

# THE CHALLENGES TO EDUCATIONAL CHANGE

Susan Baker Cohen  
Program Evaluation and Research Group  
Lesley University

White Paper Developed for NASA's Space Mission Directorate  
Education and Public Outreach Community

As so many noted educators and researchers have observed, schools are complex environments and public education is an enormously complex undertaking. To think otherwise is to ignore the social, political, and economic influences that “come to school” with every child, teacher, and education-related program and organization.

My intent with this brief summary is to provide a highly abbreviated review of issues that those engaged in education improvement might want to consider as they plan their work. It is *not* my intention to provide a thoroughly researched review of the literature of education reform.

Publicly supported education arose from constitutional principles for creating a democracy. The system was strongly influenced and shaped by the industrial demands of the 1800s to create substantial numbers of workers who could support and sustain the industrial and economic efforts for US expansion. Educating the public during the 19<sup>th</sup> century was a strategy for creating a baseline of literacy that would enable people to vote and to work in industrial settings. Teacher education prepared primarily single women to teach reading, writing and computation to students whose attendance depended upon their freedom from the need to contribute to their family's income. The majority of students ended their education well before completion in secondary schools and joined the work force. Universal education was a 20<sup>th</sup> century construct, as was a mandatory attendance requirement.

For the last several decades, educators in general have been expected to be the analog of technicians, performing functions defined by others with materials designed largely by others for purposes decided largely by others, and measured by standards created largely by others. Education decision-making has been a top-down affair that separated the curriculum direction and selection from the majority of teachers who implemented and who were held accountable for student learning.

In most districts in the country currently, curriculum materials for each subject area in grades K–12 are selected in five-year cycles. Teachers are required by their districts to

use those selected materials, though they can usually supplement them with additional resources, as budgets allow. In general, teachers have and still do rely on their administrators to make the decisions about the specific curriculum content they must cover and its correspondence to national and state standards to which the system is accountable.

The fundamental challenge to changing education now arises from the fact that there is little agreement within states and the country about what constitutes effective teaching and how all of the components of the education system should relate to one another. The symbols of the current science and mathematics reform movement, which are usually cited as authoritative, include (but are not limited to) the National Mathematics and Science Standards, the National Assessment Standards for Mathematics, and the 2061 Science Benchmarks. Educational change theories, much described in research and other journals and documents, have included strategies that target the statewide educational system, coalitions of multiple districts, individual districts, and individual schools. Research data continue to stress the reality that individual schools are the fundamental unit of change, the central concept that motivates the work of the Coalition of Essential Schools and other whole-school reform approaches. Research has found that each school shapes its own culture and exerts pressure on all of its members to conform to that culture to accomplish its goals. In the case of education, all change is local, to adapt a well-known phrase.

The search for generalizations in the sense of lawlike propositions that can be packaged and transferred from setting to setting is neither possible nor desirable in these kinds of renewal efforts . . . we can learn from these efforts and share this learning with others. But this is generalization of a much different sort. It is building heuristic understanding, developing and refining ideas that others can play with and reconstruct in their own settings. By accumulating what we call “cases of understanding,” we can have an ever-expanding source of examples from which others can learn. (p. 4)<sup>1</sup>

While many states and school districts in the country are experimenting with alternative models for addressing many of the challenges of educational change, the majority (including rural and urban districts) have little, if any, influence outside of their locality. One of the current indicators of change is curriculum program selection and implementation. Currently, publishers of what has been called NSF-supported and other standards-based curriculum materials/programs estimate that no more than 10–15% of all US school districts are really implementing these at any level of use.

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<sup>1</sup> Sirotnik, K. (1999, April). *Making Sense of Educational Renewal*. Bloomington, IN: Phi Delta Kappa International. Online article retrieved from the World Wide Web: <http://www.pdkintl.org/kappan/ksir9904.htm>

Statewide tests are currently measuring students with little recognition about what students are actually learning in their curriculum, creating a false picture of student learning that has great social consequences. Test scores influence real estate values by suggesting that particular schools in selected districts are effective in educating students, attracting the very families whose students are already successful. Low-scoring students, on the other hand, generally fall into achievement categories that correspond to research-based profiles on achievement, reinforcing commonly held stereotypes and assumptions about who can learn and be successful in school.

The elements of a standards-based system are coming into place unevenly in states and cities across the country. Most states now have content standards, although their quality varies . . . Only a minority of states have established true performance standards, that is, descriptions and illustrations of the kinds of work students are expected to be able to do. Many states and virtually all school districts administer tests, and many use the language and rhetoric of standards in communicating with parents and the public about the results of these tests. But it is still rare that the tests used have been systematically aligned to the officially adopted standards. In some jurisdictions, an off-the-shelf norm-referenced test is used as part of a nominally standards-based system, with score points being used to establish “standards” . . . It is even more rare to find instructional materials and strategies well aligned to standards, and accompanied by systematic professional development. (p. 2)<sup>2</sup>

Complicating these realities is the current political and philosophical environment that has often pitted educators and content specialists, such as scientists and mathematicians, against one another. The focus of all of this energy is the not always enlightened discussion about the theory that best addresses or explains how people learn and the role of learning in our lives. Some people think the formal education system needs to be “reformed”; others feel that “improvement” is a more suitable ambition and achievable goal. Each of those words comes loaded with rich and complex justifications about which well-meaning and intelligent educators disagree.

Within the professional science and science education community, the discussion about constructivism or constructivist learning has raised red flags. The conversation leads to impassioned indictments of scientists’ motives, capacity for rational thinking, the value of their contributions to their fields, and the problem about how to best educate future scientists. The turbulence of the exchange in the public and science domains has caused numbers of educators to react negatively about changing their ideas and/or practices. Since the education wars are not yet won, it is not clear what direction will best meet the

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<sup>2</sup> Briars, D. & Resnick, L. (2000, August) *Standards, Assessments—and What Else? The Essential Elements of Standards-Based School Improvement* (CSE Technical Report 528). Los Angeles: University of California, Center for the Study of Evaluation.

needs of the system. Many teachers and administrators throughout the country note that conducting business as usual may be the least harmful of all approaches.<sup>3</sup>

In addition to the above issues, the classroom is a complex and challenging place for both students and teachers. Most state education policies increasingly require that all children who can be, are included in the classroom with their age peers. In addition to addressing a wide range of physical needs, teachers know that students bring to school a variety of learning differences, languages, capabilities, substantially different cultures and school achievement backgrounds. Many students have little English language proficiency; in some urban schools, the number of languages spoken may be as high as 50–100. Both non-specialist classroom teachers and subject matter specialists have little training to address the issues of language and other differences. Most publishers provide few, if any, curriculum resources to support the diversity of students present in contemporary public schools.

Many elementary and middle school classroom teachers, specialists, substitutes, and other school-based staff are not necessarily certified in the subjects or areas for which they are held responsible. That fact is the result of multiple conditions, both historic and current. One such issue is that teacher certification requirements have been determined by each state based on the principle of state's rights and local control. The certification requirements generally have represented a state's best ideas about what their local school districts needed teachers to know and be able to do in order to teach students. Since most school districts in the country were considered to have control over the fundamental issues of curriculum and accountability, states were limited in their ability to ensure that all teachers certified were going to teach what they knew and knew what they would be teaching.

And there are other complicating conditions driving the education system.

Businesses are demanding that schools teach those skills and content that relate directly to the skills and abilities they need now and project for the future. Technology has become ubiquitous in society but not in schools. Creating technology-sufficient schools requires funding, which is often not available through local school district budgets. Additional state and national technology funding programs are often insufficient to install a district-wide system.

While it is hard to pin down numbers, the US DOE claims all schools in the country are ready for connectivity. In many cases, that means only that wiring is installed somewhere in the school district, but it does not guarantee that there are sufficient resources for

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<sup>3</sup> Matthews, M. (Ed.). (1998). *Constructivism in Science Education: A Philosophical Examination*. The Netherlands: Kluwer Academic Publishers.

students and teachers to take advantage of the riches technology can provide for a learning environment. Taking advantage requires that up-to-date equipment, wiring, peripherals, and software are readily accessible to teachers and students, and that both populations are well-enough trained and practiced to take advantage of the technology.

A sample of some uses found in schools that are well furnished and prepared indicates that teachers and students conduct research on the Internet, participate in networks and listservs to reach scientists and other experts, keep personal journals and other records about teaching and learning, and access state-of-the-art software that allows for high-level thinking and learning. Teacher training and ongoing technical support for sustaining the technology-mediated and -supported learning is expensive. Most school districts that have embraced technology do only a modest amount of both. Some do neither.

Remedies for many of these issues are postulated in a range of systemic change theories that name conditions deemed to be both necessary and sufficient to create the educated population needed for the future of our county. As has been already noted, there is as yet little agreement about those theories and remedies. In fact, dialogue about creating the most effective schools has been historic, and change slow, as has the effort to ensure that changes made are sustainable and can produce evidence of effectiveness.

. . . unless education reformers and practitioners at all levels are aware and make use of some of the important lessons from the history of previous efforts [for change] all bets are off. We can't dither at this time over fine points, but if our designs for New American Schools are based on quick impressions and seat of the pants judgments uninformed by the lessons of history, a great opportunity will probably be lost as history repeats itself. (p.14)<sup>4</sup>

Theorists, researchers, and interested thinkers have drawn from some of the more advanced theories regarding systems and their management to operationalize the structures and systems they think are required to deliver state-of-the-art education for the future. A sampling of current theories includes, but is not limited to, Chaos Theory, and organizational change theories including Systems Dynamics, Quantum Theory, and Social Psychology. While there is little agreement about how to best proceed in a country that favors local control, creating models of best practices seems to be the most recent approach to guiding the change process. But best practices are in the eye of the beholder, measured in most states solely by student test scores.

Seymour Sarason made it clear in *Revisiting the Culture of the School and the Problem of Change* (1996) that the origins of education change come from social forces, not from

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4 Sashkin, M. & Egermeier, J. (1991 Draft). *School Change Models and Processes, A Review of Research and Practice* (Article prepared for presentation at AERA annual meeting, 1992). Office of Educational Research and Improvement.

within the school, and that those forces control the nature of the changes that are socially acceptable to a national education endeavor.

. . . the public schools have always had a transactional relationship with their communities: affected by them and in turn affecting them. (p.2)

He notes that our society tends to identify schools as a set of buildings or locations, as if the activity of learning was confined to and by those buildings. The consequence of that thinking is that our society tends to look only within those buildings to find the causes for schools' insufficiency rather than understand that it is society that determines what happens in schools. He notes:

The major limitation is that such an approach obscures the implicit and explicit transactions between school and community. *That limitation goes unrecognized until, either from within or without, an attempt is made to effect a significant change in the schools.* Then it becomes glaringly apparent that what goes on is not explainable only by riveting on what goes on *in* schools. We tend to be unaware that we use the concept of the encapsulated school system in ways that blind us to the daily realities of the school-society relationship. (p.2)

The reality of educational change is that it is a collective endeavor, requiring the collective intelligence of every citizen. We will never all agree on what constitutes "best practices" of teaching for effective learning. The nature of our diversity and the ongoing influx of groups that have differing ideas about education and their children's futures make that impossible.<sup>5</sup> What we can do as a society is come to a consensus that education reform is more about continual alteration to the process of teaching and learning than it is about coming to a final resting point. Managing information is the most pressing challenge for the near future, but there will be others not yet known. As many large corporations now know, anticipating and knowing how to manage change prepares us to meet future challenges with a repertoire of strategies, confidence, and skill.

## Conclusion

Our education system must be a locus for inquiry and conceptual understanding for all of the nation's children. Historically agreed-upon information, often called the "canon," must not be all there is to learning in classrooms. The human learning process has not changed over the last several thousand years. Earlier societies were clever enough to invent mathematics, astronomy, writing, art, music, philosophy, agriculture, and manufacturing, to name a few accomplishments. They did not necessarily need schools as we know them now to accomplish all of those things. In fact, schools are often identified

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<sup>5</sup> Sarason, Seymour. (1996). *Revisiting the Culture of The School and the Problem of Change*. New York: Teachers College Press.

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as separate from the current and historic discussions about learning, as supported by recent examination of learning models such as home schooling, apprenticeship, mentoring, learning in museums, oral traditions and other approaches to learning in indigenous cultures. Ironically, Socrates continues to be cited as a model of best practice in teaching and learning in the academy, as well as in some professional development programs working with K–12 teachers.

But the majority of US schools still teach students using practices that we now know will produce a good percentage of students who will be bored and disinterested in school and identify learning as synonymous with remembering and recitation. Students' non-engagement in school results in all of the problems that have been documented since the period of the 1950s when James B. Conant reported to the public on the state of schooling in *The American High School Today, A First Report to Interested Citizens*.<sup>6</sup> Maintaining ineffective practices, systems, and beliefs will ensure the maintenance of past and current problems. Creating an educational consensus in the country requires tremendous leadership because it is the society, not those who work in schools, that determines what goes on in the classrooms. But consensus-building about public education lies at the heart of true educational improvement.

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<sup>6</sup> Conant, James B. (1959). *The American High School Today: A First Report to Interested Citizens*. New York,: McGraw-Hill.