

The Ball Foundation

Education Initiatives

Improving literacy achievement through whole-system change

Using What We Have to Get the Schools We Need: A Productivity Focus for American Education (1995)

Executive Summary

America's schools are not getting enough return on the nearly \$300 billion spent on them every year and need to undergo major structural changes in order to increase their efficiency and productivity, according to a new report from the Consortium on Productivity in the Schools.

The study, entitled *Using What We Have To Get The Schools We Need: A Productivity Focus for American Education*, cites unstable governance, lack of incentives to leverage productivity improvement, schools structured to reinforce continuity rather than continuous improvement, and lack of quality controls on innovations as among the reasons that American schools are not getting greater learning gains from a broader range of students with the \$1.5 billion spent per school day on K-12 education.

This century has seen surprisingly few changes in the core technology of schooling—in the ways schools go about their business. It has been said that if an auto worker, a medical doctor, a textile worker, a soldier, and a teacher were frozen in 1900 and unfrozen in 1995, only the teacher would be able to resume work without missing a beat.

The costs to Americans of having such inefficient school structures is staggering, said G. Carl Ball, co-chair of the Consortium's advisory board. Taxpayers are not getting their money's worth, because schools have not adopted the best and most efficient practices in everything from management and finance to teaching and learning.

The Consortium consisted of a dozen experts on productivity and systems analysis from the fields of industry, health, finance, government, and education. It was chaired by Sue E. Berryman, former director of the Institute on Education and the Economy at Columbia University and currently senior education specialist at the World Bank, and was supervised by an advisory board headed by Mr. Ball and Michael Timpane, president emeritus of Teachers' College.

"The only way that schools can escape from this bind of higher expectations and decreasing financial support is to make more efficient use of the resources they have," said Mr. Ball, who is chairman of Geo. J. Ball, Inc., a leading horticultural product producer based in Chicago. We think that is possible.

The Consortium adopted a systems analysis approach to its examination of primary and secondary education. It described the nation's 84,000 public schools in 15,000 school districts as part of a complex system that lacks clearly defined goals at all levels as well as basic mechanisms for monitoring and encouraging improvement.

Past attempts to improve education have failed, the report asserts, because they addressed only part of the complete education system, instead of using a systemic analysis to create significant increases in overall productivity by addressing the powerful-yet often hidden-root causes of systems problems.

Education's Key Subsystems

The report analyzes the root causes for education's failure to improve by closely examining its eight critical subsystems - governance, management, finance, teaching and learning, adaptation and innovation, outplacement, hiring and purchasing, and maintenance - that sometimes operate against one another rather than in harmony.

According to the report, school governance is too political, solving conflicts by adding new regulations, goals and mandates. This overloads school staff, making it impossible to achieve any goal, endangering the support the schools need to survive, and undermining the conditions needed to hold them accountable. The proliferation of unstable goals wastes resources by making it difficult to set and accomplish priorities and causes districts to bloat middle management and support staff.

Compared to other countries, the U.S. has a much higher percentage of non-teachers in the school system. If we had the same proportion of teaching to non-teaching staff as in Denmark or France, the number of teachers would increase by 265,000 (or about 3 more teachers per school.) If the proportion were the same as Japan or Belgium, we would add 1.3 million teachers, or about 15 additional teachers per school. The U.S. ranks next to last among 13 industrialized nations in the number of decisions made by individual schools and has by far the largest percent made by the district. American teachers lack authority over key decisions yet are held accountable for their students' performance.

While other industries use money as an incentive to produce improvement, education's finance subsystem rarely uses funding to increase productivity. Instead it creates serious inequities between rich and poor districts. Federal funding based on low student achievement rewards the schools that fail the largest number of students. Simultaneously, unfunded mandates, such as for special education, drain resources from the schools. Three students can be educated in New York City's regular education program for what it costs the city to educate a single special education student. Other key concerns cited in the report based on an analysis of key subsystems include:

1. Outside mandates, the organization of schools, and heavy teacher workloads restrict teacher performance and school innovation. Conventional, fact-oriented, and fragmented curricula further deaden the creativity needed to improve schools. Meanwhile, poor feedback about school and student achievement prevents teachers from measuring and improving their performance.
2. The education system routinely fails to adapt to the needs of the external world. Schools have virtually no knowledge of what their customers (other than colleges and universities) want from their graduates. Consequently, parents, communities, and taxpayers have a bewildering array of contradictory requirements that educators and administrators fail to acknowledge, let alone answer.
3. Education does a poor job of assessing why, when, and how it needs to change. Unlike business, where research leads to new products to sell, the education system lacks incentives to supply or demand better practices. Low investment in R&D dramatically limits education's technical knowledge base. While the average investment in all U.S. companies on research is three percent of their budget and the military spends 13 percent, federal research and development in education amounts to a minuscule 0.1 percent of spending.
4. Schools rely heavily on extrinsic factors, such as regulations and pay, to motivate educators, incentives that are much less effective than intrinsic ones, such as desire to do a good job and pride in one's own professionalism. Teachers' salaries are determined by years of service, not quality of instruction, and districts base hiring and purchasing decisions on mechanical criteria and low standards.

Productivity Not Declining

In spite of these and other problems, the report challenges the belief that the performance of American students has declined. Rather it argues that evidence over two decades shows student performance is stable, with higher scores on standardized tests for basic skills balanced by lower scores on measurements of reasoning abilities. The basic problem is that schools and their students must confront new and higher demands without much additional funding. During the past 20 years, per pupil spending has nearly doubled (rising from \$2,985 per student in 1970 to \$5,401 in 1990 in constant dollars) at the same time that average test scores of students stayed stable. While some observers say this shows declining productivity, the Consortium found that the growth in spending is partially attributable to cost pressures and increasing requirements for identifying and teaching students with special needs. In addition, schools are maintaining student performance when a much larger population of students are coming from families whose backgrounds hinder their efforts to support their children's learning.

Recommendations

The Consortium believes that American schools can achieve continuous improvement through techniques that have been successfully employed in other fields and urges a series of systemic reforms of schools aimed at increasing the amount of teaching and learning without the need for additional funds. Among the reforms proposed are:

Renegotiate the Governance and Management Contract - The governors and managers of the public K-12 system should exchange autonomy for accountability. Suppliers have autonomy to start schools, subject to state licensing requirements consistent with the U.S. Constitution and possibly to performance contracts with the community's school board. Suppliers also have the autonomy to manage schools, except for issues such as conflicts of interest, equity, or economies of scale that are better managed at levels above the individual school. Families have the autonomy to choose schools. In exchange for autonomy, the school assumes the responsibility to meet established performance criteria that reflect the interests of the three levels of the society: the community, the state, and the nation. Failing to meet its performance responsibilities should have consequences in the form of the revocation of its state license, and, if it is operating under a performance contract with a local school board in the cancellation of its contract.

Extend Accountability for Schools to Accountability for All Functions of the System - The principle of accountability should be extended to all major functions of the system not merely teaching and learning. Each level of governance should set performance criteria for each important function and ways of measuring performance that are cheap enough to allow frequent measurement and useful feedback that can result in productivity improvements.

Use the Education Financing System to Improve Educational Productivity - Money is a powerful tool that can encourage schools and subsystems to improve their performance. Three types of incentives can help spark continual improvements: incentives for school districts to keep their books in ways that show the full costs of various activities; incentives to use pooled R&D funds from states and the federal government to improve the technical knowledge about productivity, including relationships between resources and outputs and where productivity payoffs are greatest, the results being used in the design of school funding formulas; and incentives for schools to improve that would reward schools with good performance, as judged by value-added measures of learning.

Create the Conditions That Let Schools Learn - The report calls for reorganizing work within the school to multiply professional interactions around improvement. Creating schools that learn may well require reducing teachers' instructional time. States must institute high credentialing standards for new teachers and encourage experienced teachers to become board certified.

Set up Quality Controls for Innovations - The Consortium urges the nation to establish institutions that set and enforce standards for judging when new knowledge and practices can be trusted and under what conditions. These institutions also should have the means of reaching consensus within the professional community about best practices under Particular conditions. Analogues in health are the federal Food & Drug Administration, the New England Journal of Medicine, and the consensus development process of the National Institutes of Health.

Make a Contract among Ourselves for the Next Generation - The report says that each of us, in one role or another, is a stakeholder of the U.S. education system. In our role as citizens we set the basic constraints for education. As a result, we take on responsibility with educators and policymakers for establishing the conditions that let schools improve and students learn. As community members, keep eight principles in mind in any effort to change the schools: evaluate reforms using a systems perspective; resist attempts to use the schools to solve the community's social problems; remember that there are no quick fixes; focus on a few key academic goals; move from shifting blame to sharing responsibility; let change happen; insist on productivity improvement; and help expand the role of students as co-producers of their own learning. "These measures will enable schools and districts to raise their productivity and improve the academic progress of their students," said Dr. Berryman. "They take the best ideas developed by other industries and adapt them to meet the productivity challenge raised by the problems in our schools."

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Copies of this report can be obtained from the Ball Foundation at 630-469-6270.

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