less on its implications for education.

There is currently much emphasis on the need for change in education. Continuous quality improvement has been receiving attention as a possible strategy which can increase the quality of education in order for the United States to compete in a global economy. This study will examine continuous quality improvement strategies in the educational setting and assess the degree to which such improvement principles already exist in education.

The second area of study concerns local boards of education and the emerging belief that local boards as we know them now need to change in order to provide leadership for
quality education. This research project will explore the relationship between the manner in which a school board is perceived to function and the level and existence of quality improvement principles within the school district. This information can help predict the success of implementing quality improvement principles and clarify the impact of role perceptions of the board.

**Definitions**

The following definitions are provided to give additional meaning for key terms which are presented in the study:

**Accountability** - A systematic process of providing relevant information to determine whether the public educational system is meeting the expectations established for it.

**Advocacy** - The School Board’s role as it promotes and supports the identified mission of the school district to the public it serves.

**Administration** - The persons collectively who are employed in a school district to carry out management functions.
Board of Education - The elected or appointed governing body of a school district that is primarily responsible for setting policy by which the district operates.

External Customer - A person or organization who receives a product, a service, or information but is not part of the organization supplying it.

Governance - The function performed by a board of education in exercising its authority to set policy and exercise overall control of a school district.

Global Economy - The nature of today's economy in which goods and services are exchanged around the world as a result of advances in travel and technology.

Internal Customer - The recipient (person or department) of another person or department's output (product, service, or information) within an organization.

Perceived - The degree of harmony between the ideal situation and the actual situation.

Quality - The characteristic of a product or service free of deficiencies and with the ability to satisfy stated needs.

R² - Square of the correlation coefficient utilized to account for the amount of variance in the relationship of two variables.
Structure - The manner in which a school system is organized for carrying out the functions of governance and administration.

Superintendent - The person employed by the board of education to implement policy and serve as the chief executive officer of the school district.

System - A network of workers performing job functions which are interdependent so that each has an integral part to play in the successful operation of the organization.

Total Quality Management - A management approach to long term success characterized by customer satisfaction and customer feedback.

World Class Education - A standard of excellence which represents achievement of an educational attainment equal to or better than any in the world.

Limitations of the Study

One limitation of this study is consideration that all data was gathered from school districts only in the state of Iowa. Although districts were grouped according to enrollment classification, as well as to whether they were urban or rural in nature, the fact remains that Iowa is not as diverse in its population as other states, is still primarily a rural area,
and has relatively small school systems. In addition, the sample sizes were small and cautions should be exercised in interpreting results accordingly.

A second limitation is that not every individual receiving a survey responded. Originally forty-two (42) districts were identified for this study, but only thirty-four (34) were included in the data analysis due to the number of insufficient responses. This presents the possibility that the sample is not entirely representative of the general population for which the study was intended.

A third limitation stems from construction of the survey instrument utilized for obtaining the Role Perception Quality Index (RPQI) score from the local boards of education. This instrument was sent to the superintendent and all board of education members in each of the sample districts. After collecting the survey instruments in preparation for data analysis, it was noted that the "demographic information" section did not make provision for the respondent to indicate whether the response was from a board member or from a superintendent. Therefore, all responses were analyzed as being from a group comprised of board of education members and superintendents. This could cause some variation in the RPQI Scores, in terms of attribution to one group or the other.
The fourth limitation concerns the lack of knowledge that many school district employees and board of education members currently have relative to application of the principles of continuous improvement. Since application of these principles is relatively new in education, many respondents would have limited knowledge and this knowledge would be dependent upon the amount of involvement their district has had in studying and implementing quality improvement. However, no evidence supported the notion that knowledge deficits affected results of the instruments or their validity.

Dissertation Organization

This dissertation includes an introduction, a literature review, two papers for submission to scholarly journals, and a general summary with recommendations for further study. References for all sections are included at the end of the dissertation.

The first paper, "Implications of Continuous Improvement for Public Education Leadership," explores the principles of continuous improvement and their applicability to the leadership function of local boards of education. It will be submitted to the Journal of Educational Administration and/or other professional journals.
The second paper, "School Board Role Perceptions and Relationships to Perceived School District Quality," examines the manner in which a local board views its role functions related to the existence of quality concepts within the school district. This paper will be submitted to the *National Forum of Educational Administration and Supervision Journal*, or another suitable professional journal.

The Iowa State University committee on the use of Human Subjects in Research reviewed and approved distribution of the survey instruments to subjects in the sample districts. In addition the Role Perception Quality Instrument, developed by the researcher, was reviewed by university professionals, Iowa Association of School Boards Personnel, and other professionals who regularly work with local school boards in the state of Iowa and surrounding states.

The other survey instrument, the Perceived Quality Assessment Instrument, was developed at Iowa State University. It was validated by a knowledgeable panel of Iowa State University professors and was pilot tested with graduate students in the IEDT 615 Research Seminar class (Bax, 1994).
LITERATURE REVIEW

Introduction

The review of related literature in this chapter is presented in two sections. The first section looks at the subject of school governance, and is designed to assist in establishing the need to further explore the issue of school governance as it affects the quality of education. Section two reviews literature pertaining to continuous improvement practices in business and education and the philosophy which has become known as "total quality management."

The review of literature presented in the second section is not limited to an in-depth review of the total quality management philosophy, and is presented to look at what the literature says about its application to improving quality in education.

School Governance

This section of the literature review looks at the issue of school governance and its effect on the quality of the educational process. In one critique by the Twentieth Century Fund Task Force on School Governance, it was contended that an important aspect has been absent in the scrutiny of education since "A Nation at Risk" in 1983. According to the critique,
the role of local school boards has generally been ignored as an institution integral to the system of public education. This thought was also expressed by former United States Secretary of Education Terrel H. Bell (1993) who contended that governing boards have generally been unresponsive and unimaginative about keeping educational practices current with the fast-paced world.

State legislatures have mandated numerous accountability measures aimed at teachers and administrators during the past decade, but since governing boards are in charge by law, it is now time to put more accountability and responsibility on them (Bell, 1993).

Traditionally more emphasis has been placed in the literature about board member conflict than about the board's role as a governing body in setting policy and direction for a school district. This may be because most school boards find it hard to preserve both their unity of purpose and their respect for one another (Whitford, 1994). Boards usually underestimate the value of being a unified team and experience a period of frustration while members pursue their own individual agenda. As a result, conflict often develops within the board itself and between the board and its administration.
Good boardsmanship was compared to good sportsmanship (McDaniel, 1986). According to this comparison the three worst offenses against good sportsmanship on school boards are "false starts," or jumping to conclusions on complex issues; "off sides," or meddling unilaterally in school affairs; and "low blows," or the use of a school board position to advance business interests.

Role conflicts which lead to tension between boards and their superintendent is a major concern which impedes the board's governance function. Three priority functions of boards were identified: oversight and policy, employment and supervision of top management, and representation of the public constituency and clientele. (Poston, 1994)

Conflict occurs when boards don't understand or don't want to understand these as their functions. Trotter (1989) points out that superintendents feel many school board members refuse to honor the elusive line separating governance and management or policy and administration. In further support of this contention, one study of Pennsylvania public school superintendents found that the most frequent comment received was the need for board members to understand more clearly their role as policy maker, not administrator (Myers, 1985).
Another study followed twelve superintendents who were identified as being highly successful. One of the findings was that successful superintendents had good relations with their boards of education and fellow administrators. Furthermore, district resources also appeared to be an enabling factor for superintendent success (Mahoney, 1989). This finding correlates closely with findings of a study of the “buy out” of superintendent contracts in New Jersey. In this study, it was found that changes in boards of education, lack of appropriate feedback, and poor board/superintendent relationships were among those factors which lead to involuntary turnover and contract “buy out”, an expensive and often acrimonious result. (Magistro, 1988)

Such conflict as identified by Magistro may possibly affect the functioning of a school system. It was noted in the study that, as board members change, power can easily shift causing political instability for the superintendent. Expected changes that are not clearly communicated to the superintendent can result in inconsistent focus of district priorities and activities and lead to unclear performance expectations.

Also, effects on a district were studied by looking at the characteristics of effective board members as they related
to student outcomes (Johnson, 1993). The three major findings of this study included: (1) reputationally effective boards of education ranked significantly higher on the twenty-one desirable board characteristics and had higher composite ranks on each of four frames established by Bolman and Dial (1984) for analyzing leadership than did boards not judged effective by their superintendents; (2) there was not a significant relationship between the reputational effectiveness of school boards and the size, per pupil district wealth, or per pupil expenditure of the districts in which boards served; and (3) there was not a significant relationship between the reputational effectiveness of boards and student performance (Johnson, 1993).

The above study was conducted in New York City suburban county school districts. However, similar findings were found in a study of suburban school districts other than New York City suburban school districts. (Magnarella, 1987)

These findings differ from opinions expressed by some individuals noting that compared to Germany, Japan, and Denmark, the United States fails its students by neglecting basic health and welfare needs, permitting an inequitable school funding system, and perpetuating cultural ethos that undermines serious academic achievement. Local school board
organization was cited as among those factors which influences underachievement (English, 1993).

This, like most of the literature on school boards, does not offer a great deal of data that correlates board performance directly with student performance on achievement measures. However, the presence of board-superintendent conflict or conflict between board members as they search to identify their roles, may present the appearance of an atmosphere which does not provide leadership to promote and enhance the learning process.

Especially in this era of change and school reform, many believe the structure and role of the local board of education should be examined. Dansberger (1992), in “Governing Public Schools: New Times, New Requirements,” looks at the role of the local school board in delivering quality education, and cites a survey conducted from 1988 to 1990 of 266 school boards from 16 states. The results indicated that local boards were weakest in the areas necessary for effectiveness in changing school systems. Dansberger concludes by endorsing state action that changes the roles and responsibilities of local boards.

Two national reports, “Facing the Challenge” and “Governing Public Schools”, recommend sweeping changes in the
way school boards are organized and operate. Pointing to the fact that the State of Kentucky and the City of Chicago, Illinois, have embarked on radical experiments in school governance, it was noted that other areas, especially urban school districts, are also considering changes in school governance (Harrington, 1993).

According to Stephens (1993), school boards should focus on knowledge, skills, and attitudes students need to function in tomorrow’s world. Because students come from varied backgrounds, and most results are caused by the system originating them, governance must be re-examined from a systemic perspective. This is consistent with Fisher (1992) and Shannon’s (1992) examination of a 1992 National School Board’s Association (NSBA) statement which recognizes four major school board functions.

The four major school board functions identified in the NSBA’s report included: (1) envisioning a community’s future educational program; (2) establishing facilitative organizational structures and community environments; (3) ensuring a performance assessment system to enhance accountability; and (4) serving as paramount child advocates. To carry out such functions certainly necessitates a close examination of current local school board functions and
requires a look at governance from a systems perspective (Stephens, 1993).

A comprehensive study on school governance, ordered by the West Virginia Legislature in 1990, helped illustrate the need for re-examination of local board functions as they related to NSBA's four areas of emphasis. A study of the minutes of 55 West Virginia school boards over a five-year period revealed that more than one-fourth of all school board decisions concerned financial matters. Personnel decisions, granting of permissions such as field trips, and hearing presentations from staff were the other categories which helped occupy most of the time spent by board members in carrying out the function of school governance.

If the results of the West Virginia study are indicative of how other local boards spend their time, this indicates that little time is utilized for the vision, structure, accountability, and advocacy functions as identified by the NSBA.

In Iowa, a report of the joint committee appointed by the Iowa Association of School Boards and the Iowa State Board of Education addressed this issue. The report indicated that the committee agreed on a vision for the state's educational system which will ensure that all students are prepared to
make a living, a life, and a difference. However, it acknowledged that the heart of the report addressed the kind of school governance that will be most effective in achieving what students need.

The Iowa report recommended a leadership model for school boards based on the four functions of a board endorsed by the National School Boards Association. The report further asserted that for the model to work, it needed to be described in specific terms which allow boards to measure their activities and assess the level of their board’s contribution for the local education system. For boards to initiate improvement they must take time to assess their current level of achievement and set goals for their learning, growth, and focus. As a result, the joint committee developed a School Board Self-Assessment Instrument to help guide improvement efforts and to assist boards in channeling their governance efforts in a manner which will move education toward revitalization and renewal.

Recognizing the need for board assessment is consistent with other research findings. Alanis (1989) surveyed one hundred superintendents and board presidents in Texas concerning job tasks and role conflict between school board members and superintendents. The findings of this study
demonstrated that the present practices of school board member preparation are very limited, if not inadequate. The study also gave recommendations for differentiated training programs depending on whether one is a tenured member or a new board candidate.

Similar recommendations came from a study examining the school board’s perspective on school-business partnerships (Averback, 1988). The study concluded that states should provide more training to school boards. It further asserted that with more qualified membership and more training, school boards could become viable partners for school reform.

The need for formal training programs for board of education members was also supported in a research study conducted in Connecticut (Griffith, 1990). It revealed that learning what is required to be an effective board member comes from exposure in other organizations prior to board membership. It also indicated that board members learn from on-the-job training and from other board members. Board members reported that the Connecticut Association of Boards of Education did serve as another source for local board members and that local level orientations were somewhat helpful.

A random sample of 197 school districts from 16 states attempted to determine board members’ perceptions of their
roles (Ruiz, 1992). The study found that board members in general perceived that they treated curriculum and educational opportunities for children equitably and that it was of utmost importance for them to maintain the public's trust by carrying on board work with integrity. The greatest area of felt need was in the area of setting objectives and evaluating those objectives. Results of Ruiz's study showed the need for school board members and administrators to consider the need for reevaluation of the roles of school board members.

Another study was conducted to determine the impact of "effective schools" research on the decisions made by local school boards (Archambault, 1991). One motivation for this study was the board's role in school districts, which is ignored in school improvement and reform literature.

The study found that board members were more knowledgeable than they perceived themselves to be about "effective schools" research, but that few policies had been established as a result of this knowledge. However, data did indicate that many practices of boards of education and school districts actually reflect actions associated with characteristics identified in the "effective schools" research. The study suggested that those who provide
in-service to board members may find this research useful in identification of possible program content for board training and development.

Local boards and board presidents have provided grassroots leadership for public education, but both have been ignored by policymakers and researchers. (Seaton, 1992) The study looked at a random sample of school board members, school board presidents, and past school board presidents across the United States to identify their roles as well as actual and ideal leadership attributes of school board presidents.

All categories of board members in the study perceived their school board presidents as displaying few of the leadership attributes of traditional leaders. They all agreed that these leadership attributes ideally are critical or important. Results of this study also indicated a need and provides support for clarification of board member roles as they related to the issue of school governance.

One indication was that planned in-service for board members and involvement in school improvement may effectively change board members perceptions, policies, and practices (Maksimowicz, 1989). Twenty-five school districts participated in the Leadership for School Improvement Project
under a Federal Leadership for Educational Administration Development Grant and viewed changes in perceptions from the time involvement began until one year into the project.

Initially board members were involved in development of mission statements and goals, awareness sessions on school improvement, and updates at board meetings. As the year progressed, boards became involved in development of policy to support school improvement. At the completion of the year long study, changes perceived by superintendents and school board members were an overall positive change in attitudes, communication, cooperation, and collaboration among and between administrators, staff, and the board of education (Maksimowicz, 1989).

As the need for better-trained board members and their changing roles is considered, it is important to recognize that board members enter board service from diverse backgrounds. This was explored in studying the perceptions of educators who serve on school boards compared to non-educators in New York (Thomas, 1988). The study concluded there was not a significant difference between the two types of identified board members relative to the sanctioning function but a difference did exist on the community and management functions.
Educator-board members tended to perceive the community function and the management function more as a superintendent task orientation than did other board members. With the growing numbers of educators and former educators who have become elected to local boards of education in recent years, this finding may be significant in structuring school board in-service programs intended for decreasing board member role conflict.

Another consideration in structuring school board in-service programs and clarifying the roles of school board members is the emerging interest in education to apply continuous improvement principles. The use of continuous improvement practices in Japan, recent interest in the concept in the United States, and its application to the field of education will be summarized in the next section of this review of literature.

Continuous Improvement – Total Quality

"Total quality management" has become increasingly popular in the United States in recent years. Its emphasis on quality and application of continuous improvement strategies is being looked upon as a means of transforming American
business and industry in the same manner as it did in Japan after World War II.

Total quality management (TQM), according to one writer, is a story about underdogs facing great odds and winning (Pines, 1990). TQM had its birth in 1942 when the U.S. War Department established a quality control section. Eleven years prior to this a statistician named Walter A. Shewart published some ideas on quality control and introduced statistical control charts that factory workers could use to plot and adjust variations. This appealed to army procurement officials, so statistical methods were quickly taught to those engaged in wartime production.

A disciple of Shewart, W. Edwards Deming, led the effort in teaching statistical control beginning in July 1941. Such teachings proved to be a key element in the war effort.

Although Deming's teachings were instrumental in the war effort, American business and industry had little interest in application of statistical quality control. Since there was no audience in the United States, Deming traveled to Japan where he found a country looking to restructure its economy.

As Weaver (1992) pointed out, Deming's principles became the blueprint Japan needed, and four decades later, Japanese products were in demand worldwide. He continued by relating
that the Japanese success story, based on Deming's management theory, stirred interest among American managers, from car manufacturers to hospital administrators, and most recently, educators.

Deming placed responsibility upon management for transformation of American business and industry. He believed managers had to assume a leadership position by creating a climate for improvement of quality and productivity (Deming, 1986). He asserted that a vital role of management was to create the conditions whereby people can take pride in their work and develop the ability to contribute to continuous improvement efforts. In his view, management practices of most companies stifled innovation and ignored the potential contributions of employees (Deming, 1986).

Others who have written about quality supported this position. Juran (1989) speaks to the importance of leadership and the involvement of top management in providing quality and stated that upper management's responsibility was to institutionalize quality improvement within an organization.

Scholtes (1988) wrote that top managers lead as individuals and as a group. As a group, they are the steering committee for transformation that plans, strategizes, and serves as instructors and promoters for the quality
transformation. As individuals, they develop a new manner in working with people and continuously seek new ways to integrate the quality efforts into existing corporate activities such as planning, budgeting, marketing, and presentations.

Tribus (1985) contended that the cooperation of workers can only be secured if it is evident that the management cares about improving quality. Managers can do this by their daily actions and example and by creating a structure that makes continuous improvement as certain as budgeting. To do this, those in management positions must develop their own personal skills and become leaders in changing the corporate culture.

Many companies encountered early trouble when implementing quality improvement programs because of a lack of leadership (Brigham, 1993). Companies sometimes leap into quality programs with little understanding of how TQM differs from traditional management. The troubles intensify when the leaders give only a passive commitment to quality and delegate the responsibilities for quality to lower levels of management.

One study evaluated the level of importance placed on four components used during implementation of American manufacturing TQM programs throughout the United States
(Pascoe, 1992). Results of this study revealed that management commitment and employee involvement components were positively correlated and predictive of the success of the TQM program. This finding suggested that it may not be possible to obtain a high level of employee involvement without a corresponding high level of management commitment to the TQM program.

Change toward quality improvement does not always come without difficulty. To demonstrate this, consider an assessment questionnaire that was distributed to eighteen total quality leadership advocates at a naval organization. The advocates were located in field stations across the United States and in organizations implementing Deming's quality and productivity improvement concepts. The findings revealed that top management officials, trained in the total quality philosophy, did not view total quality management as just another productivity program and were actively promoting the concepts in their organizations. It was concluded that if top management officials continue to support the total quality leadership efforts, successful implementation will follow (Boyle, 1993).

A descriptive study of implementation characteristics of effective quality improvement training distributed
questionnaires to professionals responsible for quality improvement training of 1,500 randomly selected corporations with at least 4,000 employees. Results of the study suggested that in effectively implementing quality training efforts, the professional responsible for such initiatives must be concerned with securing top management support during the training process, reinforcement of the skills from training in any internal performance appraisal process, and including the key supervisory levels in any major training endeavors in the organization. (Stieber, 1992)

According to Pines (1990), the ultimate goal of TQM is clear: customer satisfaction. He continued that the generally acknowledged way to achieve it is continuous improvement, endorsed wholeheartedly by top management. He questioned how this was to be accomplished when the acknowledged gurus of continuous improvement represent diverse paths to reach the goal.

Those who qualify as "quality experts" has expanded (Oberle, 1990). However, the three primary leaders in the quality movement were identified by Oberle as W. Edwards Deming, Joseph Juran, and Philip Crosby.

The big three in quality consultation have some differences in their philosophies, but agree that quality
improvement is a never-ending process. The fundamental message of all three is to commit to quality throughout the entire organization: eliminate waste, install pride and teamwork, and create an atmosphere of innovation for continued and permanent quality improvement. The quality programs espoused by each require a continuous commitment to quality rather than a "program-of-the-day" outlook.

Schools may have to make fundamental changes in order to embrace the continuous improvement philosophy. Much of the resistance to change encountered by school leaders, in working with educators, comes from past experiences with hit-and-miss staff development programs.

As discussed by Freeston (1992), the Newtown, Connecticut Public Schools, were prime examples of the one-shot training program approach. He shared that over time the district created a scattered, disjointed pattern of programs and projects. By their nature, programs and projects began and ended and did not sustain continuous improvement.

One example of a school which emphasized Deming's insistence that a commitment to continuous improvement must start with leadership and extend throughout the organization was Christa McAuliffe Elementary School in Prince William County, Virginia. Mulligan (1992) explained that in
McAuliffe's quality training program, everyone had been trained and everyone felt ownership.

In Tupelo, Mississippi, Superintendent Mike Walters wholeheartedly adopted Deming's concept of continuous improvement working to improve the system by building on the contributions of everyone in the school district. (Rist, 1993) Walters explained that he had to find a different way to do business because he knew the system did not support teachers and students. Through application of the fundamental assumptions of the quality approach, which included the concepts of continuous improvement, and involving all employees in improving the system, Walters and his staff were coming up with some innovative solutions to old problems.

The districts cited above discovered that movement toward quality requires the involvement of all employees and must focus on systemic change sustained by continuous emphasis on improvement. Systemic change will not occur by utilization of one-shot workshops or inspirational speakers (Melvin, 1991). Boards of education and administrators need to become familiar with the change process and its application in schools.

Rhodes (1990) questioned current interest in quality when there are no full working educational models like there are in other systemic programs such as outcome-based education. He
concluded that the power of total quality management concepts of Deming and others deal with an organization's work processes as a single system. He further suggested that TQM can provide an approach in which students, staff, and the organization itself are each engaged in continually creating meaning. Thus supporting the need for total commitment throughout the system in order to achieve continuous improvement.

The benefits of total quality management are tangible (Bonstingl, 1992). Among those benefits were that people feel better about themselves and their efforts on the job, and they take greater pride in their work. Also, productivity goes up as work processes are continuously improved. Organizational change brings opportunities for personal and professional growth, along with pride and joy that come with getting better every day and helping others to do the same.

According to Leddick (1993), quality management in education is neither a fad that will pass nor an oxymoron. Schools can be of high quality, providing students the opportunity to create meaning that has value in their lives. Education can be a place where people are allowed to take pride in their work because they operate in systems that
encourage then to succeed rather than assuming that a third or more of the students will fail.

Siu-Runyon (1992) and Heart (1992) wrote that people want to do a good job, and teachers were no exception. However, they indicated those barriers such as arbitrary goals, outdated equipment, and old or irrelevant curriculum materials discourage people and crush their spirit. In order to discover their own potential, teachers and students need a learning environment that nurtures self-confidence, creativity, and adventurousness. School executives need to remove obstacles and make teachers' jobs easier by soliciting information about what's not working and asking how they can help.

This is consistent with Olson's (1992) view that workers, working in conjunction with management, are the best source of ideas and suggestions for how to improve the processes in which they are engaged. Deming's belief that all people naturally want to do well at their jobs, contribute, and experience pride and joy in their work was cited. Deming believed the fault lay not with the workers, but the system, and he estimated that workers were responsible for only 15 percent of an organization's problems while the system is responsible for the other 85 percent.
Mt. Edgecumbe High School in Sitka, Alaska, was an example of a school that has changed its culture by making changes in the system. According to Superintendent Rocheleau (1991), everyone needed to take a systems approach to their workplace. He contended that most people work extremely hard at their jobs, but many do not accomplish much, because of a dysfunctional system, not incompetent people.

Rocheleau further expressed that when a school system has been dysfunctional for years then all the people within the system, including students, will be dysfunctional. Parents blame teachers, teachers blame administrators, and administrators blame teachers. It’s easier to blame problems on people that have not been trained in a systems approach.

At Mt. Edgecumbe, the system is changing by allowing teachers and students to share responsibility for quality education with the administration. Faculty and students alike received training on team and esteem building. Barriers are removed and high expectations are placed upon students, administrators, and staff.

In one research study, total quality management was described as a consensus driven philosophy eliciting organizational-wide participation which embodied a process for
change which demanded continuous process improvement through a systematic and accountability based process (Danne, 1993).

Findings of Danne’s study revealed that education leaders currently piloting TQM models agreed on these successes of TQM: (1) TQM inspired methods involve students more fully in their own learning; (2) training in TQM statistical process control encourages accountability and ongoing assessment; (3) continuous process improvement groups are empowered in decision making; and (4) immediate change is seen as a result of TQM process implementation.

This research supported the change which has occurred at Mt. Edgecumbe High School. There, as in other school districts which are implementing concepts of continuous improvement practices, students are becoming more involved in their education and are working with teachers and administrators to improve their systems.

Glaser (1990) spoke to the role of students in creating what he calls "The Quality School." He believed students should have a part in determining the best way to do work, should be encouraged to express themselves, and should have an opportunity to improve their work. Glasser suggested that management methods used in working with students should be
based on control theory and utilizing proven quality methods of Deming.

Lezotte (1993) also supported the active role of students in school improvement efforts. Schools would probably be better places for learning if leaders had the courage to allow children to reinvent the school and redesign the setting. A strong relationship exists between Deming's operational philosophy of management and the operational tenets of the "effective schools" movement. Both represent proven management principles which, when implemented properly, result in significant improvements.

Schmoker (1993) and Wilson (1993) saw the most important elements of Deming's philosophy, when applied to school management, as: (1) a democratic, collegial atmosphere should prevail in school; (2) management should eliminate threat, encourage continuous improvement, and recognize and use the expertise that employees have acquired in their jobs; and (3) improvement must become an obsession on which employees thrive. This can occur only when management makes every effort to enhance employees' capabilities as well as the quality of their lives through training, trust, and professional respect.
Such a view has great implications for the governance function which is entrusted to local boards of education in school districts. Bonstingl (1992) described the school board as a supplier of policies that empower and enable administrators to create a true learning organization. Micro-management is put aside in favor of genuine site-based management. School boards and school administrators trained in TQM principles and practices view themselves as teammates with each other and with the teachers, students staff, parents, families, business, and community members - all of whom are partners in the progress of the schools’ people and processes.

In Bonstingl’s view, school boards should create policies that encourage a constant dedication to total quality by everyone within the system and by everyone impacted by the system. Also boards should demonstrate a constant dedication to continuous improvement of self and others at home, at work, and in the community.

Harp (1995) reviewed a study which linked school productivity to governance. The report, prepared by the Consortium on Productivity in the Schools, asserted that the nation’s schools will not improve substantially until local
school boards and state legislatures set concrete goals and then get out of the way.

The report continued by suggesting that governance changes must be made that provide school districts with easy-to-understand goals that do not change from year to year. After the goals are set by states and school boards, teachers and administrators should be given freedom to find ways to meet the goals.

School boards and administrators must create an environment which fosters excellence and continuous improvement in the quality of the teaching and learning process. Continuous improvement is doomed where administrators and board members believe, "We're no worse than anybody else" (Leonard, 1991).

Summary

The review of related literature cited in this chapter was presented to support the need for taking a closer look at the way local school districts are governed and to establish the need for change in local boards of education's roles and training programs. Also, related literature pertaining to total quality and continuous improvement practices was reviewed to establish potential solutions to improving
educational systems and local boards of education as they carry out their governance function.

School governance has not been the subject of numerous research studies as much as other educational topics. However, recent interest in the role of local boards of education in school improvement efforts has provided related literature to review for this study.

Likewise, total quality management and continuous improvement principles have not been subjects of a great amount of research in education. However, there has been much written about these subjects and utilization in business and industry to bring about improved production and higher quality. In addition, numerous articles and books have been written in recent years which hold up these concepts as means for improving American education.

This literature review looked at total quality management and continuous improvement principles. The review was concerned with literature which relates to application of these concepts in the field of education. Some reference was made to the philosophical basis of continuous improvement principles.

The focus of the review of related literature established a need for the research conducted in this study. Furthermore,
the review of literature suggested that educators need to further examine the role of local boards of education in carrying out governance functions, and that application of continuous improvement principles does hold promise for providing quality in education.
IMPLICATIONS OF CONTINUOUS IMPROVEMENT
FOR PUBLIC EDUCATION LEADERSHIP

A paper prepared for submission to the
Journal of Educational Administration
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ABSTRACT

This study explored the relationship between the manner in which a school board functions and the level and existence of quality improvement principles perceived to be present within the school district. Two survey instruments, the Perceived Quality Assessment Instrument (PQAI) and the Role Perception Quality Instrument (RPQI), were utilized to collect data in thirty-four (34) public school districts in Iowa.

Data from the first instrument was used to compute a Perceived Quality Index Score (PQI) and data from the second survey yielded a Role Perception Quality Index Score (RPQI) for each of the thirty-four (34) districts. The PQI and RPQI scores were compared to determine the degree of correlation between the PQI and RPQI. For further comparison school district data was analyzed by grouping schools according to
student enrollment, rural versus urban districts, and by the average terms of service on the local school boards.

The overall results for the thirty-four school districts indicated a positive correlation between the PQI and the RPQI and that two enrollment groups demonstrated a high positive correlation.

The results suggest that more in-depth research be devoted to looking at social-economic backgrounds of the school districts population and at the backgrounds and educational levels of board of education members. There is also need for additional research to identify the major variables within a school district which influence the level of quality which is perceived to be present.

Introduction

In recent years educators have wondered if the principles of quality improvement can be applied in some meaningful way to educational institutions. Questions such as, "Do Demings' fourteen points impact educational quality?", and "How does quality relate to organizational factors in schools?", have been on the agenda for many schools.
As business and industry in the United States began to implement the principles espoused by Deming, and were reporting success stories of improved quality and employee satisfaction, educators began to speculate upon benefits for application of this philosophy to American education. Such speculation was spurred in part by criticism of public education which was coming from business and industry. In addition, publication of "A Nation At Risk" in 1983 and the 1991 report from the Secretary's Commission on Achieving Necessary Skills (SCANS), appointed by the United States Secretary of Labor, further challenged educators to look at the present education system and explore new philosophies and strategies which would improve the current system and the quality skill level of its graduates.

One of the major factors in successful implementation of the continuous improvement philosophy, as supported by available literature, is leadership. In school districts, leadership traditionally has been the responsibility of the local board of education and its chief executive officer, the superintendent.

The purpose of the study described in this article was to examine the relationship of school district leadership to the perceived existence of continuous improvement principles.
within the school district. Background literature was reviewed to conceptualize the description of the study, and discussion of the results is presented herein.

**Literature Review**

In recent years "total quality management," with its emphasis on application of Deming's continuous improvement principles, has become increasingly popular in the United States. American businesses and industries are looking upon Deming's philosophy as a means of transforming their work places in a manner similar to what it did in Japan following World War II.

Deming's principles became the blueprint Japan needed, and four decades later, Japanese products are in demand worldwide (Wever, 1992). Wever further offers that the Japanese success story stirred interest among American managers, from automobile manufacturers to hospital administrators, and most recently, educators.

In order to transform American business and industry, Deming believed that managers must assume a leadership position in creation of a climate for improvement of quality and productivity (Deming, 1986). He viewed current management practices of most companies as stifling innovation and
ignoring the potential contributions of employees. It was his belief that management has a vital role in creating the conditions whereby people take pride in their work and are able to contribute to continuous improvement efforts.

The importance of leadership by top management in promoting quality is supported by other researchers. Juran (1989) speaks to the importance of leadership and the involvement of top management and offers that it is upper management’s responsibility to institutionalize quality improvement within an organization.

Scholtes (1988) writes that top managers lead as individuals and as a group. As a group, they are the steering committee of the transformation that strategize and serve as instructors and promoters of the quality transformation. As individuals, managers develop a new manner in working with people and continuously seek new ways to integrate the quality efforts into existing corporate activities such as planning, budgeting, marketing, and presentations.

Tribus and TSUDA (1987) contended that cooperation of workers can only be secured if it is evident that management cares about improving quality. They say that this can be done through the daily actions of managers as they develop their
own personal skills and become leaders in changing the corporate culture.

Results of a study by Pascoe (1992) revealed that management commitment and employee involvement components were positively correlated and predictive of success of TQM programs in American manufacturing settings. Such findings suggest that it may not be possible to obtain a high level of employee involvement without a corresponding high level of management commitment to the TQM program.

Results of a study released by the Gordon S. Black Corporation (1998) further supports the role of leadership. This study surveyed more than 500,000 parents, students, and teachers across the nation. The results suggested that quality in schools is leadership driven. The study's director, John Geraci, indicated that we are finding parent and teacher satisfaction with school districts to be largely determined by the perception of school leaders.

Some of the key findings of this nationwide survey include:

1. Excellent schools with satisfied students, parents and staff are produced by excellent school-based leadership as perceived and acknowledged by teachers and staff.
2. Student satisfaction, teacher satisfaction and parent satisfaction are so highly correlated that it is difficult to improve circumstances significantly for one stakeholder group without making a measurable positive impact on the other two groups.

3. Districts that make concerted efforts to improve service delivery quality through continuous improvement show moderate to dramatic improvement in stakeholder satisfaction. Where appropriate corrective actions are not taken by the leadership of the schools, problems go unresolved and satisfaction is unchanged.

Houlihan (1991), when looking at planning for a quality school in Johnson County, North Carolina, cites a quality improvement plan which believes quality must begin with top management. Included in top management are the board of education, superintendent, and each principal. Houlihan further identified some attributes of leaders as consisting of helping people, facilitating change, creating a climate for growth through education, and understanding change through sources of power.

The findings of Houlihan are consistent with those of the Ohio Quality and Productivity Forum (1989). It concludes
that with an understanding of a manager’s job, and the system to be managed, the leader becomes coach and counsel, rather than judge and jury.

According to Stephens (1993), school boards should focus on knowledge, skills, and attitudes students need to function in tomorrow’s world. She further related that because students come from varied backgrounds, and most results are caused by the system originating them, governance must be re-examined from a systemic perspective in order to identify strengths and weaknesses within the system. This is consistent with Fisher and Shannon’s examination of a 1992 National School Board’s Association statement which recognizes four major school board functions.

The four major school board functions identified in the NSBA’s report are: (1) envisioning a community’s future educational program; (2) establishing facilitative organizational structures and community environments; (3) ensuring a performance assessment system to enhance accountability; and (4) serving as paramount child advocates. To carry out such functions will certainly necessitate a close examination of current local school board functions and will require a look at governance from a systems perspective as Stephens (1993) suggests.
A comprehensive study on school governance, ordered by the West Virginia Legislature in 1990, helps illustrate the need for re-examination of local board functions as they relate to NSBA’s four areas of emphasis. A study of the minutes of fifty-five West Virginia school boards over a five-year period revealed that more than one fourth of all school board decisions concerned financial matters. Personnel decisions, granting of permissions such as field trips, and hearing presentations from staff were the other categories which helped occupy most of the time spent by board members in carrying out the function of school governance.

If the results of the West Virginia study are indicative of how other local boards spend their time, this indicates that little time is utilized for the vision, structure, accountability, and advocacy as identified by the NSBA.

In Iowa, a report of the joint committee appointed by the Iowa Association of School Boards and the Iowa State Board of Education addressed this issue (1994). The report indicated that the committee agreed on a vision for the state’s educational system which will ensure that all students are prepared to make a living, a life, and a difference. However, it acknowledged that the heart of the report addressed the kind of school governance that will be most effective in
achieving what students need and proposed the following statement of purpose: "The school board provides shared vision, structure, accountability and advocacy for the community's educational system. The board keeps before the public the need of all students to become participating and productive citizens, and promotes the importance of public education for a free nation, its people, its economy and its continued leadership in the world."

The Iowa report recommended a leadership model for school boards based on the four functions of a board endorsed by the National School Boards Association. The report further asserted that for the model to work, it needed to be described in specific terms which allow boards to measure their activities and assess the level of their board's contribution to the local education system. For boards to initiate improvement, they must take time to assess their current level of achievement and set goals for their learning, growth, and focus. As a result, the joint committee developed a School Board Self-Assessment instrument to help guide improvement efforts and to assist boards in channeling their governance efforts in a manner which will move education toward revitalization and renewal.
Description of the Study

Thirty-four (34) public K-12 school districts in Iowa took part in this study. In each district, two survey instruments were administered. The first instrument, known as the School System Perceived Quality Assessment Instrument, was developed at Iowa State University (Poston, 1993). It was organized along the Malcolm Baldrige Award structure which consists of seven criteria: leadership, information and analysis, strategic quality planning, human resources utilization, quality assurance, quality results, and customer satisfaction. This instrument measured the perceived current and perceived ideal existence of continuous improvement principles within each district as perceived by the respondents.

This survey was distributed to a sampling of students, teachers, support staff, administrators, and all board of education members in each district. On each of the forty two (42) items, the respondent was to give his/her perception of the current situation and the ideal situation on a five point rating scale from strongly agree to strongly disagree. Tabulation of the results yielded a Perceived Quality Index (PQI). This was obtained by dividing the perceived current scores by the ideal situation scores which yielded a ratio
expressed as a decimal. The closer the ratio was to 1.0, the closer the district meets its expectations of quality. A score of 1.0 would indicate a district was meeting the expectations, and a score exceeding 1.0 would indicate that a district was exceeding expectations.

The second survey instrument was developed specifically for this study. It was structured utilizing the four-fold thrust for local boards of education leadership as identified by the National School Boards Association. (1992) Questions on the survey were developed reflecting the essence of NSBA's identified leadership functions of vision, structure, accountability, and advocacy.

This survey instrument was distributed to all board of education members and superintendents in each of the thirty-four (34) school districts. It consisted of 32 items, and like the Perceived Quality Assessment Instrument, asked the respondent to give his/her perception of the desired situation and the current situation on a five-point scale from "always" to "almost never." Tabulation of the results yielded a Role Perception Quality Index for each district. As with the PQI, this index was obtained by dividing the current situation scores by the desired situation scores which resulted in a ratio expressed in decimal form. The closer the ratio was to
1.0, the closer the board of education was perceived to be achieving the desired situation. A score of 1.0 meant the board of education was achieving the desired situation, and a score exceeding 1.0 meant the board of education was exceeding the perceived desired situation.

Other variables of the study in addition to the PQAI and the RPQI were average school board experience and the K-12 student enrollment of each district. Average school board experience was calculated by taking the total number of years of school board service by all members of a district board of education responding to the survey and dividing by three (3), which is the length of one term of school board service in Iowa. This provided an average board experience number expressed as the average number of terms of service on each board of education.

The K-12 student enrollment for each district was the enrollment figure reported to the Iowa State Department of Education on the annual Basic Educational Data Survey (BEDS) completed each September by all Iowa school districts. This enrollment data was utilized to group the thirty four (34) participating school districts into enrollment sub groups for additional data analysis as outlined in the next section of this article.
Definition of District Categories and Tables

For further analysis and comparison, the thirty-four (34) districts were grouped into two of the following categories of size and community type:

1. Urban districts - Those districts located in towns of at least 5,000 resident population or located in a county seat town. There were thirteen (13) such districts.

2. Rural districts - Those districts located in a town of less than 5,000 residents. There were twenty-one (21) such districts.

3. Districts with student enrollment between 0 and 499. (10 districts)

4. Districts with student enrollment between 500 and 999. (8 districts)

5. Districts with student enrollment between 1,000 and 1,999. (9 districts)

6. Districts with student enrollment over 2,000. (7 districts)

Table 1 is a listing of the thirty-four school districts in the order which they were assigned for the study. The Perceived Quality Index Score, Role Perception Quality Index
Score, K-12 student enrollment, and the average terms of school board service is listed for each school district.

Tables 2 through 7 show districts as grouped in six categories by district resident population and by student enrollment. The PQAI and RPQI scores for each district are also listed in the tables.

Table 8 gives the correlation coefficients and resulting description of degree of correlation between the PQAI and RPQI. The correlation coefficients were computed using Stat View Student (Feldman and Gagnon, 1991).

**Findings and Implications**

This study explored the relationship between the manner in which a school board functions and the level and existence of quality improvement principles within the school district. It was felt that such information can help predict the success of implementing quality improvement principles and clarify the impact of role perceptions of the board.

Although the results of the study did not conclusively indicate that the board’s manner of operation, as measured by the RPQI, always influences the existence or non-existence of continuous improvement principles, it does establish that the board’s manner of operation may have an effect under certain
circumstances. The overall results for the thirty-four school districts in the study indicated a positive correlation between PQAI and RPQI, even if the correlation was low positive (.427), and that two enrollment groups demonstrated a high positive correlation. Enrollment group of 500 to 999 students showed a correlation of .726, and enrollment group of over 2000 students showed a correlation of .716. This is illustrated in Table 8 which depicts the correlation coefficients for the identified categories of this study.

Further results of the study, in looking at correlation, indicate that comparison of the RPQI and PQAI scores of those districts categorized as rural yielded a low to moderate correlation (.407) while comparison of RPQI and PQAI scores of those districts categorized as urban yielded a low positive correlation (.333). Also, comparison of RPQI and PQAI scores between the average terms of school board service found little if any positive correlation (.122) in those districts with boards of education whose average experience was less than two terms and a low positive correlation (.451) existed for those districts with average board of education experience of more than two terms.
These findings indicate that a somewhat greater quality may be present in rural districts, and that local boards of education become better aware of their roles and responsibilities as the average term of service on the board increases.

From these results it is suggested that more in-depth research be devoted to looking at the social-economic backgrounds of the communities and at the experience and education levels of board of education members. Since schools in two of the enrollment categories, 500 to 999 and over 2000, displayed considerably higher correlations between the RPQI and PQAI scores than did the schools in the other two enrollment categories, additional research is needed to help account for these differences. There also is a need for additional research to identify the major variables within a school district which influence the level of quality which is perceived to be present.

Additionally, in terms of moving toward quality improvement, educators will need to have data for utilization in reaching consensus on quality indicators which will be specific for education. Thus far most research on quality is based on business and industry standards. In order to fully implement the principles of continuous improvement in
education, and to adequately educate local boards of education to provide quality leadership, additional research will be needed to develop universally accepted quality education standards. With such information available, local boards of education will be better equipped to make a positive impact on quality education within their districts than they are today. This will require formal training programs to provide for continuous development of knowledge and skills needed to effectively govern quality school districts.

Additional studies, such as this one, can help fulfill the need to establish such standards and can be helpful in assisting local boards of education in understanding their roles and understanding the affect the manner in which boards carry out their responsibilities has on the quality of education in their local school district. As state and national governments, as well as local communities, intensify the call for greater school district accountability, much data will be needed to help shape training programs and to give guidance to boards of education in developing frameworks for pursuing quality in all aspects of local school district operation.
Table 1. Listing of the Study's 34 School Districts

<table>
<thead>
<tr>
<th>District</th>
<th>PQAI</th>
<th>RPQI</th>
<th>ENROLLMENT</th>
<th>AVERAGE EXPERIENCE</th>
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</thead>
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<td>1</td>
<td>.951</td>
<td>.830</td>
<td>1545</td>
<td>2.68</td>
</tr>
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Table 5. School Districts With Enrollment Over 2000

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Table 6. Rural School Districts (Cities Under 5,000)

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SCHOOL BOARD ROLE PERCEPTIONS AND RELATIONSHIPS TO PREDICTING SCHOOL DISTRICT QUALITY

A paper prepared for submission to the National Forum of Educational Administration and Supervision Journal

David J. Scala, William K. Poston Jr.

Iowa State University

ABSTRACT

This study explored the relationship of leadership to perceptions of organizational quality within a sample of thirty-four (34) public school districts in Iowa. Leadership was measured by perceptions of local school board members and superintendents toward the role of local school board members in carrying out their responsibilities.

Two survey instruments were administered in each of the 34 school districts. The first instrument, known as the Perceived Quality Assessment Instrument (PQAI), was distributed to a sample of students, teachers, support staff, administrators and all board of education members in each district. Tabulation of the results yielded a Perceived Quality Index (PQI) for each district.

The second survey instrument, called the Role Perception Quality Instrument (RPQI), was distributed to all board of
education members and superintendents in each of the districts. Results of this instrument yielded a Role Perception Quality Index (RPQI).

Other variables of the study in addition to the PQAI and the RPQI were the average school board experience, expressed in average terms of service, and the K-12 enrollment of each districts. The 34 districts were then grouped into four enrollment categories and categorized either as rural or urban districts.

Results of the study were analyzed to determine if a board of education's perception of its role responsibilities have a relationship to the perceived existence of continuous improvement principles which are at work in their school district in carrying out the board's leadership function. Further analysis was conducted to determine if the board's perceptions of its role responsibilities can be utilized in predicting the extent of continuous improvement principles (quality concepts) which are being practiced across the district.

Analysis of the data indicated that comparison of RPQI and PQAI scores for all thirty-four districts indicated a correlation did exist. However, the highest correlations were found in the districts of enrollment 500-999 and districts of
enrollment of 2000 or more students. Additionally, those districts classified as rural displayed a higher correlation than the urban districts, and the correlation was higher in districts with board of education experience of more than two terms than in those districts with average board of education experience less than two years.

These findings indicate that as local boards of education learn more about quality and continuous improvement in education, application of these principles will become more prevalent in the overall operation of the school district.

**The Need for Changes in School Governance**

The final decade of the twentieth century may become known as the decade in which educational reformists began looking seriously at the organizational structure of public schools. Prior to this decade many of the variables of school organization, such as governance, administration, instructional techniques, assessment methods, and the school calendar remained basically unchanged. This lack of meaningful change was reported to the Council of Chief State School Officers (Daggett, 1991) in a report that contended
that today’s curriculum and assessment methods still mirror the industrial model of the 1950’s.

Although schools have remained basically unchanged, educators are now beginning to understand the skills necessary to compete in the next Century. Looking at schooling as a system, educational leaders are organizing components and parts of the system in order to equip graduates with the knowledge and skills necessary to compete in a technologically advanced global society.

For nearly twenty years, educators have been studying and gradually applying the continuous improvement principles of W. Edwards Deming (Deming, 1989). Demings’ ideas have proven effective in business and industry for improving quality, and in "Out of Crisis", Deming cites adoption of a “system perspective” as a major breakthrough in Japanese management thinking. Adoption of such a system perspective by educators is identified by Leonard (1991) as a real need in transforming education. Leonard continues by noting that viewing the school in this context provides numerous insights about students which are caused by variations in the complex and dynamic system in which they work and learn.

Deming’s system theory places great emphasis on customer satisfaction. The importance is stressed of not merely having
satisfied customers but having loyal customers who come back, wait in line, and bring friends. In the case of education, the student is the primary customer of the service which is provided. However, the school also has other customers, including parents, community groups, businesses, industry, and taxpayers who support the school. Educators must respond to the needs and interests of these groups as well in order to gain support, both financial and moral, for the needs and mission of the school.

The call for public schools to develop loyal, satisfied customers has taken on greater significance in recent years. Criticism of public education by business and industry combined with such forces as open enrollment, private schools, home schooling, and the threat of vouchers has caused educators to become serious about looking at changes in the school's organizational structure. Delivery of instruction, organization of the school day, development of school-to-work programs, and length of the school year are but a few of the structural changes which are being explored. Such changes may significantly change the culture of public education systems in preparation for entering the 21st century.

As educators across the country struggle to respond to the need for change, they also struggle with local politics
involved in motivating constituents and customers to embrace new ideas and educational practices which differ from the traditional modes of operation. One idea that has been looked upon as a means of promoting effective change in education is the use of continuous improvement principles with their focus on customer satisfaction.

The study described in this article examined the perceived existence of continuous improvement principles within a sample of Iowa school districts. Perceived role perceptions of local boards of education were also examined in order to ascertain if a district's perceived quality can be predicted from knowing the perceived role perceptions of the board of education.

Review of Relevant Literature

The leadership role in local school districts has traditionally been placed in the hands of the school administration who must report directly to a board of education made up of individuals from the community who may or may not have any background in education other than the fact that they once attended school. Until recent years, the board's function was mostly confined to policy making and dealt with non-instructional matters. As Zlotkin (1993)
writes, policy decisions traditionally made by boards, concern legally required actions. What she calls, "visionary stuff", has been pretty much left to the professionals. Her contention is that policy makers should concern themselves with important policies such as what the community wants for its children to be able to do, how to set appropriate goals and standards, and how to make parents real educational partners.

Since local boards of education need to have a major leadership role in shaping the educational programs in their school districts, and since the local school administration is accountable directly to the board, the question of role relevance arises. At question is the adequacy of a governing body made up of primarily non-educators for carrying out the governance function of public schools in a time when workers need to be more highly trained and highly skilled. Nevertheless, change is not likely any time soon. According to Fisher (1992), school boards are apt to stay but there is much discussion concerning the need for change in school governance. In his words, "school boards epitomize the United States tradition of representative local government." The local school board is the primary institution of American education governance. (CED, 1994)
Other writers speak to the need for change in school governance. In "The School Bell Tolls For Board Members" Hall (1993) states, "If schools in the United States are to be world Class, they must be led by world class boards of education that have the knowledge, skills, and abilities required for success." In the same publication, Finch alludes to the tremendous turnover of board members and superintendents and cites the resulting lack of consistent leadership for public school districts as a barrier to real school reform.

One of the factors which influences under-achievement by American students, as cited by English (1993), is local school board organization. In addition, former United States Secretary of Education Terrel H. Bell (1993), contended that governing boards have generally been unresponsive and unimaginative about keeping educational practices current with the fast paced world. Such contentions are further supported by Harrington (1993) who cites two national reports, "Facing the Challenge" and "Governing Public Schools" as recommending sweeping changes in the ways school boards are organized and operated. Harrington also points out that the state of Kentucky and the city of Chicago, Illinois, embarked on radical experiments in school governance and that other areas,
especially urban school districts, are also considering changes in school governance.

Although there has not been a great deal of research concerning the school governance issue, there appears to be a common belief that the governance function will most likely remain with local boards of education. However, it also appears to be a common belief that changes in the structure and function of such boards need to be made in order to insure that schools will continually improve and respond appropriately to economical and societal needs.

**National and State Governance Change Initiatives**

The National School Boards Association has recognized the changing nature of school governance and has proposed four leadership functions for local boards which follow some of Deming’s philosophy. In "The Governance Role of the Local School Board: NSBA's Philosophy of Local Board Responsibility" (1992) the association lays out a four-fold thrust for leadership by local school boards: vision, structure, accountability, and advocacy. Through utilization of this leadership model, the NSBA believes local boards of education can ensure excellence and equity in the public schools and
keep America free and first among the nations of the world as we enter the 21st century.

In response to the NSBA's report, some states, including Iowa, began developing their own models for school governance. The Iowa Association of School Boards and the Iowa Department of Education created a committee to focus on the future of school governance in Iowa. The committee was charged with defining the type of leadership which would best provide the schools Iowa students would need in the 21st Century. (1994) After a year of study the Iowa committee issued its report, "School Board Leadership: The Future." (1994) The report stated, "We recommend a leadership model based on the four functions of a school board endorsed by the delegate assembly of the National School Boards Association in 1992":

1. **Vision:** The board, on behalf of, and with extensive participation by the community, envisions the community's educational future.

2. **Structure:** To achieve its vision the board establishes a structure and creates an environment designed to ensure all students the opportunity to attain their maximum potential through a sound organizational framework.
3. **Accountability:** Because the board is accountable to the local community, it causes the continuous assessment of all conditions affecting education.

4. **Advocacy:** The board serves as education's key advocate on behalf of students and their schools in the community in order to advance the community's vision for its schools, pursue its goals, encourage progress, energize systemically, and deal with children as whole persons in a diversified society.

As a result of this report, the Iowa Association of School Boards intensified its training programs for local school board members. Once consisting of mainly a short orientation session for new board members, the IASB's in-service program is now known as the Academy of Board Learning Experiences (ABLE). The academy provides a series of training opportunities culminating in receipt of a "Better Boardsmanship Award" by those board members who attend a specified number of sessions. The awards are presented at the annual state school board convention.

The effectiveness of in-service programs is supported by studies, including one that indicated planned in-service activities for board members effectively changes participants' perceptions, policies, and practices (Maksimowicz, 1989).
The need for such programs was supported in a Texas study (Alanis, 1989) and in a study of Connecticut board of education members (Griffith).

This growing concern over training activities for boards of education, and the importance of a board's leadership function cited in the literature, led to this research study. The study focused on the relationship between Board perceptions and leadership factors.

**Description of the Study**

This study was undertaken to explore the relationship of leadership to perceptions of organizational quality within a sample of thirty-four (34) public school districts in Iowa. In this study, leadership was measured by perceptions of local school board members and superintendents toward the role of local school board members in carrying out their responsibilities.

Two survey instruments were administered in each of the 34 school districts. The first instrument, known as the Perceived Quality Assessment Instrument (PQAI), was developed at Iowa State University (Poston, 1993). It was based on the Malcolm Baldrige Award criteria which consists of seven criteria: leadership, information and analysis, strategic
quality planning, human resources utilization, quality assurance, quality results, and customer satisfaction.

The PQAI was distributed to a sample of students, teachers, support staff, administrators, and all board of education members in each district. In each of the forty-two (42) items, the respondent was to give his/her perception of the current situation and the perception of the ideal situation on a five point rating scale. The scale was a Likert type that ranked responses from strongly agree to strongly disagree.

Tabulation of the results yielded a Perceived Quality Index (PQI) for each district. The closer the index was to 1.00, the more the district was perceived to exhibit current characteristics which meet the perceived "ideal" situation in terms of the quality criteria. A score of 1.00 would indicate a district was meeting the expectations, and a score exceeding 1.00 would indicate that a district was exceeding its own expectations.

The second survey instrument was developed specifically for this study. The instrument, called the Role Perception Quality Instrument (RPQI) was based on the four criteria of performance for local school boards identified by the National School Boards Association. These criteria consist of four
leadership functions: vision, structure, accountability, and advocacy. Prior to distribution to the schools in the study, the instrument was reviewed by university professors, Iowa Association of School Boards personnel, and other educational professionals who work with local boards of education.

The survey instrument was distributed to all board members and superintendents in each of the thirty-four (34) school districts participating in the study. It consisted of 32 items and, like the Perceived Quality Assessment Instrument, asked the respondent to give his/her perception of the desired ideal situation and their perception of the current situation on a five-point scale similar to that used in the PQAI survey. Responses were ranked on a scale from "always" to "almost never."

Tabulation of the results yielded a Role Perception Quality Index (RPQI) for each district. The closer the index was to 1.00, the more closely the local board of education was perceived to function in a manner which promotes quality. A score of 1.0 meant the board of education was achieving the desired situation, and a score exceeding 1.0 meant the board of education was exceeding the perceived desired situation.

Other variables of the study in addition to the PQAI and the RPQI were average school board experience and the K-12
student enrollment of each district. Average school board experience was calculated by taking the total number of years of school board service by all members of a district board of education responding to the survey and dividing by three (3), which is the length of one term of school board service in Iowa. This provided an average board experience number expressed as the average number of terms of service on each board of education.

The K-12 student enrollment for each district was the enrollment figure reported to the Iowa State Department of Education on the annual Basic Educational Data Survey (BEDS) completed each September by all Iowa school districts. This enrollment data was utilized to group the thirty four (34) participating school districts into enrollment sub groups for additional data analysis as outlined in the next section of this article.

**Definition of District Categories**

For further analysis and comparison, the thirty-four (34) districts were grouped into two of the following categories of size and community type.

1. Urban districts - Those districts located in towns of at least 5,000 resident population or located in a
county seat town. There were thirteen (13) such districts.

2. Rural districts - Those districts located in a town of less than 5,000 residents. There were twenty-one (21) such districts.

3. Districts with student enrollment between 0 and 499. (10 districts)

4. Districts with student enrollment between 500 and 999. (8 districts)

5. Districts with student enrollment between 1,000 and 1,999. (9 districts)

6. Districts with student enrollment over 2,000. (7 districts)

Results of the Study

The results of this study were analyzed to determine the relationship between the Role Perception Quality Index and the Perceived Quality Assessment Index. More specifically, an attempt was made to determine if a board of education’s score on the RPQI could predict the district’s score on the PQAI.

In other words, does a board of education’s perception of its role responsibilities have a relationship to the perceived existence of continuous improvement principles which are at
work in their school district in carrying out the board’s leadership function? If the board of education’s perceptions of its role responsibilities are known, it may be possible to predict the extent of continuous improvement principles (quality concepts) which are being practiced across the district.

Correlation coefficients were calculated by comparing the RPQI and PQAI scores of those districts categorized as urban (resident population of at least 5000 or a county seat town) and those districts categorized as rural (resident population less than 5,000). Resulting data indicated a low to moderate positive correlation (.407) for the rural district category and a low positive correlation (.333) for the urban district category.

In addition, to see if the relationship between the PQAI and the RPQI was different for districts with different lengths of board member service, a correlation was examined between the average terms of school board service. It was found that little if any positive correlation (.122) existed between the RPQI and the PQAI in those districts with boards of education whose average experience was less than two terms and a low positive correlation (.451) existed for those
districts with average board of education experience of more than two terms.

Comparing rural and urban districts indicate that there was little difference in terms of perceived quality between the two types of communities. Although slight, the PQAI and RPQI of rural districts did exhibit a higher correlation. This finding indicates that the background of board members may have some effect on their self reported knowledge of quality principles.

When looking at the experience level of boards of education, the average number of terms appears not to have a major influence on the RPQI and PQAI scores although the districts who had an average experience level of two terms or more did demonstrate a higher correlation between the RPQI and PQAI. This finding may indicate that as board of education members become more experienced, they have a better understanding of their role responsibilities and thus see a stronger connection with perceived quality within the school district.

Additional analysis of the results with linear regression also indicated that there is a higher degree of prediction possible for those boards with average membership in excess of
two terms of board service as well as in districts classified as rural for purposes of this study.

Discussion and Implications

The main purpose of this study was to determine if the role perceptions held by local boards of education, based on continuous improvement principles, had a corresponding relationship with the perceived existence of continuous quality within various operational aspects of the school district.

Overall, the results of the study indicate that for the thirty-four school districts studied, a positive correlation was evident between the board of education’s role perceptions and the perceived continuous quality within the school district.

Additionally, the findings indicate that boards of education with longer average terms of board member service reveal higher perceptions of quality principles present in their districts. This indicates that as boards of education learn more about quality and continuous improvement through board service, application of these principles may become more prevalent in the overall operation of their school districts.
This will take time and will happen as school districts become involved in adopting the principles of continuous improvement.

This study further suggests that the more a local school board is carrying out its role as it wishes or desires, the more quality increases in terms of perceptions of organizational members. This finding, along with the positive effect shown by longer board member service, supports recommendation of professional growth for board of education members through formal training programs and encouraging states to establish longer terms for school board members.
GENERAL SUMMARY

As American educators acknowledge the reality of a global economy and begin to understand the skills necessary to compete in the 21st Century, they are beginning to look at how the educational process can be improved. Educators are now examining the needs of their customers, in a way similar to business and industry, by studying and applying principles of quality improvement first introduced by W. Edwards Deming.

Applying improvement strategies leads educators to look at the organization of the school as a system of interdependent functions and processes. They are now looking within the system for answers to improving educational quality.

Reviewing literature and research reports written on the application of Deming's principles in business and industry, substantiates the responsibility of leadership by upper management to institutionalize quality improvement in an organization. In schools the upper management function is usually vested in a local board of education and its administrators who together comprise the management team.

Although limited research has been done on the governance of school districts as practiced by local boards of education, much attention has been given in recent years to the need for
change in the way school districts are governed. This need has been acknowledged by the National School Boards Association and by many state organizations representing local boards of education in their planning of training programs for local board of education members.

This study was undertaken to examine the relationship between the manner in which local boards of education perceive their responsibilities and the extent to which total quality improvement principles are perceived to exist within their school districts. It was believed that such information can help predict the success of implementing quality improvement principles and clarify the impact of role perceptions of the school board.

Data were collected from thirty-four (34) Iowa Public School Districts. Two survey instruments, the Perceived Quality Assessment Instrument (PQAI) and the Role Perception Quality Instrument (RPQI), were used to collect data from all thirty-four districts.

The data was analyzed using correlation to determine the relationship between a board of education’s perceptions of its roles and responsibilities and the extent to which principles of continuous improvement are perceived to exist within their district. Further analysis utilized linear regression to
determine if the extent of continuous improvement principles perceived to be present in a district can be predicted from knowing the board's perceptions of its roles and responsibilities.

Results of the study indicated that a positive correlation did exist between the PQAI and the RPQI. The highest correlations existed in the districts with student enrollments between 500-999 and in districts of 2000 students or more. Also, a higher correlation existed in those districts classified as rural as opposed to urban, for this study, and in those districts with boards of education whose average terms of service for board members were greater than two terms as compared to boards with average terms of service less than two terms.

Additionally, results of the study indicated that it is possible to predict the PQAI from knowing the RPQI. As with the results of correlation, a greater probability of prediction is possible in districts with enrollments between 500-999 or 2000 and above, in rural as opposed to urban districts, and in districts with average board of education experience of more than two terms.
Recommendations for Further Study

Further research is recommended to look in-depth at the social-economic backgrounds of the communities and at the experience and education levels of board of education members. Since schools in two of the enrollment categories, 500 to 999 and over 2000, displayed considerably higher correlations between the RPQI and PQAI scores than did the schools in the other two enrollment categories, additional research is needed to help account for these differences. There also is a need for additional research to identify the major variables within a school district which influence the level of quality which is perceived to be present.

Additionally, more research is recommended in the application of continuous improvement principles to educational organizations. As the quality movement continues to gain importance in education, educators will need to have data for utilization in reaching consensus on quality indicators which will be specific for education. Most research currently available on quality is based on business and industry standards. In order to fully implement the principles of continuous improvement in education, and to adequately educate local boards of education to provide
quality leadership, additional research will be needed to develop universally accepted quality education standards.

Additional studies such as this one can fulfill the need to establish such standards and can be helpful in assisting local boards of education in understanding their roles and understanding the affect the manner in which boards carry out their responsibilities has on the quality of education in their local school district. As state and national governments, as well as local communities, intensify the call for greater school district accountability, much data will be needed to help shape training programs and to give guidance to boards of education in developing frameworks for pursuing quality in all aspects of local school district operation.

From the results of this study, it is recommended that state organizations representing school boards work with state legislatures to develop formalized training programs for local board of education members to include pre-election training. It is further recommended that states consider mandating longer terms of service for board members to provide a higher level of experience and to maintain continuity of local board membership.
APPENDIX A

INFORMATION FOR REVIEW OF RESEARCH INVOLVING HUMAN SUBJECTS
Information for Review of Research Involving Human Subjects

Iowa State University

(Please type and use the attached instructions for completing this form)

A Study of the Relationship Between School Board Member Role Perceptions & Existence of Total Quality Principles in a Sch.

1. Title of Project: A Study of the Relationship Between School Board Member Role Perceptions & Existence of Total Quality Principles in a Sch.

2. I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are protected. I will report any adverse reactions to the committee. Additions to or changes in research procedures after the project has been approved will be submitted to the committee for review. I agree to request renewal of approval for any project continuing more than one year.

David J. Scala 2/9/94
Typed Name of Principal Investigator

Date

Signature of Principal Investigator

3. Signatures of other investigators

2/9/94

Date

Relationship to Principal Investigator

4. Principal investigator(s) (check all that apply)

☐ Faculty ☑ Staff ☐ Graduate Student ☐ Undergraduate Student

5. Project (check all that apply)

☐ Research ☑ Thesis or dissertation ☐ Class project ☐ Independent Study (490, 590, Honors project)

6. Number of subjects (complete all that apply)

1200 Adults, non-students 1 # ISU student 1 # minors under 14 1 other (explain)

7. Brief description of proposed research involving human subjects: (See instructions, Item 7. Use an additional page if needed.)

Human subjects will be surveyed using the "Perceived Quality Assessment" and "School Board Role Perceptions" instruments which are attached. The surveys will establish total quality indices for board members, administrators, teachers, and superintendents of the selected school districts. The surveys will be sent to the superintendents in the selected districts for distribution. The Superintendent will collect the completed forms for return. Superintendents will be asked to randomly select teachers and support staff. All school board members and administrators will be asked to participate in the study.

A sampling of forty-four school districts from across the state of Iowa will be selected for participation. The sample will include schools of various sizes for comparison. There will be no individual identification of human subjects, only groups of individuals with their schools coded to mask identity. (Please do not send research, thesis, or dissertation proposals.)

8. Informed Consent:

☐ Signed informed consent will be obtained. (Attach a copy of your form.)

☐ Modified informed consent will be obtained. (See instructions, item 8.)

☐ Not applicable to this project.
9. **Confidentiality of Data:** Describe below the methods to be used to ensure the confidentiality of data obtained. (See instructions, item 9.)

School districts will be coded by a letter to protect the identity of individual schools. Names of the schools will be kept until all data is collected to allow for follow up if needed. Then numerical identifiers will be attached to individuals and letter identifiers will be attached to schools to protect identities.

All surveys will be returned directly to Iowa State University where the results will be tabulated to further protect the identity of individuals and school districts.

10. **What risks or discomfort will be part of the study?** Will subjects in the research be placed at risk or incur discomfort? Describe any risks to the subjects and precautions that will be taken to minimize them. (The concept of risk goes beyond physical risk and includes risks to subjects' dignity and self-respect as well as psychological or emotional risk. See instructions, item 10.)

11. **CHECK ALL of the following that apply to your research:**
   - A. Medical clearance necessary before subjects can participate
   - B. Samples (blood, tissue, etc.) from subjects
   - C. Administration of substances (foods, drugs, etc.) to subjects
   - D. Physical exercise or conditioning for subjects
   - E. Deception of subjects
   - F. Subjects under 14 years of age and/or Subjects 14 - 17 years of age
   - G. Subjects in institutions (nursing homes, prisons, etc.)
   - H. Research must be approved by another institution or agency (Attach letters of approval)

If you checked any of the items in 11, please complete the following in the space below (include any attachments):

**Items A - D** Describe the procedures and note the safety precautions being taken.

**Item E** Describe how subjects will be deceived; justify the deception; indicate the debriefing procedure, including the timing and information to be presented to subjects.

**Item F** For subjects under the age of 14, indicate how informed consent from parents or legally authorized representatives as well as from subjects will be obtained.

**Items G & H** Specify the agency or institution that must approve the project. If subjects in any outside agency or institution are involved, approval must be obtained prior to beginning the research, and the letter of approval should be filed.
Checklist for Attachments and Time Schedule

The following are attached (please check):

12. [X] Letter or written statement to subjects indicating clearly:
   a) purpose of the research
   b) the use of any identifier codes (names, #s), how they will be used, and when they will be removed (see Item 17)
   c) an estimate of time needed for participation in the research and the place
   d) if applicable, location of the research activity
   e) how you will ensure confidentiality
   f) in a longitudinal study, note when and how you will contact subjects later
   g) participation is voluntary; nonparticipation will not affect evaluations of the subject

13. [ ] Consent form (if applicable)

14. [ ] Letter of approval for research from cooperating organizations or institutions (if applicable)

15. [X] Data-gathering instruments

16. Anticipated dates for contact with subjects:
   First Contact: February 21, 1994
   Last Contact: April 30, 1994

17. If applicable: anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:
   April 30, 1994

18. Signature of Departmental Executive Officer

19. Decision of the University Human Subjects Review Committee:
   [X] Project Approved
   [ ] Project Not Approved
   [ ] No Action Required

Patricia M. Keith
Name of Committee Chairperson

[Signature]
Date
APPENDIX B

CORRESPONDENCE
January 31, 1994

Dave Scala
Superintendent
Keokuk
727 Washington St
Keokuk, IA 52632

Dear Colleague:

First, please accept our sincere thanks for your willingness to participate in the Quality Assessment Project being conducted by a team of doctoral students at Iowa State University. Dave Scala, participant in the research project, has been in touch with you and indicates that you have agreed to be one of the 44 superintendents in Iowa who will help us in our quest to learn more about the implementation of quality principles in school district management.

As you know, any innovation in education merits close scrutiny and evaluation to determine its worth. So it is with the quality movement. We are hopeful that your participation in this significant study will make a substantive contribution to our understanding of quality principles in school administration. Your assistance is crucial to the success of this project.

Shortly after February 18, 1994, you will receive from your liaison (Dave Scala) a set of questionnaires for distribution to your staff. In the table below is a list of the instruments, an estimate of the time it will take to respond to each, and the people who will need to complete them. Please note that all respondents and school district names will be scrupulously kept anonymous and confidential.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Time Reqd</th>
<th>To be completed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Quality Assessment Instrument</td>
<td>20 min</td>
<td>Board, superintendent, 2 administrators, 5 teachers, 3 support personnel, student body president and vice president</td>
</tr>
<tr>
<td>Questionnaire on Superintendent Compensation</td>
<td>10 min</td>
<td>Board and superintendent</td>
</tr>
<tr>
<td>School Board Perceptions on Governance</td>
<td>20 min</td>
<td>Board and superintendent</td>
</tr>
<tr>
<td>Strategic Planning Assessment</td>
<td>10 min</td>
<td>10 staff members selected at random by Board Secretary</td>
</tr>
<tr>
<td>Staff Development Questionnaire</td>
<td>15 min</td>
<td>10 staff members selected at random by Board Secretary</td>
</tr>
<tr>
<td>Facilities Rating Scale</td>
<td>10 min</td>
<td>Superintendent and Principals</td>
</tr>
</tbody>
</table>

This is a formidable task, but we feel that the results will be worth the effort. Of course, you will receive a copy of the final results from each of the studies when they are completed. Please plan to receive the instruments in a couple of weeks. If you have any questions, please give me or Dave Scala a call. Again, many thanks for your assistance and your support of this very important research effort.

Sincerely,

William K. Poston Jr.
Associate Professor
Quality Assessment Project

PC: Dave Scala
February 18, 1994

Participating Superintendents:

Thank you for agreeing to have your school district participate in our study of Continuous Quality Improvement in Iowa school districts and its relationship to the role perceptions of local Board of Education members. The data gathered from the enclosed surveys will be used to complete my doctoral dissertation at Iowa State University.

In addition to the directions in your packet for distribution of the School District Quality Assessment Instrument, I am asking that you have each of your Board of Education members complete the School Board Member Role Perception instrument. Also, I would like for you to complete one of these instruments. All instruments are to be mailed directly to Iowa State University.

There will be no individual identities, only numbers indicating groups. Once we have tabulated data, school names will be removed and each school will be identified only by letter for total anonymity. Participation in the study is completely voluntary and you may withdraw at any time. If you have any questions concerning procedures you may call me (319) 524-1402.

Your participation, time, and effort in aiding our research is appreciated.

Sincerely,

David Scala
2125 Logan Court
Keokuk, Iowa 52632
APPENDIX C

INSTRUMENTS
School System Perceived Quality Assessment Instrument
Department of Professional Studies • Iowa State University

To the Participant: This instrument requests information from you and your colleagues about perceptions of the level of quality found in your school system's operations and activities. Please provide the information requested below, and complete the rating section on the next two pages as instructed below. All you need to do when you have completed this instrument is to fold it, tape it closed, and drop it in the U.S. Mail. Thanks for your help and cooperation. Your responses will help in future efforts to improve education.

Part I: Demographic Information
Please provide the following information:

1. Position: □ Teacher □ Support Staff □ Administrator □ Superintendent □ Board □ Other
2. Home Annual Income: □ Under $10,000 □ $10,000 - 29,999 □ $30,000 - 49,999 □ Over $50,000
3. Gender: □ Male □ Female
4. Age: □ Under 18 □ 18 - 29 □ 30 - 55 □ 56 - 70 □ Over 70
5. Level of Education: □ Less than B.A. degree □ B.A. degree □ Master's degree □ Doctorate degree
6. Years Experience in Current/Similar Job: □ Under 5 yrs. □ 5-10 yrs. □ 11-25 yrs. □ 25 yrs. or more

Part II: Rating of School System Quality Components
Directions: Please state your judgment of the current situation and the desired or ideal situation in your school system. Consider the statements on the following two pages carefully, and indicate the degree to which you feel each statement describes your school system. Note that you are asked to respond to each statement twice: once in the current situation column, and once again in the desired situation column.

Definitions:
1. Current Situation: What is the status of your school system now in terms of the statement — what do you see is the present state of affairs on this item?
2. Desired Situation: What should the status of your school system be in terms of the statement — what would you like to see or find in your system on this item?

Please respond in both columns (current and desired) on each statement, and mark only one response for each statement in each column.

RESPONSES ARE STRICTLY CONFIDENTIAL
AND WILL BE REPORTED ONLY IN SUMMARY FORM BY DISTRICT

After completing the instrument, please fold and tape it closed, and drop it in the U. S. Mail. Thank you for your assistance and cooperation!

Please open the instrument, and proceed with the next section.
School System Perceived Quality Assessment Instrument

Please indicate to what extent you agree or disagree with each item.

Respond to both columns on each item, and mark only one response in each column.

<table>
<thead>
<tr>
<th>A. Leadership</th>
<th>Current Situation</th>
<th>Desired Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. District-level management is committed to improving quality.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The school system's policy or statements on quality are clearly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>communicated to all employees.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. District-level management is visibly involved in and actively promotes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>quality within the school system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. District-level management is recognized outside the school district for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>promoting quality.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The school system supports employees and students to promote quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>awareness with community, state, national, educational, business, and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other organizations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. School system client focus and quality values are integrated into</td>
<td></td>
<td></td>
</tr>
<tr>
<td>day-to-day leadership of all operations.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| B. Information and Analysis                                                 |                  |                   |
| 7. Assessment data are used to improve curriculum, instruction, and         |                  |                   |
| operations of the system as a whole.                                       |                  |                   |
| 8. Information is communicated in a systematic manner.                      |                  |                   |
| 9. Adequate procedures are in place to collect data about organizational    |                  |                   |
| performance from a variety of sources.                                      |                  |                   |
| 10. Decisions are made based upon collected data and analysis of results.   |                  |                   |
| 11. Improved quality has been the result of data collection and analysis.   |                  |                   |
| 12. The quality of programs and services is compared with those in other    |                  |                   |
| school systems.                                                             |                  |                   |

| C. Strategic Quality Planning                                               |                  |                   |
| 13. The system planning process is integrated into daily operations and     |                  |                   |
| involves all administrative, instructional, and support areas.             |                  |                   |
| 14. Quality tools and techniques are used in the normal planning process.  |                  |                   |
| 15. Each department or unit has a mission, and has identified key           |                  |                   |
| processes and client needs.                                                |                  |                   |
| 16. Continuous improvement is emphasized in district strategic planning     |                  |                   |
| efforts.                                                                   |                  |                   |
| 17. Information from staff and community is used for strategic planning.    |                  |                   |
| 18. Cooperative teams are formed and used in strategic planning involving   |                  |                   |
| all levels of employees.                                                   |                  |                   |

| D. Human Resource Development and Management                               |                  |                   |
| 19. Quality awareness training is made available to all employees on a     |                  |                   |
| regular basis.                                                             |                  |                   |
| 20. Employee teams are regularly used to solve district problems.           |                  |                   |
| 21. Empowerment, risk taking and innovation are encouraged and supported.  |                  |                   |
| 22. There are opportunities for individuals and groups to contribute to     |                  |                   |
| quality goals and plans.                                                   |                  |                   |
| 23. Individualized professional development plans are used in staff        |                  |                   |
| development and training.                                                  |                  |                   |
School System Perceived Quality Assessment Instrument

- Please indicate to what extent you agree or disagree with each item.
- Respond to both columns on each item and mark only one response in each column.

<table>
<thead>
<tr>
<th>Current Situation</th>
<th>Ideal Situation</th>
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E. Management of Process Quality

26. Validation of program performance and actual results is done regularly.
27. Articulation among all grade levels in curriculum planning and delivery is encouraged and implemented.
28. Procedures have been established to reduce student dropout rates.
29. Advisory committees are extensively used to maintain up-to-date program content and processes.
30. Reports and findings about results and performance are shared freely with the board, staff, and the community.
31. Quality or performance audits of programs and courses are conducted regularly.

F. Quality and Operational Results

32. Major trends of key programs and services are identified and monitored over time.
33. The number of purchased services and consultant assistance contracts have increased over time.
34. Graduates are continuously tracked and information about their placement and status is analyzed.
35. Strategies are in place to diagnose continuously the skills and ability levels of students in key learning areas.
36. The quality of support and services (equipment, instructional resources, training etc) provided is improving.
37. The quality of the school district is compared regularly with other schools' program results and performance.

G. Client Focus and Satisfaction

38. Procedures for handling inquiries and complaints are well established and operate smoothly.
39. Surveys are regularly used to obtain student and parent feedback.
40. Post-secondary institution and employer satisfaction with graduates are monitored on a regular basis.
41. Clear standards are established and employees are taught skills to effectively interact with parents, students, employers, and citizens.
42. Future student curricular and program needs are identified and tied to curriculum development.
43. Information is gathered frequently to monitor progress and improvement from year to year in all areas.
44. Special training in helping clients is provided to all professional and support staff on a regular basis.
45. Client satisfaction with this school district's performance is improving over time.
Thank you for your help and cooperation!
Please fold booklet in half (mail panel out), tape closed, and drop in U.S. Mail.
Thank you for your help and cooperation!

Please fold booklet on dotted line, tape closed, and drop in U.S. Mail.
<table>
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<tr>
<th>BOARD MEMBER ROLE PERCEPTIONS</th>
<th>DESIRED SITUATION</th>
<th>CURRENT SITUATION</th>
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<tr>
<td>Vision</td>
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<tr>
<td>1. Views its role as policy making and goal setting.</td>
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<td>2. Plans strategically for the future.</td>
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<td>3. Is committed to excellence and equity in its educational programs.</td>
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<td>4. Recognizes diversity and plans programs within a global context.</td>
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<tr>
<td>5. Encourages participation by the community in planning.</td>
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<tr>
<td>6. Seeks and responds to many forms of parent and community participation in the school system.</td>
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</table>

| Structure                     |                   |                  |
| 7. Supports leadership for change. | 1 2 3 4 5 | 1 2 3 4 5 |
| 8. Encourages collaboration with families, community organizations and other public and private organizations. | 1 2 3 4 5 | 1 2 3 4 5 |
| 9. Believes in education of the whole child in becoming an effective member of society. | 1 2 3 4 5 | 1 2 3 4 5 |
| 10. Sets high standards of performance for all students. | 1 2 3 4 5 | 1 2 3 4 5 |
| 11. Looks at students as customers and adapts programs to fit student needs. | 1 2 3 4 5 | 1 2 3 4 5 |
| 12. Puts a high priority on budgeting funds for staff development programs. | 1 2 3 4 5 | 1 2 3 4 5 |
| 13. Uses a formal procedure for assessing the performance of the superintendent. | 1 2 3 4 5 | 1 2 3 4 5 |
| 14. Uses a formal procedure for assessing the performance of the board of education. | 1 2 3 4 5 | 1 2 3 4 5 |
| 15. Employs personnel only after receiving a recommendation from the superintendent. | 1 2 3 4 5 | 1 2 3 4 5 |
| 16. Sees the superintendent as chief executive officer for the district. | 1 2 3 4 5 | 1 2 3 4 5 |
| 17. Provides direction to the superintendent but does not become involved in administrative decisions. | 1 2 3 4 5 | 1 2 3 4 5 |

| Accountability                |                   |                  |
| 18. Keeps the primary focus of board service as student achievement. | 1 2 3 4 5 | 1 2 3 4 5 |
| 19. Participates in opportunities for board member training and in-service. | 1 2 3 4 5 | 1 2 3 4 5 |
| 20. Has adapted methods of informing the public of school programs and progress of students. | 1 2 3 4 5 | 1 2 3 4 5 |
| 21. Makes decisions based upon what is best for all students. | 1 2 3 4 5 | 1 2 3 4 5 |
| 22. Supports board decisions even when there is a dissenting opinion. | 1 2 3 4 5 | 1 2 3 4 5 |
| 23. Establishes a policy and process for the adoption of textbooks, library books, and curriculum expectations. | 1 2 3 4 5 | 1 2 3 4 5 |
| 24. Opportunities and support are provided for decision to be made at the individual school building site. | 1 2 3 4 5 | 1 2 3 4 5 |
| 25. Obtains systematic evaluation of the district's progress toward the accomplishment of all its purposes. | 1 2 3 4 5 | 1 2 3 4 5 |
| 26. Regularly evaluates the instructional program in relationship to the district's educational objectives and terminates programs if inefficient or ineffective. | 1 2 3 4 5 | 1 2 3 4 5 |

| Advisory                      |                   |                  |
| 27. Communicates the vision of the district to the community. | 1 2 3 4 5 | 1 2 3 4 5 |
| 28. Accepts the board's role as one of supporting systemic change. | 1 2 3 4 5 | 1 2 3 4 5 |
| 29. Is committed to working with the community as a whole to create quality educational programs. | 1 2 3 4 5 | 1 2 3 4 5 |
| 30. Provides leadership for education and is an advocate for the educational needs of children. | 1 2 3 4 5 | 1 2 3 4 5 |
| 31. Works to influence policies of governmental bodies and organizations whose decisions affect children. | 1 2 3 4 5 | 1 2 3 4 5 |
| 32. Encourages innovation and risk taking in instructional programs and practices. | 1 2 3 4 5 | 1 2 3 4 5 |


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