A former N.I.E. director, this writer examines the status of schooling and sets an ambitious agenda for educators in the immediate future. Direct research findings, he contends, should give clearer guidance to school practice at all levels.

Education is a big business in the United States. Two out of every three American adults have at least a part-time involvement in education, and it is the major occupation of some 60 million people. In the 1976-1977 school year, the U.S. will spend more than $120 billion on education.

By and large, our education system is a good one. But like any big business, the education enterprise has areas of controversy and failure as well as success.

Despite our best efforts, the education we offer our children is not as good as it could be. Employers complain that many high school graduates cannot read or write well enough to do their jobs properly. At the same time, more and more students of all ages are questioning the economic worth of education. Where do they find the motivation to acquire postsecondary degrees when a California street sweeper makes $13,000 a year and an assistant professor in that state's college system makes only $12,000? It has become obvious that education is only one of a number of routes to economic security.

At the same time, the newspapers carry stories almost daily describing major problems in our schools.

Again and again, we hear that the education system is a failure, that schooling doesn't matter, that teachers aren't doing their jobs, and that education has no influence on our lives. However, most of the facts just don't back up this discouraging picture. The declining test score controversy is a case in point.

The Test Score Controversy

For some time, overall scores on a number of nationally-used achievement and aptitude tests have been declining. The fact has rated national attention. It has been the focus of numerous newspaper articles, most of which indicate that schools are continuing to lose ground across the board. This conclusion is completely unsupported by the facts.

While the decline of some test score indicators during the past decade has rated national attention, there has been little mention that other indicators have remained the same—and that reading skill tests in grades one through three have actually increased over the same time period.
Further, the latest SAT scores for 1975-1976 show no decline in mathematics and only a three point decline in verbal skills (the smallest decline in five years). Graduate Record Exam scores have stabilized, and the Iowa Testing Program—which has consistently typified other test score trends—has reported increases in all subject scores for most grade levels and greatly reduced declines for seventh and eighth grades for the first time in a decade.

Yet to judge by what we read in most newspapers, the situation is continuing to worsen. These reports have caused parents and other citizens to lose faith in their schools, thus creating a self-fulfilling prophecy. Teachers and administrators—working with rapidly shifting enrollments, declining budgets, and changing expectations—have not had the public support they deserve.

In education, the failures have drawn national attention, while the successes are rarely mentioned. In the state of Massachusetts, two things occurred simultaneously last fall: violence in three Boston schools and completely peaceful integration in the Springfield schools. Everyone heard about Boston; no one heard about Springfield. The achievements of the schools are seldom made part of the public record.

Education Makes a Difference

I firmly believe that for the past few years, the American people have been misled. Education does make a difference. One recent research study of 80,000 adults between the ages of 25 and 72 showed that the longer you stay in school the more you know—throughout your life.1 You may forget the capital of Brazil, or some of the other bits of knowledge you were required to learn in third-grade geography, but by and large, the knowledge you acquire in school stays with you. That same study also found that people from lower socioeconomic backgrounds who go to college do better in life than those from wealth backgrounds who only complete high school.

Education does make a difference, in both intellectual and monetary terms. But the education system is affected by a great many outside pressures. To be knowledgeable about education, you must understand politics, business, civil rights, philosophy, labor relations, finance—the list is nearly endless. And most of us look at education from a very local, very personal viewpoint. If your son or daughter isn't doing well in school, the education system is failing. If he or she is doing well, the schools are fine.

The most important task facing educators in the next few years is to restore the faith of the American public, and their elected leadership, in our system of education.

Research: Who Participates?

Given the diversity of our population and its rapid mobility, the complex interactions among the more than 18,000 local, state, and federal bodies responsible for education work remarkably well.

This is perhaps surprising when we consider how little the nation spends on efforts to find out what works and what does not, to evaluate ongoing efforts and design new ones, and to improve

the effectiveness of the $120 billion education investment. The nation commits roughly three to four percent of its annual expenditures in the fields of agriculture and medicine to research and development, while spending roughly one-half of one percent on similar efforts in education. This is particularly ironic at a time when the education research and development system has matured enough to provide some real and important answers to the questions that concern educators.

There is general agreement that the Federal government can and should play a major role in education research and development. The National Institute of Education (NIE) was established for exactly that reason. NIE’s role is complex for it includes both centralization and coordination. Although many of the Federal education programs can be decentralized to good effect, no one wants 50 different state programs of research on something like neurological mechanisms and learning. Basic research in education, as in medicine, is more effective if it is centralized.

There is, however, a hidden trap in centralization: it can lead to the “top-down” model of research and development. That model makes some unfortunate assumptions. It assumes, for example, that the brightest people are located in a few universities and research firms. It further assumes that these very bright people can think up new ideas independently to solve the problems of a particular field such as education. It assumes that these new ideas can then be handed to developers who prepare instructional packages and deliver those packages “down” to a teacher or administrator who faithfully follows the “simple instructions” on each new “idea package.” This process thereby eliminates the need for any thought on the part of the educator.

The “top-down” model doesn’t work for several reasons. First, the education field is full of very bright people; universities and research firms don’t have a monopoly on talent. Second, the better the teacher, the more he or she will want to have a direct hand in deciding what will be done in the classroom—because teachers care. Third, most of the larger big city school systems have some very innovative research and evaluation experts of their own. And fourth, it simply isn’t possible to design a single method of instruction or a single textbook that will perfectly match the needs of all students in all education situations.

What Works?

We do know something about what does work in education research. First of all, we know that teachers and administrators must be involved in education research from the time that a problem is first studied until the final product is implemented in a classroom. This is the only way to ensure that research will be relevant to the needs of educators. Before NIE began its research and development in reading, six conferences were held involving everyone from psycholinguists to teachers of reading. Our bilingual program was developed through a similar series of conferences, and the NIE-sponsored Institute for the Study of Teaching is required to employ at least six public school teachers as staff members.

Second, we know that the results of research and development must be adapted in order to be adopted. We must recognize that individual teachers will want to put their own stamp on materials they will use. Thus, there should be enough “give” in the materials so that those who use them can say “That’s mine.”

Third, we know also that a great deal of very good information from research is simply never communicated to those who need it. We need to develop “translators” who can convert the language of research into more readable forms, and we need to develop a decentralized system of dissemination to get research information and products into the hands of teachers, administrators, and legislators. NIE has begun in this area by providing grants to State Departments of Education to help them build their capacity to disseminate good practices and products. And NIE is working with local schools and school districts...
in a variety of ways to help them increase their ability to solve their own problems.

A Broader Education Policy

We also know that we need to take a broader view of education. We must cease viewing the education system in a vacuum, isolated from health care, nutrition, welfare, and social work. As a nation, we must give more attention to the integration of community services. We know already that poor nutrition on the part of expectant mothers often results in premature births and low birthweight children. And there is abundant evidence that low birthweight and premature birth are highly related to learning difficulties when the child enters school. Given this, the best education policy for the nation might well be to ensure that every pregnant mother has an adequate diet as well as routine physical exams during pregnancy.

People-related services interact, and it is important that we act accordingly. Just as cancer research has begun to look at the variety of environmental factors that promote or reduce carcinogens, so education needs to look more carefully at the variety of out-of-school forces that impinge on what the schools can do. The costs are minimal and the return could be large.

Quality in Education

We must also show an increased concern for the standards used by the education system. Today, the high school curriculum consists of some 2,000 different course titles, double the number that existed only a decade ago. Included are many courses that used to be taught in the first year or two of college, such as introductory psychology, sociology, and ecology. As a consequence of expanded curricula, less than half of all high school students take an English course in their senior year.

This may be an overlooked cause of test score declines. If so, those who support the “back-to-basics” movement have an argument. But if there is a “basic” with which we should provide all students, it is the ability to formulate and solve problems in a variety of settings. We must ensure that students can read, write, and compute, but we must also ensure that students are equipped with problem-solving skills. When 17-year-olds cannot figure out the proportions called for in a recipe, it is not that they can’t read the words, it is that they cannot properly formulate the problem. Rote memorization of the “basics” will not help them.

We must also develop a broader set of criteria with which to assess a student’s potential. Existing achievement mechanisms do not tell us very much about what a student is capable of doing after he or she leaves school. We need to think of human talent in a variety of forms, including the skills of working with data and ideas, working with people, and working with things. Few people achieve excellence in all three areas, but few would deny the importance of each. If we begin thinking seriously about student achievement in a variety of areas, all of which are teachable and testable, we can perhaps develop a much more useful system of assessing present achievement and future potential.

The Job Ahead

I have proposed a large agenda—the integration of education research and practice with other social services, the development of more useful ways to assess student achievement, the development of a more useful system of education research and development, a reconsideration of the curriculum, and an increased involvement of teachers and administrators in education research. It is a large task—but it can be done. And it is worth doing, for the outcome should be the restoration of the American people’s faith in their system of education. For all of us who have a stake in education, no more important task can be imagined.

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