



United States  
General Accounting Office  
Washington, D.C. 20548

Human Resources Division

B-251772

February 10, 1994

The Honorable William F. Goodling  
Ranking Minority Member  
Committee on Education and Labor  
House of Representatives

Dear Mr. Goodling:

On September 20, 1993, we briefed your staff on the preliminary results of our work concerning the use of Total Quality Management (TQM) principles in elementary and secondary schools. Specifically, you asked us to (1) identify elementary and secondary schools applying TQM principles; (2) describe how these institutions typically implement TQM, including both the benefits and challenges of adopting this approach; and (3) determine what role the federal government has played with regard to TQM efforts in elementary and secondary schools.

In addressing these objectives, we reviewed the literature on this issue; interviewed various experts, including TQM consultants working with school districts; and conducted case studies at two school districts, which we present in an enclosure. This correspondence presents our final observations on the application of quality management principles by schools and school districts.

BACKGROUND

TQM is a management philosophy originally applied in an industrial setting. Japanese companies were the first to embrace this approach, and TQM is often credited with the dramatic success of Japanese industry over the last few decades. The basic principles of TQM include:

- having a visionary, committed leadership team;
- understanding customer expectations;
- empowering employees at all organizational levels;
- ensuring that quality improvement is continuous and long term;
- using a sound system to measure quality;
- opening communication channels at all levels; and
- providing comprehensive quality training programs for all employees.

In taking note of industry's success with TQM, some school superintendents and educators have begun using TQM in all facets of school operations. As one expert recently wrote:

TQM provides educators with a conceptual framework for addressing these issues in our schools. TQM gives us a philosophy and a set of tools to understand--through data analysis--what our [education] systems are made of, what they are capable of doing, and the reasons and ways suboptimization is taking place.<sup>1</sup>

As a sign of growing interest in the application of TQM principles there are proposals to expand the Malcolm Baldrige National Quality Award to evaluate the success of TQM in schools.<sup>2</sup> In addition, some states, including New York and Texas, have established or are considering statewide quality awards for education.

#### WHAT WE FOUND

Our literature review and discussions with TQM experts showed that few schools or school districts have implemented TQM programs. Those which employ TQM have programs unique to their own operations, even though they are all following the same basic TQM principles. In many instances private-sector corporations sponsor these TQM efforts. Skepticism about the benefit of and resistance to behavioral changes that underscore TQM--from the school board down to the teachers--typify the barriers to initiating TQM. However, some believe that overcoming barriers to TQM could allow schools and school districts to realize a number of benefits, ranging from more cooperative relations between teachers and administrators to improved educational outcomes for students.

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<sup>1</sup>Bonstingl, John Jay, "Schools of Quality: An Introduction to Total Quality Management in Education," (Alexandria, Virginia: Association for Supervision and Curriculum Development, 1992), p. 27.

<sup>2</sup>Established in 1987, the Malcolm Baldrige National Quality Award is designed to promote quality awareness, recognize quality achievements of U.S. companies, and publicize successful quality strategies. The U.S. Department of Commerce's National Institute of Standards and Technology sponsors the award, which is administered by the Malcolm Baldrige National Quality Award Consortium, Inc., a joint effort of the American Productivity and Quality Center and the American Society for Quality Control.

### Few Schools Have TQM Programs

Nationally there appears to be only about 75 ongoing TQM programs ongoing at either the school or school district level. While many schools and districts currently implement some kind of school improvement or reform program, most of these programs we believe cannot be considered TQM. For example, some of these programs typically have a limited scope, do not consider community needs or customer input, are not coordinated with other school or school district initiatives, and lack a commitment to a long-term process of change essential to TQM. Moreover, most of these programs omit certain essential elements of TQM, such as a quality council and TQM teams.

### TQM Programs Frequently Product of Corporate Community Outreach

The literature indicates, and our interviews with consultants and school district officials corroborate this fact, that many TQM programs in schools have resulted from or were influenced by corporate community outreach programs. Many of the better known TQM school programs are sponsored by companies committed to implementing total quality. For example, Xerox Corporation works extensively with eight school districts in Virginia; Bellcore, Inc., is working with several school districts in New Jersey; and Corning, Inc., actively supports school TQM efforts in several communities near its corporate facilities.

However, sometimes schools begin implementing TQM because of a personal interest on the part of a few key individuals. For example, the principal at the George Westinghouse Vocational and Technical High School, a large urban commuter school in Brooklyn, New York, developed an interest in TQM because of TQM training received at a local bank. In another case, the consortium of school districts in Madison, Wisconsin, was formed when three neighboring superintendents who had attended graduate school together began to merge their interest in TQM with outcome-based education.

### A Variety of TQM Models Exist

The literature discusses many TQM educational models and many articles focus on how a particular school or district applied TQM principles to improve one or more aspects of its operations. For example, the school leaders in the well-known TQM experiment at Mt. Edgecumbe High School in Sitka, Alaska, applied TQM principles and practices not only to enhance the work of teachers and students in the classroom, but also to establish a successful student-operated salmon

export business with Japan. At Maryland's Glenwood Middle School, TQM was used to institute a New England-style town meeting for the student body. Before attending meetings, students work in one or more quality circles. In their teams, students discuss how to improve their individual and collective work, pledging specific efforts to help bring about planned results. In Virginia's Rappahannock County schools, TQM is used in virtually every aspect of the district's functioning. For example, report cards have been designed by parent-teacher-student teams and serious disciplinary problems on buses have been solved as a result of a Quality Improvement Committee.<sup>3</sup>

In studying how schools and school districts implement TQM, the National Alliance of Business concluded that TQM is a means to an end and not an end in itself; a way to strengthen other improvement efforts by adding a systemic focus. The study, developed from over 200 interviews at 11 TQM-based educational institutions, found that (1) infrastructure offered by total quality practices, processes, and tools is critical for achieving the systemic change required for school systems; (2) implementation of total quality in education is not a quick-fix solution; (3) business management experience and political support are critical for implementing total quality in education; and (4) bridges need to be built between business and education leaders before they can use total quality processes together to restructure education.<sup>4</sup>

#### Perceived Barriers to TQM

We identified a number of potential barriers to successfully implementing TQM. We believe one of the biggest barriers is cynicism on the part of school management and staff toward implementing "yet another" school reform or educational restructuring effort. Another hurdle is the reluctance of school board and school district officials to change their traditional approaches to managing their operations. Other notable obstacles to the implementation of TQM include (1) convincing those who hold the purse strings to invest the resources essential to implementing TQM--especially time and money needed for staff training--in an environment marked by fiscal conservatism and cutback management and (2) the

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<sup>3</sup>Bonstigl, John Jay, "The Quality Revolution in Education," Educational Leadership, Vol. 50, No. 3. (1992), pp. 8-9.

<sup>4</sup>Siegel, Peggy, and Sandra Byrne, "The Cutting Edge of Common Sense: Total Quality/Education/Systemic Change," (Washington, D.C.: National Alliance of Business, 1993).

difficulty of including all key stakeholders, such as central administrators, principals, teachers, and parents, in the decision-making process.

### Perceived Benefits of TQM

A variety of tangible benefits have been reported at individual schools and school districts implementing TQM. For example, at the George Westinghouse Vocational and Technical High School, a TQM project is credited with both substantially reducing the number of students failing all courses and improving students' academic performance. In another case, at the Millcreek Township School District in Erie, Pennsylvania, TQM is cited for the decision to change procedures for providing transportation and maintenance services, resulting in significant efficiency improvements. In another instance, at Parkview School in Orfordville, Wisconsin, TQM is credited with saving \$60,000 in the food service operation. However, we noted that many of the claimed improvements to date lack detailed before and after measurements common to industrial TQM projects.

### What Has Been the Federal Role?

Currently, the federal government plays little or no role in the implementation of TQM at elementary and secondary schools. Moreover, our literature search showed no general interest in an increased federal role with regard to schools' TQM programs. However, officials we interviewed during our case studies had a few suggestions for ways the federal government could assist schools and districts implementing TQM. Some administrators suggested that the Department of Education could initiate a program to support TQM initiatives and provide leadership for schools' TQM efforts. One principal suggested that certain applications for federal education funding could require applicants to demonstrate that their district or school has adopted TQM as a condition for receiving money from some federal funding streams. Finally, some school staff members commented that they would like to see more federal funds directed to individual schools implementing TQM.

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Copies of this letter will be provided to the Secretary of Education, relevant congressional committees, and other interested parties. If you have any questions or would like to discuss this material further, please call me at (202) 512-7014.

Sincerely yours,

*Cornelia M. Blanchette*

*for*

Linda G. Morra  
Director, Education  
and Employment Issues

Enclosure

### Challenges of Implementing TQM

District officials, principals, and teachers face an array of challenges implementing TQM. The biggest challenge is to overcome the resistance of school staff to change. Administrators and principals see TQM as a potential threat and have to be encouraged to share power; teachers have to be encouraged to accept their new role in management. Teachers feel threatened as the traditional protections provided by union contract work rules change. For example, after an individual school council was empowered to make staffing decisions, it chose to employ two additional subject area teachers, rather than the traditional music and art teachers. This created friction within the local teachers union, rather than the more usual friction between management and teachers. Now, however, the union is focusing less on resolving management/teacher conflict and more on implementing teacher empowerment programs. The union supports teacher empowerment and its current contract allows individual school councils to change some work rules. Another major challenge was getting all units in a school to cooperate. Several staff mentioned that, in the past, school principals could make many decisions quickly; now decisions take more time because a consensus is required.

### Benefits of Implementing TQM

JCPS officials credit TQM with many positive outcomes, however, they do not attribute the improvements cited to any particular TQM initiative. For example, between 1981 and 1991, the average daily attendance rate increased from 91.2 to 94.1 percent and the dropout rate declined from 6.4 to 2.4 percent. From 1982 to 1991, the number of seniors going on to postsecondary education rose from 63 to 77 percent. Seniors graduating in 1988 received over \$8.9 million in scholarships; by 1991 the amount had increased to \$24.6 million. In 1981 there were no programs to help employers improve the literacy of their work force; five work programs were developed by 1986; and in 1991 there were 45 active programs. The Parent Teacher Association membership more than doubled between 1981 and 1991, going from 34,000 to 76,000 members. Business, community, and foundation partnerships, almost nonexistent in 1981, raised \$1.4 million in 1984; by 1991, the figure had grown to \$10.3 million.

TQM is also cited as one reason for the more cooperative attitude between JCPS and the teachers union. TQM principles were employed with great success in negotiating the latest teacher union contract. In addition, JCPS believes that by adopting TQM they were able to comply with some requirements of the Kentucky Educational Reform Act (KERA) before the mandated deadline. For example, KERA mandates that all schools have school councils. Most schools in Jefferson county have formed school councils in

the natural course of applying TQM principles. Finally, the current improvement initiative will enable JCPS to more accurately measure the future impact of TQM on its operations.

#### TQM AT ALTOONA AREA SCHOOL DISTRICT

AASD began its formal TQM effort in 1991. The primary motivation for TQM was the school board's decision to implement site-based management. The superintendent and union president, both familiar with TQM principles, decided TQM was the most effective means to implement site-based management. The union is in full agreement with the goals of TQM and is cooperating fully with its implementation. Officials said that the district is gradually building TQM into all phases of its operations.

The current TQM program was a natural outgrowth of two previous quality improvement initiatives in the district: Altoona Design for Effective Practices (ADEPT) and the Coalition of Altoona Professionals (CAP). The ADEPT program, initiated in 1984, brought principals and teachers together for the first time to work jointly on improving the district's curriculum delivery program. The CAP program, initiated in 1988, brought administrators and school board members into the management process. CAP sought to provide a means to solve problems and build consensus between school administrators and staff. A consulting firm was hired to implement CAP and train staff.

To begin implementing TQM, the superintendent formed a TQM steering committee with representatives from all key stakeholder groups in the district. The TQM steering committee, which has been working together for over 2 years, is divided into four subcommittees--training team, school councils, customer focus, and marketing and communication--each with its own mission and projects. Now, however, the primary focus is shifting from the steering committee to individual schools. Individual school councils were elected and have been trained in TQM. These councils, which also have representatives from all stakeholders in the school community, became operational in September 1993. Members of the steering committee are working with the individual school councils as TQM program facilitators. The individual councils will eventually share responsibility for the operations of the school with the principal. Each council will develop and set its own individual agenda according to the needs in the local community. The superintendent expects that councils initially will deal with concerns such as attendance and parent volunteerism and will eventually progress to setting curriculum and budgeting.



### Challenges of Implementing TQM

For TQM to succeed in the district, school officials must overcome several barriers. First, district officials need to deal with the skeptical attitudes of some staff members. There have been so many improvement programs over the years that some staff view TQM as just another improvement effort, the latest "flavor of the month." Second, some school staff are becoming impatient with the process and could become disillusioned with it before TQM is fully implemented. For example, the more senior district staff have been anticipating shared decision making for some time and their expectations have been delayed. Third, district staff have high expectations for staff empowerment; if those expectations are unmet, staff will be disenchanting and morale could diminish.

In addition, some teachers are concerned that as individual school councils take on an increasing role, the former protection afforded by the union contract will not be available. Union work rules are being changed to accommodate TQM. Teachers are particularly concerned about their seniority and school transfer rights. Finally, there are concerns that the programs initiated by the individual school councils will conflict with provisions of Pennsylvania's Outcomes-Based Education regulations. For example, AASD might have to request a state waiver from the teacher rating system because its internal teacher rating system--developed utilizing TQM--may not comply with the rating system mandated by the state.

### Benefits of Implementing TQM

Officials we interviewed cited a few of the key benefits that they expect to realize from successfully implementing TQM. First, the TQM program will involve the entire school system, not just part of the system or program as in past improvement efforts. All groups in the system--including community members, school board members, parents, teachers, administrators, and noninstructional staff--will be involved for the first time. Staff will have more say on issues facing their particular school and for the first time noninstructional staff, such as custodians and bus drivers, will be involved. Second, officials expect staff morale to improve. And third, individual schools will better serve the needs of their communities.

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