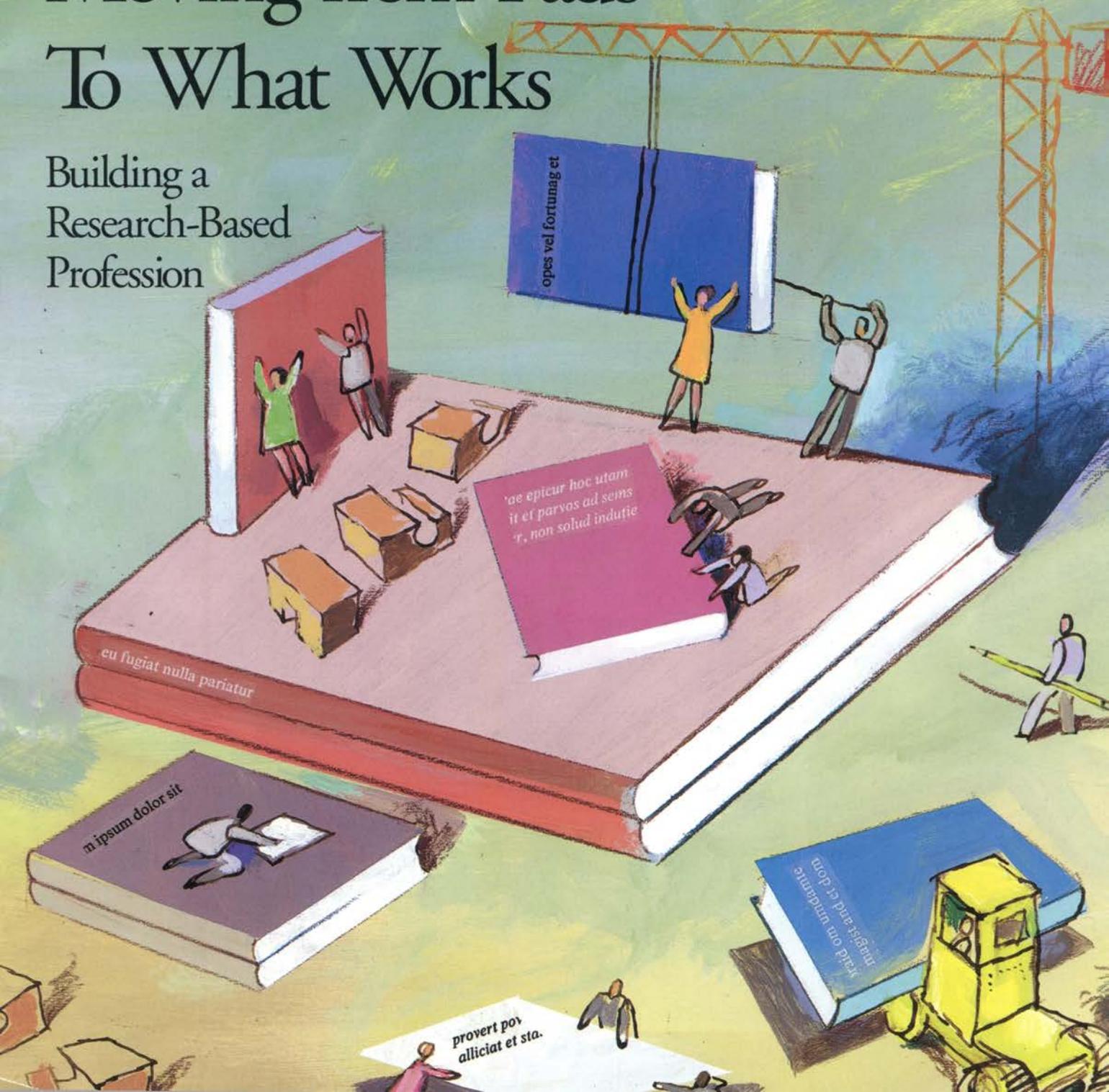


# AMERICAN Educator

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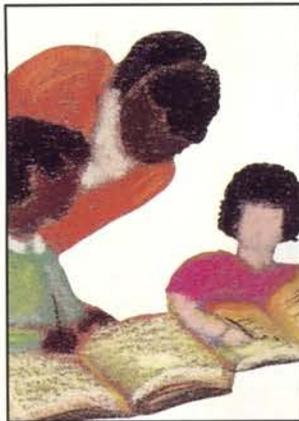
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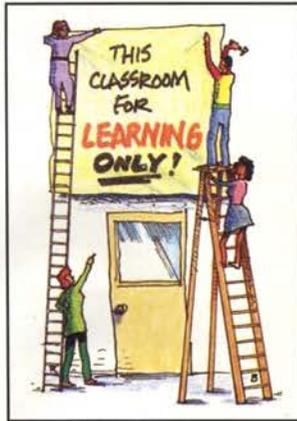
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# NOTEBOOK

## Women of Hope

### Discounts on Hispanic Heritage Materials

The AFT has arranged for a special member discount on a package of Hispanic Heritage materials. "Latina Women of Hope" includes a video, a twelve-poster set and a teaching guide. The half-hour documentary video describes the hopes and dreams that shaped the lives of twelve outstanding Latina women in the United States who have broken new ground in their lives and achievements. These women are prominent in the arts, literature, government service, politics, medicine, science, and law. The twelve full-color 18" x 24" posters are especially suitable



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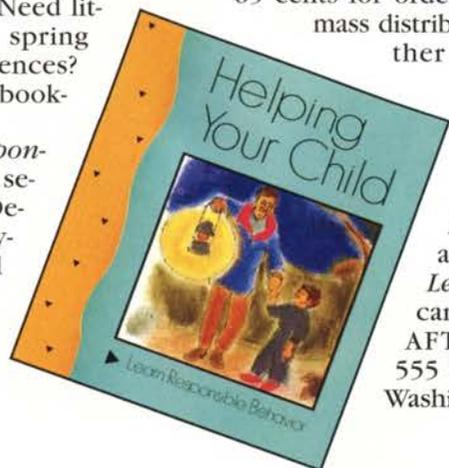
*The "Latina Women of Hope" package includes a twelve-poster set featuring outstanding Latina women.*

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# REALITY'S REVENGE: RESEARCH AND IDEOLOGY

BY E.D. HIRSCH, JR.

THE FIRST step in strengthening education in America is to avoid the premature polarizations that arise when educational policy is confused with political ideology. In the United States today, the hostile political split between liberals and conservatives has infected the public debate over education—to such an extent that straight thinking is made difficult.

Here's an example. Political liberals in the United States advocate greater equality in per-pupil spending among different school districts within a state. Many conservatives oppose shifting funds from one school district to another. Jonathan Kozol's book *Savage Inequalities* (1991) dramatized the injustices inflicted on poor children by the unfair distribution of public resources, and recently courts in Texas, Kentucky, and many other states have ruled that greater equity of funding is indeed required by law. Sadly, some of these rulings have been circumvented by conservative resistance—reflecting the degree to which a sense of community between rich and poor has further declined in the nation and given way to an us-versus-them mentality even with respect to children.

But one's political sympathies with equitable funding have no logical or practical connection with one's views about what ought to be happening inside schools once they are equitably funded. My political sympathies are with those who, like Kozol, advocate greater funding equity. But Kozol, perhaps influenced by his study at education school, expresses many "progressive" educational ideas that I oppose. I would label myself a political liberal and an educational conserva-

tive, or perhaps more accurately, an educational pragmatist. Political liberals really ought to oppose progressive educational ideas because they have led to practical failure and greater social inequity. The only practical way to achieve liberalism's aim of greater social justice is to pursue conservative educational policies.

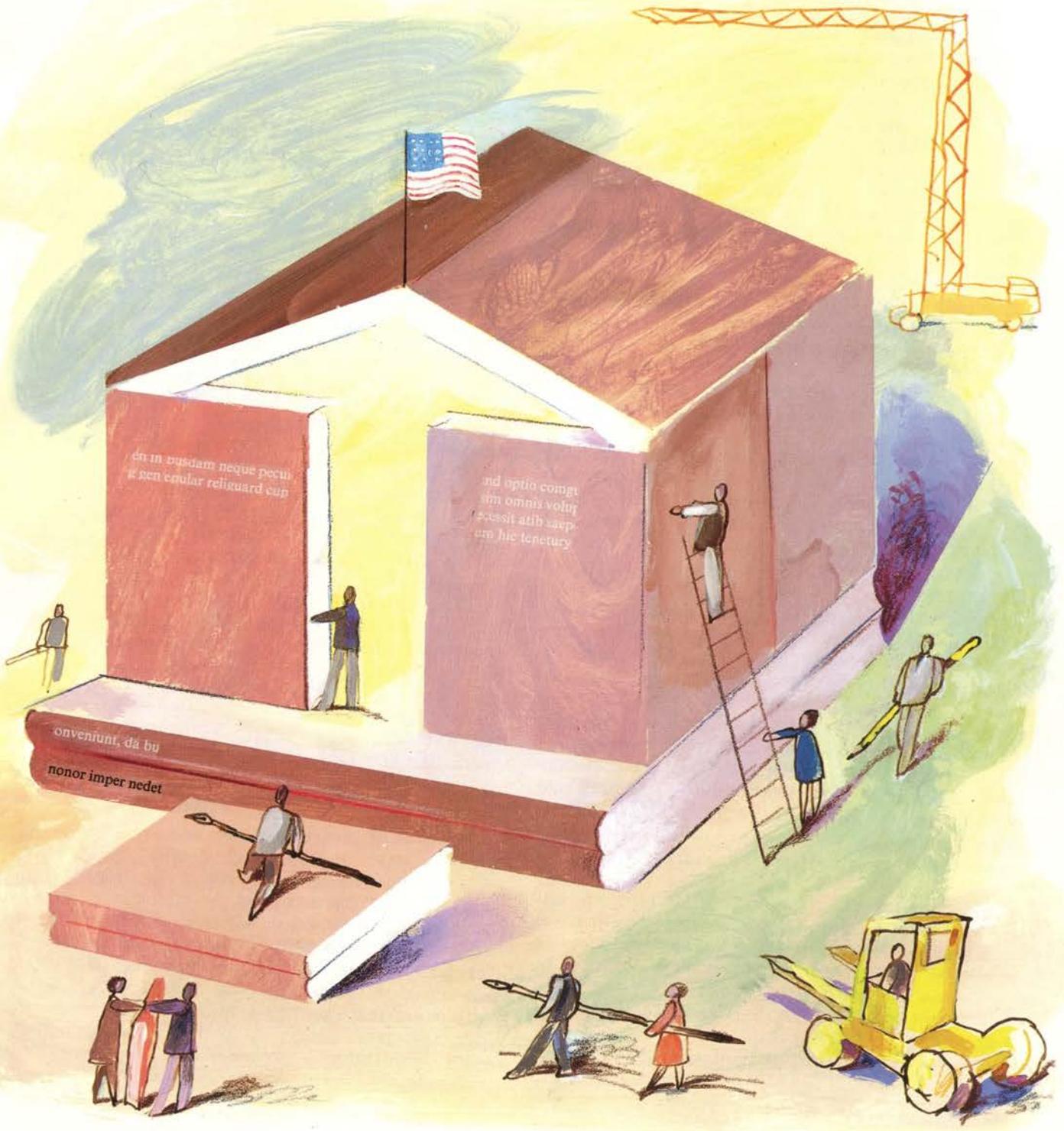
That is not a new idea. In 1932, the Communist intellectual Antonio Gramsci, writing from jail (having been imprisoned by Mussolini), was one of the first to detect the paradoxical consequences of the new "democratic" education, which stressed "life relevance" and other naturalistic approaches over hard work and the transmission of knowledge. Il Duce's educational minister, Giovanni Gentile, was, in contrast to Gramsci, an enthusiastic proponent of the new ideas emanating from Teachers College, Columbia University, in the United States.<sup>1</sup> Today, Gramsci's observations seem prescient:

The new concept of schooling is in its romantic phase, in which the replacement of "mechanical" by "natural" methods has become unhealthily exaggerated.... Previously, pupils at least acquired a certain baggage of concrete facts. Now there will no longer be any baggage to put in order.... The most paradoxical aspect of it all is that this new type of school is advocated as being democratic, while, in fact, it is destined not merely to perpetuate social differences but crystalize them in Chinese complexities.<sup>2</sup>

Gramsci saw that to denominate such methods as phonics and memorization of the multiplication table as "conservative," while associating them with the political right, amounted to a serious intellectual error. That was the nub of the standoff between the two most distinguished educational theorists of the political Left—Gramsci and Paulo Freire. Freire, like Gramsci a hero of humanity, devoted himself to the cause of educating the oppressed, particularly in his native Brazil, but his writings also have been influential in the United States. Like other educational progressivists, Freire rejected traditional teaching methods and subject matters, objecting to the "banking theory of schooling," whereby the teacher provides the child

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*E.D. Hirsch, Jr., a professor at the University of Virginia, Charlottesville, is president and founder of the Core Knowledge Foundation and author of Cultural Literacy and The Dictionary of Cultural Literacy. This article is excerpted from his new book, The Schools We Need and Why We Don't Have Them. Copyright © 1996 by E.D. Hirsch, Jr. Published by arrangement with Doubleday, a division of Bantam Doubleday Dell Publishing Group, Inc.*



with a lot of “rote-learned” information. The consequence of the conservative approach, according to Freire, is to numb the critical faculties of students and to preserve the oppressor class. He called for a change of both methods and content—new content that would celebrate the culture of the oppressed, and new methods that would encourage intellectual independence and resistance. In short, Freire, like other educational writers since the 1920s, associated political and educational progressivism.

Gramsci took the opposite view. He held that political progressivism demanded educational conservatism. The oppressed class should be taught to master the tools of power and authority—the ability to read, write, and communicate—and to gain enough traditional knowledge to understand the worlds of nature and culture surrounding them. Children, particularly the children of the poor, should not be encouraged to flourish “naturally,” which would keep them ignorant and make them slaves of emotion. They should learn the value of hard work, gain the knowledge that leads to understanding, and master the traditional culture in order to command its rhetoric, as Gramsci himself had learned to do.

In this debate, history has proved Gramsci to be the better theorist and prophet. Modern nations that have adopted Gramscian principles have bettered the condition and heightened the political, social, and economic power of oppressed classes of people. By contrast, nations (including our own) that have stuck to the principles of Freire have failed to change the social and economic status quo.

Gramsci was not the only observer to predict the inegalitarian consequences of “naturalistic,” “project-oriented,” “hands-on,” “critical-thinking,” and so-called “democratic” education. I focus on Gramsci as a revered theorist of the Left in order to make a strategic point. Ideological polarizations of educational issues tend to be facile and premature.

The educational standpoint from which this article is written may be accurately described as neither “traditional” nor “progressive.” It is pragmatic. Both educational traditionalists and progressivists have tended to be far too dogmatic, polemical, and theory-ridden to be reliable beacons for public policy. The pragmatist tries to avoid simplifications and facile oppositions. Thus, this article will argue that the best guide to education on a large scale is observation of practices that have worked well on a large scale, coupled with as exact an understanding as possible of the reasons why those practices have succeeded in many different contexts.

Reliable guidance depends on reliable research. Ideology and research should be disentangled as much as humanly possible. Research findings that are accurate and reliable must transcend partisanship and must be seen to do so. When research is cited with misleading selectivity, or when it is second-rate and unreliable, it ceases, after a time, to be useful even as rhetoric.

This discussion of educational research treks through a certain amount of technical detail. The trip is worth taking because of the practical benefits that solid, mainstream research can yield. High-quality, refereed research summarizes the most reliable accumu-

lated educational experience available to us. Its intelligent applications usually work much better in the classroom than mere hunches, because the conclusions of good, replicated research are far more often right than wrong. Good research represents the reality principle in education.

But, since much educational research is concentrated in such “soft” subjects as history, sociology, and psychology, it necessarily contains unknown factors, uncontrolled variables, and ineradicable uncertainties. There *is* consensus on certain important matters, however, and I try to focus on some of the most widely agreed-upon and disinterested conclusions.

By “disinterested,” I refer to a cast of mind, not to a lack of concern. Because educational research is applied research, the topics studied will have been generated by direct, practical goals, but a good researcher’s preferences will not have predetermined the results. In good medical research, too, practical aims decide what questions get asked and what money gets allocated, but the answers and the results of this applied research are dictated by the realities, not by preferences.

The questions we ask of educational research sometimes reflect conflicted aims, such as: How can we educate everyone to a fairly high competence without holding back our ablest and most motivated students? Research can describe and quantify the trade-offs involved in such questions, but it cannot evaluate how to act upon them. Such evaluation is a matter of policy, and in a democracy, educational policy should be decided openly and with the most accurate knowledge available. Research is the servant of policy, not its master.

But in another sense, good research *is* a kind of master, exhibiting a certain finality. Although it cannot decide policy, it can at least connect us with reality. Many of our failures in precollegiate education have been caused by the lack of fit between our dominant theories and the realities they have claimed to represent. Our educational failures reflect reality’s revenge over inadequate ideas. The history of American education since the 1930s has been the stubborn persistence of illusion in the face of reality. Illusion has not been defeated. But since reality cannot be defeated either, and since it determines what actually happens in the world, the result has been educational decline.

### **What Is Higher-Order Thinking?**

The goal of present-day educational reformers is to produce students with “higher-order skills” who are able to think independently about the unfamiliar problems they will encounter in the information age, who have become “problem solvers” and have “learned how to learn,” and who are on their way to becoming “critical thinkers” and “lifelong learners.” The method advocated for achieving these “higher-order skills” is “discovery learning,” by which students solve problems and make decisions on their own through “inquiry” and “independent analysis” of “real-world” projects—what Kilpatrick in the 1920s called the “project method.”

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# MAKING RESEARCH SERVE THE PROFESSION

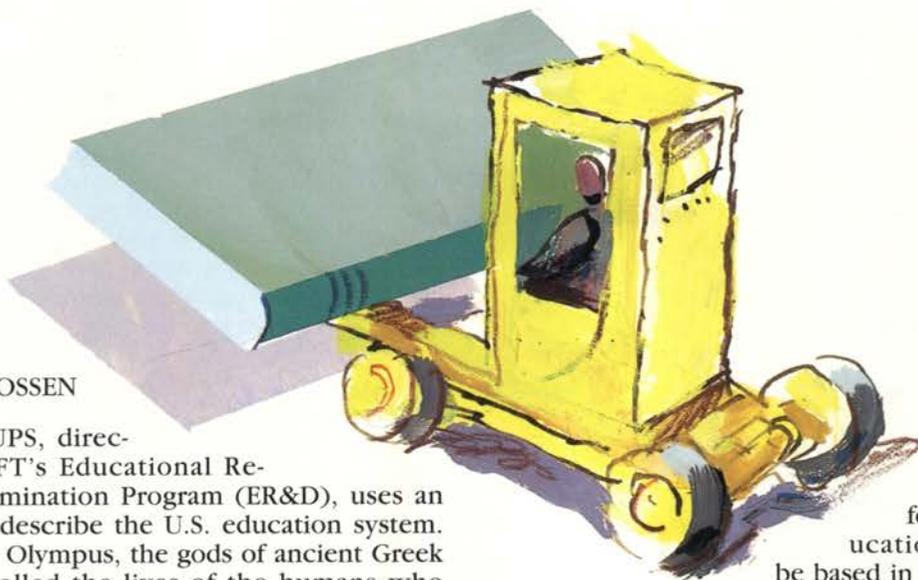
BY BONNIE GROSSEN

**L**OVELY BILLUPS, director of the AFT's Educational Research and Dissemination Program (ER&D), uses an apt metaphor to describe the U.S. education system. From atop Mount Olympus, the gods of ancient Greek mythology controlled the lives of the humans who dwelled below. As Billups tells it, modern education is not much different.

Students, teachers, administrators and local school district officials live at the base of education's Mount Olympus. About half way up, a layer of clouds obscures their view of the educational hierarchy on top: publishers, university professors, state department of education officials, teacher trainers, education consultants and national interest organizations (e.g., early education, mathematics, English, reading and so forth). Every so often, like a bolt of lightning from above, a new education fad will strike the nation's schools. Many of these lightning bolts will come in the form of a state mandate, followed by the roar of publishers promoting their packaged implementation materials. Knowing that a positive evaluation of the school may depend upon compliance, administrators send scarce education dollars streaming up through the clouds.

This Mount Olympus metaphor illustrates one of education's most serious problems. Unlike other research-based professions, our mechanisms for distinguishing fads that will probably fail from effective innovations are weak and ineffective. In fact, there may be more incentives for faddism than for the dissemina-

*Bonnie Grossen is a research associate with the University of Oregon's National Center to Improve the Tools of Educators (NCITE), a project funded by a grant from the U.S. Office of Special Education. This article is adapted from a presentation to the 1996 Summer Institute of the AFT's award-winning Educational Research and Dissemination Program (ER & D), a sixteen-year-old train-the-trainer project connecting practitioners with scientific research on teaching and learning.*



tion of proven practices.

To ensure its effectiveness, any education reform should be based in scientific research.

Unfortunately, this seemingly logical goal is undermined by many gods on Mount Olympus, who resist the necessary emphasis on objective tests and measurements. Yet this complex dispute may boil down to just this: If the American system of public education is to survive, it will have to convince a skeptical public that it can provide a quality education to all children, and then it will have to do it. To improve schools' performance, the instructional practices that are shared widely across the profession should be limited to those most likely to produce the best results. And scientific research is the best method for predicting the results that different practices are likely to produce.

In other words, what is needed is a professional knowledge base, composed of those practices which can be shown to work well for a large and diverse population of students and teachers. While there may be additional practices that can be shown to work for some students and some teachers in a limited number of cases, these should not be disseminated on a large scale until their success upon replication can be accurately predicted.

## What Makes It Research?

With all of the competing "reforms" and conflicting advice that is now being thrown at educators, how can we tell which prescriptions for success to follow? Whose predictions are most accurate? Research arrives at reliable predictions using a scientific method of inquiry that works something like this:

Let's say that we have a box that contains a mysterious and infinite universe. It's impossible to examine every item in the box, just as it's impossible to exam-

ILLUSTRATED BY BRU ASSOCIATES

ine every child in the world. But it is possible to take a careful sampling. If we see a pattern emerge, we can use it to try to predict the contents. The goal of the scientist is to use what can be seen to understand what remains unseen as accurately as possible.

Let's say the researcher, at random, draws a drinking glass from the box. It's impossible to draw any conclusions about the nature of the other things that may be inside from just one item—say, a case study. Out of context from other research, a case study may be interesting, but it's not very informative.

But let's say the next item that the researcher pulls from the box is another drinking glass. A good working hypothesis, then, would be that this is a box of drinking glasses.

In making the next selection, a researcher may be tempted to look inside the box and select another item that "confirms" this hypothesis. Or she might want to discard an item that doesn't fit. Both actions would diminish the reliability of the research.

Let's say the next item is a cup. The original hypothesis was shown to be at least somewhat inaccurate. So we might revise our hypothesis and predict that the next item will be a drinking container, but perhaps not a glass.

Another item, randomly drawn, is a canteen. This object would tend to confirm our hypothesis. With two glasses, a cup and a canteen, it appears that the box contains all types of drinking vessels.

But let's say that the very next object taken from the box is a rock. A rock doesn't fit the pattern at all. Must we now throw out our entire knowledge base to account for the rock? No; to reject or focus solely on the rock would be a mistake. Based on the samples that have already been taken, we can still make a prediction with some degree of accuracy.

The hypothesis now is that four out of five objects in the box are drinking vessels. While keeping the rock in mind, there is a significant probability that the next item taken from the box will also be a drinking vessel.

The consumers of educational practice—teachers and administrators—are increasingly aware of the importance of research and have begun to ask for it. But, while most of the education gods have obliged by producing what they claim to be research, these claims can be deceiving. The first problem is one of terminology. Unlike the hard sciences, education tends to refer to its working hypotheses as "theories"—a term that most fields of scientific research reserve to describe hypotheses that have already undergone some level of testing.

Secondly, while most education literature is now written with citations, including names and dates in parentheses, what is being cited may not be research at all, but opinion:

A small number of prolific professionals with strong beliefs can write a great deal and quote each other's ideas

*Author's acknowledgment: I would like to thank Barbara Ruggles, vice president of AFT Local 604 and president of the Park Forest Council, for her thoughtful feedback and constant encouragement in the development of this manuscript.*

(Back and Forth, 1994; Grossen, 1982). This creates a circular knowledge base that may appear to be research (Forth, 1963), but which can, in fact, just be "bull" (Ruggles, 1970).

As a consequence, many influential recommendations for teaching practice are really academic musings, devoid of any real research base—a fact that too many practitioners only find out the hard way: in the classroom. For example, from a principle such as, "In a democratic society, people should make responsible choices," some theorists might conclude that children should be given the responsibility of making their own choices, without too much direction from the teacher. Researchers, on the other hand, might approach the issue like this: "We want young adults in our society to learn to make responsible choices. Educationally speaking, how do we best accomplish this—by introducing choice to students through a teacher-imposed structure, or by giving them free choice?" By sampling the effects of these interventions in various classrooms, researchers would document which one results in more young adults making more responsible choices. Theorists develop theories to describe reality. Researchers use classroom evidence to test theories against reality.

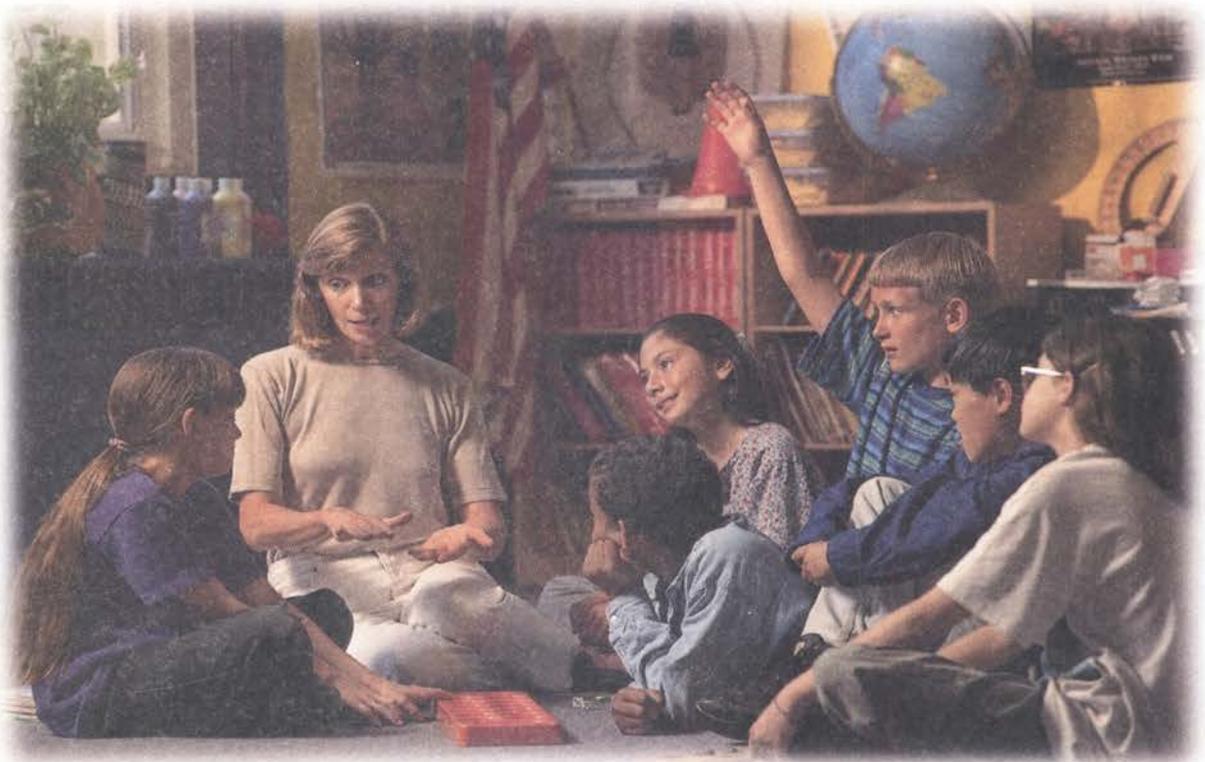
And finally, educational literature can mislead by referencing data that have nothing to do with the teaching practices under discussion. For example, there is research documenting that many students aren't good at critical thinking. This is often cited in support of particular teaching strategies which are said to help turn students into critical thinkers. But the data that exist only describe the problem; they say nothing about any specific instructional procedures that might help to solve it. Until an instructional practice has been implemented, evaluated and found to produce better results than its alternatives, there is no research basis for recommending it.

## Building a Professional Knowledge Base

Educators are not alone in these problems. All professions grapple with similar questions: How do you separate quackery from best practice? How do you encourage innovation, yet maintain high standards across the profession? At what level of evidence will new research be incorporated into the professional canon?

Many other professions have dealt with these issues by establishing impartial procedures, agencies and institutions to help screen information before it enters the professional knowledge base. Observation of the chemical reactions of a new compound, for example, might suggest its utility in the treatment of cancer. Yet, before an experimental study could be conducted on a few patient volunteers, extensive animal studies and tissue tests would be conducted. Only afterward would its effectiveness be tested on humans, probably against a placebo and/or an alternative treatment using randomly selected patients in a "double-blind" study. This research might then be submitted for publication in a professional journal, ensuring that it is subjected to an extensive peer review process. Independent researchers could then try to replicate or disprove the

*(Continued on page 22)*



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# SKILLS AND OTHER DILEMMAS OF A PROGRESSIVE BLACK EDUCATOR

BY LISA DELPIT

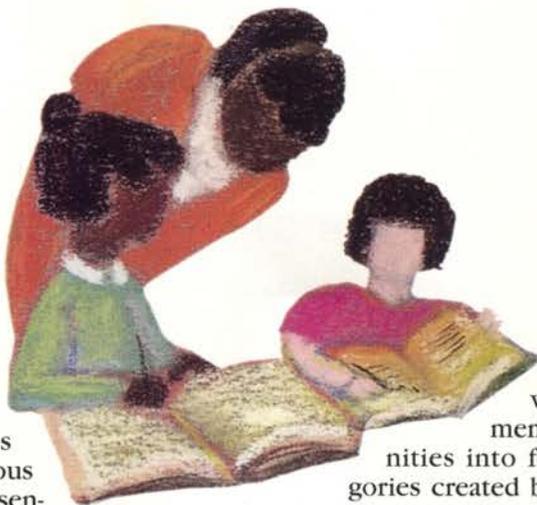
**W**HY DO the refrains of progressive educational movements seem lacking in the diverse harmonies, the variegated rhythms, and the shades of tone expected in a truly heterogeneous chorus? Why do we hear so little representation from the multicultural voices that comprise the present-day American educational scene?

These questions have surfaced anew as I begin my third year of university "professing" after having graduated from a prestigious university known for its progressive school of education. My family back in Louisiana is very proud about all of that, but still they find me rather tedious. They say things like, "She just got here and she's locked up in that room with a bunch of papers talking about she's gotta finish some article. I don't know why she bothers to come home." Or, "I didn't ask you about what any research said, what do *you* think?!"

I once shared my family's skepticism of academia. I remember asking myself in the first few months of my graduate school career, "Why is it these theories never seem to be talking about me?" But by graduation time many of my fellow minority students and I had be-

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*Lisa Delpit, a professor at Georgia State University in Atlanta, is a MacArthur Award recipient and author of *Other People's Children* (1995), a provocative look at the problems of education and society. This essay first appeared a decade ago in the pages of the Harvard Educational Review and quickly became one of the most widely discussed articles in the history of that publication. It is reprinted here because the issues it raises remain as relevant today as on the day it made its debut. Copyright ©1986 by the President and Fellows of Harvard College. All rights reserved.*



come well trained: We had learned alternate ways of viewing the world, coaxed memories of life in our communities into forms that fit into the categories created by academic researchers and theoreticians, and internalized belief systems that often belied our own experiences.

I learned a lot in graduate school. For one thing, I learned that people acquire a new dialect most effectively through interaction with speakers of that dialect, not through being constantly corrected. Of course, when I was growing up, my mother and my teachers in the pre-integration, poor black Catholic school that I attended corrected every other word I uttered in their effort to coerce my Black English into sometimes hypercorrect Standard English forms acceptable to black nuns in Catholic schools. Yet, I learned to speak and write in Standard English.

I also learned in graduate school that people learn to write not by being taught "skills" and grammar, but by "writing in meaningful contexts." In elementary school, I diagrammed thousands of sentences, filled in tens of thousands of blanks, and never wrote any text longer than two sentences until I was in the tenth grade of high school. I have been told by my professors that I am a good writer. (One, when told about my poor community and segregated, skill-based schooling, even went so far as to say, "How did you ever learn how to write?") By that time I had begun to wonder myself. Never mind that I had learned—and learned well—despite my professors' scathing retroactive assessment of my early education.

But I cannot blame graduate school for all the new beliefs I learned to espouse. I also learned a lot during my progressive undergraduate teacher training. There, as one of the few black education students, I learned

that the open classroom was the most “humanizing” of learning environments, that children should be in control of their own learning, and that all children would read when they were ready. Determined to use all that I had learned to benefit black children, I abandoned the cornfields of Ohio and relocated to an alternative inner-city school in Philadelphia to student-teach.

Located on the border between two communities, our “open-classroom” school deliberately maintained a population of 60 percent poor black kids from “South Philly,” and 40 percent well-to-do white kids from “Society Hill.” The black kids went to school there because it was their only neighborhood school. The white kids went to school there because their parents had learned the same kinds of things I had learned about education. As a matter of fact, there was a waiting list of white children to get into the school. This was unique in Philadelphia—a predominantly black school with a waiting list of white children. There was no such waiting list of black children.

I apprenticed under a gifted young kindergarten teacher. She had learned the same things that I had learned, so our pairing was most opportune. When I finished my student teaching, the principal asked me to stay on in a full-time position.

The ethos of that school was fascinating. I was one of only a few black teachers, and the other black teachers were mostly older and mostly “traditional.” They had not learned the kinds of things I had learned, and the young white teachers sometimes expressed in subtle ways that they thought these teachers were—how to say it—somewhat “repressive.” At the very least they were “not structuring learning environments in ways that allowed the children’s intellect to flourish”: they focused on “skills,” they made students sit down at desks, they made students practice handwriting, they corrected oral and written grammar. The subtle, unstated message was, “They just don’t realize how smart these kids are.”

I was an exception to the other black teachers. I socialized with the young white teachers and planned shared classroom experiences with them. I also taught as they did. Many people told me I was a good teacher: I had an open classroom; I had learning stations; I had children write books and stories to share; I provided games and used weaving to teach math and fine motor skills. I threw out all the desks and added carpeted open-learning areas. I was doing what I had learned, and it worked. Well, at least it worked for some of the children.

My white students zoomed ahead. They worked hard at the learning stations. They did amazing things with books and writing. My black students played the games; they learned how to weave; and they threw the books around the learning stations. They practiced karate moves on the new carpets. Some of them even learned how to read, but none of them as quickly as my white students. I was doing the same thing for all my kids—what was the problem?

I taught in Philadelphia for six years. Each year my teaching became less like my young white friends’ and more like the other black women’s who taught at the school. My students practiced handwriting; I wrote on the board; I got some tables to replace some of the

thrown-out desks. Each year my teaching moved farther away from what I had learned, even though in many ways I still identified myself as an open-classroom teacher. As my classroom became more “traditional,” however, it seemed that my black students steadily improved in their reading and writing. But they still lagged behind. It hurt that I was moving away from what I had learned. It hurt even more that although my colleagues called me a good teacher, I still felt that I had failed in the task that was most important to me—teaching black children and teaching them well. I could not talk about my failure then. It is difficult even now. At least I did not fall into the trap of talking about the parents’ failures. I just did not talk about any of it.

In 1977 I left Philadelphia and managed to forget about my quandary for six and a half years—the one and a half years that I spent working in an administrative job in Louisiana and the five years I spent in graduate school. It was easy to forget failure there. My professors told me that everything I had done in Philadelphia was right; that I was right to shun basals; that I was right to think in terms of learner-driven and holistic education; that, indeed, I had been a success in Philadelphia. Of course, it was easy to forget, too, because I could develop new focal points. I could even maintain my political and moral integrity while doing so—graduate school introduced me to all *sorts* of oppressed peoples who needed assistance in the educational realm. There were bilingual speakers of any number of languages; there were new immigrants. And if one were truly creative, there were even whole countries in need of assistance—welcome to the Third World! I could tackle someone else’s failures and forget my own.

In graduate school I learned about many more elements of progressive education. It was great. I learned new “holistic” teaching techniques—integrating reading and writing, focusing on meaning rather than form. One of the most popular elements—and one, I should add, that I readily and heartily embraced—was the writing-process approach to literacy. I spent a lot of time with writing-process people. I learned the lingo. I focused energy on “fluency” and not on “correctness.” I learned that a focus on “skills” would stifle my students’ writing. I learned about “fast-writes” and “golden lines” and group process. I went out into the world as a professor of literacy armed with the very latest, research-based and field-tested teaching methods.

All went well in my university literacy classes. My student teachers followed my lead and shunned limited “traditional” methods of teaching. They, too, embraced holistic processes and learned to approach writing with an emphasis on fluency and creative expression.

But then I returned to Philadelphia for a conference. I looked up one of my old friends, another black woman who was also a teacher. Cathy had been teaching for years in an alternative high school. Most of the students in her school, and by this time in the entire Philadelphia system, were black. Cathy and I had never taught together but had worked together on many political committees and for many radical

causes. We shared a lot of history, *and* a lot of philosophies. In fact, I thought we were probably in agreement on just about everything, especially everything having to do with education. I was astounded to discover our differences.

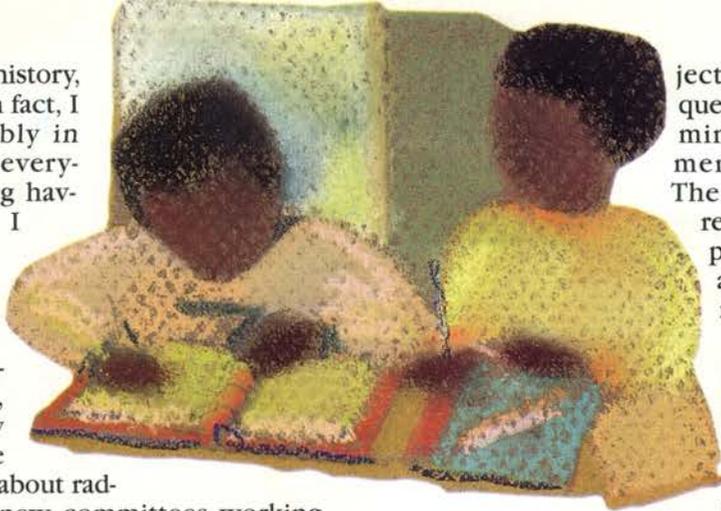
Cathy invited me to dinner. I talked about my new home, about my research in the South Pacific, and about being a university professor. She brought me up to date on all the gossip about radicals in Philly and on the new committees working against apartheid. Eventually the conversation turned to teaching, as it often does with teachers.

Cathy began talking about the local writing project based, like those in many other areas, on the process approach to writing made popular by the Bay Area Writing Project. She adamantly insisted that it was doing a monumental disservice to black children. I was stunned. I started to defend the program, but then thought better of it, and asked her why she felt so negative about what she had seen.

She had a lot to say. She was particularly adamant about the notion that black children had to learn to be "fluent" in writing—had to feel comfortable about putting pen to paper—before they could be expected to conform to any conventional standards. "These people keep pushing this fluency thing," said Cathy. "What do they think? Our children have no fluency? If they think that, they ought to read some of the rap songs my students write all the time. They might not be writing their school assignments but they sure are writing. Our kids *are* fluent. What they need are the skills that will get them into college. I've got a kid right now—brilliant. But he can't get a score on the SAT that will even get him considered by any halfway decent college. He needs *skills*, not *fluency*. This is just another one of those racist ploys to keep our kids out. White kids learn how to write a decent sentence. Even if they don't teach them in school, their parents make sure they get what they need. But what about our kids? They don't get it at home and they spend all their time in school learning to be *fluent*. I'm sick of this liberal nonsense."

I returned to my temporary abode, but found that I had so much to think about that I could not sleep. Cathy had stirred that part of my past I had long avoided. Could her tirade be related to the reasons for my feelings of past failures? Could I have been a pawn, somehow, in some kind of perverse plot against black success? What did those black nuns from my childhood and those black teachers from the school in which I taught understand that my "education" had hidden from me? Had I abrogated my responsibility to teach all of the "skills" my black students were unlikely to get at home or in a more "unstructured" environment? These were painful thoughts.

The next day at the conference I made it my business to talk to some of the people from around the country who were involved in writing-process pro-



jects. I asked the awkward question about the extent of minority teacher involvement in these endeavors. The most positive answer I received was that writing-process projects initially attracted a few black or minority teachers, but they soon dropped out of the program. None came back a second year. One thoughtful woman told me she had talked to some of the black teachers about

their noninvolvement. She was pained about their response and still could not understand it. They said the whole thing was racist, that the meetings were racist, and that the method itself was racist. They were not able to be specific, she added, but just felt they, and their ideas, were excluded.

I have spent the last few months trying to understand all that I learned in Philadelphia. How could people I so deeply respect hold such completely different views? I could not believe that all the people from whom I had learned could possibly have sinister intentions toward black children. On the other hand, all of those black teachers could not be completely wrong. What was going on?

When I asked another black teacher in another city what she thought of her state's writing project, she replied in a huff, "Oh, you mean the white folks' project." She went on to tell me a tale I have now heard so many times. She had gone to a meeting to learn about a "new" approach to literacy. The group leaders began talking about the need for developing fluency, for first getting anything down on paper, but as soon as this teacher asked when children were to be taught the technical skills of writing standard prose, leaders of the group began to lecture her on the danger of a skills orientation in teaching literacy. She never went back.

In puzzling over these issues, it has begun to dawn on me that many of the teachers of black children have their roots in other communities and do not often have the opportunity to hear the full range of their students' voices. I wonder how many of Philadelphia's teachers know that their black students are prolific and "fluent" writers of rap songs. I wonder how many teachers realize the verbal creativity and fluency black kids express every day on the playgrounds of America as they devise new insults, new rope-jumping chants, and new cheers. Even if they did hear them, would they relate them to language fluency?

Maybe, just maybe, these writing-process teachers are so adamant about developing fluency because they have not really had the opportunity to realize the fluency the kids already possess. They hear only silence, they see only immobile pencils. And maybe the black teachers are so adamant against what they understand to be the writing-process approach because they hear their students' voices and see their fluency clearly. They are anxious to move to the next step, the step

(Continued on page 48)

# STUDENTS WANT MORE DISCIPLINE, DISRUPTIVE CLASSMATES OUT

BY LYRIC WALLWORK WINIK

IT IS SEPTEMBER 3, 1996, the first day of the new school year. But for twenty-one high school students in the greater metropolitan area of a major American city, the first school night isn't spent hitting the books or even in front of the television. It's spent inside a windowless, nondescript room, seated around a wooden veneer table.

For four hours, two groups of young people, eleven from the city schools and another ten from the surrounding suburbs, talked about their education, their schools, their future. Dressed for the first day back in shorts, jeans, and assorted T-shirts, these students, ranging in grade from ninth to twelfth, may or may not be representative of American youth as a whole. But while the two focus groups were not designed for scientific accuracy, what these students had to say, in between fidgeting with pencils and doodling on notepads, should give pause to educators across the country.

According to these students, what their schools most lack—and what students most want—are discipline and order.

Violence, often coupled with drugs, disorder in the classroom, and the weak enforcement of school rules were of paramount concern. Overwhelmingly, the students' message was clear: Standards of behavior matter, both for everyday safety and for academic success.

School violence consumed much of the attention of both focus groups, whether it was sporadic, as at some of the suburban schools, or a more constant threat, as at several of the urban ones. When asked to grade personal behavior at their schools, most students gave their peers, and even their teachers and administrators, C's and D's. Both groups reported fights breaking out and the presence of weapons. Several suburban students spoke of the state police monitoring certain schools for drug problems and thefts, while many

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*Lyric Wallwork Winik, a Washington, D.C.-area writer, is a frequent contributor to Parade magazine, where she often covers educational issues. She has also written for Washingtonian magazine, The New York Times, and other publications.*

urban students told of schools where they were constantly on edge, despite metal detectors, private guards (also called "rent-a-cops"), and new security procedures.

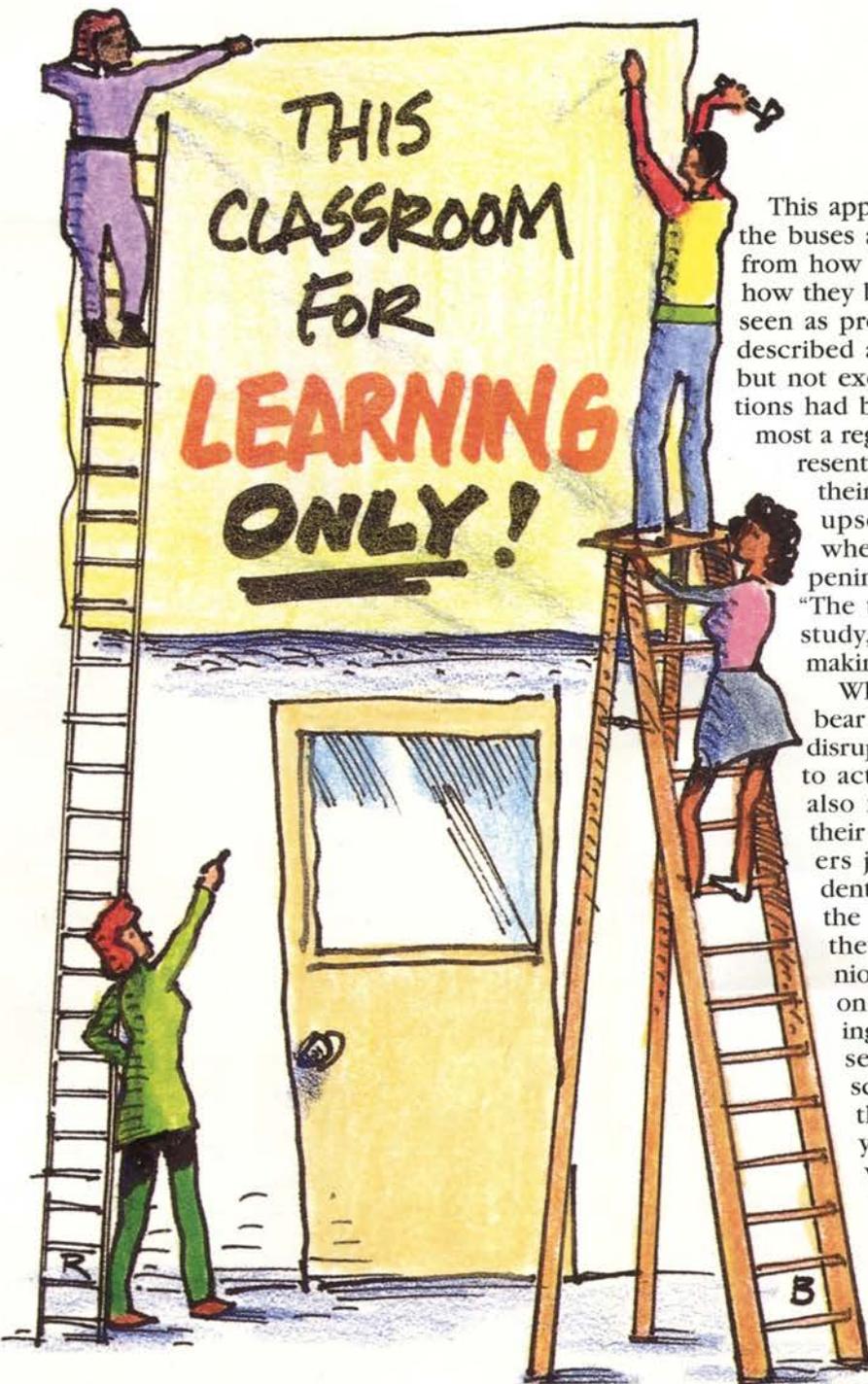
"You think being in school, you be safe," said Jackie,\* a sophomore at a city high school, "but you're in school and you're still not safe." "There's a lot of fighting," added Taker, a junior, "... Sometimes I be scared to walk down the hall because somebody will turn off the lights and the boys be hiding in the lockers. So when you walk down the hallway, you don't know what's going to jump out from behind you or in front of you." The trip to and from school may also be a time of danger. "Sometimes I be scared to go on that bus out there," said Lynn, a senior, "so sometimes I walk.... You know how boys will get, like drunk or something at school, so when they get on the bus they don't know how to act and they'll start fighting or something."

Several city students also complained of the easy access outsiders and strangers seem to have to their schools, explaining that almost anyone can enter the building and start a fight. "I mean they let you get in with a temporary ID, instead of enforcing the rules like they're supposed to," Taker explained. "They just let you in with a temporary ID and they don't do anything about it.... I'm saying, if you don't have an ID, you shouldn't be able to get inside, because everybody's sister, mother, and cousin could be in [my school]."

While episodes of violence seemed to be more common in the city schools, suburban students reported that they were far from exempt. Dave, a suburban sophomore, described the problems in his school as serious: "There's a lot of drugs, but they don't do anything about it. People pull guns on each other and they don't do anything...." Jared, a senior whose school has been plagued by fires, including one where the women's bathroom was doused in magnesium and set ablaze, explained, "People don't respect our school."

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\*EDITOR'S NOTE: For the purposes of this article, all student names have been changed.



This apparent lack of respect carries over from the buses and the bathrooms to the classroom—from how students behave toward each other to how they behave toward teachers. If violence was seen as problematic, classroom disruptions were described as epidemic. Several students—mostly, but not exclusively, urban—indicated that disruptions had become so common that they were almost a regular part of each class period. And they resented having to pay an academic price for their classmates' misbehavior. "It makes you upset, especially like around exam time when you really need to know what's happening," explained Aisha, a city sophomore. "The teacher's telling you what you need to study, and they're disrupting the class and making it hard for you to learn."

While many students feel that their peers bear much of the responsibility for classroom disruptions—"you should already know how to act," explained one urban student—they also fault those teachers who fail to exert their authority in the classroom. "Some teachers just don't have control, and their students take over," said Aisha, "but I can have the same classmates in a different class and they don't say anything." James, a city junior, placed half the blame for disruptions on students and half on teachers, explaining, "... I think the teachers, they need to set precedents. Like on the first day of school, you know, show to the students that they have control. Because, like, if you don't and if they see that they can walk over him, they are going to take that opportunity. And also you've just got a few ignorant students out there who just want to get in detention or whatever else."

Several teens also placed the blame for class disruptions and school tensions directly on the students' shoulders. "I definitely think it's the

students' fault, at least in my school," said Marc, a suburban junior. "There's just a lot of ignorant people in my school. They're just disrespectful.... They don't respect people except for themselves or their group."

Many students expressed sympathy for teachers in their struggle to manage and discipline large, unruly classes. Jackie, the urban sophomore, even raised the issue of teachers' personal safety. "Because it's like some people, if they can hit their mother, they can hit a teacher.... You can't hit a student, but then a student can hit you, really. That's how it is." Added Kim, a freshman, many teachers "are scared of the students."

Many students also expressed frustration with the ineffectiveness of schools' disciplinary procedures, a source of repeated complaints from both sets of students, although with several variations. "The problem lies in the students," said Doug, a suburban senior, "but the fault lies in the administration. The school is there to do something, and [even] if the students are the ones with the problem, they're not going to change on their own. If the administration's not going to do anything—which they won't—nothing's ever going to change. I put the fault in the administration."

Some students thought that their school's disciplinary code needed to be made tougher; some thought that the rules were adequate but said that lack of enforcement was the problem. Others said that there were far too many rules, but the serious problems remained unaddressed. "We've got plenty of rules that's like in binders this thick," said Dave. "They expect you to know every rule. They've got everything from if your pants are too big around your waist, you've got to wear a belt. Your boxers can only show this far. [But] they only do anything about the stupid stuff, like talking in class. The people that bring drugs into the schools and guns, a month after they get expelled, they're back in school. [For] the most serious acts, students need to get kicked out of school—for good—and need to go to an alternative school. And then them schools have to have stronger rules too."

In fact, urban and suburban students, alike, felt themselves plagued by violent and disruptive peers—students who may have been removed from class or even expelled from the school—only to return in a week, a month, or just a day, as if nothing had happened. "... [T]hey're going to know they can do whatever they want and just come back. I think there needs to be a certain point, you know, just kick them out," explained an urban junior, who attends one of the city's more prestigious magnet schools. Lynn, a city senior, agreed. "Just kick them out of class. If you don't show that you're serious about it, then the students aren't going to take you seriously. Like if you just let them get away with things, then students are going to keep doing them."

The support for permanently removing unruly classmates was just as strong among suburban students: "If a student is being disruptive, then just kick him out. Get him out of the class.... I mean, if they don't want to learn, you gave them the chance," said Alan, a senior with an interest in law and graphic design. He went on to add, in obvious frustration, that disruptive students should be told, "This is your high school education, and if you don't want it, we're not going to give it to

you.... If a person is constantly disruptive, then they obviously don't care. If they're throwing paper and whatnot, get them out of class. I mean, sure, everybody may do something to a substitute teacher, everybody may do something once in a while, but there are people who are constantly, absolutely disruptive who just shouldn't be there, who aren't learning but yet they're still there."

Indeed, students' desire for orderly classrooms clearly overlaps with their concern over academics. And here again, the wish is for identifiable standards. In fact, the same preference among many students for enforceable standards for classroom conduct extends, in varying forms, to their views on academic achievement.

"I don't think I'll be prepared for college," said Dave, the suburban sophomore, "because there are just too many students in the school that are just like [not serious].... There are just too many disruptions." For some, large class sizes—several suburban students spoke of classes of forty-five or more—seem to guarantee a certain level of anonymity in which standards of behavior and academic achievement are both allowed to slide.

Several urban students also complained that, in some instances, good behavior is allowed to substitute for academic achievement. "I think they just grade you on the way you act," said Aisha, "If you was quiet, you get a 90." Added Taker, "They give you what they think you deserve...."

One suburban student explained that there was very little difference in the actual work between standard and honors classes. The real difference was to be found in students' behavior: "... the kids in there actually want to learn, that's why they're signed up for honors, they actually want to be there."

Indeed, most of these high schoolers have come to *expect* other students to behave badly. Alan, the suburban senior, summarized students' frustrations this way, "I think it's the whole setting. The teachers don't care, the kids don't care, the administration doesn't care, when it comes down to it, after three years, you don't care."

For Guy Molyneux at Peter D. Hart Research Associates, observations like Alan's lead to some larger and troubling conclusions. "Most students accept their current school conditions," he says. "And although they voice specific complaints, they do not have a sense that their schools may have been or could become better." Perhaps most disturbing is the researcher's comment that, "Most of these high schoolers have a hard time imagining a school in which students and teachers are respectful of one another and in which learning and hard work are valued."

For anyone concerned with the state of education, such observations and conclusions raise an important question well beyond the scope of these two focus groups: These students clearly expressed a desire for higher standards, for themselves and their peers, in the areas of both discipline and academics. At the same time, it appears that the students' standards for and expectations of their schools are declining. The question now is: How does the nation and its public school system raise students' expectations—and fulfill them? □

# FINDING THE WAY POINT

## *Education and the American Dream*

BY RICHARD DREYFUSS

**T**HANK YOU. I'd be a liar if I told you that I'd never had a fantasy of getting a standing ovation from a room full of teachers.... The reality is far better than the fantasy.

First of all, I'd like to thank Mr. Shanker, not only for his very kind introduction and for the wonderful column that he wrote about me and about *Mr. Holland's Opus*, but for the work that he has done over the last thirty years. The strange puzzle of being a teacher in America—the fact that teachers are the most respected and disrespected people in our community—is something that Mr. Shanker has struggled with better than most. I appreciate that.

Second, I just want to make sure, is Gladys Wilcox here? Gladys Wilcox? Okay. As long as she's not here, I can tell you the story.

Gladys Wilcox was a teacher of mine at Horace Mann Elementary School. She was also a humorless, impatient, frustrating, bitter, rotten human being.

So after I left school, after I left her class, I never thought about her again. About twenty years later, I was having a conversation with a friend of mine. We were reminiscing about elementary school, when all of a sudden it occurred to me that many of the things that I had come to love in my life—Shakespeare, history, reading literature—had all come out of this woman's class. And I was struck by the fact that she had—you know—not liked me very much and had not seemed to encourage me much. But she got the job done.

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*Richard Dreyfuss, an Academy Award-winning actor, starred as music teacher Glen Holland in last year's hit film, Mr. Holland's Opus. This is the text of his August 4 address to the AFT's 1996 national convention in Cincinnati, Ohio.*



*The author as high school music teacher Glen Holland in a scene from Mr. Holland's Opus.*

And so I tracked her down. I found her in a retirement home in southern California. I called her up. She answered the phone, and I said, "Mrs. Wilcox, you won't remember me. My name is Richard Dreyfuss. I was a student of yours at Horace Mann Elementary, and I just want you to know that many of the things I've come to love in my life, I learned in

your class." She said, "Thank you, very much," and hung up.

... There's a point to that story, but I also had a teacher by the name of Rose Jane Landau—may she rest in peace—who taught a class in drama when I was a teenager. She happened to gather together the greatest collection of neurotic, misfit, outcast children that has ever been brought together in one place at any time.

She was also, like Gladys Wilcox, a great teacher. She was great because she allowed us to believe that we were, in fact, as talented as we thought we were.

Those were not the only great teachers I had, but they represent polar opposite approaches that both led to great teaching and grateful students. And wherever they are, I thank them.

*Mr. Holland's Opus* was also about a guy struggling to become a good teacher and a good person. And it was about a larger debate within American society over what is valuable and important to us as a people.

What touched people in the film, why they responded so strongly, points to certain fundamental values in America—certain aspirations and longings that are not currently being fulfilled, that we, in an odd way, have walked away from.

Pilots, as they take off, focus on a point on the horizon called the "way point." You fly fine until you reach that point. Then you must re-focus, locate a new way



PHOTOGRAPH BY RUSSELL CURTIS

point on the horizon and re-adjust your instruments to fly again with confidence.

We are now at a unique turning point in America; not just because we approach the end of a millennium—although there is psychological power, and even anxiety, in reaching the year 2000 in Western civilization—and not just because by prevailing in the Cold War, we lost the security of an external enemy. Add to that thirty years of unceasingly negative events: from assassinations to the Vietnam War, from the oil embargo to Watergate and the drug epidemic—all of which created a permanent, undying suspicion from all sides in this country toward the government and its institutions.

The moorings we had in a certain set of values and beliefs seem to have broken free. We seem, for the first time, to be without a way point. We are adrift, insecure, and frightened. Our sense of common purpose and destiny has been deeply eroded.

But there is a new and dangerous deal here. If we lose faith in ourselves, in our institutions, it bodes particularly ill because we are tied to our country in a unique way. We are not the French or the Italians or anyone else held together by geography and ancestry and common culture. We are tied to the abstracts of freedom and opportunity and the themes expressed in the Constitution and the Bill of Rights—and if we cease to believe in these things, what's the point of being an American?

The ties that bind are more invisible here. We have no common culture to fall

*Actor Richard Dreyfuss, one of the many prominent endorsers of the AFT Lessons for Life campaign, roused the audience with this address to the AFT's 1996 national convention.*



back on, no unified version of history, no monolithic tale shared by all. Our foods, our gods, our marriage customs—everything here is various and different. We are connected only by those yearnings that are intangible.

We are about hope, and faith in our future. The future, in fact, has been the one constant in the history of America. John Quincy Adams said of those who were thinking of taking the extraordinary step of emigration, "They must cast off their European skin, never to resume it. They must look toward their posterity rather than backward to their ancestors." The essence of America is a commitment to an unbounded future of achievable dreams.

But now we have limited those hopes. Our belief in our future has been shaken. And all the dreams that each generation has passed on to its children are not shared by us. Our kids, we truly believe, will have to make do with less.

We are without a way point, and we feel all our resources are bankrupt.

We have forgotten that we are the richest nation on earth. We act as if we are poor and struggling and miserly, and those who have more than others are committed merely to hanging on to it. How else can we explain this drumbeat of rejection for school budgets, health care for our people, safe bridges, enough parks?

Our new mean-spiritedness denies the very heart and soul of our culture: We are

about life, liberty, and the pursuit of happiness; about opportunity, achievement, can-do generosity. For everyone. For each of us.

Yet the real and greatest enemy we face as the millennium draws near is the rejection of hope, optimism, and faith in the American ideals that bind us, that are our very essence.

Ladies and gentlemen, we need a new

way point, and we are going to have to look to ourselves to find it, individually and collectively. We must look to the story that is and has been America.

I am convinced we can turn this around.

But it will take passion and work. You, the teachers of America, know this better than anyone.

I believe that the powerful public reaction to *Mr. Holland's Opus* speaks to this. Why did Mr. Holland strike such a deep chord in Americans? Because they love their teachers, and because they cherish their memories of those times.

They long for those times, precisely

because they seemed to have had a way point. We knew who we were and where we wanted to go—as a people, as a nation. And there seemed to be objective indications that we could actually get there. And even our challenges seemed clear, often winnable, and occasionally noble—good jobs, two-car garages, women's rights, democracy versus totalitarianism, space exploration, civil rights.

And they remember their teachers. Sure, parents want their kids to be able to go to college and get a good job. But that is not enough. They want teachers who help their kids to understand life and its meaning. They want them to understand who we Americans are and how we should express our character in words and actions. And, I believe, people, as they watched this movie, unconsciously recognized the importance of a complete education, from math, science, and history to art and music.

Perhaps we've all misunderstood the reason we learn music and all the arts in the first place. It is not only so a student can learn the clarinet, or another student can take an acting lesson. It is that for hundreds of years it has been known that teaching the arts, along with history and math and biology, helps to create "The Well-Rounded Mind" that Western civilization and America have been grounded on. America's greatest achievements—in science, in business, in popular culture—simply would not have been attainable without an education that encourages achievement in all fields. We need that "Well-Rounded Mind" now. For it is from creativity and imagination that the solutions to our political and social problems will come.

The society that doesn't teach its children the richest expressions of history and culture doesn't give its kids the real tools of expression: powerful and dramatic words, compelling images, music, and song. That society is defrauding and ultimately destroying itself.

You, teachers, educators here today, would consider it an honor and a duty, I know, to be a part of the process of establishing a new way point for our children. They need—we all need—to believe again in our future, in our possibilities, in what brought us all this way, together, as Americans.

We need to remind our kids, remind ourselves, of the importance of where we come from. Of course, we have to teach children to read and write and make them functioning members of something other than an unquestioning work force, but we also have to seduce them, we have to propagandize them, we have to brainwash them into a love affair with the American idea. We have to paint a picture of republican democracy that is as romantic and irresistible as it really is. We have to teach our children our history, our mythology, our culture with passion, with wit, with rigor. And by doing that, we create the possibility of that civic virtue that ties a thinking individual into his or her present community.

Teach them the value of commitment and creativity and the simple endurance of people like Glen Holland. Teach them of the need for the shared belief that our schools are a primary source for character and courage.

Teach them these things, and they will know how to find their way point. □



PHOTOGRAPH BY MICHAEL CAMPBELL



PHOTOGRAPH BY MICHAEL CAMPBELL

# 2004: MARYLAND'S REFORM ODYSSEY

BY KARIN CHENOWETH

WHEN STATES first began requiring students to meet minimum course requirements and pass competency tests before graduating from high school, some educators worried that the new standards would cause students—especially minority and disadvantaged students—to fail and drop out at higher rates than was already the case.

Their thinking was that these students were already failing to meet existing standards. Raising standards, they argued, would simply force students further into an educational limbo.

As it turned out, the exact opposite happened. Although initial rates of passing were low, school systems with minimum standards report that more of their students are passing and—perhaps the biggest surprise—dropout rates are stable or declining.

In light of this, some states are now deciding that they should go beyond minimum standards and adopt a more rigorous academic experience, not just for those students thought gifted, but for everyone.

Although several states have begun efforts in this direction, one of the few states to link that kind of reform to higher education is Maryland, which has been slowly putting into place a systemwide reform that will eventually make a high school diploma not only a certificate of mastery, but a ticket to good jobs, higher education, and even scholarship money.

“I want kids to have a diploma they’re proud to

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hang on the wall,” is the way state board of education member Walter Sondheim Jr. puts it.

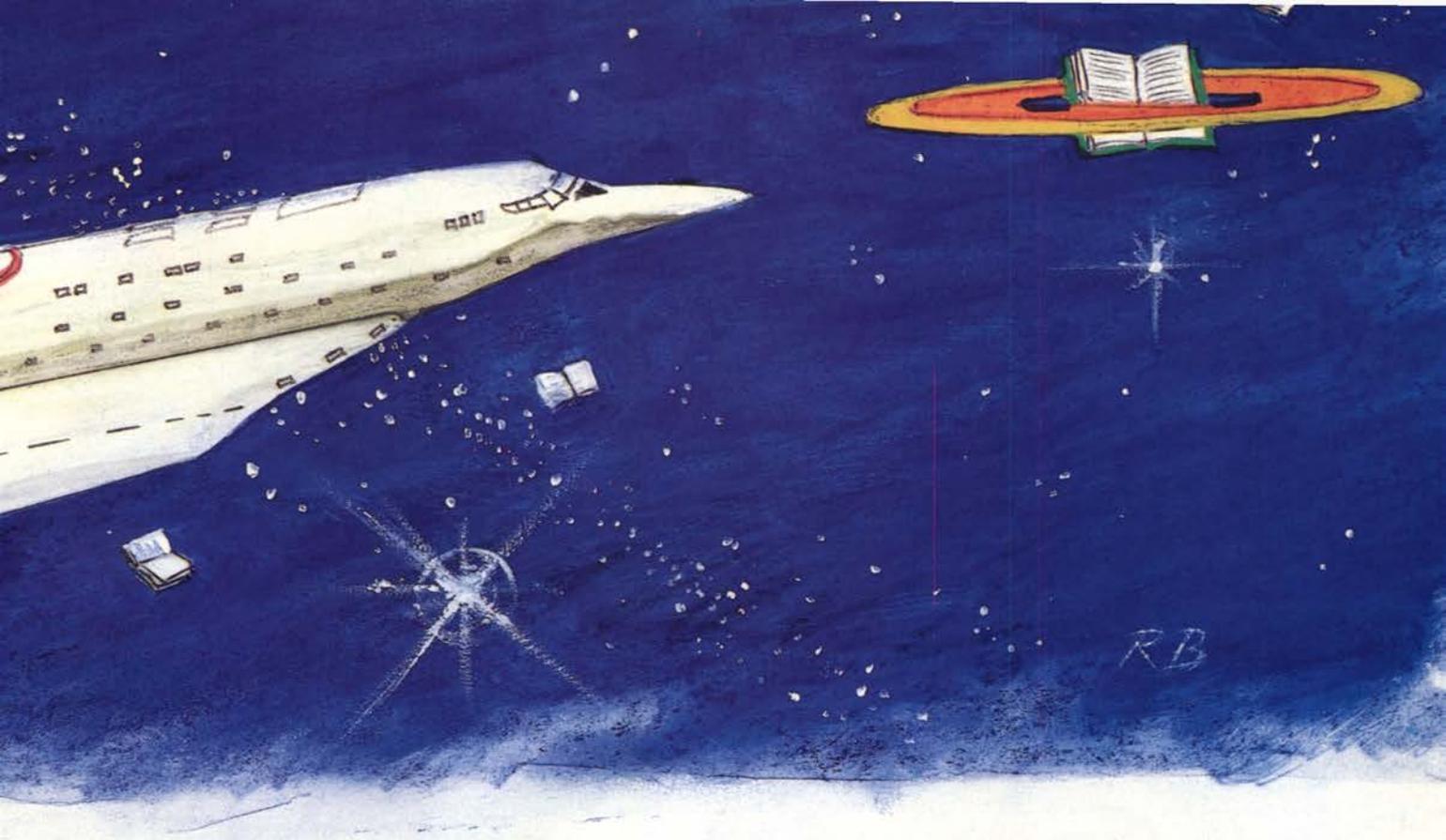
## Corporate Support

Late in January, Maryland took a big step toward its plan to require high-level assessments when the state school board asked testing companies for bids to design ten tests, to be taken throughout the high school years.

To make sure the tests are challenging for all students and to guard against pressures to “dumb the tests down,” state educators plan on having multiple levels. For example, achieving a score of 80 on the exams might guarantee high school graduation. A score of 85 or 90 might garner the student a special note on the diploma that he or she had graduated with merit or distinction. Higher scores might guarantee the ultimate reward of automatic entrance to a Maryland college and even scholarship money.

In addition, the Maryland Business Roundtable, which represents seventy of Maryland’s biggest employers, has agreed that if this testing procedure becomes a reality, it will encourage businesses to use the diploma and the scores on the assessments as a way to make hiring decisions. A letter of support for the reforms was signed by the heads of such companies as Potomac Electric Power Company, Bethlehem Steel Corporation, and Bell Atlantic-Maryland.

This approach represents a turnaround of the old worry that teachers will abandon what should be taught in order to “teach to the test.” By putting into place tests they think worthy of being taught to, Maryland officials are basing their reform on the expectation and hope that teachers *will* teach to the test.



Nancy S. Grasmick, state superintendent of schools, tells teachers in a recent newsletter that "teaching to the test is in favor."

### 'High-stakes' Diplomas

If Maryland, in fact, implements these changes, it will in some ways be mirroring what some other nations do. In Germany, for example, admissions to university and to prestigious apprenticeships are determined in large part by how well students do on exams in their equivalent of ninth- and tenth-grade.

But Maryland officials are not consciously patterning the state's system after any other nation's. "It's just a matter of thinking through the incentives," says Christopher Cross, president of the state's school board and president of the Council for Basic Education. Cross draws a distinction between what he would like to see in Maryland and, for example, Japan, by saying, "Japan doesn't have the richness of second chances. We're not a society that would stand for—nor should we—that kind of rigidity."

Cross wants Maryland's high school tests to be what he calls "high stakes," and withholding diplomas from those who fail them is certainly one way to do that. For planning purposes, officials are assuming that 50 percent of the students will fail the first set of exams and will need to be re-tested after being provided with more instruction or other kinds of help.

Dr. Helen Giles-Gee, associate vice-chancellor for academic affairs of the University of Maryland System (UM) and one of the behind-the-scenes theoreticians of the reform effort, contends that by setting clear, achievable standards and then providing students the support they need to meet them, Maryland will be

providing a greater opportunity for all students—but particularly poor and minority students.

"It's so exciting," she says. "And it has so much promise."

### The 'Seamless Web'

Giles-Gee has been part of the "Maryland Partnership for Teaching and Learning K-16," or "Maryland K-16" for short. Begun in November 1995 by the chancellor of the University of Maryland System, the superintendent of the state department of education, and the state's secretary of higher education, Maryland K-16 has been charged with making the transition from kindergarten through college a "seamless web."

Giles-Gee has spent a great deal of time working on one of the many parts of that web: articulation between two- and four-year institutions. Now, after years of work by academics throughout the state, a general education class at Essex Community College is equal to a UM general education class, and students may now easily transfer credits between two- and four-year institutions.

She is hoping that the K-16 initiative will develop that kind of fluidity between high school and college so that, for example, a high school senior who is ready to take college-level calculus may do so by taking the class at a local college or at the high school, where a college faculty member will be assigned to teach the subject. "The ideal alignment would be a meshing of real competencies," she says.

All this requires that Maryland colleges, high schools, and businesses expect the same things of high school graduates, and representatives from all those communities have spent the past two years developing

# Standards: How's Your State Doing?

SINCE THE first National Education Summit in 1989, educators and policymakers in most states have been working conscientiously to develop and strengthen academic standards for students. These efforts received a terrific boost at the second Education Summit earlier this year, when governors and business leaders reaffirmed their commitment to raising the academic bar for all students (see *American Educator*; Spring 1996). The forty-four governors in attendance made a commitment to have a system of internationally competitive standards in place within the next two years. A tall order? Perhaps, but most states have taken this challenge seriously and have begun the difficult process of reviewing and improving their academic standards. Now the question many are asking is: "How do our standards compare with the standards in other states and other countries?"

This summer, the AFT released a report designed to help answer this question. *Making Standards Matter 1996* is the second annual AFT review of standards-based reform in the fifty states. The report provides a subject-by-subject analysis of the standards in every state, and it answers some important questions about the impact those standards will have on student learning. Here are some of the major findings:

- **States are committed to improving academic standards and basing them in core academic subjects.** Forty-eight states (down from forty-nine last year) are developing common academic standards for students (Iowa and Wyoming are not doing so). All but one (Rhode Island) of the forty-eight will have separate standards in the four core academic subjects—English, math, social studies, and science—something the AFT thinks is crucial to preserving the integrity of the traditional disciplines.
- **Most state standards are still not clear and specific enough or adequately grounded in subject-matter content to form the basis for a core curriculum.** Only fifteen states (up from thirteen last year) have standards in all four core subjects that are specific enough to lead to the development of a common core curriculum. Why is this a problem? By opening the door to widely varying interpretations, vague standards threaten educational equity, reducing the chance that all students across the state will get an equally rigorous curriculum. Vague standards also cannot help teachers and schools deal with the problem of student mobility. One-fifth of students nationwide change schools each year, and one-third change each year in urban areas. In the absence of clear, common standards, students arrive in their new

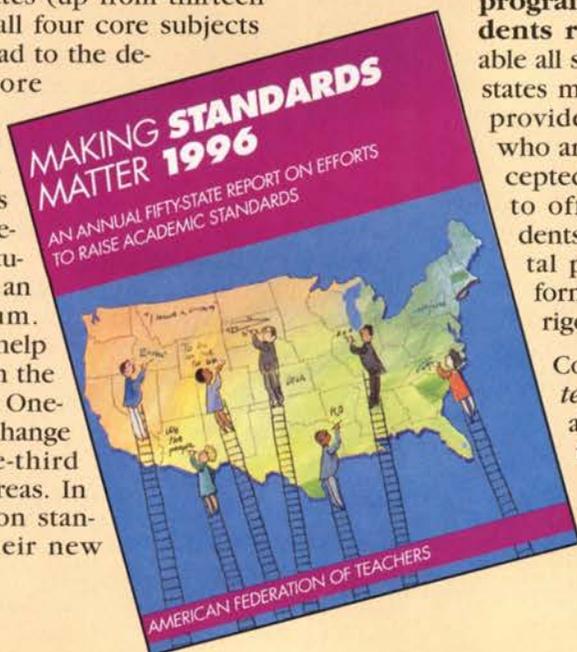
classrooms ahead of or behind the rest of the class, placing a significant burden on the teacher.

- **Most states realize that high-quality standards should compare with the best in the world, but only a few have looked at student standards in other countries, and none has done a thorough job of international benchmarking.** Only twelve states (up from seven last year) have examined curricula, exams, or other materials from foreign countries while developing their standards.
- **Some standards are exemplary and can serve as models for other states to follow.** Nine states (Calif., D.C., Del., Fla., Ind., Mass., Ohio, Va., W. Va.) have standards in one or more subjects that AFT considers exemplary for their clarity, specificity, and grounding in academic content.
- **Forty-two states are developing student assessments linked to standards, but the insufficient attention to academic content means that these assessments will rest on a weak foundation.** Assessments based on vague standards are problematic for one of two reasons. Either the assessments will follow the lead of the standards, and they will not require students to demonstrate mastery of specific, rigorous content. Or the assessments will require specific content knowledge, but teachers, students, and others will have to guess what that content is.
- **Fewer than half the states plan to make their standards "count" for students by linking them to promotion or graduation.** Only three states will hold students accountable for meeting standards in elementary and middle school, and only twenty states have or are planning high school exit exams linked to the standards that students must pass to graduate.

- **Only ten states require and fund programs to help low-achieving students reach state standards.** To enable all students to reach high standards, states must be prepared to identify and provide extra help to those students who are struggling. Few states have accepted this obligation, and the failure to offer help to low-achieving students will undermine the fundamental promise of standards-based reform: to provide *all* students with a rigorous quality education.

Copies of *Making Standards Matter 1996* (item no. 265) are available for \$10 each (prepaid) from the AFT Order Department, 555 New Jersey Avenue, N.W., Washington, DC 20001-2079.

—MATT GANDAL, AFT



a list of what exactly every high school graduate should be assumed to know and be able to do.

"The question asked of them was, 'What will it take for you to stop saying that our graduates are unprepared?'" says Dr. Robert Gabrys, assistant state superintendent of research and development, another of the key architects of the reform.

### Common Complaint

This basic question gets to one of the underlying causes for school reform in the state: Higher education institutions have complained that too many Maryland undergraduates are unprepared for college-level work, and Maryland businesses have complained that high school graduates cannot be expected to know or be able to do much of anything.

"Right now a diploma pretty much means you've attended school," is the way Maryland Business Roundtable associate director Kathy Seay puts it.

A low opinion of high school graduates' capabilities is not peculiar to Maryland—educators and employers around the country have been voicing similar concerns.

But this complaint of long standing crystallized as an issue in Maryland when the state began, three years ago, to compile an annual report of local jurisdictions and individual high schools on how their graduates do in college. The state's Higher Education Commission and Education Coordinating Committee now send an annual report each year detailing whether college freshmen need remediation in math and English, whether they stay in college, and what their first grades in math and English are.

That information galvanized the education world in the state as it realized that a large number—as high as 70 percent on some college campuses—of freshmen require remedial courses.

Even upper-income Montgomery County, just north of Washington, D.C., which has long prided itself on what it calls its "national reputation," does not look too good—with 49 percent of the students it sends to its county community college requiring remediation in math and 24 percent requiring remediation in English.

### Every Student an Academician

By the year 2004, as envisioned by educators, remediation classes for recent high school graduates should be a thing of the past in Maryland. By then, if these reforms succeed, all diploma holders will have demonstrated their ability to handle postsecondary work by demonstrating proficiency in math, science, English, social studies and what Maryland is calling "skills for success," which involves being able to write, speak, solve problems, and use up-to-date technology.

Some of this is similar to the Regents' system in New York, where the top students earn academic Regents' diplomas on the basis of tests. But unlike New York—which could be considered a tracking system in which some are on an academic track and others a business or vocational track—in Maryland, every student will be expected to meet rigorous academic standards.

Gabrys says the emphasis put on the word "every" is important because it eliminates the source of excuses common among school systems that, when their stu-

dents fail, it is because they come from what are often called "diverse backgrounds" or "unsupportive" families. "If a student comes to school with disadvantages," Gabrys says, "it is the job of the school system to compensate, not accept that as a reason for failure."

For example, says Gabrys, disadvantaged students often have little access to books, and few adults to read to them. "We might ask what schools have done to make sure students have books and people to read to them."

Gabrys is drawing a bead on one of the big worries associated with raising academic standards—that the rising tide will not raise all boats, but raise some and sink others.

Giles-Gee agrees that this is an issue that bears watching. "How do you make sure the standards don't become a barrier?" she asks. Part of the answer, she says, lies in making sure that all the resources in the state are pulling toward the same goals.

That means, for example, that colleges and universities will have to be involved in the professional development of teachers already teaching and in changing the teachers education program. One change already in the works is requiring future teachers to have two majors—one in education and the other in the subject they are planning to teach. Another change, launched in January 1996, is to require future teachers to spend a year in the classroom working with veteran teachers.

### Mastery at Bowie

Dr. Vernon Clark, provost of the historically black Bowie State University and a member of the state K-16 task force, has begun implementing some of these changes on his campus, which began as a normal school and still has a substantial education program.

"Every student who gets an education degree from Bowie State has to take and pass the National Teachers Exam," says Clark. This is a higher requirement than is required by the state, which allows teachers several years before they have to pass the NTE.

All Bowie students will also have to pass exams measuring competency in the core curriculum, which most students take in the first two years. "We've made a decision to say that every student who receives a diploma has demonstrated mastery of the core curriculum."

Clark says that implementing Maryland's reforms will require what he calls a "no-holds-barred approach to quality education," which will include providing alternative settings, ending social promotion and restructuring the way schools are organized. "If a kid doesn't perform at the level we expect, we will provide support, time [and] intensive interaction."

In a December 1995 *Atlantic Monthly* article, Paul Gagnon of the School of Education at Boston University wrote, "Starting school reform by first deciding what every child should learn strikes most people as only common sense. But to many American educators, it spells revolutionary change. This strategy would give subject-matter teachers, and the educated public, unprecedented power to spur genuine change—change far deeper than questions of school choice, methods, or management."

By 2004, Maryland should know if that is true. □

## MAKING RESEARCH SERVE

(Continued from page 8)

published results. A longer, large-scale study would then be conducted to prove that the drug is safe and effective for a wide variety of patients and to ensure that too many unforeseen side effects don't emerge over time. And finally, the Food and Drug Administration would also have to be convinced of the drug's safety and efficacy, perhaps by requiring, commissioning, or conducting its own series of extensive studies. In other words, the FDA is a final gateway in a long (and some believe too arduous) process that any new drug must pass through before it can be legally manufactured or prescribed to you by your family doctor.

Educators have no similar agencies and mechanisms to rely upon. So, how do we sift through all of the educational research that now exists and determine that which is most worthy of becoming part of our own shared knowledge base? Ellis and Fouts (1993, 1994) have suggested a three-level classification system to help in evaluating the evidence behind the statement: "The research says..."

According to the Ellis and Fouts model, Level I research is "basic research" and theory building. Research at this level is comprised of correlations, descriptive data and qualitative case studies. While Level I education research exists in abundance, it is really of only limited utility. It can be used to disprove a claim of effectiveness, but no theory regarding effective teaching practices can actually be proven using only correlation and description. For example, from the correlation between high achievement and high levels of self-esteem, some have concluded that self-esteem causes academic achievement. They argue that by offering warmth and sympathy to children who fail, teachers can build self-esteem and raise achievement levels. Using similar correlations, however, it's easy to see that this isn't necessarily true. Take the correlation showing that students with higher achievement levels have larger shoe sizes. Few would make a similar, logical leap to argue that big feet cause achievement. Instead, the correlation is explained by a third variable that hasn't been accounted for at this level of research: age—children's feet get bigger as they grow up and progress through school.

At Level II, a theory of instructional practice is tested in the classroom to see if it is more effective than the alternatives. Do randomly assigned students

actually perform at higher levels in classrooms that use the experimental teaching procedure? Using statistics, researchers analyze the data to determine if the results are accidental or can be predicted to occur again. For example, Level II tests of self-esteem theories indicate that the theories are inaccurate. In fact, Graham (1984) found that responding to student failure only with warmth and sympathy may actually serve to reduce students' belief in their own capabilities.

Level III research evaluates the effects of the recommended teaching intervention using large-scale and school- and district-wide implementations. Research at this level is important because it examines the new intervention in full context. How well can this practice be integrated into all the other things that teachers must accomplish in a day? The danger in using only Level II research to justify a broad recommendation of a new teaching practice is that some negative side-effects are only visible over time and in uncontrolled settings. For example, a teaching practice may be found to do wonders for reading scores, but take so much time that it interferes with other learning goals, such as achievement in math. This shortcoming would not be evident until Level III.

One huge problem with our current professional knowledge base is that many experimental practices have been allowed to jump from Level I research straight into the professional canon. Unlike most other fields of scientific inquiry, education places extraordinary emphasis on the new and the novel. Believing that the most recent theory—at whatever level of research—is also the most important, education leaders may lose sight of the value of seminal research and proven practices. Yet the nature of children's learning probably hasn't changed much in hundreds of years. The research into it is timeless. It cannot be sup- planted, only disproven.

To construct a strong professional knowledge base, we should turn our attention to Level III research and the high-performing schools from which much of this data would be derived. It is in these schools that we can expect to find the most successful integrations of old and new research.

The ultimate measure of predictability is a Level III demonstration of high performance that is replicable. After correcting for socioeconomic differences, those schools with the highest achievement levels could be identified and studied to catalog those instructional

Figure 1

<b>Education</b>	<b>Scientific Method</b>
Level I. Theory building	1. Develop a hypothesis
Level II. Test the theory	2. Test the hypothesis by formal experiment 3. Analyze data to determine the truth of the hypothesis
Level III. Replicate results in large-scale studies and school/district-wide implementations	4. Peer review, replication of the experiment, large-scale and/or long-term follow-up studies

### *Constructing Knowledge from Evidence*

***The nature of children's learning probably hasn't changed much in hundreds of years. The research into it is timeless. It cannot be supplanted, only disproven.***

practices that are most effective. Once these had been successfully replicated, they could be used as models to teach the rest of the profession how to get the same high achievement levels. In other words, Level III research could be used to screen instructional practices before they enter the professional knowledge base. The close relationships that develop between high-achieving schools and the university researchers who study them could also yield additional benefits. For example, with a close town-gown relationship, schools of education across the country might use the high-achieving schools in their region as preservice training centers and dissemination points for effective educational reform. The researchers and educators who actually get the kind of results demanded by the public would become education leaders, teaching other practitioners across the U.S. how they, too, can enable their students to achieve at high levels.

This is not to say that all Level I theories are without merit and will not work. It only means that teachers should not be widely trained in *unproven* practices. Nor should states and districts mandate their adoption, spending huge amounts of money to promote and implement them. It would also do nothing to prevent individual teachers from reading about new research while it was still at the Level I stage, or from working with it to see if any promising interventions could be developed. But, unlike today, anyone using Level I research would have a clear idea of its limitations and know to proceed with caution.

Level II research would remain important, both as a means to test new Level I theories and to identify the specific components that have led to success in high-performing schools. But in a system that looked to high-performing schools, rather than to the gods, only those practices that produce replicable results would be widely disseminated. Faddism would be denied a foothold.

### **Uses and Abuses in the Current System**

Unfortunately, we are still a long way from achieving such a system. Many of the educational practices that are widely touted by academic theorists and in teacher-training programs across the country don't even have Level II research support, never mind Level III. When these practices fail, however, who gets blamed? Not the promoters and publishers who sold unworkable materials; not the well-paid consultants who provided the staff development and implementation advice; not the university professors who developed the theory. Teachers are blamed. If it doesn't work, "The teachers didn't do it right."

To request Level II and III research support is just to ask that instructional practices not be foisted on schools before it has been shown if and how they work. Today, this assurance cannot be taken for granted.

**Piaget and Developmental Psychology.** For example, instructional practices based on Piaget's work in developmental psychology are only at the Level I stage. Piaget never tried to teach children; he only tried to describe what they do at different ages.



No specific teaching procedures follow from this.

**Gardner's Multiple Intelligences.** Howard Gardner's theory of multiple intelligences is another example. What are its implications for instruction? Where has it been shown to affect teaching or learning? Although some ideas for using the theory have been suggested, there are few, if any, Level II comparative studies to evaluate their effects. Nevertheless, the theory of multiple intelligences is one of the most popular discussion topics in education today. Howard Gardner, himself, has said that education's enthusiasm for the theory of multiple intelligences has gotten a bit out of hand.

**Interdisciplinary/Integrated Curricula.** According to Ellis and Fouts (1993), the Level II research on interdisciplinary/integrated curricula is also "close to nil" (p. 153). The numerous claims (e.g., an interdisciplinary curriculum improves higher-level thinking, is less fragmented, heightens the opportunity for the transfer of learning, improves mastery, positively shapes a student's overall approach to knowledge, and improves motivation) should be treated as hypotheses for Level II research. Block scheduling, often part of an integrated curriculum, also has no empirical basis.

**Cooperative Learning.** Cooperative learning has an extensive Level II research base and is also one of the most widely used innovations of our time. Therefore, it might seem that this is one example where solid research has been successfully moved into practice. Unfortunately, this is not entirely the case.

Cooperative learning is more than simply group work on projects. It was designed to complement teacher-directed instruction, providing opportunities for students to work together to expand on what they have already learned. This instructional method, however, is often used *in place of* teacher-directed instruction, with students expected to construct their own knowledge working in groups. The research shows that two elements are crucial to the successful implementation of this method: group goals and individual accountability (Ellis & Fouts, 1993). "When group goals and individual accountability are clear, achievement effects of cooperative learning are consistently positive—37 of 44 experimental/control comparisons of at least four weeks' duration yielded significant positive effects" (p. 123). Yet, cooperative learning is often implemented without clear goals or any individual accountability. In other words, to make cooperative learning work as intended, teachers need extensive technical training. This training is rarely provided. Therefore, cooperative learning, despite its research base, may be rendered ineffective and, in the long term, may come to be regarded as just another fad.

**Direct Instruction.** Although Level III education research has been rare, it has occurred. Project Follow Through—the largest, most expensive research study in the history of education—is a prime example.

Follow Through began in 1967 as part of President Johnson's War on Poverty, and continued to receive funding through the summer of 1995. A massive effort to break the cycle of poverty through better education, it affected more than 70,000 children in more than 180 schools over a period of nearly thirty years, at a cost to taxpayers of over \$1 billion. Its goal was to

identify the specific teaching methods that could raise the performance levels of America's poorest schools from the 20th percentile (the normal level of performance for children in poverty) up to the 50th percentile (even with mainstream America).

Abt Associates, an independent agency, was brought in to evaluate the early-childhood education models that had been funded by Follow Through, using various measures of self-esteem and academic achievement. Figure 2 shows the mean national academic achievement levels of about 10,000 third-grade children in the study, as measured by the Metropolitan Achievement Test (MAT). Its baseline is set at the 20th percentile. When the bars go above this line, children's academic performance levels have climbed above what would be considered normal. When the bars go down, children's performance was hindered (that is, the children learned less than would have been expected without the intervention). As the graph shows clearly, the children who were taught using the Direct Instruction model had average scores very near the 50th percentile—the target. The scores of children taught using the other models were significantly lower, often below the 20th percentile.

Both these results and the winning model were regarded as highly controversial, however. *Direct Instruction* consisted of lesson plans developed by a preschool teacher, Siegfried Engelmann, who was known for his students' remarkable achievement levels. Engelmann believed in several basic principles that many associate with the range of practices and models that have all come to be categorized as "direct instruction." First, he wanted to encourage more student-teacher interaction, believing that it was possible to accelerate learning by maximizing efficiency in the design and delivery of instruction. He hypothesized that children would generalize their learning in new, untaught situations, if they could respond perfectly to a smaller set of carefully engineered tasks. He also favored a rapid instructional pace and choral group response, punctuated by individual student responses, believing that this would heighten student engagement and allow teachers to perform regular checks for student mastery.

But Engelmann's model was disseminated in the form of polished lesson plans—a practice which some criticized as overly structured and restrictive of teacher creativity. Its heavy emphasis on teacher-directed instruction was also criticized by those who believed in the efficacy of more "child-centered" approaches, a self-description shared by most of the other Follow Through models. According to Bereiter and Kurland (1981):

The two high-scoring [Follow Through] models according to our analysis are Direct Instruction and Behavior Analysis; the two low-scoring are EDC Open Education and Responsive Education. If there is some clear meaning to Follow Through results, it ought to emerge from a comparison of these two pairs of models. On the one hand, distinctive characteristics of the first pair are easy to name: sponsors of both the Direct Instruction and Behavior Analysis models call their approaches "behavioral" and "structured" and both give a high priority to the three Rs. EDC and Responsive Education, on the other hand, are avowedly "child-centered." Although most other

Follow Through models could also claim to be child-centered, these two are perhaps most militantly so and most opposed to what Direct Instruction and Behavior Analysis stand for (pp. 16-17).

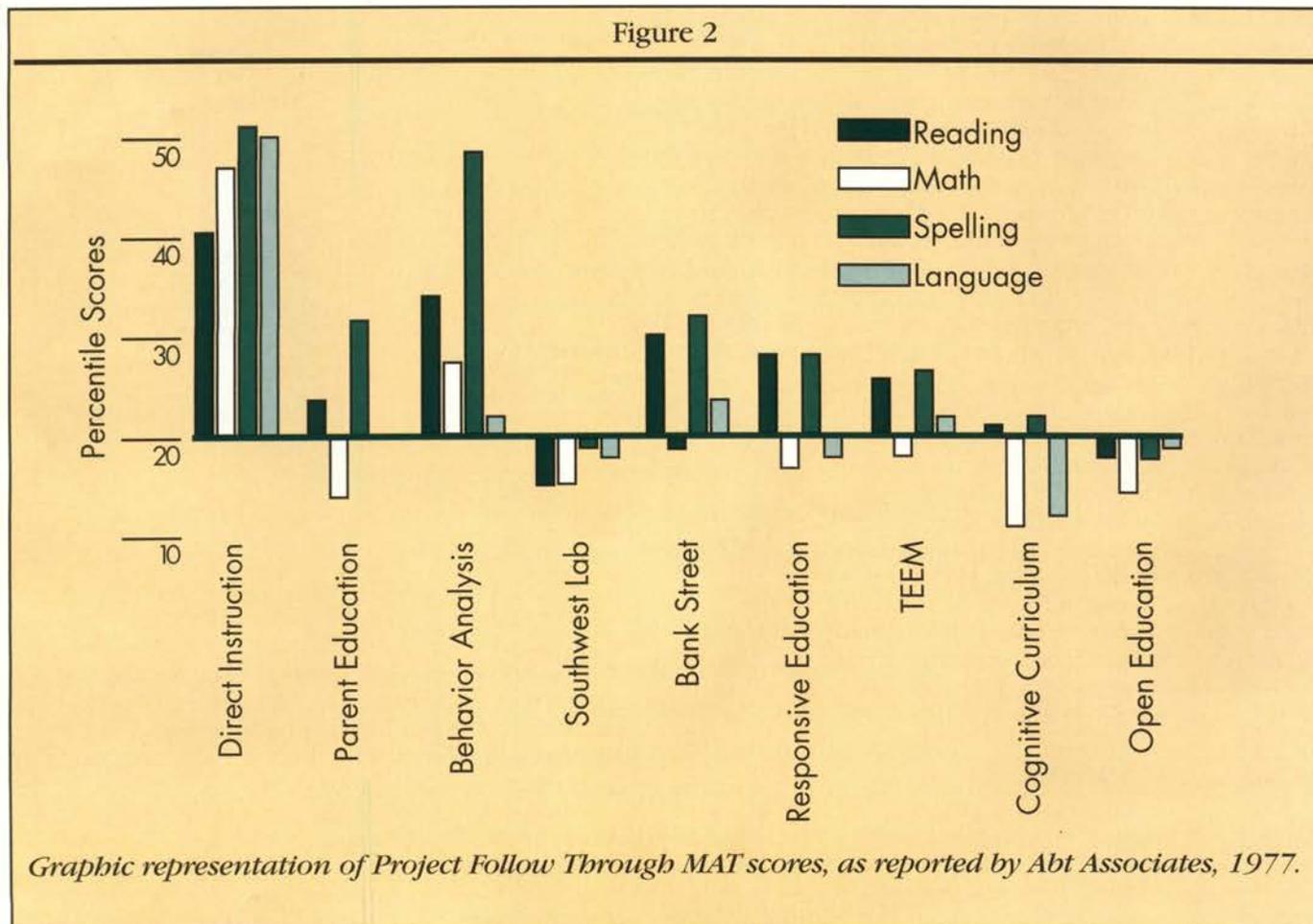
Bereiter and Kurland also point to an aspect of the teacher-directed lesson plans that seems to account for the higher achievement scores:

Child-centered approaches rely almost exclusively on a form of instruction that ... may be called *relevant activity*.... The instructional approaches used in Direct Instruction and Behavior Analysis reflect years of analysis and experimentation devoted to finding ways of going beyond relevant activity to forms of instruction that get more directly at cognitive skills and strategies. This effort has been successful in some areas, not so successful in others, but the effort goes on. Meanwhile, child-centered approaches have tended to fixate on the primitive, relevant-activities form of instruction for all their instructional objectives (p. 20).

Ironically, according to the Abt findings, both the learning and the self-esteem of children in poverty appear to have been hampered by many of the nondirective child-centered models. In fact, given Direct Instruction's focus on academics and many of the other models' focus on self-esteem, Abt Associates noted that the most surprising Follow Through result was that Engelmann's model had the best outcomes for self-esteem, as well as academics (Bock, Stebbins, & Proper, 1977).

Yet findings such as these, which appeared to hold significant promise in helping young at-risk students succeed, were never widely disseminated among practitioners. Before Abt Associates' evaluation of Follow Through was even published, the Ford Foundation funded an evaluation of the evaluation. This widely-read critique by House, Glass, McLean and Walker, published in 1978 by the *Harvard Educational Review*, raised questions about the design of Follow Through, about the statistical methodology used by Abt, and about the appropriateness and accuracy of some of the self-esteem measures. However, the critique also included a reanalysis of the academic achievement data using different statistical methods. These results confirmed Abt Associates' academic ranking of Direct Instruction: It was by far the most successful of the Follow Through models. The critique also went further and endorsed the MAT as a sound assessment of academic achievement in the early elementary grades, describing the test as "a technically sound instrument—highly reliable, well-normed, largely free of practical or conceptual flaws" (p. 138).

This agreement over Follow Through's academic results wasn't emphasized during the initial debate, however—perhaps because House and his colleagues (as well as many others) believed that the primary significance of Follow Through was as a *social*, not an educational, experiment. For the authors of the critique, "What model works best?"—the very question that



teachers want to hear answered—was a question that Follow Through should never have asked and Abt should never have attempted to answer.

Whatever the reasons, the result was that many non-academic followers of the debate were left with the impression that Follow Through and Direct Instruction had been completely discredited. Today, very few teachers know anything about Follow Through, its findings or the ongoing dispute over whether this or other forms of scientific inquiry should be attempted in the field of education.

In a 1981 report published by the National Institute of Education, predecessor of the U.S. Department of Education's Office of Educational Research and Improvement (OERI), Glass and Camilli took issue with Follow Through for even attempting to use scientific research to measure educational outcomes. Level II and III educational research, they argued, is immaterial, even to educators:

The audience for Follow Through evaluations is an audience of teachers. This audience does not need the statistical findings of experiments when deciding how best to educate children. They decide such matters on the basis of complicated public and private understandings, beliefs, motives and wishes. They have the right and good reasons so to decide (ERIC abstract ED244738, p. 21).

Unfortunately, this attitude has left teachers without the tools that they need to build a sound professional knowledge base, assess the utility of new innovations or identify and resist the outbreak of fads. It is an attitude that allows for the continued promotion, marketing and mandating of educational "breakthroughs," with little or no research into their efficacy or how best to implement them.

One of the low-scoring models in Project Follow Through serves to illustrate the point. The TEEM model was a language experience approach to learning comparable to many of the teaching practices now known as "whole language." California's recent mandates of whole language's use in, and then removal from, the classroom are now infamous, both in and out of the profession. In addition to the many California students who were hurt by this wild pendulum swing, another sad result was that a research opportunity was lost to learn more about teaching children to read: Project Follow Through data had already shown that, as a primary teaching method, whole language is an ineffective approach to use with disadvantaged students. Is it effective with other groups of students? Would it work better in combination with phonics-based instruction? Is it effective in the higher grades, after phonics has already been mastered? How do these options compare with other alternatives? These questions for scientific inquiry were never asked or answered.

### What Can Teachers Do?

AFT vice president Adam Urbanski says: "Everyone seems to think that all you need to do to be a good teacher is to love to teach. But no one thinks that all you need to do to be a good surgeon is to love to cut." Unfortunately, today's teachers may have nothing more

***To ask that teachers create all of their own tools and curricula is like asking doctors to invent all of their own drugs; like asking airplane pilots to build their own airplanes.***



than their love of students and of their profession to fall back upon. Certainly, they can't count on the availability of sound research or on getting the training and support they need to acquire the best information and best technical skills. Instead, by ignoring Level II and III scientific research, the educational hierarchy often serves as an obstacle, rather than a resource, in the dissemination of the knowledge that is so crucial to the success of public education.

This isn't news to many teachers. However, some of the tactics teachers use to avoid reliance on a dysfunctional professional support system also undermine the

development of a scientific, professional knowledge base about teaching. Being forced to use intuition and personal preference to pick and choose instructional procedures—without the benefit of any scientific information regarding the effectiveness of these procedures—isn't likely to lead to a significantly improved public education system.

What we know in the 1990s is that reform will not work until it gets down to the details of identifying effective instructional strategies for teaching specific topics. AFT president Albert Shanker put it this way in his recent editorial entitled, "There is a lot of bull [in educational reform], but no beef." He said: "You don't know a theory is worth anything until you grapple with the details of putting it into practice" (Shanker, 1996). According to the research synthesized through the National Center to Improve the Tools of Educators, the kind of knowledge that leads to significant improvement, especially in the education of special education, at-risk, and other vulnerable learners, is specific and technical (Kameenui & Carnine, in press).

The reformers who provide teachers with theories—but no evidence that they are effective and no details for how to use them—are really demanding that teachers do most of their work for them. To ask that teachers create all of their own tools and curricula is like asking doctors to invent all of their own drugs; like asking airplane pilots to build their own airplanes. When would teachers have time to do this? Engineering a highly effective instructional sequence would more than consume most teachers' private time.

To be a profession is to have a professional knowledge base comprised of shared procedures and strategies that work. This may be a new idea for teachers, though it is quite old for other professions. Good teachers using well-engineered tools and detailed procedures can achieve remarkable results and—this is the good news—teachers can get these results and also have a personal life.

A common, research-supported professional knowledge base would allow the sharing of what Stigler and Stevenson (1991) referred to as "polished stones" in their description of Asian educational systems—instructional procedures and lesson plans that have been revised and refined by different teachers until they work so reliably, they are polished to a shine. The emphasis, though, shouldn't be just on sharing; it has to be on sharing only those teaching procedures that get the best results. The clearest way to find these best practices, especially given the current level of dysfunction on Mount Olympus, is by looking to high-performing schools.

By identifying these practices from research into high-performing schools (Level III research), we could be confident that they work, not just in theory or in isolation, but as part of an effective educational system. To identify these model schools—schools that are accomplishing the things that the public wants schools to accomplish—we must have measurable academic standards that align with society's aspirations for its public education system. After controlling for socioeconomic differences, those schools that are the most effective in helping students reach (or surpass) these standards could be recognized, rewarded and

replicated.

By allowing high-performing schools to take a lead in education reform, we also reward school personnel for seeking the Level II research that could cause a new breakthrough and lead to a reclassification as a high-performing school. Researchers and theorists would be rewarded, not just for another interesting theory, but for producing models that work and can be replicated.

The first step toward such a system is simple: Practitioners and policymakers, alike, must start asking to see the research results, to know the methods by which they were gathered, and to look at models where the practices they describe have been proven to work. If one thing seems certain in education today, it is that if you do not ask, it will not be given. □

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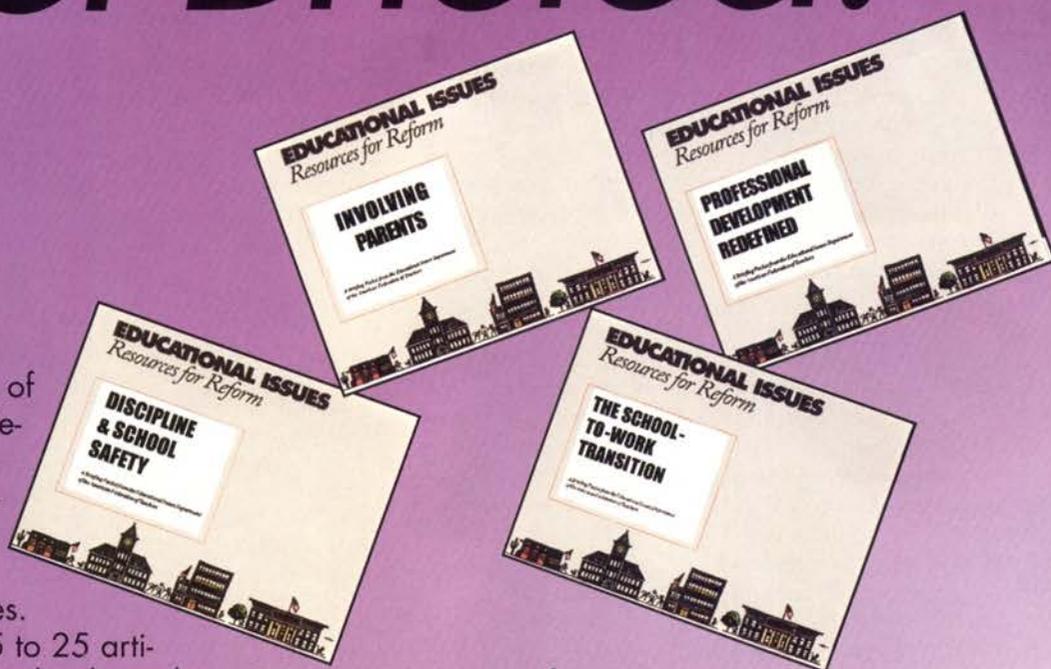
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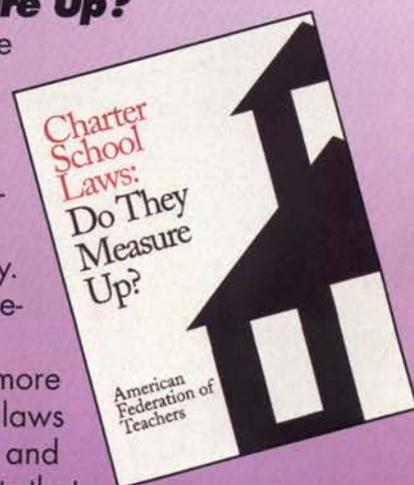
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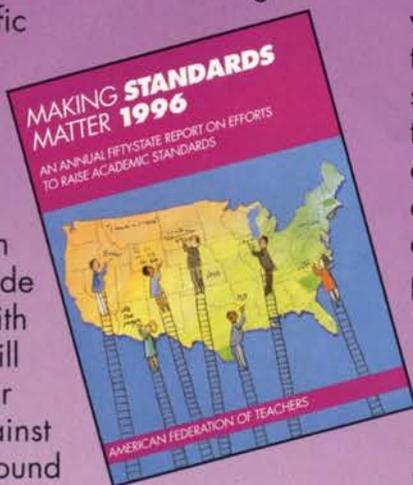
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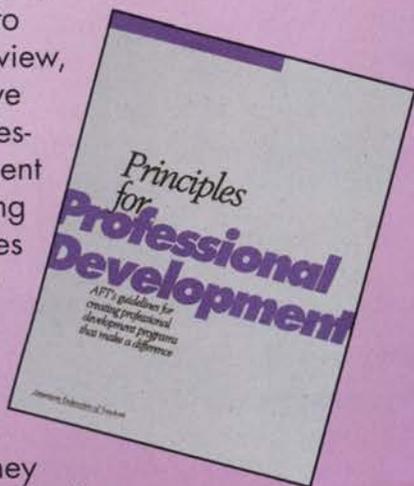
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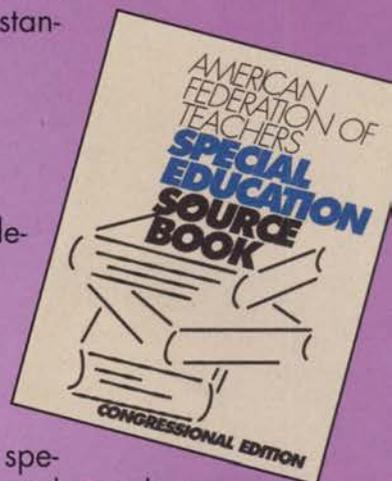
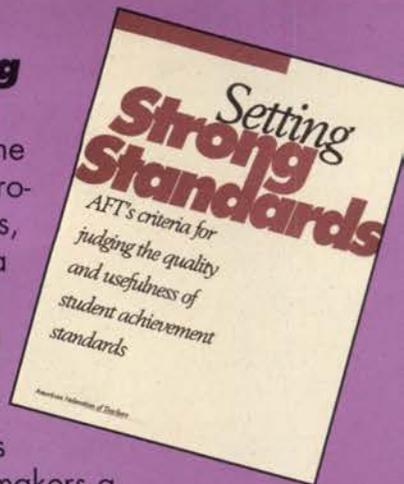
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## REALITY'S REVENGE

(Continued from page 6)

The oft-repeated goal of the educational community—to inculcate general thinking skills—is not, however, soundly based in research. And that is stating the point too mildly. The idea that school can inculcate abstract, generalized skills for thinking, “accessing,” and problem solving, and that these skills can be readily applied to the real world is, bluntly, a mirage. So also is the hope that a thinking skill in one domain can be readily and reliably transferred to other domains.

Yet broad-gauged thinking abilities do exist. Most of us know well-educated people, even some not very bright ones, who have high general competence, can think critically about diverse subjects, can communicate well, can solve a diversity of problems, and are ready to tackle unfamiliar challenges. The belief that our schools should regularly produce such people appeals to both experience and common sense. If the goal didn't make apparent sense, it could hardly have retained its attractiveness to the educational community and the general public. Rightly understood, then, the goal of general competence *does* define one important aim of modern education. The task is not to change that goal but to interpret it accurately so that it corresponds to the nature of real-world competency and can actually be achieved.

Two traditions in cognitive psychology are useful for understanding the nature of the critical-thinking, problem-solving skills that we wish to develop in our students. One tradition has studied the characteristic differences between expert and novice thinking, sometimes with the practical goal of making novices think more like experts as fast as possible.<sup>3</sup> Another tradition has investigated the differences between accurate and inaccurate thinking of the everyday newspaper-reading, bargain-hunting sort that all of us must engage in as nonexperts.<sup>4</sup> Both sorts of study converge on the conclusion that, once basic underlying skills have been automated, the almost universal feature of reliable higher-order thinking about any subject or problem is the possession of a broad, well-integrated base of background knowledge relevant to the subject. This sounds suspiciously like plain common sense (i.e., accurate everyday thinking), but the findings entail certain illuminating complexities and details that are worth contemplating. Moreover, since the findings run counter to the prevailing fact-disparaging slogans of educational reform, it will be strategically useful to sketch briefly what research has disclosed about the knowledge-based character of higher-order thinking.

The argument used by educators to disparage “merely” factual knowledge and to elevate abstract, formal principles of thought consists in the claim that knowledge is changing so rapidly that specific information is outmoded almost as soon as it has been learned. This claim goes back at least as far as Kilpatrick's *Foundations of Method* (1925). It gains its apparent plausibility from the observation that science and technology have advanced at a great rate in this century, making scientific and technological obsolescence a common feature of modern life. The argument assumes that there is an analogy between technological

and intellectual obsolescence. Educators in this tradition shore up that analogy with the further claim that factual knowledge has become a futility because of the ever-growing quantity of new facts. The great cascade of information now flowing over the information highway makes it pointless to accumulate odd bits of data. How, after all, do you know which bits are going to endure? It is much more efficient for students to spend time acquiring techniques for organizing, analyzing, and accessing this perpetual Niagara of information.

Like the tool metaphor for education, the model of acquiring processing techniques that would be permanently useful—as contrasted with acquiring mere facts that are soon obsolete—would be highly attractive if it happened to be workable and true. But the picture of higher thinking skills as consisting of all-purpose processing and accessing techniques is not just a *partly* inadequate metaphor—it is a totally misleading model of the way higher-order thinking actually works. Higher thought does not apply formal techniques to looked-up data; rather, it deploys diverse relevant cues, estimates, and analyses from preexisting knowledge. The method of applying formal techniques to looked-up data is precisely the inept and unreliable problem-solving device used by novices. As a model of real-world higher-order thinking, the picture is not simply inaccurate—it reverses the realities. It describes the lower-order thinking of novices, not the higher-order thinking of experts.

A useful illustration of the point is presented by Jill Larkin and Ruth Chabay in a study of the ways in which novices and experts go about solving a simple physics problem.<sup>5</sup> The problem Larkin and Chabay set up is (in simple terms) to find out how much friction there is between a sled and the snow-covered ground when a girl is pulling her little brother through the snow at a constant rate. The brother and the sled together weigh 50 pounds. The sister is pulling with a force of 10 pounds, and she pulls the rope at an angle of 30 degrees from the horizontal. What is the coefficient of friction? The typical novice tries to solve the problem by applying formal equations that can be looked up in a book, thus dutifully following the tool principle of problem solving. The student finds that the applicable formula is  $f = \mu N$ , where  $f$  is force,  $N$  is the “normal force” (which is usually equal to weight), and  $\mu$  is the coefficient of friction, which is the quantity to be solved. The novice sees that  $f = \mu \times 50$ . The student assumes that  $f = 10$ , the force exerted by the girl. So  $10 = \mu \times 50$  and  $\mu = 10/50$ , which equals .2. The answer is wrong, not because the equation or the math is wrong but because the novice doesn't know enough about real-world physics to know how to connect the formula to the problem. The novice's procedure illustrates not just the inappropriateness of the formalistic model but also the bankruptcy of the claim that students need only learn how to look things up—so-called “accessing skills.” In this typical case, the skill of looking things up simply lends spurious exactitude to the student's misconceptions.

The expert physicist goes about the problem differently. He or she analyzes the critical components of the situation before looking up equations and makes two critical observations before even bothering with

numbers. The first observation is that the sled is going at a constant speed, so that, in effect, there is no net residue of forces acting on the sled; there is an exact balance between the force exerted horizontally by the girl's pull and the force exerted against that pull by friction. If there had been some difference in the two forces, then the sled would speed up or slow down. So the answer has got to be that the friction is exactly equal to the horizontal component of the force exerted by the girl. The physicist also sees that since the rope is pulled at 30 degrees, part of the girl's 10 pounds of force is vertical. The answer is going to be that the friction equals the *horizontal* force of the girl's pull, which is going to be the 10 pounds minus its vertical component. The structure of the answer is solved on the basis of multiple cues and relevant knowledge, before any formulas are looked up and applied. Larkin and Chabay make the following comment (which is much more to our purpose than the details of the physics involved):

Scientists' problem solving starts with redescribing the problem in terms of the powerful concepts of their discipline. *Because the concepts are richly connected with each other, the redescribed problem allows cross-checking among inferences to avoid errors* [author's emphasis].<sup>6</sup>

An important feature of higher-order thinking is this "cross-checking among inferences," based on a number of "richly connected" concepts. In higher-order thinking, we situate a problem in mental space on analogy with the way we situate ourselves in physical space—through a process of cross-checking or triangulation among relevant guideposts in our landscape of pre-existing knowledge. If we look at a problem from a couple of different angles, using a couple of different cues, and if our different estimates converge, we gain confidence in our analysis and can proceed with confidence. If, on the other hand, there is some dissonance or conflict between our cues, then warning signals go up, and we figure out which approach is more probable or fruitful. The procedure is clearly a very different and far more reliable mode of thinking than the error-prone method of applying formal techniques to looked-up data.

The example also illustrates the implausibility of the claim that school-based information quickly grows outdated. How outmoded will the knowledge used to solve the sled problem become? A philosopher of science, Nicholas Rescher, once observed that the latest science is in a sense the least reliable science, because, being on the frontier, it is always in dispute with other, rival theories—any of which may emerge victorious. Accordingly, reasoned Rescher, the most reliable physics is "stone-age-physics": If you throw the rock up, it is going to come down. For most problems that require critical thought by the ordinary person regarding ethics, politics, history, and even technology, the most needed knowledge is usually rather basic, long-lived, and slow to change. True, just as physics is under revision at the frontier, so American history before the Civil War is constantly under revision in certain details (e.g., did Abraham Lincoln have an affair with Ann Rutledge?). But behind the ever-changing *front lines*, there is a body of reliable knowledge that

has not changed, and will not change very much, and that serves very well as a landscape to orient us in mental space. It is true that, over time, the content of the most significant and useful background knowledge for today's world does change. But I have never seen a carefully reasoned defense of the repeated assertion that, in the new age, factual knowledge is changing so fast as to make the learning of significant information useless. Probably, no carefully reasoned defense of this mindless claim could be mounted.

The physics example from Larkin and Chabay, if viewed in isolation, might be taken to show that higher-order thinking depends on abstract concepts rather than on factual details. But most research indicates that while the thinking activities through which we reach conclusions and solve problems are not crowded with literally remembered facts, neither are they made up of abstract concepts alone.<sup>7</sup> The models, cues, and schemas through which we think critically are neither pure concepts nor a literal recall of data but a complex and varied combination of concepts, estimates, and factual examples. The key trait to remember about higher-order thinking is its mixed character, consisting of operational facility and domain-specific knowledge.

Some of the most useful studies of higher-order thinking have been concerned with improving our ability to make intelligent and accurate estimates on which to base decisions in our ethical, economic, and civic lives.<sup>8</sup> Since most of us cannot remember, and do not want to take the time to learn, all the details of the U.S. budget deficit and similar matters, we follow political and economic debates with a degree of impressionism that leaves many of us open to slogans and demagoguery. What kind of critical thinking can improve our ability to reach accurate conclusions on such issues? How can we protect ourselves and our students from oversimplifications, lies, and scapegoating conspiracy theories?

It is hard to see why a generalized skepticism, unsupported by accurate knowledge, is superior to a generalized credulity, similarly unsupported. Indeed, uninformed, generalized skepticism expresses itself as a form of credulity, despite our inclination to call I'm-from-Missouri postures "critical thinking." Our best hope for intelligent civic thought lies in our ability to make good ballpark estimates that are close enough to truth to make our decisions well informed and sound. But life is too short, and learning too arduous, for all citizens to memorize a lot of economic and demographic data. Our current yearly government budget deficit—is it around \$30, \$300, or \$3,000 per American family? Sure, we could look it up, but few of us will. If we can't make an intelligent estimate from the knowledge we already have, we usually won't make an intelligent estimate at all. A lot of higher-order thinking involves our ability to make these sorts of estimates, and to make them well. How do some people manage to do it? And how can we all learn how to do it? From answers to those questions, what implications can be deduced for the K-12 curriculum?

The best research on this subject shows that neither fact-filled memorization nor large conceptual generalizations are effective modes of education for higher-

***In higher-order thinking, we situate a problem in mental space on analogy with the way we situate ourselves in physical space—through a process of cross-checking or triangulation among relevant guideposts in our landscape of pre-existing knowledge.***

order thinking about the complexities of the modern world. On the other hand, it has been shown that accurate factual estimates are necessary for understanding many issues. Norman Brown and Robert Siegler summarize the underlying problem for modern education:

Faced with the issue of how to inculcate such information, educators have oscillated between two approaches. One has been to require students to memorize large numbers of quantitative facts. The other has been to de-emphasize dates, magnitudes, and other quantities, and to focus on understanding of qualitative relations. Each of these approaches has major drawbacks, however.... There are just too many such facts for anyone to memorize a high percentage of them. On the other hand, it is difficult if not impossible to acquire more than a superficial understanding of a domain without some degree of quantitative sophistication about it.<sup>9</sup>

The breadth-depth issue will always be with us and will always require compromises and common sense. The particular compromise one makes will depend upon subject matter and goals. In practice, an appropriate compromise has been reached by self-taught, well-informed people and by the fortunate students of particularly able teachers. One well-tested teaching method, already followed by many good books and teachers, provides students with a carefully chosen but generous sampling of factual data that are set forth in a meaningful web of inferences and generalizations about the larger domain. Researchers have shown that such generally selective factual instruction leads to accurate inferences not directly deducible from the literal facts that were taught. The mechanisms by which we are able to use these selective exemplifications in order to make remarkably accurate factual guesses about untaught domains are a subject of vigorous current research.

Whatever the underlying psychological mechanisms prove to be, research has demonstrated that the teaching of a generous number of carefully chosen exemplary facts within a meaningful explanatory context is a better method for inducing insightful thinking than is any proposed alternative. These alternatives include (1) the teaching of the whole factual domain, (2) the teaching of the general principles only, and (3) the teaching of a single example in great depth (the less-is-more theory). None of these methods is as effective for inducing effective real-world thinking as sampling well-selected and consistent facts in a carefully prepared explanatory context.<sup>10</sup> This careful-sampling method works well even when (as usually happens) the literal details of the taught facts are not memorized by students and cannot be retrieved accurately from memory after a period of several months. Nonetheless, a strong improvement in accurate thinking persists if students have once been taught a carefully chosen sample of the factual data.

This finding has strong implications for curriculum making. The conclusion from cognitive research shows that there is an unavoidable interdependence between relational and factual knowledge and that teaching a broad range of factual knowledge is essential to effective thinking both within domains and



among domains. Despite the popularity of the anti-fact motif in our progressive education tradition, and despite its faith in the power of a few "real-world" projects to educate students "holistically" for the modern world, no state board or school district has yet abandoned the principle of requiring a broad range of different subject matters in elementary school. Across the land, there are still universal requirements for mathematics, science, language arts, and social studies.

Is this curricular conservatism a mere residue of traditional thinking, or does it indicate that common sense has not been defeated by Romantic theory? I favor the latter hypothesis. Despite the vagueness of state and district guidelines, their continued parceling out of schooling into different subject matters, against continued pleas for a more "integrated" and holistic approach, shows an implicit understanding that breadth of knowledge is an essential element of higher-order thinking. School boards have rightly assumed that the mental landscape needs to be broadly surveyed and mapped in order to enable future citizens to cope with a large variety of judgments. No effective system of schooling in the world has abandoned this principle of subject-matter breadth in early schooling.

For later schooling, however, a good deal of evidence—marshaled in the superb research of John Bishop of Cornell—shows that in the last two years of high school, and later on, the balance of utility shifts in favor of deeper and more narrowly specialized training as the best education for the modern world.<sup>11</sup> This finding means that breadth in earlier schooling is all the more essential to developing adequate higher-order thinking and living skills in our citizens-to-be. If schooling is going to become more and more specialized in later life, it is ever more important to map out the wider intellectual landscape accurately and well in the earlier years. Otherwise, we shall produce not critical thinkers but narrow, ignorant ones, subject to delusion and rhetoric. This danger was uppermost in Jefferson's mind when he advocated teaching of human history in early years. In our age, the same argument holds for the domains connected with mathematics, science, technology, and communication skills. A wide range of knowledge and a broad vocabulary supply entry wedges into unfamiliar domains, thus truly enabling "lifelong learning," as well as the attainment of new knowledge and greater depth as needed. The unmistakable implication for modern education is that, instead of constantly deferring the introduction of challenging and extensive knowledge, we need to be taking the opposite tack by increasing both the challenge and the breadth of early education.

### Consensus Research on Pedagogy

A consensus regarding the most effective teaching methods has emerged from three independent sources whose findings converge on the same pedagogical principles. This pattern of independent convergence (a kind of intellectual triangulation) is, along with accurate prediction, one of the

***If schooling is going to become more and more specialized in later life, it is ever more important to map out the wider intellectual landscape accurately and well in the earlier years.***



most powerful, confidence-building patterns in scientific research. There are few or no examples in the history of science (none that I know of) when the same result, reached by three or more truly independent means, has been overturned.

A wonderful example of this convergence was described by Abraham Pais in his biography of Albert Einstein. At the end of the nineteenth century, the existence of atoms and molecules was still a matter of debate among scientists. In 1811, a physics professor, Amedeo Avogadro, put forth the hypothesis that the same volume of any gas under the same temperature and pressure must contain the same number of molecules. If molecules exist, then a mole—that is, the molecular weight in grams of any substance—must contain the same number of molecules, no matter what the substance. This number,  $N$ , is still called “Avogadro’s number.” In the early 1900s, Einstein reasoned that if totally different experimental ways of determining  $N$  converged on the same result, then molecules must exist. In March 1905, he submitted a paper computing  $N$  on the basis of blackbody radiation. In April 1905, his Ph.D. thesis described a new theoretical method for determining  $N$  from data on sugar solutions. In May 1905, Einstein submitted an article computing  $N$  on the basis of Brownian motion (the zigzag movements of tiny particles suspended in a liquid). Later, in 1910, Einstein submitted a paper on “critical opalescence,” which explained why the sky is blue, and derived still another, independent way of determining  $N$ . All of these different mathematical/empirical inferences converged on the same magnitude. Pais states:

The debate on molecular reality came to a close only as a result of developments in the first decade of the twentieth century. This was not just because of Einstein’s first paper on Brownian motion or of any single good determination of  $N$ . Rather, the issue was settled once and for all because of the extraordinary agreement in the values of  $N$  obtained by many different methods. Matters were clinched not by a determination of  $N$  but by an overdetermination of  $N$ . From subjects as diverse as radioactivity, Brownian motion, and the blue in the sky, it was possible to state, by 1909, that a dozen independent ways of measuring  $N$  yielded results all of which lay between  $6$  and  $9 \times 10^{23}$ .<sup>12</sup>

The independent convergence on the fundamentals of effective pedagogy that exists today is less mathematical but nonetheless compelling. The same findings have been derived from three quite different and entirely independent sources: (1) small-scale pairings of different teaching methods; (2) basic research in cognition, learning, memory, psycholinguistics, and other areas of cognitive psychology; and (3) large-scale international comparative studies. The findings from all three sources are highly consistent with each other regarding the most effective pedagogical principles. Because real-world classroom observations are so completely affected by so many uncontrolled variables, the most persuasive aspect of the current picture is the congruence of the classroom-based observations with cognitive psychology—which is currently our best and most reliable source of insight into the processes of learning.

In presenting these findings, my strategy will be briefly to go through some of the classroom studies and summarize their points of agreement. Then, I will relate those points to findings in cognitive psychology. Finally, I will comment on their congruence with the results of international comparisons. Not all readers may be interested in these research details, which are included for purposes of documentation, and may wish to turn to the summary conclusions at the end of this section. First, then, the classroom studies.

**New Zealand Studies.** In a series of “process-outcome” studies between 1970 and 1973, researchers from the University of Canterbury in New Zealand found that time spent focused on content and the amount of content taught were more important factors than the teacher behaviors that were used to teach the content. With seventh graders, it did not matter whether the teacher used questions and student responses or gave straight lectures. But younger students, for example, third graders, learned better with the question-and-answer mode. The researchers found that the questions asked needed to be narrow in focus, clear, and easily answered. High expectations and occasional praise were more effective than indifference or matter-of-factness. Whether the lecture or the question format was used, careful structuring of content by the teacher, followed by summary reviews, was the most effective teaching method.<sup>13</sup>

**“Follow Through” Studies.** Jane Stallings and her colleagues observed and evaluated results from 108 first-grade classes and fifty-eight third-grade classes taught by different methods. Programs having strong academic focus rather than programs using the project-method approach produced the highest gains in reading and math. Brophy and Good summarize the Stallings findings as follows: “Almost anything connected with the classical recitation pattern of teacher questioning (particularly direct, factual questions rather than more open questions) followed by student response, followed by teacher feedback, correlated positively with achievement.” As in the New Zealand studies, students who spent most of their time being instructed or guided by their teachers did much better than students who did projects or were expected to learn on their own.<sup>14</sup>

**Brophy-Evertson Studies.** Between 1973 and 1979, Brophy and his colleagues conducted a series of studies in which they first determined that some teachers got consistently good results over the years, and others consistently bad ones. They made close observations of the teacher behaviors associated, respectively, with good and bad academic outcomes. Teachers who produced the most achievement were focused on academics. They were warm but businesslike. Teachers who produced the least achievement used a “heavily affective” approach and were more concerned with the child’s self-esteem and psychic well-being than with academics. They emphasized warmth, used student ideas, employed a democratic style, and encouraged student-student interaction. The researchers further found that learning proceeded best when the material was somewhat new and challenging, but could also be assimilated relatively easily into what students

already knew. The biggest contrast was not between modes of academic instruction but between all such instruction and "learner-centered" "discovery learning," which was ineffective. Paradoxically, the students were more motivated and engaged by academic-centered instruction than by student-centered instruction.

In 1982, Brophy and his colleagues summarized some of their later findings on the effective teaching of beginning reading. These were the most salient points:

1. Sustained focus on content.
2. All students involved (whole-class instruction dominates).
3. Brisk pace, with easy enough tasks for consistent student success.
4. Students reading aloud often and getting consistent feedback.
5. Decoding skills mastered to the point of overlearning (automaticity).
6. In the course of time, each child asked to perform and getting immediate, nonjudgmental feedback.<sup>15</sup>

**Good-Grouws Studies.** For over a decade, Good and Grouws pursued process-outcome studies that support the Brophy-Evertson findings. Their 1977 summary contained the following points:

1. The best teachers were clearer.
2. They introduced more new concepts, engaged in less review.
3. They asked fewer questions.
4. Their feedback to the students was quick and nonevaluative.
5. They used whole-class instruction most of the time.
6. They were demanding and conveyed high expectations.<sup>16</sup>

**The Gage Studies.** N. L. Gage and his colleagues at Stanford University have produced a series of process-outcome studies from the 1960s to the 1980s. These results, consistent with the above, are summarized in the following points of advice to teachers:

1. Introduce material with an overview or analogy.
2. Use review and repetition.
3. Praise or repeat student answers.
4. Be patient in waiting for responses.
5. Integrate the responses into the lesson.
6. Give assignments that offer practice and variety.
7. Be sure questions and assignments are new and challenging, yet easy enough to allow success with reasonable effort.<sup>17</sup>

**Other Studies.** In 1986, Rosenshine and Stevens listed five other "particularly praiseworthy" studies of effective teaching modes, all of which came to similar conclusions. They summarize these conclusions as follows:

1. Review prerequisite learning.
2. Start with a brief statement of goals.
3. Introduce new material in small steps.
4. Maintain clarity and detail in presentation.
5. Achieve a high level of active practice.
6. Obtain response and check for understanding (CFU).
7. Guide student practice initially.
8. Give systematic, continual feedback.

9. Monitor and give specific advice during seatwork.<sup>18</sup>

**The Brophy-Good Summary.** In their final summation of research in this area, Brophy and Good make a comment worth quoting directly. They draw two chief conclusions from reviewing all of this research:

One is that academic learning is influenced by the amount of time students spend in appropriate academic tasks. The second is that students learn more efficiently when their teachers first structure new information for them and help them relate it to what they already know, and then monitor their performance and provide corrective feedback during recitation, drill, practice, or application activities....There are no shortcuts to successful attainment of higher-level learning objectives. Such success will not be achieved with relative ease through discovery learning by the student. Instead, it will require considerable instruction from the teacher, as well as thorough mastery of basic knowledge and skills that must be integrated and applied in the process of "higher-level" performance. Development of basic knowledge and skills to the level of automatic and errorless performance will require a great deal of drill and practice. Thus drill and practice activities should not be slighted as "low level." They appear to be just as essential to complex and creative intellectual performance as they are to the performance of a virtuoso violinist.<sup>19</sup>

Before I go on to discuss correlations between these findings and research in cognitive psychology, I will digress to make an observation connecting these results to student motivation. While common sense might have predicted the *academic* superiority of structured, whole-class instruction over less academically focused, learner-centered instruction, it was unexpected that these studies should have demonstrated the *motivational* superiority of instruction centered on content rather than on students. Why is academically focused instruction more engaging and motivating to young learners than learner-centered instruction?

I know of no research that explains this finding, but I shall hazard the guess that individualized, learner-centered instruction must be extremely boring to most students most of the time, since, by mathematical necessity, they are not receiving individualized attention most of the time. It may also be the case that the slow pace and progress of less structured teaching may fail to engage and motivate students. A teacher must be extraordinarily talented to know just how to interact engagingly with each individual child. Given the strong motivation of young children to learn about the adult world, the best way to engage them is by a dramatic, interactive, and clear presentation that incidentally brings out the inherent satisfaction in skill mastery and interest in subject matter.

There is also a basis in cognitive psychology for the finding that students should be taught procedural skills to the point of "overlearning." "Overlearning" is a rather unfortunate term of art, since intuitively it seems a bad idea to overdo anything. But the term simply means that students should become able to supply the right answer or to follow the right procedure very fast, without hesitation. Through practice, they become so habituated to a procedure that they no longer have to think or struggle to perform it. This leaves

***The classroom studies also stressed the importance of teaching new content in small incremental steps.... A new thing has to become integrated with prior knowledge before the mind can give it meaning, store it in memory, and attend to something else.***

their highly limited working memory free to focus on other aspects of the task at hand. The classroom research cited above simply reported that teachers who followed the principle of overlearning produced much better results. Cognitive psychology explains why. Students who have mastered word recognition through structured practice of that procedural task, for example, are much better able to comprehend what they are reading. One of the best ways of overlearning word recognition is by "repeated readings": Students read a selection over and over again until they can read it with facility. Research shows that by using the repeated-reading method,

students not only improved in fluency on each passage, they also showed a transfer-of-training effect in that the first reading of each new passage was faster than the previous initial reading had been, and the number of readings to reach criterion decreased. *The most important finding was that there was improvement in comprehension [author's emphasis].*<sup>20</sup>

Automating word recognition leaves the mind free to focus on comprehension. This is precisely what studies of working memory in cognitive psychology would lead one to predict.

The classroom studies also stressed the importance of teaching new content in small incremental steps. This is likewise explained by the limitations of working memory, since the mind can handle only a small number of new things at one time. A new thing has to become integrated with prior knowledge before the mind can give it meaning, store it in memory, and attend to something else. New learnings should not be introduced until feedback from students indicates that they have mastered the old learnings quite well, though not, as in the case of procedural skills, to the point of overlearning. Research into long-term memory shows why this slow-but-sure method of feedback and review works best: "Once is not enough" should be the motto of long-term memory, though nonmeaningful review and boring repetition are *not* good techniques. The classroom research cited above indicated that the best teachers did not engage in incessant review. Memory studies suggest that the best approach to achieving retention in long-term memory is "distributed practice." Ideally, lessons should spread a topic over several days, with repetitions occurring at moderately distant intervals. Thus Bahrick:

Students learned and relearned fifty English-Spanish word pairs seven times to the same criterion. They were tested for recall and recognition eight years later. The original relearning sessions were spaced either at thirty-day intervals, at one-day intervals, or all on the same day. Eight years later, participants who were trained at thirty-day intervals recalled about twice as many words as those trained at one-day intervals, and both of these groups retained more than the subjects who were trained and retrained on the same day.<sup>21</sup>

It would follow that a two-day interval is better than one day for introducing reviews. This feature of learning explains the importance of a deliberate pace of instruction, as all the classroom studies showed. What-



ever practical arrangements are chosen for classroom learning, the principle of content rehearsal is absolutely essential for fixing content in long-term memory. Until that fixation occurs, content learning cannot be said to have happened.

That receiving continual feedback from the students is essential to good teaching is a robust finding in all the studies, and also gets support from research into both short-term and long-term memory. Feedback indicates whether the material has been learned well enough to free short-term (i.e., working) memory for new tasks. Moreover, the process of engaging in question-answer and other feedback practices constitutes content rehearsal, which also helps achieve secure learning in memory. Good teachers seem to be implicitly aware of this double function of question asking—that is, simultaneous monitoring and rehearsing.

Finally, research in cognitive psychology supports the finding that classes should often begin with a review or an analogy that connects the new topic with knowledge students already have. Psycholinguistic studies have shown that verbal comprehension powerfully depends on students' relevant background knowledge and particularly on their ability to apply that knowledge to something new.<sup>22</sup> Meaningful understanding seems to be equivalent to joining the new knowledge to something already known. Other psycholinguistic studies show that comprehension is enhanced when clues are offered at the beginning of a written passage indicating the overall character and direction of the passage. One needs to have a sense of the whole in order to predict the character of the parts and the way they fit with each other. Just as holistic, generic clues are important for the reader's comprehension of a written passage, such clues are similarly important for the student's understanding in the classroom. This psycholinguistic principle shows why a summary at the beginning of a class can give students the right "mindset" for assimilating the new material.<sup>23</sup>

These few principles concerning working memory, long-term memory, and the best prior conditions for meaningful learning explain the effectiveness of almost all the practices that were found to be effective in the classroom studies. Their congruence with mainstream psychology was well observed by Rosenshine and Stevens when they stated that research in cognitive psychology

helps explain why students taught with structured curricula generally do better than those taught with either more individualized or discovery learning approaches. It also explains why young students who receive their instruction from a teacher usually achieve more than those who are expected to learn new materials and skills on their own or from each other. When young children are expected to learn on their own, particularly in the early stages, the students run the danger of not attending to the right cues, or not processing important points, and of proceeding on to later points before they have done sufficient elaboration and practice.<sup>24</sup>

Now I shall turn to some data from international studies on classroom practice. The fullest such research has been conducted by Harold Stevenson and

his several colleagues in the United States, China, Japan, and Taiwan, who observed 324 Asian and American mathematics classrooms divided between first grade and fifth grade. Each classroom was studied for more than twenty hours by trained observers who took voluminous notes. There can be little doubt of the accuracy of the resulting generalizations regarding classroom practice in Asia and the United States. Nor can there be any doubt of the differences in mathematical achievement between the Asian and American classrooms. In international comparative studies of math achievement among developed nations, Asian countries rank at the top, the United States at the bottom. Hence, this international research by Stevenson and his colleagues can be interpreted as a process-outcome study on a grand scale, one in which the different classroom processes that yield dramatically different outcomes are fully and accurately described.

Classroom practice is not of course the only factor that has caused this huge difference in outcomes. Chinese and Japanese adults value mathematics; they are well educated in the subject, are able to teach math to their children outside of school. Nonetheless, classroom practice is a highly important factor in determining these results. (In their book *The Learning Gap*, Stevenson and Stigler effectively dispose of the argument that our inferior classroom results are owing to our greater "diversity."<sup>25</sup>) In light of the contrast in outcomes, it is no surprise that the activities that typically occur in Asian classrooms follow the effective pedagogical principles deduced from small-scale American studies and from cognitive psychology. By contrast, the activities that typically occur in American classrooms run counter to those research findings. Lest these contrasts seem to deprecate *all* American teachers, however, it should be remembered that it was the work of first-rate American teachers that originally determined the results of the research into effective pedagogical principles. Unfortunately, as comparative studies show, such superior pedagogy is not at all typical in the United States.

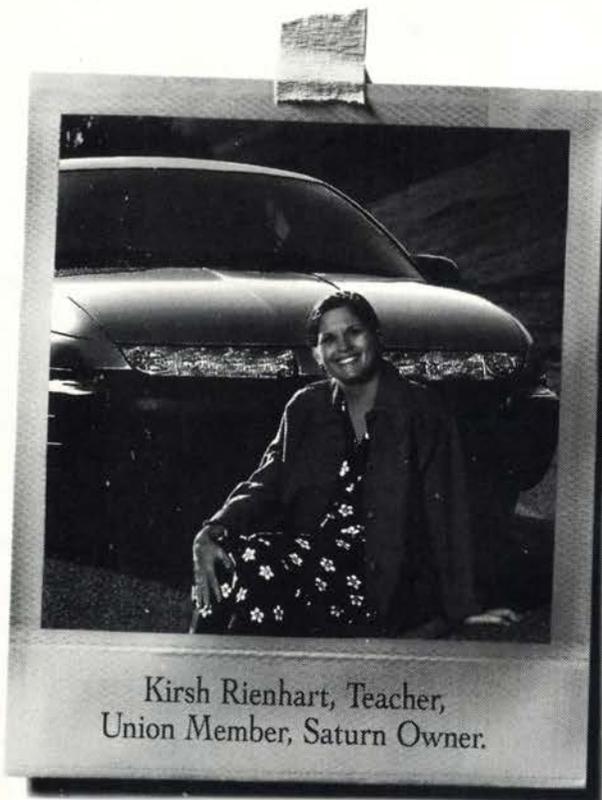
To illustrate the agreement between the small-scale intranational studies and the international studies, I shall first summarize the small-scale research findings in each category, then the corresponding findings from the international studies.

### **Social Atmosphere**

**Small-scale intranational studies.** In the best classrooms, the social atmosphere was warm and supportive, but at the same time businesslike and focused on the job at hand. By contrast, the worst-performing classrooms were "heavily affective," with a lot of verbal praise and self-esteem talk. In the best classes, the teacher was respectful to students but demanded good discipline as well as hard work. In the worst, the atmosphere was less ordered and disciplined.

**International studies.** The most frequent form of evaluation used by American teachers was praise, a technique that is rarely used in either Taiwan or Japan. Praise cuts off discussion and highlights the teacher's role as the authority. It also encourages students to be satisfied with their performance rather than informing

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them about where they need improvement. Chinese and Japanese teachers have a low tolerance for errors, and when they occur, they seldom ignore them. Discussing errors helps to clarify misunderstandings, encourage argument and justification, and involve students in the exciting quest of assessing the strengths and weaknesses of the various alternative solutions that have been proposed.<sup>26</sup>

### **Initial Orientation**

**Small-scale intranational studies.** The teacher first reviews the knowledge prerequisite to the new learning and orients the class to what is in store. One good way is to introduce the material with an overview or analogy connecting it with previous knowledge and to present a brief statement of goals for the day's class.

**International studies.** The Asian teacher stands in front of the class as a cue that the lesson will soon start. The room quiets. "Let us begin," says the teacher in Sendai. After brief reciprocal bows between pupils and teacher, the teacher opens the class with a description of what will be accomplished during the class period. From that point until the teacher summarizes the day's lesson and announces, "We are through," the Japanese elementary school class—like those in Taiwan and China—consists of teacher and students working together toward the goals described at the beginning of the class. Contrast this scene with a fifth-grade American mathematics classroom that we recently visited. Immediately after getting the students' attention, the teacher pointed out that today was Tuesday, "band day," and that all students in the band should go to the band room. "Those of you doing the news report today should meet over there in the corner," he continued. He then began the mathematics class with the remaining students by reviewing the solution to a computation problem that had been included in the previous day's homework. After this brief review the teacher directed the students' attention to the blackboard where the day's assignment had been written. The teacher then spent most of the rest of the period walking about the room monitoring the children's work, talking to individual children about questions or errors, and uttering "shush" whenever the students began talking among themselves. This example is typical.<sup>27</sup>

### **Pace**

**Small-scale intranational studies.** The best teachers introduce new material in small, easily mastered steps setting a deliberate but brisk pace, not moving ahead until students show that they understand. Better results come from teachers who move forward with new concepts, have higher expectations, and provide review, but not "incessant review."

**International studies.** The pace is slow, but the outcome is impressive. Japanese teachers want their students to be reflective and to gain a deep understanding of mathematics. Each concept and skill is taught with great thoroughness, thereby eliminating the need to teach the concept again later. Covering only a few problems does not mean that the lesson turns out to

be short on content. In the United States, curriculum planners, textbook publishers, and teachers themselves seem to believe that students learn more effectively if they solve a large number of problems rather than if they concentrate their attention on only a few.<sup>28</sup>

### **Clarity**

**Small-scale intranational studies.** The most effective teachers were not just clearer but more focused on the content or skill goal, asked questions but fewer of them, and kept the focus by continually integrating student responses into the lesson. A useful tool for clarity in presentation: an end-of-class summary review indicating where the lesson went and what it did.

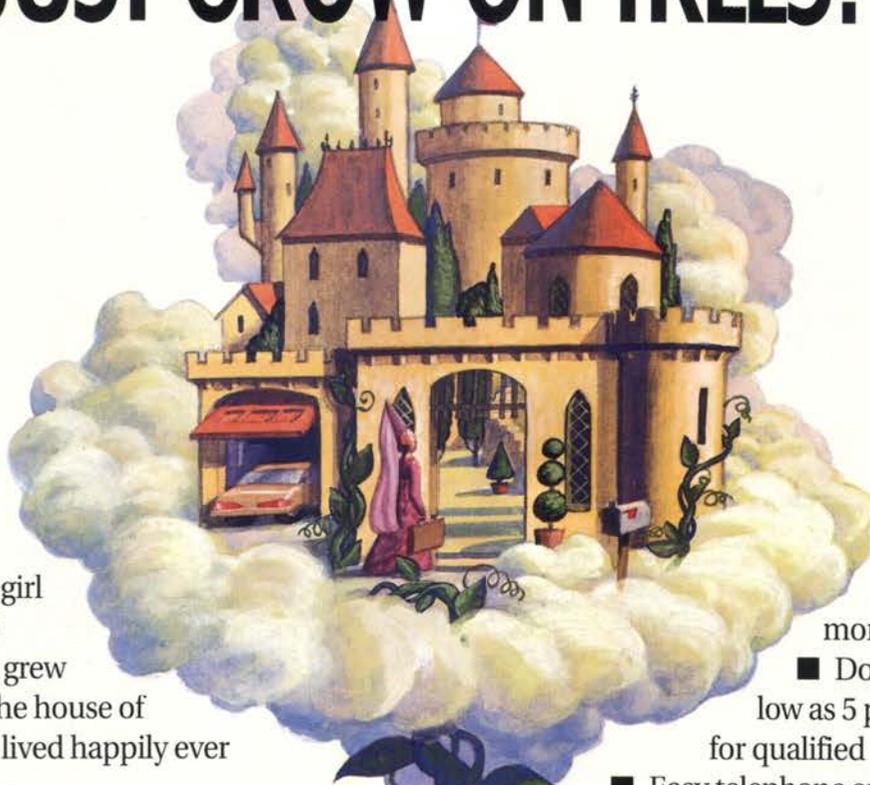
**International studies.** Irrelevant interruptions often add to children's difficulty in perceiving lessons as a coherent whole. In American observations, the teacher interrupted the flow of the lesson with irrelevant comments, or the class was interrupted by someone else in 20 percent of all first-grade lessons and 47 percent of all fifth-grade lessons. In Sendai, Taipei, and Beijing, interruptions occurred less than 10 percent of the time at both grade levels. Coherence is also disrupted by frequent shifting from one topic to another within a single lesson. Twenty-one percent of the shifts within American lessons were to different topics (rather than to different materials or activities), compared with only 5 percent in the Japanese lessons. Before ending the lesson, the Asian teacher reviews what has been learned and relates it to the problem she posed at the beginning of the lesson. American teachers are much less likely than Asian teachers to end lessons in this way. For example, we found that fifth-grade teachers in Beijing spent eight times as long at the end of the class period summarizing the lessons as did those in Chicago.<sup>29</sup>

### **Managing and Monitoring**

**Small-scale intranational studies.** In the most effective teaching, whole-class instruction is used most of the time. The teacher obtains responses and checks for understanding for each student, ensuring that each child gets some feedback and that all students stay involved. While feedback to the students is frequent, it is not incessant. The teacher is patient in waiting for responses. Student answers are often repeated for the class. Many effective teachers make constructive, nonevaluative use of student errors, working through how they were made. Students are more engaged and motivated in these classrooms than in student-centered ones.

**International studies.** Chinese and Japanese teachers rely on students to generate ideas and evaluate the correctness of the ideas. The possibility that they will be called upon to state their own solution keeps Asian students alert, but this technique has two other important functions. First, it engages students in the lesson, increasing their motivation by making them feel they are participants in a group process. Second, it conveys a more realistic impression of how knowledge is acquired. American teachers are less likely to give students opportunities to respond at such length. Al-

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though a great deal of interaction appears to occur in American classrooms—with students and teachers posing questions and giving answers—American teachers generally ask questions that are answerable with a yes or a no or a short phrase. They seek a correct answer and continue calling on students until one produces it.<sup>30</sup>

### ***Drill and Practice***

**Small-scale intranational studies.** Two kinds of practice are needed, corresponding to two objects of learning—content and skills. For content, new concepts are discussed and reviewed until secure in the memory. Procedural skills are mastered to the point of overlearning (automaticity). Guided practice should be part of whole-class instruction before seatwork occurs. Small-group seatwork generally works better than individual seatwork, but seatwork per se is used rather sparingly for both content and skills. Supervision and feedback are provided during seatwork.

**International studies.** When children must work alone for long periods of time without guidance or reaction from the teacher, they begin to lose focus on the purpose of their activity. Asian teachers assign less seatwork than American teachers; furthermore, they use seatwork differently. Asian teachers tend to use short, frequent periods of seatwork, alternating between discussing problems and allowing children to work problems on their own. When seatwork is embedded within the lesson, instruction and practice are tightly woven into a coherent whole. Teachers can gauge children's understanding of the preceding part of the lesson by observing how they solve practice problems. Interspersing seatwork with instruction in this way helps the teacher assess how rapidly she can proceed through the lesson. American teachers, on the other hand, tend to relegate seatwork to one long period at the end of the class, where it becomes little more than a time for repetitious practice. In Chicago, 59 percent of all fifth-grade lessons ended with a period of seatwork, compared with 23 percent in Sendai and 14 percent in Taipei. American teachers often do not discuss the work or its connection to the goal of the lesson, or publicly evaluate its accuracy. Seatwork was never evaluated or discussed during 48 percent of all American fifth-grade lessons observed, compared to less than 3 percent of Japanese classes and 6 percent of Taiwan classes.<sup>31</sup>

\* \* \*

Since it was predominantly research into effective American classrooms that, in the small-scale studies, originally determined these criteria of effective teaching, the first question that comes to mind is: Why do American teachers so consistently contravene the results of American research, whereas Asian teachers consistently follow its imperatives? In an important study of classroom effectiveness that reported similarly disconcerting findings, W. James Popham, an education professor at UCLA, stated the following about American teachers:

Rarely does one find a teacher who, prior to teaching,

***The very thing that Horace Mann called upon teacher-training schools to do and that the American public assumes that such schools are doing—the teaching of effective pedagogy—is a domain of training that, according to both sympathetic and unsympathetic observers, gets short shrift in our education schools.***

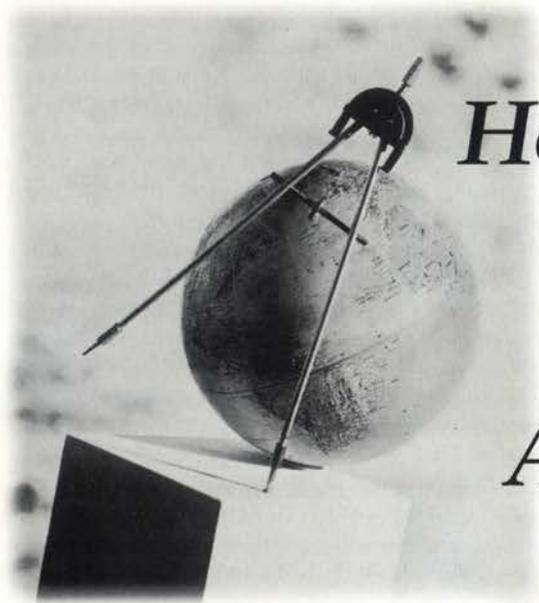
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establishes clearly stated instructional objectives in terms of learner behavior and then sets out to achieve those objectives.... Lest this sound like an unchecked assault on the teaching profession, it should be pointed out that there is little reason to expect that [American] teachers should be skilled goal achievers. *Certainly they have not been trained to be; teacher education institutions rarely foster this kind of competence. Nor is there any premium placed on such instructional skill after the teacher concludes preservice training* [author's emphasis].<sup>32</sup>

The very thing that Horace Mann called upon teacher-training schools to do and that the American public assumes that such schools *are* doing—the teaching of effective pedagogy—is a domain of training that, according to both sympathetic and unsympathetic observers, gets short shrift in our education schools.<sup>33</sup> Instead, it is mainly theory, and highly questionable theory at that, that gets more attention in education school courses. That point should be stated even more strongly: Not only do our teacher-training schools decline to put a premium on nuts-and-bolts classroom effectiveness, but they promote ideas that actually run counter to consensus research into teacher effectiveness.

This consensus among present-day reformers is well summarized by Zemelman, Daniels, and Hyde in their 1993 book, *Best Practice*.

In virtually every school subject, we now have recent summary reports, meta-analyses of instructional research, bulletins from pilot classrooms, and landmark sets of professional recommendations. Today there is a strong consensus definition of Best Practice, of state-of-the-art teaching in every critical field.... Whether the recommendations come from the National Council of Teachers of Mathematics, the Center for the Study of



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**Colorado Governor Roy Romer.** Governor Romer has been at the forefront of the effort to set education standards since the inception of these initiatives. In Colorado, he initiated and secured passage of legislation which requires all public school systems in the state to adopt clear standards for what students should know and be able to do in six core academic areas. On a national level, Romer currently serves on the National Assessment Governing Board and is one of twelve governors and CEOs who are establishing a non-governmental organization to support the implementation of state standards and assessments.

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Reading, the National Writing Project, the National Council for the Social Studies, the American Association for the Advancement of Science, the National Council of Teachers of English, the National Association for the Education of Young Children, or the International Reading Association, the fundamental insights into teaching and learning are remarkably congruent. Indeed on many key issues, the recommendations from these diverse organizations are unanimous.

Zemelman, Daniels, and Hyde then list twenty-five "LESS" and "MORE" admonitions on which all these organizations agree. Among them are the following:

- LESS whole-class teacher-directed instruction
- LESS student passivity, sitting, listening, receiving
- LESS attempts by teachers to cover large amounts of material
- LESS rote memorization of facts and details
- LESS stress on competition and grades
- MORE experiential, inductive, hands-on learning
- MORE active learning with all the attendant noise of students doing, talking, collaborating
- MORE deep study of a smaller number of topics
- MORE responsibility transferred to students for their work: goal-setting, record-keeping, monitoring, evaluation
- MORE choice for students, e.g., picking their own books, etc.
- MORE attention to affective needs and varying cognitive styles of students
- MORE cooperative, collaborative activity.<sup>34</sup>

The authors praise the current consensus on these "child-centered" principles for being "progressive, developmentally appropriate, research based, and eminently teachable." These claims are not, however, "research based" in the way the authors imply. Quite the contrary. No studies of children's learning in mainstream science support these generalizations. With respect to effective learning, the consensus in research is that their recommendations are worst practice, not "best practice."

This Alice in Wonderland reversal of reality has been accomplished largely by virtue of the rhetorical device that I have called "premature polarization." Discovery learning is labeled "progressive," and whole-class instruction "traditional." Under such descriptors, one mode is assumed to be active and engaging, the other passive and boring; one holistic and indirect, the other step-by-step and direct. As a result of such terminological polarization, the term "direct instruction," which is the mode advocated by a number of teachers and educational specialists, has come in for some heavy criticism from anti-traditionalists: The distinction, however, between direct and indirect instruction is an unfortunate simplification of some complex issues. It overlooks, for instance, the different pedagogical requirements for procedural learning and content learning and thus neglects the different pedagogical emphases needed at the different ages and stages of learning. Effective procedural learning requires "overlearning," and hence plenty of practice. Content learning is amenable to a diversity of methods that accommodate themselves to students' prior knowledge, habits, and interests.

What the international data show very clearly is that both procedural and content learning are best

achieved in a focused environment that preponderantly emphasizes whole-class instruction but that is punctuated by small-group or individualized work. Within that focused context, however, there are many good roads to Rome. The classroom observations of Stevenson and his colleagues bring home the ancient wisdom of integrating both direct and indirect methods, including inquiry learning, which encourages students to think for themselves, and direct informing, which is sometimes the most effective and efficient mode of securing knowledge and skill. A combination of show and tell, omitting neither, is generally the most effective approach in teaching, as it is in writing and speaking.

The only truly general principle that seems to emerge from process-outcome research on pedagogy is that focused and guided instruction is far more effective than naturalistic, discovery, learn-at-your-own-pace instruction. But within the context of focused and guided instruction, almost anything goes, and what works best with one group of students may not work best with another group with similar backgrounds in the very same building. Methods must vary a good deal with different age groups. Within the general context of focused and guided instruction, my own general preference, and one followed by good teachers in many lands, is for what might be called "dramatized instruction." The class period can be formed into a little drama with a beginning, middle, and end, well directed but not rigidly scripted by the teacher. The beginning sets up the question to be answered, the knowledge to be mastered, or the skill to be gained; the middle consists of a lot of back-and-forth between student and student, student and teacher; and the end consists of a feeling of closure and accomplishment.

The idea of teaching as drama or as storytelling gains a great deal of credence from its agreement with demonstrably effective classroom teaching and with an ancient and highly effective tradition, particularly in that subtle domain of teaching consensus values and virtues. How do we teach and model such values as independent thinking, toleration, respect, aspiration, civility, resistance to the mob, and at the same time teach subject matters and skills like history and science, reading and writing? From Plato to Sir Philip Sidney to Robert Coles to Kieran Egan, there is general agreement that dramatizing, telling, or implicitly enacting stories, both fictional and factual, is a sound and sure teaching method.<sup>35</sup> In early grades especially, no opportunity should be lost to combine skill instruction, which can itself be dramatized, with virtue-and-knowledge-enhancing stories.

The focused narrative or drama lies midway between narrow drill and practice (which has its place) and the unguided activity of the project method (which may also occasionally have a place). Sir Philip Sidney argued (in 1583!) that stories are better teachers than philosophy or history, because philosophy teaches by dull precept (guided instruction) and history teaches by uncertain example (the project method). The story, however, joins precept and example together, thus teaching and delighting at the same time. Thus Sidney in the sixteenth century:

The philosopher therefore and the historian are they

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which would win the goal, the one by precept, the other by example. But both, not having both, do both halt. For the philosopher [sets] down with thorny argument the bare rule.... The historian, wanting the precept, his example draweth no necessary consequence.... Now doth the peerless poet perform both.... With a tale forsooth he cometh unto you, with a tale which holdeth children from play, and old men from the chimney corner. And pretending no more, doth intend the winning of the wind from wickedness to virtue.<sup>36</sup>

Elsewhere in his essay, Sidney makes it clear that good history can also be a good story that combines precept and example. Excellent classroom teaching has a narrative and dramatic feel even when there is a lot of interaction between the students and the teacher—it has a definite theme, and a beginning, middle, and end. This teaching principle holds even for mathematics and science. When every lesson has a well-developed plot in which the children themselves are participants, teaching is both focused and absorbing. The available research is consistent with this scheme, though it by no means says that thoughtful sequencing, plotting, and dramatizing of learning activities are the exclusive or whole key to good pedagogy. For many elementary learnings, repeated practice has to be an integral part of the plot.

That recent psychological research should yield insights that confirm what Plato and Sidney said about stories should probably make us more, not less, confident in the results of this recent research. Education is as old as humanity. The breathless claim that technology and the information age have radically changed the nature of the education of young children turns out to be, like most breathless claims in education, unsupported by scholarship. Nor should current studies surprise us when they show that a naturalistic approach, lacking a definite story line and a sharp focus, has the defect Sidney saw in history as a teacher of humankind: it “draweth no necessary consequence.” There *is* a modest place for discovery learning, just as there is for drill and practice. But research indicates that, most of the time, clearly focused, well-plotted teaching is the best means for “[holding] children from play and old men from the chimney corner.” □

## Endnotes

- 1 For comments on Gentile's views and for basic insights into Gramsci's ideas about education, I am grateful to Entwistle, *Antonio Gramsci*. Additional commentary may be found in Broccoli, *Antonio Gramsci e l'educazione come egemonia*; Scuderi, *Antonio Gramsci e il problema pedagogico*; and De Robbio, *Antonio Gramsci e la pedagogia dell'impegno*. For modern data showing that Gramsci is right in holding that traditional schooling greatly improves the academic competencies of low achievers, see K. R. Johnson, and Layng, “Breaking the Structuralist Barrier,” 1475-90.
- 2 Gramsci, “Education.”
- 3 Larkin et al., “Models of Competence in Solving Physics Problems,” 317-48. Schoenfeld and Hermann, “Problem Perception and Knowledge Structure in Expert and Novice Mathematical Problem Solvers,” 484-94.
- 4 Some work in this tradition: Tversky and Kahneman, “Availability,” 207-32; Collins, *Human Plausible Reasoning*; and Fischhoff, “Judgment and Decision Making,” 153-87.
- 5 Larkin and Chabay, “Research on Teaching Scientific Thinking,” 158.
- 6 Ibid., 150-72.
- 7 Johnson-Larid, *Mental Models*.
- 8 Kunda and Nisbett, “The Psychometrics of Everyday Life,” 195-224.
- 9 Brown and Siegler, “Metrics and Mappings,” 531.
- 10 Brown and Siegler, “Metrics and Mappings,” 531. But see also Scardamalia and Bereiter, “Computer Support for Knowledge-Building Communities,” 265-83; and Scardamalia, Bereiter, and Lamon, “CSILE: Trying To Bring Students into World 3,” 201-28.
- 11 Bishop, *Expertise and Excellence*.
- 12 Pais, “*Subtle Is the Lord*,” 95.
- 13 The data from the New Zealand study and most other studies cited here are taken from the excellent review by Brophy and Good, who conducted some of the most significant research into effective teaching methods. See Brophy and Good, “Teacher Behavior and Student Achievement,” 328-75. Some of the New Zealand work is described in Nuthall and Church, “Experimental Studies of Teaching Behaviour.” The importance of this kind of research was well argued by Gilbert T. Sewall in his *Necessary Lessons*, especially pages 131-33. Sewall cites highly similar findings from the British researcher Neville Bennett in N. Bennett, *Teaching Styles and Pupil Progress*. For an explanation why progressive methods like discovery learning have not worked well in teaching science, see Walberg, “Improving School Science in Advanced and Developing Countries,” 625-99.
- 14 Stallings and Kasowitz, *Follow Through Classroom Evaluation, 1972-1973*.
- 15 Brophy and Evertson, *Learning from Teaching*. Anderson, Evertson, and Brophy, *Principles of Small-Group Instruction in Elementary Reading*.
- 16 Good and Grouws, “Teacher Effects,” 49-54.
- 17 Gage, *The Scientific Basis of the Art of Teaching*.
- 18 Rosenshine and Stevens, “Teaching Functions,” 376-91.
- 19 Brophy and Good, “Teacher Behavior and Student Achievement,” 338.
- 20 Beck, “Improving Practice through Understanding Reading,” 40-58.
- 21 Bahrick, “Extending the Life Span of Knowledge,” 61-82.
- 22 Spiro, “Cognitive Processes in Prose Comprehension and Recall”; and Anderson and Shifrin, “The Meaning of Words in Context.”
- 23 Bransford and Johnson, “Contextual Prerequisites for Understanding,” 717-26. Spiro, “Cognitive Processes in Prose Comprehension and Recall.”
- 24 Rosenshine and Stevens, “Teaching Functions,” 379.
- 25 Stevenson and Stigler, *The Learning Gap*, 196-98.
- 26 Ibid., 191.
- 27 Ibid., 174.
- 28 Ibid., 194.
- 29 Ibid., 179, 181-82.
- 30 Ibid., 190.
- 31 Ibid., 183.
- 32 Popham, “Performance Tests of Teaching Proficiency,” 105-17.
- 33 Clifford and Guthrie, *Ed School*. Kramer, *Ed School Follies*.
- 34 Zemelman, Daniels, and Hyde, *Best Practice*, 4-5.
- 35 Egan, *Teaching as Story Telling*.
- 36 Sidney, *An Apology for Poetry*.

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## SKILLS AND OTHER DILEMMAS

(Continued from page 11)

vital to success in America—the appropriation of the oral and written forms demanded by the mainstream. And they want it to happen quickly. They see no time to waste developing the “fluency” they believe their children already possess. Yes, they are *eager* to teach “skills.”

Of course, there is nothing inherent in the writing-process approach itself that militates against students’ acquiring standard literacy skills; many supporters of the approach do indeed concern themselves with the technicalities of writing in their own classrooms. However, writing-process advocates often give the impression that they view the direct teaching of skills to be restrictive to the writing process at best, and at worst, politically repressive to students already oppressed by a racist educational system. Black teachers, on the other hand, see the teaching of skills to be essential to their students’ survival. It seems as if leaders of the writing-process movement find it difficult to develop the vocabulary to discuss the issues in ways in which teachers with differing perspectives can hear them and participate in the dialogue. Progressive white teachers seem to say to their black students, “Let me help you find your voice. I promise not to criticize one note as you search for your own song.” But the black teachers say, “I’ve heard your song loud and clear. Now, I want to teach you to harmonize with the rest of the world.” Their insistence on skills is not a negation of their students’ intellect, as is often suggested by progressive forces, but an acknowledgment of it: “You know a lot; you can learn more. Do It Now!”

I run a great risk in writing this—the risk that my purpose will be misunderstood; the risk that those who subject black and other minority children to day after day of isolated, meaningless, drilled “subskills” will think themselves vindicated. That is not the point. Were this another article, I would explain what I mean by “skills”—useful and usable knowledge that contributes to a student’s ability to communicate effectively in standard, generally acceptable literary forms. And I would explain that I believe that skills are best taught through meaningful communication, best learned in meaningful contexts. I would further explain that skills are a necessary but insufficient aspect of black and minority students’ education. Students need technical skills to open doors, but they need to be able to think critically and creatively to participate in meaningful and potentially liberating work inside those doors. Let there be no doubt: a “skilled” minority person who is not also capable of critical analysis becomes the trainable, low-level functionary of the dominant society, simply the grease that keeps the institutions that orchestrate his or her oppression running smoothly. On the other hand, a critical thinker who lacks the “skills” demanded by employers and institutions of higher learning can

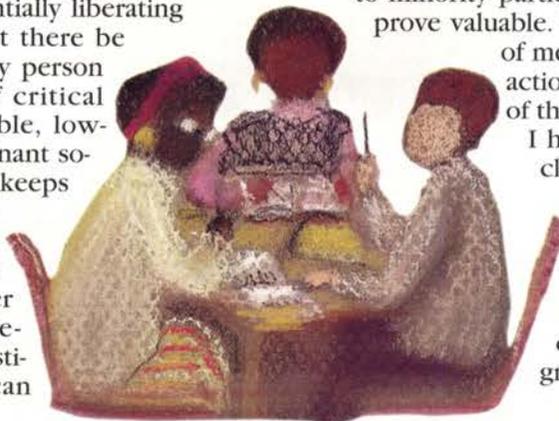
aspire to financial and social status only within the disenfranchised underworld. Yes, if minority people are to effect the change that will allow them to truly progress we must insist on “skills” *within the context* of critical and creative thinking.

But that is for another article. The purpose of this one is to defend my fellow minority educators at the same time I seek to reestablish my own place in the progressive educational arena. Too often minority teachers’ voices have been hushed: A certain paternalism creeps into the speech of some of our liberal colleagues as they explain that our children must be “given voice.” As difficult as it is for our colleagues to hear our children’s existing voices, it is often equally difficult for them to hear our own. The consequence is that all too often minority teachers retreat from these “progressive” settings grumbling among themselves, “There they go again.” It is vitally important that non-minority educators realize that there is another voice, another reality; that many of the teachers whom they seek to reach have been able to conquer the educational system *because* they received the kind of instruction that their white progressive colleagues are denouncing.

What am I suggesting here? I certainly do not suggest that the writing-process approach to literacy development is wrong or that a completely skills-oriented program is right. I suggest, instead, that there is much to be gained from the interaction of the two orientations and that advocates of both approaches have something to say to each other. I further suggest that it is the responsibility of the dominant group members to attempt to hear the other side of the issue; and after hearing, to speak in a modified voice that does not exclude the concerns of their minority colleagues.

It is time to look closely at elements of our educational system, particularly those elements we consider progressive; time to see whether there is minority involvement and support, and if not, to ask why; time to reassess what we are doing in public schools and universities to include other voices, other experiences; time to seek the diversity in our educational movements that we talk about seeking in our classrooms. I would advocate that university researchers, school districts, and teachers try to understand the views of their minority colleagues and constituents and that programs, including the country’s many writing projects, target themselves for study. Perhaps ethnographies of various writing projects, with particular attention given to minority participation and nonparticipation, would prove valuable. The key is to understand the variety of meanings available for any human interaction, and not to assume that the voices of the majority speak for all.

I have come to believe that the “open-classroom movement,” despite its progressive intentions, faded in large part because it was not able to come to terms with the concerns of poor and minority communities. I truly hope that those who advocate other potentially important programs will do a better job. □





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