

## **A Systems View of Improving School Performance**

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### ***Summary***

This paper discusses how the School District of Lancaster used the ISO 9001:2000 Quality Management System as a framework for improving school performance. The purpose is to highlight the challenges of the implementation process and the success quality can make in public education.

### ***What Happened?***

In February 1999 the School District of Lancaster became the first school district in the world to register the entire organization to the ISO 9001:1994 Quality Management Standard. The School District of Lancaster was re-registered to the ISO 9001:2000 Quality Management Standard in February 2003.

### ***Who is the School District of Lancaster?***

The boundaries of the school district include Lancaster City and Lancaster Township in South Central Pennsylvania. These two municipalities provide the school district with 13.2 square miles of urban-suburban homes for nearly 69,000 people.

The school district enrollment of over 11,000 students is housed in twenty buildings. There are thirteen elementary schools grades pre-kindergarten to grade 5, four middle schools grades 6-8, an alternative school grades 6-12 and a high school campus consisting of two buildings and two satellite community sites for grades 9-12. The District's total student population also includes 300 students who attend special classes at a regional education center (Intermediate Unit), 80 students who attend a charter school and 20 students placed in other Pennsylvania schools by the court.

Small Learning Communities are established in the secondary schools to provide a more personalized curriculum, opportunities for students to explore interests and career aspirations while ensuring a rigorous program. Currently, there are Small Learning Communities for Arts & Humanities, Business & Entrepreneurial, College Preparation and Partnerships, Hospitality & Tourism, International Baccalaureate/Advanced Placement, Public Leadership & Service, Science & Technology and Vocations & Technical Careers. The research literature is unequivocal – students do better academically and behaviorally when they are in smaller learning situations.

The ethnic makeup of the student population is 49 percent Hispanic, 25 percent Caucasian, 23 percent Africa-American, 3 percent Asian. More than thirty countries around the world are represented in the District's student population. Approximately one in fourteen students speak English as a second language.

Twenty-two percent receive special education services and sixty-four percent of the student population qualifies for free or reduced lunch. The school district operates with a payroll of 82 administrators, 838 professionals and 442 support staff. As the eighth largest employer in Lancaster County the school district operates with an annual budget of \$104 million.

## *The Plan*

The District set aggressive goals for raising student achievement. In order to reach these goals the school district developed a strategic plan titled *Priority One: A Call to Action*. This strategic plan guides the work of the district with six main ideas:

- Mobilize all stakeholders
- Institutionalize core beliefs
- Build trust in the goals and strategies
- Develop excellence in teaching and learning
- Empower relationships
- Resource essential supports

The school district's success is dependent upon the collective ability of everyone to believe all children can learn at high levels, to build strong relationships, to create system improvements and to support quality at every step of the educational process.

The strategic plan went beyond simply setting a challenging goal. It also included targets that held everyone accountable for doing what the school district set out to do – help all students achieve to high levels of academic performance. The targets are called vital signs; indicators designed to guide school progress in much the same way a physician is guided by specific indicators of the health of a patient. A physician may record body temperature, blood pressure, pulse, etc. In education we specify vital signs in areas such as readiness for school, attendance, achievement in core subjects, achievement in higher-level externally benchmarked courses, graduation rates and student satisfaction measured one year after graduation.

**Vital Sign #1 Readiness for School** - Research clearly shows that access to high quality early childhood experiences greatly increases a child's chances of academic success in later years. This vital sign addresses key strategies, such as reading aloud to young children, providing a rich selection of books, and creating essential partnerships with pre-schools, libraries and community groups committed to education.

**Vital Sign #2 Attendance in School and Class** – School attendance is a key factor in student achievement. The District instituted high expectations for regular attendance and a tough tardy policy to ensure we were doing everything possible for students to be present for learning. The standards were high and the consequence tough, but they were established to prepare students for the future by teaching them early on the importance of responsibility.

**Vital Sign #3 Achievement in Core Subjects** – The performance of students in reading and mathematics on the Pennsylvania System of School Assessment (PSSA) measured student achievement in four categories: top (advanced), high middle (proficient), low middle (basic) and bottom (below basic).

**Vital Sign #4 Achievement in Higher-Level and Externally Benchmarked Courses** – This measurement determines how well we challenge our brightest students to high levels of educational excellence. The school district records Scholastic Aptitude Test (SAT) scores and the number of students who enroll in International Baccalaureate and Advanced Placement courses. In addition to recording the number of students who participates in rigorous course work the district measures the number of students who qualify for college credit because of superior course results.

**Vital Sign #5 Persistence of the 9<sup>th</sup> Grade Class to High School Graduation** – The school district tracks the number of students who start 9<sup>th</sup> grade and persist to 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> grade. This process avoided the common practice of basing graduation rates only on the ratio of 12<sup>th</sup> graders enrolled in October to the number who graduate.

**Vital Sign #6 Successful Post-High School Transition** – This is an assessment of the quality of education as perceived by the students one year after graduation. Using a survey the school district determines how students perceive they were prepared for post secondary education, work or the military.

### *Implementing Process Improvements*

School districts are complex social and political organizations with bureaucracies that sometimes limit the learning, innovation and growth of staff and students. Oftentimes, goals are based solely on inputs, expectations are poorly communicated, data points for measuring progress are weak and curriculum, instruction and professional development are only loosely connected.

Successful businesses have recognized the advantages of having a clear focus on their core processes. Schools are no different. ISO 9001 provides the framework to systematically institutionalize the strategic plan, focus resources and communicate progress. The quality system structure provides the rigor to focus on student achievement, develop unity of purpose, align processes, grow strong leaders, exploit the intellectual capacity of all staff, measure progress, make decisions based on data and provide for continuous improvement.

Our school district was registered to the ISO 9001 Quality Management System in February 1999. We seriously began the implementation process in 1996 and experienced all the peaks and valleys possible when implementing change. If I knew then what I know now, planning and implementation could have been done far better in a shorter period of time. What I lacked in quality expertise I had to make up for in my determination to improve the quality of our schools. Hence, the willingness to learn was essential when implementing quality.

Some variables that may reduce implementation time include:

- The commitment of top management. "Lending support" or "buying in" does not demonstrate commitment. Top management must *own* the quality system.
- An organizational culture and work environment that builds trust and makes the most of the intellectual capital of the workforce.
- People who are open to change and free to take risks.
- A philosophical understanding that systems thinking requires a learning organization.
- The capacities to collect, manage and use data for making decisions.
- A sincere dedication to improve results.

The language used in the standard was a major obstacle. Even an explanation of the ISO terms by a qualified consultant did not help it make sense to educators. Terms like supplier, contract review, non-conformance and process control simply did not make sense. Most educators had already spent years learning and understanding educational jargon. Not many were ready to learn a new language. It was apparent that much creative work needed to be done to interpret the quality standard for education. The ISO 9001 language outlined in the quality standard was based on engineering and manufacturing operations and seemed foreign and irrelevant to an educational system. The only way to overcome this obstacle was to thoroughly understand each of the ISO requirements. Not just know the words, but understand what the combination of terms and phrases mean to quality. It was a time consuming process to interpret each requirement until it was thoroughly understood. Once it was understood, the language was changed to fit the school environment. Some examples include Contract Review became the Parent/Student/Teacher Agreement, Statistical Techniques became Data Management, Process Control became Standards in Practice and Design Control became Curriculum Planning. Many requirements like Document Control, Corrective Action and Purchasing remained the same because no translation was necessary.

What seemed to generate the most success was process-writing teams made up of the people responsible for carrying out the work of the school district. Some examples include: The superintendent and senior leaders documented how top level management meetings would be conducted, principals documented School Improvement Plans, Teaching and Learning Coordinators began documenting the curriculum and instructional design process and the Business Office documented financial procedures.

While the documentation of key processes was important the school district soon realized that the dialogue was reaping even greater benefits. People began reviewing processes critically, thinking systematically and looking for ways to improve effectiveness. The dialogue increased planning time, clarified expectations and reduced implementation time. The improved process was not another directive that was handed down from top management. Staff owned the process and understood the work.

The District began documenting the quality system with an overarching statement of the purpose of quality and a strategic plan that outlined the important goals and objectives for the school district. These documents became important references as the school district wrote the Quality Manual describing how to meet the requirements of the quality standard. The Quality Manual took each requirement of the quality standard and briefly explained how it applied to the school district.

More detailed Standard Operating Procedures (SOPs) were developed to provide a clear understanding of how the work needed to be accomplished for the quality system to succeed. These procedures are in a standardized format that made them easy to follow.

In the early stages of implementation the school district began conducting internal audits of the system. Internal audits allow the system to monitor itself through regularly scheduled reviews of each school and department. This took some finesse because staff understanding about audits was generally negative, i.e. peoples understanding of “audit” was visits from the IRS or the State accounting office. Much up-front training was needed to train staff to conduct the audits and each scheduled audit was preceded by a thirty-minute orientation for the auditors and auditees to discuss the purpose, process and confidentiality of audit information.

In addition to identifying opportunities for improvement and compliance to the quality system internal auditing also added some unexpected benefits. Auditors began identifying best practices in other schools and departments and they brought these newly discovered ideas back to use in their schools and departments. Needless to say, internal auditors energized the quality system. The audits involved staff in a meaningful way and provided feedback on how to make things better.

### *Conclusion*

Managing data and tracking progress became an important component in all improvement actions, resource allocations and decision making. Each member of the school district staff knew how the strategic objectives, management plans, and preventive and improvement actions were aligned. The system was connected across all central offices, schools and the public. Moreover, the data was publicly presented in a Community Report.

For year’s deep financial constraints, a high dropout rate, low-test scores and the threat of a state takeover characterized the school district. Today the district has succeeded in making progress in accomplishing the objectives outlined in the strategic plan. By establishing strong community partnerships, building internal capacity of the staff, creating effective two-way lines of communication and openly disclosing all information – the good as well as the not so good, the school district has provided real hope for the future of the schools and the community. State testing scores have risen every year – taking the school district off the list for a possible take over by the State. While still facing many challenges, such as recruiting and retaining high quality staff the district now has the confidence and structure to improve in every aspect of learning.

Student achievement results in 1998 indicated that 51 percent of our students were scoring below basic in both reading and math; a trend of poor student performance that could be traced back for ten years. In 1999, forty-six percent of our students were scoring below basic, in 2000, forty-three percent were scoring below basic and in 2001 thirty-seven percent were scoring below basic. It is the District’s intent to decrease

our students scoring below basic to ten percent, in the near future. After ten years of declining student achievement teachers, parents and the community believe such incredible improvement is doable. Other system improvements include: increased student attendance by .5 percent (student attendance is 95 percent), Special Education Medicaid reimbursements by .5 million and grants by \$7 million, reduced procurement costs by a third and responsiveness and communication with the Lancaster community and parents to quickly and effectively address their concerns.

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