

HORACE

Research of all sorts—historical, sociological, and in cognitive science—informs the ideas and guides the practices of Essential schools, and can now begin to examine their effectiveness in enhancing student understanding.

BY KATHLEEN CUSHMAN

What Research Suggests About Essential School Ideas

MY PROBLEM WITH RESEARCH into education, aside from how hard it is to read, is that it so often seems to tell you what you already knew anyhow. Why spend valuable time and money proving that kids learn to read quicker when you give them good books, or that teenagers go to school more readily and work harder if their teachers know their names and care what they think? I could have told you that, I grumble, and I go back to my novel.

Still, this particular era in the history of education does demand some measure of reflection. What patterns in the past, what scientific underpinnings, *did* lead to the Nine Common Principles of the Coalition of Essential Schools, which struck a deep chord throughout the world of schools? In the laboratory of school change, have those deeply held beliefs proved true? Against the acid test—whether understanding increases in students themselves—would Coalition ideas and practices bear fruit? I took myself to the stacks to find the facts.

But facts, as Coleridge said, "are not truths; they are not conclusions; they are not even premises. The truth depends on, and is only arrived at, by a legitimate deduction from all the facts which are truly material." Researchers may set out, for instance, to explore how new ways of teaching might help kids learn more effectively. But all too soon they must collide with the

organizational context in which those innovations take place—and the structures that impede or facilitate change then frame another question for research.

My task, then, was to look broadly at the research base on which Essential School reform rests, and through several different lenses, particularly historical, sociological, and psychological among them. From the beginnings of the Coalition to its ten-year mark, when it has become the focus of research itself, perhaps these facts could help to frame some "legitimate deduction."

The Lessons of History

Ted Sizer, a historian himself by training, often says that the ideas of the Coalition of Essential Schools arose out of historical research. Looking at the forces that shaped our present educational system helps us understand our current situation and gives us grounds from which to challenge it. (An illuminating analysis, for example, of how American public schools evolved to their typical structure—from the early village schools to the bureaucratic and more centralized systems of the nineteenth and twentieth centuries—appears in David Tyack's *The One Best System: A History of American Urban Education*.)

Sizer's own vision of changing schools emerged from the Study of High Schools that he undertook in the 1980s with several colleagues

from Harvard University and elsewhere. David K. Cohen's chapter on the history of twentieth-century American high schools in *The Shopping Mall High School* and Robert L. Hampel's essays on the history of high schools since the 1940s both resulted from that study (as didSizer's own book, *Horace's Compromise: The Dilemma of the American High School*). Together they form an enlightening picture of the history of American public education in this century, how it started and how it changed. The terms of the current debate over high school education were set, these histories make clear, as early as the 1890s; and its main concerns—academic quality, curricular flexibility, and student motivation and engagement—have not changed much since then.

But in different periods educators have understood those concerns in different ways, and shaped their plans for schools accordingly. This century's first four decades, for instance, saw a wave of intense activity as the country built a secondary school system that started with about half a million students and ended with six and a half million by 1940. The move was driven not only by an increasing population and changing labor practices but by a general belief that through education could come social and economic improvement. Society began to regard teenagers as minors to be protected from exploitation in the labor force, and this created a powerful new reason (aside from academic ambition) for them to go to school. For the first time, high schools found themselves educating large numbers of students who were not there to prepare for elite colleges or universities.

Schools responded to this situation by offering separate courses of study for the college-bound, for business students, and for those seeking vocational training. By 1930, a distinct minority of students was enrolled in academic tracks; and in fact (as Robert and Helen Lynd's

1920s and '30s study of "Middle-town" and August Hollingshead's 1930s study of "Elmtown" found) few students either worked hard or even reported learning as their aim in attending high school. By and large, David Cohen observes, kids channeled their energy into socializing, extracurricular activities, sports, and after-school jobs.

In response, he says, schools found themselves easing up on academic standards and differentiating their program to suit their clients' interests and perceived abilities. Then as now—despite the dismay of universities over how poorly prepared, disengaged, and bored with academics students were—neither students nor their communities expressed much dissatisfaction with their own school experiences.

Not everyone agreed with the way schools saw their task, though. John Dewey, among others, argued that high school work could be both intellectually serious and deeply engaging for everyone. In the next several decades, educators of all stripes began to criticize and reshape the secondary school system. Having made classes more accessible to students deemed incapable of serious academic work, they began in the Cold War era to stiffen academic requirements in the top track.

But even among those who worried about maintaining both equality of access to learning and high quality, Cohen notes, few gave much attention to how teachers practiced their craft. Until a revolution in cognitive science began to focus attention on how people learn, even those schools that tried to engage kids through curricular offerings used methods of instruction that left them passive and bored.

In 1969 the country began regularly to measure the performance of its students through the National Assessment of Educational Progress (NAEP). And just as the country's needs for workers trained in higher-order thinking skills reached a new high in the 1980s, NAEP data

revealed, fewer students were leaving school proficient in those skills.

In this historical context, the next wave of school reform began, sparked by the 1983 publication of the government's report *A Nation at Risk*. Educational reformers brought to the table many ways to reshape the country's schools—from introducing school-based management or market competition to giving students more tests and holding schools more accountable for their performance. But for the first time, change addressed more than just the forms and organization of schooling. Now researchers also had new ways to evaluate instructional alternatives, through cognitive scientists' theoretical advances in the area of teaching and learning.

The Social Perspective

The Coalition of Essential Schools began in 1984 as an effort to link teachers and schools across the country in a shared commitment to new ways of thinking about what



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goes on in the classroom. From its modest start with twelve member schools, it has grown to include close to 800 at various stages of involvement. It has allied itself with the Education Commission of the States, in the Re:Learning initiative that concentrates on state and local policy. And its National Re:Learning Faculty has created a professional development network that trains teachers to work for change within their own and nearby schools.

The very existence of such a network, argues Stanford University researcher Milbrey McLaughlin, creates a crucial context that makes school change more likely. Studies she conducted from 1987 to 1992 at the Center for Research on the Context of Secondary School Teaching show that reforms take hold only when teachers operate within a strong and supportive professional community. Whether that community comes from a department, a school, a professional organization (like the National Writing Project), or a network such as CES matters little as long as it works to "generate knowledge, craft new norms of practice, and sustain participants in their efforts to reflect, examine, experiment, and change."

Where states and districts promote a common set of principles as the backbone of systemic reform efforts, teachers reshape their attitudes and practices more successfully, McLaughlin's data show. (Strong Essential School networks in California, Kentucky, and New York, for example, have created a culture of innovation by embedding Coalition principles in curriculum frameworks and assessment instruments.) But that condition is not enough, McLaughlin warns; teachers must also "participate in a professional community that discusses new teaching materials and strategies and that supports the risk-taking and struggle entailed in transforming practice."

Even that support may prove frail within the culture of individual schools, ethnographic research

Some Key Findings that Support Essential School Ideas

- How personal the secondary school environment is matters more than any other single factor in encouraging students' engagement and their willingness to work hard on academic goals. When teachers connect with and understand their students' families, cultures, and life outside school, students achieve at higher levels. (McLaughlin 1993)
- At all achievement levels students prefer an active classroom role, and this is particularly important to nontraditional students, who generally fail to thrive in teacher-dominated classrooms. (McLaughlin 1993)
- Disadvantaged students seem to benefit from schools where advanced academic course work sets high expectations for all. (Lee and Smith 1994; Bryk, Lee, and Holland 1993)
- By itself, implementing more challenging, higher-quality academic content will accomplish little if students do not feel connected to school and take a positive view of themselves as learners. (Lee and Smith 1994)
- Smaller schools are more productive work places for both adults and students, and student achievement is more equitably distributed. (Lee, Bryk, and Smith 1990)
- Any number of restructuring moves that depart significantly from conventional practices to make schools less bureaucratic and more "communal" contribute to student achievement gains across the spectrum of socioeconomic and other differences. (Lee and Smith 1994)
- The public believes that students should not graduate or be passed from grade to grade without evidence of achievement, not merely effort. (Public Agenda 1994)
- Good schools do not merely compile innovative elements when they restructure; they have an "effective organizational syndrome" that is often "communally organized," reflecting a vision of how components work together. (Chubb and Moe 1990; Bryk and Driscoll 1988; Bryk et al. 1993)
- Networks of all kinds—among schools, among teachers exploring new practices, among students—contribute to deeper student learning. (McLaughlin 1993)
- A sense of mission or ethos that defines the school contributes to higher student achievement, particularly with disadvantaged students. (Bryk et al. 1993)
- Students learn best when learning is embedded in authentic contexts. (Collins et al. 1991)
- A student's intelligence is not fixed and unitary but a uniquely personal complex that thrives best when instruction is personal and developmentally appropriate. (Gardner et al., 1991)

indicates. Unless a school builds a sense of shared purpose and values, continuing to reflect on and develop it and drawing in new participants over time, Essential School ideas will not exert permanent or far-reaching influence, as Donna Muncey and Patrick McQuillan conclude in their five-year study of eight Coalition member schools.

Yet if a school does succeed in instilling such a sense of mission, the common set of principles Essential schools adopt will in itself contribute to the likelihood that students will achieve at higher levels, other research indicates. In their studies of Catholic schools and of small schools in the Chicago area and elsewhere, Anthony Bryk and his colleagues

found that any strong shared ethos in a school makes students take their work more seriously and do better at it.

Enter the Number-Crunchers

Impressive new evidence about the importance of such supportive contexts came recently from a huge statistical survey of student achievement in restructuring high schools, conducted by University of Michigan professor Valerie Lee and Julia Smith of the University of Rochester.

For 11,704 students from 820 secondary schools participating in the National Education Longitudinal Study, Lee and Smith followed academic progress from the eighth grade to the tenth, as represented by conventional standardized test scores and other survey data. When they analyzed student performance, they also screened out the effects of socioeconomic and other differences.

Using carefully defined criteria, Lee and Smith categorized the schools involved into those whose

reform practices they called "traditional," "moderate," and "restructuring." The practices make up a Chinese menu of options, but those that departed most significantly from conventional schooling tended to aim for a more personal, "communal" organizational style as opposed to a more traditional, bureaucratic one. In fact, the practices regarded as "restructuring" echo many Essential School concerns, from the belief that teachers should know their students well to an emphasis on universal goals for students of varying achievement levels. (See sidebar, this page.)

The study's findings brought good news for Essential school advocates. "Not only were student achievement outcomes in the first two years of high school significantly higher in the restructuring schools than in the traditional schools," Lee and Smith report, "but those gains also were distributed more equitably. That is, the achievement gap between the students of lower socioeconomic status, or SES, and students of higher SES was narrower in restructured schools." Across all socioeconomic groups and in the fields of mathematics, reading, history, and science, "students in restructured schools learned more, as indicated by test results, and were more engaged than their counterparts in either traditional or non-reforming schools."

Trying too many reforms all at once, these data indicate, may backfire; gains were smaller and their distribution less equitable when schools reported trying more than three restructuring practices at once.

The Coalition's belief that schools should be smaller and more personal also found support in this research. Above and beyond the gains resulting from any reform practices, smaller schools consistently posted higher and more equitably distributed gains in all four cognitive areas.

Researchers Lee and Smith do not conclude that "restructuring

Three Kinds of Change that Schools Call Reform: Traditional, Moderate, and Restructuring Practices

Valerie Lee and Julia Smith's 1994 study showed impressive gains in early secondary school students' achievement when their schools departed significantly from conventional practice. Using the following criteria drawn from the University of Wisconsin's Center on Organization and Restructuring of Schools (and reprinted with WCER's permission), they divided reform-minded schools into three categories based on what kinds of reforms they had instituted. (Note: the practices appear in descending order of the probability that an average high school engages in them. About 12 percent of the 820 high schools studied reported engaging in none of these practices.)

Similarities to certain Essential School ideas—notably those aimed at personalizing the teacher-student connection, at interdisciplinary teaching, at increasing academic quality, and at the flexible use of time—are apparent in the category of "restructuring practices."

Traditional Practices

Departmentalization with chairs
Common classes for same curricular track
Staff development focusing on adolescents
PTA or PTO
Parent-teacher conferences each semester
Focus on critical thinking in curriculum
Common classes for different curricular tracks
Increased graduation requirements
Recognition program for good teaching
Parents sent information on how to help kids study

Moderate Practices

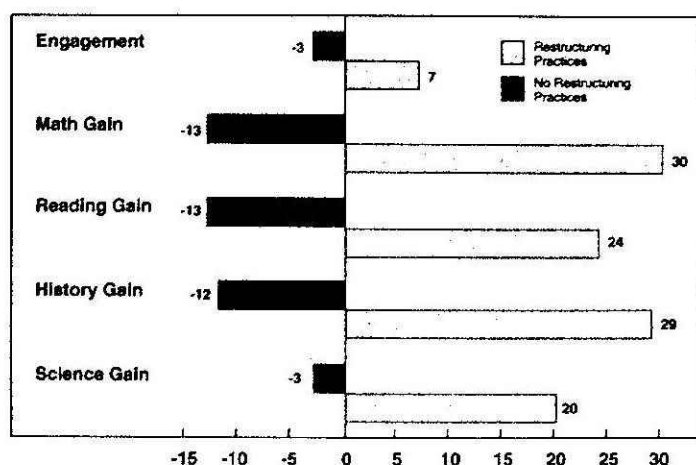
Parent workshops on adolescent problems
Student satisfaction with courses important
Strong emphasis on parental involvement
Strong emphasis on increasing

academic requirements
Student evaluation of course content important
Outstanding teachers are recognized
Emphasis on staff stability
Emphasis on staff development activities

Restructuring Practices

Students keep same homeroom throughout high school
Emphasis on staff solving school problems
Parents volunteer in the schools
Interdisciplinary teaching teams
Independent study, Eng./soc. studies
Mixed ability classes in math/science
Cooperative learning focus
Student evaluation of teachers important
Independent study in math/science
School-within-a-school
Teacher teams have common planning time
Flexible time for classes

Student Achievement in Restructured Schools



This figure represents the percent gain in student engagement and achievement for schools with different types of practices (compared to schools with traditional reform practices) in Lee and Smith's 1994 longitudinal study, "High School Restructuring and Student Achievement." It compares performance gains of students from eighth grade to tenth grade in traditionally restructured schools with student gains in the two other types of schools, using the traditionally restructured schools' gains as a baseline score of 0. Students at schools with restructuring practices showed greater gains; schools with no restructuring practices showed less improvement. (Reprinted by permission of the Wisconsin Center for Education Research, Madison, Wisconsin)

practices" in themselves directly "cause" these gains in student performance. More likely, both they and other commentators note, students have thrived because their schools make personal attention and respect a priority, and establish a climate where everyone cares about shared learning goals.

But though test scores may be rising, overall student achievement still falls far short of excellence, NAEP scores show. And scrutinizing the list of even the most ambitious restructuring practices these researchers found, one still cannot conclude that such changes relate directly to deepening the curriculum or raising the quality of intellectual work. In fact, such large-scale quantitative research cannot by its nature get close enough to actual teaching and learning to shed real light on what might cause improvement in student achievement.

At the same time, the nation has a growing political and economic awareness that students must perform at ever higher levels to meet the global economy's need for "knowledge workers." An unlikely alliance of interests is pressing for *everyone* to learn the "higher order thinking skills" society once reserved for its elite. The skills and abilities required by employers today are at least those required for college entrance ten years ago, researcher Lauren Resnick at the University of Pittsburgh has noted; in the future, they will rise even higher.

Given these expectations for student work, Essential School ideas stand in a particular relation to school restructuring in general: Unlike schools that start with structural changes, Essential schools start with deepening the curriculum. Sizer's ideas arose from his commitment to the "triangle of learning"

linking teacher, student, and subject matter, and from his passionate conviction, derived from John Dewey's philosophy, that all children could learn to use their minds well. Changing the way teachers work with kids in their daily practice, he believes, must constitute the heart of any school restructuring—a focus history reveals as all too easy to neglect.

Teaching Thinking

But the Essential School principle calling for schools to judge student mastery by demonstrated exhibition, for example, does not in itself demand any of the restructuring practices common in schools. It depends, rather, on a shift in teachers' attitudes: about what constitutes authentic student understanding, how to teach for it, and how to recognize it when we see it.

In the past several decades, the burden of researching such questions has gone to psychologists and philosophers in the field of cognitive science. Many began exploring how human beings think, remember, and learn as they probed for ways to create artificial intelligence in newly powerful computers. Others—such as Lauren Resnick and University of California professor Ann Brown—applied the new "science of the mind" to what goes on between teacher and student in the classroom.

What these researchers found flew directly in the face of how this nation's schools had operated since their beginnings. If students are to become thinkers, cognitive scientists showed, they must take an active part in constructing their own knowledge. Teachers cannot merely deliver instruction; they must instead provoke understanding in their students, mediate it, coach the skills that prompt it to emerge. And if learning is to take hold—to last beyond the Friday test—they will need a whole new variety of teaching strategies that infuse thinking skills throughout the curriculum.

At the heart of those strategies,

What Does the Public Want? Essential Schooling, Perhaps

by Peter Huidekoper, the Gates Foundation

What do parents want of their children's schools? What does the public believe about our schools and how well they are doing? Is there a "disconnect," as recent reports imply, between the answers to those questions and the reform efforts of the Coalition of Essential Schools? Or does that impression arise largely from poor communication?

First Things First: What Americans Expect from the Public Schools, a national report released in fall 1994 by the Public Agenda Foundation, offers a rich account of what the public believes is taking place—and should be taking place—in our schools. "School 'Experts' Found Out of Sync with Public," reads the headline over *Education Week's* summary of the study.

The Gates Foundation in Colorado (the principal private supporter of Re:Learning in the state) also recently undertook a survey, of Coloradans' attitudes toward public education. It was part of our effort known as Agenda 21, which attempts to close the gap between the public, policy makers, and educators around a number of important educational issues.

A close look at the results from both studies reveals many shared concerns between the principles of the Coalition of Essential Schools and what the public wants of America's schools. Here are just a few examples.

For a large majority of Americans, too many public schools are not meeting their most elemental goal: ensuring that the nation's children master some basic, but essential skills—the ability to read and write English and to do simple arithmetic by hand, along with a "common knowledge" understanding of science, history, and geography. (*First Things First*, p. 3)

When TheodoreSizer and his colleagues studied American high schools in the early 1980s, they found "shopping mall high schools" with a loss of focus, and students not learning at a high level. The first two principles of the Coalition of Essential Schools seem consistent with what most parents want: 1. *The school should focus on helping young people develop the habit of using their minds well [and maintain its] central intellectual purpose;* 2. *The school's academic goal should be simple: that each student master a limited number of essential skills and areas of knowledge.*

The Agenda 21 poll found that, of the majority (65 percent) of Coloradans who felt public education was on the wrong track, the first reason people gave for feeling this way was that "the basics are not taught." No doubt some disagree about what are "basics" and what are "essential skills," but don't the first two Coalition principles generally respond to what the public expects from public schools?

"It is not uncommon for some in the educational reform movement to refer to 'the basics' with disdain," *First Things First* states, "and numerous observers have interpreted the public's continuing focus on basics as evidence of lack of support for more rigorous and challenging course work. From the public's point of view, however, making sure public school children complete their education with a firm command of the basics is not a trivial or inconsequential goal. It is the essential

foundation on which children build their future. . . ."

To many Americans, "education experts" seem to give surprisingly short shrift to basics—skipping over them to discuss issues such as the importance of "critical thinking skills," the need to learn teamwork, and other higher-order skills that are at the top of reformers' agenda. But when people talk about "the basics," they are not necessarily suggesting that children can't do more, or that higher levels of achievement are not desirable. What most people seem to mean is "First things first." Indeed, the vast majority of Americans (96 percent) support having "tougher and more challenging courses" in the basics. (p. 14)

As further support of this point, note the response of Coloradans to the Agenda 21 poll item that read, "If schools would just go back to teaching the basics—like reading, writing, and arithmetic—it would solve a lot of today's problems in public education." A majority (57 percent) disagreed with that statement. The analysts' conclusion: "The public wants young people to know the basics, but not only the basics. Or put more formally, knowing the basics is seen as a necessary condition of being educated, but not a sufficient one."

In short, the public very much wants clarity about expectations, about what are the "essential skills and areas of knowledge." According to *First Things First*: "Like leaders, people believe that academic standards should be raised, that schools and teachers should be clear and specific about what they expect children to learn." (p. 15)

There is great agreement, as well, on the issue of the size of the school and of classes. According to the study done by *First Things First*, there is substantial concern about large classes. About half of Americans, and 63 percent of African-Americans, say classes are too crowded in their local schools. Respondents in focus groups often propose smaller classes as an effective way to make the schools more orderly and thus improve learning. This study, and other Public Agenda education projects, suggest that people place a very high premium on the teacher's role in a small-scale, structured environment. People believe students succeed best when a teacher knows them individually, knows how to encourage and challenge them, checks carefully on both their academic work and their behavior, and responds quickly and decisively if they fall behind. (p. 22)

This corresponds nicely with many of the conclusions TedSizer and his colleagues draw in *Horace's Compromise* and *The Shopping Mall High School*. The fourth Common Principle speaks to the issue of class size and teachers knowing their students well. Schools that work hard to get those numbers down and personalize the learning experience for all students will be responding to a parent's longing for safe schools where a few adults know their students well.

Such areas of common ground exist. If we listen hard and speak clearly, we might go a long way toward overcoming the gaps between the public and education reform. Better communication might reveal that parents and teachers, the public and the school reformers, are not really so "out of sync" after all.

many argue, is the need to rethink the role of assessment in teaching and learning. Essential school advocates call for exhibitions of mastery because they believe they provide a key tool—far better than conventional testing instruments offer—for revealing where students are encountering stumbling blocks in their emerging understanding. Once teachers and students have this information, the theory goes, they can address the shortfalls at once, folding their insights back into their daily actions and curriculum.

This approach could imply a whole new array of standard measures of student performance. Or, as the Coalition of Essential Schools prefers, it might instead encourage teachers to develop the critical habits that let them assess student understanding on the spot, against agreed-on local priorities. Regardless, the new approach to assessment contradicts much of American education's conventional wisdom—that testing exists to sort out, select, and reward an elite who can think.

Instead, cognitive research has shown, any student will learn if teachers pay attention to his or her unique intellectual profile, adapting classroom strategies to best suit the situation. Students whose intelligence manifests itself primarily in forms other than language or mathematical logic—through music or art, for example, or through the use of the body—have been abandoned by traditional schooling techniques, contend Howard Gardner and Joseph Walters at Harvard University's Project Zero. Their research into the learning process has established the usefulness of portfolios and projects in evaluating students' thinking skills across that spectrum.

At the same time, Gardner and his Harvard colleagues David Perkins and Vito Perrone have directed research into cognitive skills, aimed at developing and testing a "pedagogy of understanding" in the middle and high school years. The Teaching for Understanding project,

with its emphasis on in-depth learning and performance assessment, documents in a research setting many Essential school practices.

The idea emerged from research showing how "fragile" was the knowledge even the best students took away from the traditional curriculum. Students clung to misconceptions and stereotypes in key academic areas even after they had done well on coursework and tests, several studies confirmed. Real understanding must involve being able to *do something* with content knowledge, this research shows—explain it, find evidence for it, apply it, generalize from it, and represent it in new ways. The "generative topics" that Perkins and his colleagues describe as lending themselves to such teaching bear a striking similarity to the Coalition's "essential questions." If they can be shown to raise students' ability to perform at higher levels of thinking, we will have a research platform from which further gains can take off.

Researching the Coalition

A number of other researchers have gone into the classroom to observe first hand what works and what doesn't in Essential School reform. Much of this work focuses not only on shifting priorities in curriculum, pedagogy, and assessment but also on the accompanying changes within the schools as social organizations.

Donna Muncey and Patrick McQuillan's ethnographic studies in *Challenging Reform* (forthcoming from Yale University Press) offer a rich look at the process and pitfalls of early Essential school change efforts. The University of Illinois's Nona Prestine is tracing the progress over five years of schools in that state's Re:Learning Alliance. Under the aegis of the Center for Technology in Education, Alan Collins followed the "cognitive apprenticeship" of students at Central Park East Secondary School in New York. Linda Darling-Hammond and her colleagues at Columbia's National

Center for Restructuring Education, Schools, and Teaching (NCREST) have studied Coalition member schools in New York and elsewhere. Sam Stringfield's study of ten promising educational reforms found that no matter the strength of their ideas, all shared the struggles of changing entrenched institutions.

CES researchers too are charting the course of their movement. Patricia Wasley's book *Stirring the Chalkdust* follows five teachers in Coalition member schools through the throes of changing their classroom practice. Joe McDonald's forthcoming book *Redesigning School* studies ten member schools with an eye to identifying predictable problems and patterns.

Classroom teachers can also contribute to educational research by posing questions about their practice and sharing the results they collect with university partners. Such "action research" also contributes to professional development as teachers grow more reflective, talk more with colleagues about teaching and learning, and begin to change their classroom practice based on observable results.

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So what does research tell us about Essential Schooling that we didn't know before? Does the accrued evidence actually affect what teachers and students do when they meet up at school each day?

"The relationship between research and practice is not a simple, linear one," says the Coalition's Joe McDonald. "We should never fall into the trap of thinking that research tells us what to do; it can only *inform* school practice, not dictate it." The Essential School mission makes sense, he argues, from several points of view—political, educational, moral, and cognitive. Beyond that, perhaps better merely to agree with James Thurber that it is better to know some of the questions than all of the answers. In that respect, certainly, Essential Schools seem to be headed along the right path. □

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