

---

---

# Lessons from Enlightened Corporations

---

*The formula for improving our schools — adapted for education — can be found in the philosophy that helped transform Japanese industry and in the principles that many forward-looking American corporations are emulating.*

---

ALAN M. BLANKSTEIN

---

The same evils that have brought our economy to destruction also afflict and affect education. Our system of rewards has ruined both.

— W. Edwards Deming, 1989

**T**he task of transforming our schools is today within our reach. We can find direction in the theories and principles that guide our most advanced corporations. Many of these organizations are making a sustained effort to apply the philosophy of W. Edwards Deming, the man who helped Japanese industry achieve world-class standards of quality.

You may wonder what the management philosophy of companies has to do with running schools. Schools, after all, are not “businesses,” and the challenges of educating children are different from those of operating a company. But as Al Shanker (1990), John Goodlad (1984), and other educational leaders have pointed out, schools are modeled after the *old* business paradigm of Taylorism — the basis for the assembly-line method that permitted mass production of automobiles — a system that is no longer functional.

As David Kearns, former CEO of Xerox and now Deputy Secretary of Education, suggested, we need a design for schools that is relevant for present times:

The modern school should look less like a factory and more like our best high-tech companies, with lean structures, flat organizations, and decision making pushed to the lowest possible level . . . [with] fewer middle managers, and those that remain act[ing] less like controllers and more like colleagues and collaborators” (in Doyle and Kearns 1988, p. 38).

This recommendation is in sync with Deming’s philosophy, which provides a framework that can integrate many positive developments in education. Without such a framework, teacher participation, team-teaching, site-based management, and cooperative learning, for example, remain individual elements lacking the cohesiveness necessary to transform our schools. Deming’s 14 principles are powerful, universal axioms based on the assumptions that individuals want to do their best and that it is management’s job to enable them to do so by constantly improving the *system* in

which they work (Deming 1988). They are:

1. Create constancy of purpose for improvement of product and service.
2. Adopt the new (Deming) philosophy.
3. Cease dependence on inspection to achieve quality. Build in quality in the first place.
4. End the practice of awarding business on the basis of price alone.
5. Improve constantly and forever every process.
6. Institute training on the job.
7. Adopt and institute leadership.
8. Drive out fear.
9. Break down barriers between staff areas.
10. Eliminate slogans, exhortations, and targets for the staff.
11. Eliminate numerical quotas for

---

**Deming’s 14 principles are powerful axioms based on the assumption that individuals want to do their best and that it is management’s job to enable them to do so by constantly improving the system in which they work.**

---

---

---

## We must have better data on actual student performance related directly to valued outcomes if schools are to make sound use of the Deming philosophy.

---

the staff and goals for management.

12. Remove barriers that rob people of pride of workmanship.

13. Institute a vigorous program of education and self-improvement for everyone.

14. Put everybody in the organization to work to accomplish the transformation.

In order to see how Deming's principles, which were originally developed for business, might apply to schools, we need to translate a few of his terms. Principals and superintendents can be considered "management" or "leadership." Teachers are "employees," "leaders," and "managers" of students. Students are "employees," and the knowledge they gain and later contribute to society is the "product." Parents and society are the "customers." Legislators are the "board of directors."

In Japan, where Deming's principles were first adopted, managers have a broad view of their "system," which encompasses both the individual company and the whole nation. It would be ideal, and ultimately necessary, to include the entire community of legislators, parents, businesses,

universities, and social service agencies in implementing the principles. Communities like Ware Shoals, South Carolina, are doing this. However, since garnering such broad support may initially be difficult, the "system" for our purposes will include only what can be directly influenced at the district and school level.

Although all of Deming's principles are important and interrelated, here I will focus on just a few (1, 2, 3, 5, and 11), restating them slightly.

### Maintain Constancy of Purpose

The first principle we might apply to improve schools is maintaining a constancy of purpose. American management's focus on short-term goals and outcomes is evidenced in an emphasis on quarterly profits, wide acceptance of corporate takeovers for quick profit, and a view of quality and training as an "expense" rather than an "investment." This shortsightedness is also evident in schools; for example, when students who are not learning are promoted and when teachers teach to the test. These are *not* the fault of the teachers, however, but, rather, inherent flaws in the *system*.

One prerequisite to long-range planning, of course, is reasonable confidence that one will have the resources to carry out the plan. Unfortunately, many administrators are forced from year to year to reevaluate their budgets and school policies in light of laws passed by legislators who are often distant from the real process of education. This is contrary to Deming's belief that innovations in the system come from the input of those who are most intimately familiar with the work: the employees, not the board of directors.

Constancy of purpose is most severely undermined, however, by the enormous turnover of management.

According to the American Association of School Administrators, 45 percent of their members leave their jobs within three years (1990). Losing one's district leader every few years is a major blow to experience-based innovation, ongoing efforts, and maintenance of institutional memory.

### Adopt the New Philosophy

The second Deming principle that we might apply to schools is assuring that all policies and procedures are consistent with the new point of view. Instituting Deming's principles are difficult. They require rethinking a school's priorities, with everyone in agreement on them.

For example, who are the school's "customers"? For teachers, are they the principal, students, or parents? For principals, are they parents or the superintendent? It's important that everyone agree on who the customers are and what their needs are. As noted earlier, I contend that the customers for the entire school organization are the parents and the community. Their needs should drive the organization.

### Build in Quality Now

"Quality comes not from inspection," writes Deming, "but from improvement of the process" (1988, p. 29). The next principle we'll look at is: do not depend on inspections and examinations to assure quality; do things right in the first place. It *always* costs more to fix a problem than to prevent one.

This principle's clear application to education can be illustrated in NEA President Keith Geiger's remark:

We worry about kids when they reach 14, 15, or 16 years old and discover they don't have enough math or science. . . . If we concentrated more of our time and energy on kids in kindergarten to 3rd

grade, then we wouldn't have to invest so much time and money [later] (Geiger 1989).

An example of an effective preventive approach is Head Start, conceived of by Edward Zigler at Yale University.

### Improve the Entire System

Working continuously to improve the entire system — another of Deming's principles — requires extensive collection and analysis of data to determine which systems need attention. An individual (student or teacher) whose record of performance falls consistently within a certain range is part of a "stable system." Most of the opportunities for improvement of a stable system, Deming advises, come from altering the system itself, which is primarily the job of management, not those who work within that system.

## Deming's arguments against appraising individual performance call into question the entire grading and marking system basic to the operation of most schools.

The ultimate intent of improving the system is to narrow the amount of variation within it, bringing *everyone* toward the goal of perfection. This is the primary task of leadership (principle 7, Deming 1988, pp. 248-249).

Having good data on people's performance is essential.

In education, the data currently collected, such as standardized test scores, are notoriously inadequate. Even teachers' grades are not necessarily valid indicators of student learning, because they may be based on other factors, such as attendance, classroom conduct, or completion of homework and tests. The need to have better data on actual student performance related directly to valued outcomes goes beyond the scope of this article, but it must be solved if schools are to make sound use of the Deming philosophy.

In fact, full application of Deming's ideas requires shifting to a paradigm very different from that found in most schools today. His philosophy assumes an educational system in which desired outcomes are clearly defined and understood by all. The teacher's responsibility is to assist all students to improve processes toward achieving the outcomes. Teachers do not collect grades on homework and tests and average them at the end of the marking period; instead they maintain records of what students have achieved, with the intent to *decrease variability*.

When problems arise, those directly involved (teachers, parents, students, the principal) may form a *quality circle*. Rather than blaming any individual, they collect relevant data on the situation, define a possible opportunity to improve the process, test the change in the system, observe the results, and permanently implement the change, if it proves effective (Sherkenbach 1988).

### Do Not Use Quotas or Numerical Goals

In recent years educators have been pressured, often by people outside the

schools, to use quantitative goals, highly structured teacher evaluation systems, and merit pay. Deming's concept of these practices is critical to understanding all of his work. The problems with setting goals and evaluating people by quantifiable output are many. Let's examine them.

1. *The goals are usually arbitrarily set.* A superintendent once proudly told me that he and his staff set a goal of a 90 percent high school graduation rate for the district. When I asked him how they decided on that figure, he replied that at a staff meeting everyone had decided that it was achievable.

The problem with this approach is that it does not take into account information from the current system. The questions to ask this superintendent are: "Did you graduate 90 percent of last year's students? If not, why not? What will you do differently *this year*? Why aim for only 90 percent?" The focus should be on improvement of the process based on what the process is currently producing.

"If you have a stable system," Deming advises, "then there is no use to specify a goal. You will get whatever the system will deliver. If you have not a stable system, then there is again no point in setting a goal. . . . Focusing on outcome is not an effective way to improve a process or an activity" (1988, p. 76).

2. *Setting quotas leads to marginal work.* If teachers are evaluated on how many of their students receive a passing grade of 60 percent, then they will strive to have as many as possible do just that. They will not be as inclined to help those who are way below or well above that mark, or to move *everyone* toward excellence. This leads to the "finish Mao Tse-tung by Friday" syndrome (Sizer 1991), in which mastery is *not* the goal.

According to Glasser, minimum standards are as common in schools as in industry: "The goals on their [teachers] minds are those of the top-level management: raise the test scores a little, get more students through, and keep discipline problems low" (1990, p. 434). Setting goals of this nature crowds out the intrinsic motivation that leads to pride in work (Deming 1988; Glickman 1991, p. 6).

3. *Appraisal of individual performance is unfair and misguided.* Any system, Deming explains, has two types of variability, which occur as a result of common or special causes. Most variability within a stable system comes from common or natural causes, beyond the purview of any single worker.

Variation between different people's performance is natural and unavoidable. One-half of all people will *always*, by definition, perform below median. It is not management's job to

**Deming supports those who oppose merit pay, pointing out that it is difficult for a team to work together toward a common goal when the members will receive individual rewards at the end of the year.**

tell this half that they are in fact performing below average. It is also counterproductive to try to get them to "do better" if they are performing within the system.

Management's job, rather, is to improve *everyone's* performance through training and education and improvement of the entire system. Management should also *help* those who represent "special" causes of variation. As Deming explains, doing anything less is failing to take responsibility for one's role as leader.

4. Merit pay destroys teamwork. The notion that excellence requires formal evaluation of individuals is deeply embedded in educational practice and in current management theory — both in and out of schools. Carried to its logical extreme, such a system rewards those judged to be superior. Among Deming's reasons for supporting those who oppose merit pay is that it is difficult for a team to work together toward a common goal when the members will receive individual rewards at the end of the year. "Who did what?" becomes the issue, leading to divisiveness on evaluation day.

Like American businesses, schools are *functionally* oriented. This often leads to mutually exclusive goals (for example, superintendents have to show high test scores, while teachers may want to foster higher-order thinking skills). The reward system in this case reinforces people for doing well *within* a faulty, divisive system, not for improving that system.

5. *Individual appraisal nourishes fear.* If a teacher is to be evaluated, and the system for evaluation is ultimately subjective, then the teacher's fate is in the hands of the principal. This leads to politics, concealment of

mediocre work, and mindless adherence to regulations. It also stifles innovation or improvement of the system. Deming points out that "the 80 American Nobel prize winners all had tenure, security. They were answerable only to themselves" (1988, p. 109). (Readers may wish to become more familiar with Deming's principle 8 on driving out fear. Fear creates an insurmountable obstacle to any improvement.)

6. *A system of individual appraisal increases variability in the desired performance.* Deming's arguments against appraising individual performance call into question the entire grading and marking system that is basic to the operation of most schools. Such a system, he explains, increases variability because of the implied preciseness of the rating system (What is the real difference between a test score of 88 percent and one of 90 percent?). Students may not really desire to earn higher grades, but even if they did, the results would be undesirable. With half the people trying to change their outcomes, the variability of the organization is doubled.

### **A Road Map**

It took U.S. auto and electronics industries decades to realize how performance appraisals, fear-driven incentives, short-term measures, and externally imposed quotas destroy people and the organizations they served. The leaders of these industries had time to spend learning the value of Deming's principles. Our youth, and the schools and societal structures that determine their future, don't have that luxury.

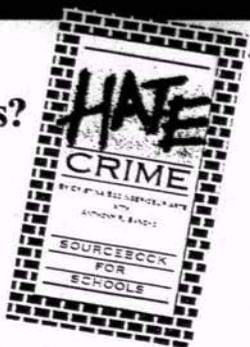
The changes necessary to transform our schools are massive but attainable. Deming provides a road map for success. □

# New from RBS

- What is "hate crime?"
- How does it affect schools?
- What can educators do?

Discover the answers in this new book from the Southwest Regional Lab and RBS.

It discusses the nature and incidence of hate crime, then provides practical resources schools can use to address the problem. Ask for SI23, ISBN 1-56602-046-8, \$18.95 ea.



Call or write  
for our new  
1992 catalog!

**RBS Publications**

RESEARCH FOR BETTER SCHOOLS  
444 N. 3rd St., Philadelphia, PA 19123  
Call 215-574-9123, FAX: 215-574-0133

*Author's note:* Special thanks to W. Edwards Deming, Stuart Rankin, Larry Barber, Anne Meek, Nancy Shin, Ernest Mueller, Tom Koerner, William Scherkenbach, Warren Lewis, and Julie Pareles.

*Editor's note:* For more information about Deming, see "The Total Quality Classroom," p. 66, and "On the Road to Quality," p. 76, this issue.

## References

- American Association of School Administrators. (1990). Membership survey. Arlington, Va.: AASA.
- Deming, W. E. (1988). *Out of the Crisis*. Cambridge, Mass.: Massachusetts Institute of Technology.
- Deming, W. E. (February 3, 1989). From a speech delivered at a national forum on "Shaping America's Future I." New York City.
- Doyle, D., and D. Kearns. (1988). *Winning the Brain Race*. San Francisco: ICS Press.
- Geiger, K. (September 25, 1989). From a speech delivered at a national forum on "Shaping America's Future II." New York City.
- Glasser, W. (February 1990). "The Quality School." *Kappan* 47: 424-435.
- Glickman, C. (May 1991). "Pretending Not to Know What We Know." *Educational Leadership* 48: 4-10.
- Goodlad, J. I. (1984). *A Place Called School*. New York: McGraw Hill.
- National Educational Service Transcripts. (1989). *Shaping America's Future I and Shaping America's Future II*. Bloomington, Ind.: National Educational Service.
- Shanker, A. (January 1990). "The End of the Traditional Model of Schooling — and a Proposal for Using Incentives to Restructure Our Public Schools." *Kappan* 71:344-357.
- Sherkenbach, W. (1988). *The Deming Route to Quality and Productivity*. Washington, D.C.: CEE Press Books.
- Sizer, T. (May 1991). "No Pain, No Gain." *Educational Leadership* 48: 32-34.

**Alan M. Blankstein** is President of the National Educational Service and author of an upcoming book on Deming's principles for educators. He can be reached at 1610 W. Third St., Bloomington, IN 47404.



## Falmer Press

*New from the Studies in Curriculum History Series...*

### THE 'GIRL QUESTION' IN EDUCATION Vocational Education for Young Women in the Progressive Era Jane Bernard Powers, San Francisco State University

In 1930, vocational courses for young women consisted of training for office work, home economics and some trade education. The fact that coursework in all three of these fields existed in secondary schools before the turn of the century would suggest that the vocational education movement was 'much ado about nothing'. This study explains and documents that the simplicity of offerings belies the complexity and significance of the reform movement. It is a timely and significant contribution to the literature of educational history and women's history.

April 1992 • 208 pages  
1-85000-847-7 Hardcover \$58.00

### THE TEACHER'S VOICE A History of Teaching in Twentieth Century America Edited by Richard J. Altenbaugh, Northern Illinois University

This anthology reconstructs the careers of twentieth century teachers. It emphasizes the parts played by social, economic, and political events and issues, as well as those played by the school organization in shaping the teachers' evolving perceptions of their roles as teachers in a particular community. It is multidimensional in scope, stressing qualitative research supported by in-depth analyses. This study also focuses on a comparative examination of teachers' experiences and perceptions in different regions. Settings include: 'Women's Work', 'Teachers and their Communities' and 'Professionals or Workers?'

February 1992 • 224 pages  
Hardcover 1-85000-960-0 \$79.00 • Softcover 1-85000-961-9 \$27.00

To order call TOLL FREE 1-800-821-8312 or write to:  
Falmer Press • c/o Taylor & Francis • 1900 Frost Road, Ste. 101 • Bristol, PA 19007

Copyright © 1992 by the Association for Supervision and Curriculum Development. All rights reserved.