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CHARTING A NEW COURSE: Public Schools Embarking on a Quality Journey

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Abstract

During the past several years, we have watched the ups and downs of quality efforts in many school systems. It is not too surprising that there are ups and downs in this process in education as many industrial organizations have made similar errors when first launching quality efforts. Most of these failures are due to the lack of information of those driving the quality initiatives. Those responsible for quality lacked adequate working knowledge on how to manage quality. Lacking this knowledge, and pressed for quick results, they made a choice which seemed reasonable at the time, but was doomed to failure no matter how well the strategy was carried out. In the dialect of the marksman, their choice was "ready, fire, aim."

Although the subject of "quality management" is gaining importance on the agenda of many school systems across the country, there has been very little published to clearly and convincingly illustrate how quality management applies in this setting. And, much of what has been published has been written by well-intended amateurs. This has resulted in a number of school systems following the advice of those not well grounded in experience.

In education, quality management remains severely limited as an applied technology. Such is not the case in many other American industries. For 10-20 years, industrial quality management has been as rigorous as any applied discipline. The strategies associated with success have been well documented. As schools turn more energy and resources to applying quality management they can save time and effort if they try to build on the achievements and successes of quality management in industry. As schools are searching for analogies and transportable techniques, they can shorten the evolutionary process in school systems which took decades to play out in industries, by paying attention to what has worked in industry.

In choosing a quality strategy, schools are well advised to learn from organizations who have achieved measurable results in quality. Some

of these role models might be winners of the [Malcolm Baldrige National Quality Award](#). Others, although not Baldrige winners, may have achieved the rewards of a well-chosen quality strategy. These are the organizations to emulate. Schools should discover the strategies they have in common, and use these as the foundation for your efforts.

When studying the approaches used by the quality leaders, make certain that you are aware of the length of the journey they made to achieve their quality results. Remember, it takes years to attain the rewards of quality efforts. Sometimes we are so excited to copy what the quality leaders are doing today, we neglect to identify the road-map which allowed them to get there. The temptation is to dive before learning how to swim.

This paper has been prepared to guide you in choosing a quality strategy for your school system. "Charting a New Course" is based on Juran Institute's analysis of over 100 quality leaders (hospitals, manufacturing companies, financial services, public utilities, hotels, etc.) [\[1\]](#). The lessons learned are universal, and can be readily adapted to help school systems take aim at quality.

Introduction

Quality. It's a word that you hear a lot these days. Organizations all over the world are talking about "Total Quality Management" (TQM). But, what is total quality? Is it a fad, or is it a viable strategy for remaining competitive in an increasingly competitive world? How is it that some organizations have been so successful in achieving the rewards of quality? And why is it that some quality efforts have failed? Can the concepts of industrial quality management be successfully applied to education?

We would like to share some recent highlights of the quality movement. Then, we will develop a list of approaches to quality management that have proven effective in attaining quality leadership, and remaining competitive. Finally, we'll take a look at whether all of these can be applied to education.

What Drives Quality?

One of the first questions is why do anything at all? Why does any organization -- private or public, industrial or service oriented -- want to adopt and implement the methods of modern quality management?

Some organizations are driven by a vision to be the best. Others are driven by the need to retain a leadership position they already enjoy. However, most organizations turn to quality because they find themselves in a crisis. Following World War II, Japan faced a crisis of enormous magnitude. "Made in Japan" meant cheap, shoddy products that wouldn't sell. And so, Japan focused on quality to compete in the world marketplace. Soon the words "Made in Japan" were synonymous with reliable and high quality goods. By the 1970s, American electronics firms and automobile manufacturers had reached a point in the crisis that stimulated them to address quality within their organizations.

In 1983 a national report entitled "Nation at Risk" ([Gardner, David et al, 1983](#)) signaled a crisis in education. American children were losing their educational competitive edge in the global market place. Unfortunately, twelve years following the delivery of that report, American children remain competitively behind other nations in critical areas of education.

What's Driving Quality in Education?

The education profession is now facing some very sober realities. Like many organizations, education is coping with growing customer dissatisfaction, as represented by, 1) declining support for budgets, 2) increasing competition from private educational companies, 3) rapidly shifting student and parent demands, and 4) a weak economy less apt to support increased costs for business as usual. Tests scores in math and science are being compared internationally and the U.S. falls behind the nations with whom we compete. In a perverse sense, that's the good news. It means that the education profession is firmly in the midst of a crisis and that's a proven motivation for improvement.

A Changing Paradigm

In every one of the school systems listed below, private organizations have been brought in to run all or part of the school system [\[2\]](#). Several years ago the idea of a private company taking over the operations of a school district proved unlikely [\[3\]](#). But, since that time, more than two dozen school districts in the United States have entered into such agreements. And a lot of other school districts are considering this possibility.

However, private management of schools is not, and should not be the only concern we feel in the public education system. Numerous cottage

industries are developing with the express purpose of delivering high quality educational services to public school children. Some services now include:

1. Education for children with handicapping conditions
2. Remedial instruction in math, reading and writing
3. Management of students with chronic behavioral problems
4. Instruction to home-bound and hospitalized students
5. Distance learning delivered by satellite

Companies offering these services are forging new relationships with public education. School vouchers, charter schools and school privatization are all significant issues on the public and political agenda. Public education and private enterprise are rapidly forming new relationships to deliver a quality of educational services not thought possible before.

Will Quality Work in Education?

It is natural to wonder if the methods of industrial quality management will work in the practice of education. The differences seem profound between industry and the educational progression, and even more so between the assembly line and the decision-making process of the education profession. The reasons for skepticism are many:

1. Doesn't quality management only apply when there is a standard, uniform product? How can quality management help in education where every student and every class is different?
2. Where is the "assembly line" in the practice of education? Isn't quality a matter of the teacher's and administrator's expertise?
3. Quality management has certainly helped within the culture of manufacturing and even within some service organizations, but how can it work in the culture of the educational community? Teachers and administrators tend to be very isolated in their job functions. How can these individual practitioners be a part of a coordinated quality effort?
4. Quality management requires that quality somehow be measured. How can we possibly measure or even define something as all inclusive as the quality of an education received by a student?

Quality Has Worked In Many Other Industries

Five years ago doctors and hospital administrators asked the same questions we've just listed. They too engaged in plenty of lively debate as to whether quality management could be beneficial in this unique, profession-based industry. After all, they were very different. They were not making widgets. Every patient and case that came into the hospital was different. In addition, there were the professionals to deal with. How can you "manage" the expertise and decision making process of the doctors?

Now, with several years of experience in numerous health care organizations, we have factual evidence that quality management efforts can indeed be successfully implemented in a unique, profession-based culture ([Berwick, Godfrey, & Roessner, 1990](#)).

During the late 70s and 80s, the benefits of quality management were also demonstrated in many other industries and cultures. A study by the United States General Accounting office examined the impact of formal quality management practices on the performance of selected organizations in the U.S. The study found that in nearly all cases, organizations that used total quality management practices achieved better employee relations, higher productivity, greater customer satisfaction, increased market share and improved profitability ([United States General Accounting Office, 1991](#)).

Education Responds to the Crisis

Some of our colleagues in education have already started to respond to this new challenge. From State Education Departments, to school districts, to individual teachers and students in the classroom, we have examples of lessons learned from pioneers that are beginning to forge the way for continuous improvement in education.

- * The Virginia Department of Education has utilized a quality improvement process to decide which category of special education teachers were in need of the greatest staff development assistance. This has made a significant impact on the state's special education services.

- *The Enterprise, California School District utilized a quality improvement process to significantly increase the reading scores in two elementary classrooms that were falling behind their peers.

* George Westinghouse High School in New York, recently lost 21.2 percent of its faculty . Despite the loss, George Westinghouse initiated a quality improvement process that has decreased the dropout rate from 7.8 percent to 5.3 percent -- in a city averaging 17.2% dropouts city-wide. They also decreased the number of students failing every course from 151 to 11. George Westinghouse was also able to reduce their class cutting by 39.9 percent utilizing a quality improvement process [\[4\]](#).

* Mt. Edgecombe High School utilized a quality improvement process to restructure their entire approach to classroom instruction and education. Their national recognition as a model school for the implementation of total quality management serves as an example for us all ([Main, 1994](#)).

* Regional School District 14 in Woodbury, Connecticut used quality improvement to reduce the percentage of students needing remedial services in mathematics from 16 percent to 1 percent, and in reading from 17 percent to 5 percent. Even the students in Woodbury were involved with quality improvement. They took what they learned about quality tools and methods to substantially increase the percentage of juniors and seniors receiving their choice of educational electives. Another student team looked at a problem in the cafeteria. For two decades the cafeteria had operated at a loss. The results of this project represented a \$100,000 turn-around for the school.

Learning From the Leaders

If you are embarking on a quality effort, one of the best pieces of advice we can give you is to study actual successes and failures in other schools and particularly in other industries.

For decades, Juran has been a close observer of "what's been happening" in quality. We have studied in detail the many approaches organizations have tested in their quest to attain a leadership status. We have seen what has worked, and we have seen what has not worked. We believe that the strategies used by these leading organizations have followed a pattern so closely as to establish a cause and effect relationship. The strategies have shown us a road map, which if followed, can result in attaining the rewards and benefits

associated with quality leadership ([Juran, 1989](http://www.juran.com)) (Also check <http://www.juran.com> for additional information).

All Have Achieved Stunning Results

First, let us notice that all of the true, quality leaders have achieved stunning results with respect to quality (DeFeo, &Vecchio, 1994; Juran, 1993). These organizations have demonstrated numerous instances in which, during a few years:

1. The time to provide customer service has been reduced by an order of magnitude
2. Errors have been reduced by an order of magnitude
3. Productivity has been doubled through quality improvement
4. Costs have been cut by 50 percent, again through quality improvement

The Concept of "Big Q"

A second notable achievement was that quality improvements took place throughout the entire spectrum of activities: customer satisfaction; timeliness of customer service; elimination of waste; quality and efficiency of business processes; employee satisfaction. To use the latest terminology, these organizations replaced the traditional focus on so-called little "q" (statistical production quality) with the new concept of Big "Q" (organizational and leadership quality). The term Big Q is a label for the new, modern and enlarged scope of managing for quality. Under that enlargement:

1. The term "product" is applied to both tangible outputs (deliverables) and services
2. The term "customer" includes all who are affected by the organization's products and services, and who are also affected by its actions, whether they are external to the organization or internal
3. Quality management is applied to all processes in an organization, professional and administrative -- whether they produce tangible outputs or intellectual results
4. Structured managerial processes continually challenge the organization to systematically solve quality problems, and reduce quality related costs.

Gains Beyond Measurables

The third notable effect is that the organizations made extensive gains beyond the measurable results. As a by-product of making quality improvements, their personnel became experienced at making improvements, and got into the ongoing habit of making quality improvements. In addition, most of these improvements were made by teams. That required teamwork on an unprecedented scale.

We can learn useful lessons from the experiences of these organizations. The fact that they got such results proves that it is doable elsewhere. However, to learn from their experience requires identifying what are the universal concepts and processes which made those results possible.

Create the Infrastructure for Quality Improvement

The first lesson is that organizations must create the infrastructure for quality improvement. Quality improvement on a massive scale requires an infrastructure. The elements of that infrastructure have become clear:

1. Establish a district-level quality council to guide quality improvement efforts
2. Provide a process for selecting meaningful projects to be tackled
3. Provide a process for appointing teams to tackle the projects. Major projects are typically cross-curricular or cross-grade level. They require a team approach.
4. Train teams in how to work as teams, and in how to analyze and diagnose problems and provide remedies. This type of training should be directed at changing behavior. (Training limited to education or awareness will soon be forgotten).
5. Establish a progress review by the district quality council. The work of making improvements is constantly competing with the work of meeting budgets, schedules and other traditional educational objectives. To keep that competition in balance, the leadership of the school must review progress on meeting quality objectives as well as progress in meeting traditional goals
6. Give recognition for superior performance in quality improvement. This recognition becomes a major form of motivation, which in turn serves as a means of changing the culture and securing involvement.

7. Update the reward system. Participating in all those improvement projects adds substantially to the workload of everyone in the school system. This new work is mandated – it becomes part of the job description. As a result, the reward system must be updated to take into account the added responsibilities in quality.

Establish Stretch Goals

Another lesson is to establish stretch goals. Don't be satisfied with targeting a pedestrian pace of quality improvement. Reach out for goals such as:

1. Reducing the time it takes to implement a new curriculum change by 75
2. Reducing remediation rates in all subject areas by at least 50%
3. Improve the percentage of students scoring in the top range of your standardize test by 50%
4. Reduce the operating budget by 5% without reducing programming or staffing

Use Benchmarking to Prove it Can Be Done

The typical reaction to stretch goals is that they can not be met. One way of dealing with this reaction is to use the concept of benchmarking. Benchmarking involves setting goals based on results already attained by leaders in similar activities. The fact that someone has gotten those results proves that it is doable. Benchmarking does not necessarily mean that you can only learn from other schools. Sometimes the very best ideas come from examples outside of your profession.

Quality Improvement at a Revolutionary Pace

Quality improvement activities should be carried out at a revolutionary pace. Every organization has a multitude of chronic quality problems just waiting to be addressed. If you study the quality leaders in America, Europe and Japan, you will discover that the most influential element in their success has been the rate of their quality improvement efforts. The leading organizations have reported that hundreds, or even thousands of quality improvement projects are implemented in a single year. Many leading organizations now average more than one improvement per year. Toyota averages 46 quality

improvements per employee (that's well over a million improvements per year)!

Focus Quality Efforts on Customers

The leading organizations have moved quickly beyond the amateurish belief that managing quality just means doing things right and reducing the costs associated with poor quality. These are stills goals, but quality also means satisfying, even pleasing customers. Quality means meeting or even exceeding the needs, wants and expectations of customers. The word "customer" (or client as they are called in the professions) needs to be stretched to include all persons who are affected by the organization's processes and services (parents, teachers, students, businesses, community, etc.). Those persons include internal as well as external customers.

The educational community needs to precisely understand the needs of their customers, and design processes and services that meet and even surpass customer needs. Many school districts launch their quality efforts with an in-depth customer satisfaction survey. The results of such an effort often identify the critical areas that become nominations for quality improvement activities.

Start Small, Then Scale Up

Too many organizations begin a quality effort by marching down the quality road on a broad front. They launch a massive start-up, training everyone in the organization and getting everyone busy with quality. Don't do it! Quality efforts should start small with the identification of a few "pilot" projects. Use these early, controlled opportunities to gain experience. Then scale up as you learn how to make quality improvements. In addition, the success of the pilot projects will go a long way toward convincing the opposition that quality is worth the effort.

Avoid Trivial Issues

We have seen too many organizations turn their attention to specific quality problems that are either trivial or impossible to solve. The key issue is to avoid spending time on trivial quality problems. The selection of projects to tackle is a decision that should be left to the district quality council. The first projects tackled (those pilot projects) represent a bellwether for the rest of the school. They should be persuasive winners! More specifically:

1. A project should deal with a chronic problem -- one which has been awaiting solution for a long time.
2. A project should be critical to students, parents, teachers and the school board. Its solution should result in an important benefit to the school or district.
3. A project should be feasible and manageable (do not try to solve world hunger).
4. And finally, the project results should be measurable

It Requires a Lot of Work and a Lot of Resources

Now for an unwelcome lesson: all of this good stuff requires a lot of work and a lot of resources. Whoever wants those stunning results should also face up to the fact that the effort required adds substantially to the workloads of the participating personnel, including the practicing teachers and administrators. The estimates vary, but none go below 10 percent. Failure to face up to this fact has doomed many well-intended efforts. Attaining quality leadership also requires extensive training: in how to manage quality; in how to make improvements; in the tools and techniques.

Quality Improvement Has a High Return on Investment

It is true that quality improvement requires an initial investment in time, training and other resources. However, the experience within many hundreds of successful service organizations has shown the return on investment for quality improvement is among the highest available to an organization.

In our experience a 10 to 1 return is very common. School Districts around the country facing increased financial burden and a loss of taxpayers support need to address the "costs of poor quality" in the educational organization of schools.

The "costs of poor quality" are all those costs that would go away if we did everything correctly right from the start. While numerous reports on the use of TQM in schools have outlined academic improvements, few have addressed reduction in spending by eliminating the "costs of poor quality". If additional time, training and resources for the implementation of Total Quality Management is necessary, then educators must address the issue of "return on investment."

Administration Must Lead, Personally

Here's another very important lesson also sometimes unwelcome. Having observed a great many organizations in action, we cannot point to a single instance in which stunning results were produced without the active and personal leadership of the executive management. In the successful organizations, the top people virtually "took charge" of quality. They accepted personal responsibility for certain critical decisions and actions which are vital to Total Quality Management.

These critical actions and decisions consist mainly of the following:

1. Serve on a senior-level quality council (the council guides the school's quality efforts)
2. Establish the school's major quality goals
3. Set up the essential infrastructure that will make quality happen throughout the school system
4. Provide training in how to make quality improvements
5. Review progress along the way
6. Revise the reward system to include quality objectives and measurements

Will Quality Work in Education?

Quality management doesn't necessarily challenge the wisdom, creativity and experience of the education profession. Instead it seeks to challenge and improve the critical processes that support managerial decision making and professional achievement.

There are many critical processes within the educational community that are very similar to processes within other industrial and service organizations. There are, for example, functions such as staff development, payroll, facilities management, purchasing, and strategic planning. These processes can (and have) benefited enormously from quality improvement activities.

"Are these quality concepts applicable to the education profession?" The answer is a resounding yes. However, for the most part, the education profession is light years behind those organizations who are successfully implementing the concepts of quality management. It will take the work of some determined pioneers to make quality happen within the unique culture of the educational system.

The benefits of quality have been clearly demonstrated in many different industries and cultures. If you choose to go down this road,

we have little doubt that you too will benefit. However, you will be among the early pioneers. You will be on a voyage of discovery, with all of the associated perils that will greet you along the way.

Quality's relentless pursuit of doing things better, more efficiently, at lower costs, and with greater sensitivity to the customers' needs will ultimately differentiate the leading Educational Systems of the 21st Century.

ENDNOTES

- 1.** Information from Juran Institute's Research Department. The Institute maintains a private, internal research database which consolidates the lessons learned from hundreds of consulting assignments with a broad representation of clients in 50 countries. You may access their web server at <http://www.juran.com>
- 2.** Some of these public private partnerships include: Baltimore, Maryland- Educational Alternatives Incorporated of Minneapolis, signed a contract with the school board to manage 9 of their public schools. Three more schools were added in late May. (This contract was canceled in December 1995 due to a dispute between the company and the Board on what was owed).

Chelsea, Massachusetts – Boston University signed a ten year contract to manage the budget of the city's nine public schools.

Detroit, Michigan – University Public School, a public middle school operated by Wayne State University, is completing its first year of operation.

Hartford, Connecticut – Educational Alternatives Incorporated has taken over the operation of the entire school district. This contract is worth one billion dollars to this educational firm.

Lowell, Worcester, and Boston, Massachusetts – Christopher Whittle's Edison Project won the right to develop three charter schools to open in these locations in 1995. They will be public school that will receive state funding but will be autonomous from the local Board of Education.

Miami, Florida – Educational Alternatives Incorporated is now operating South Point Elementary School.

Minneapolis, Minnesota – The Board of Education hired the Public Strategies Group Inc. to resolve the financial problems of the 79 schools in this district.

Nashville, Tennessee – Alternative Public Schools Incorporated is seeking to manage one or more of the public schools in Nashville. The mayor of Nashville supports this takeover.

New Haven, Connecticut – The private Hyde Foundation operates the Hyde School of Leadership, a public school for ninth and tenth graders.

Pinckney, Michigan – Educational Alternatives Incorporated will manage all of the district's six schools.

Washington, DC – The district hired Sylvan Learning Center to tutor eleventh and twelfth grade students reading below grade level. The superintendent proposed turning fifteen of the district's schools over to private educational firms.

Wichita, Kansas – The school board agreed to let Chris Whittle's Edison Project operate three public schools on a for-profit basis.

Source: Connecticut Association of Boards of Education Journal. (1994). "Privatization Update." December, 1994, CABE Publishing.

- 3.** In the early 70s many companies were brought in to run part or all of a school. Among the notables was Behavioral Research Laboratories which ran the Bannacker School in Gary Indiana and a voucher experiment in Alum Rock School Districts (Santa Clara, California). The trend did not continue due to effective attacks on the practice by advocates of the status quo. At that point however, the only "crisis" we were aware of was the crisis in educating the "disadvantaged" and thus the efforts were all directed to that arena. Today the whole of education is facing the same crisis.
- 4.** Franklin P. Shargel, assistant principal, George Westinghouse Vocational & Technical High School. Various interviews.

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