Preparing Teachers for Twenty-first Century Schools

By Albert Shanker

Preparing teachers for the twenty-first century: Your view of what that means obviously depends on the direction you think schools should take. Over the past several years, we have been shown visions of schools that are radically different from most of our current schools and encouraged to see them as the schools of the future for some, if not all, of our children. At one time, I was in that camp myself, but I have gradually changed my mind. It's not that I think these visions are unimportant or that I oppose their having a bigger place in our thinking about schools. However, I have come to think that the assumptions underlying the call for radical change are just plain wrong.

The call for change is based on the idea that the traditional model of schooling does not work. When people speak of the traditional model, they are thinking about classrooms where the teacher stands up front talking and asking questions and all the children are supposed to learn in the same way and at same time. As we know, this is not the way children learn. And so, the thinking goes, we need to throw out the whole system and put something totally different in its place. But what will replace the traditional model?

There is currently a good deal of experimentation, but no one has yet found an alternative to the traditional model that has been tested by time. Moreover, this traditional model seems to work quite well in other industrial countries. So I think we need to ask ourselves whether we can afford to junk our current system when we have no substitute for it and, indeed, whether it is the model that is wrong or the way we are using it.

What system?

One of the assumptions about our current system is that it is extremely well-organized and even rigid, and it needs to be made much more flexible because it doesn't fit our times or our youngsters. Another assumption is that there is a heavy emphasis on academics. However, a look at our schools will show that academics are very low in the order of priorities and that socialization comes first. Take the current crusade for total inclusion--that is, including all youngsters with disabilities in regular classrooms regardless of the nature and severity of their disability. Total inclusion is an argument for socializing disabled youngsters and others with, somewhere in a footnote, the assertion that full inclusion, if "done properly," need not result in the sacrifice of academic achievement. (1)

Another assumption is that because our students are subjected to lots of tests, we run a high-stakes school system that is very hard on students and teachers, and we need to get rid of these extrinsic systems of motivation. But if you look at our system, you see that there are no visible stakes. Schools can fail on every indicator with no consequences for the principal or the teachers and no visible consequences for the kids: They move on, they get promoted, they graduate, and 95 percent of the colleges and universities in the United States will accept them no matter what their level of achievement.

My parents used to tell me, almost every day, "If you want to go to college you've got to do better than that," and they really pushed hard. Later, when I tried to tell my children that they weren't working enough or achieving enough, they just laughed at me. They said, "Dad, no one works at school, and they are all going to college." Of course, if you want to go to certain selective schools, you have to work, and my children knew that, but they'd made up their minds that they didn't care about getting into Stanford or Harvard.

In other words, all of our assumptions call for relaxing a rigid system and moving away from academics and high stakes when, as a matter of fact, our current system is hardly a system at all and, far from being rigid, it is almost anarchic.

When I was teaching, I was given some thick curriculum manuals put out by the State of New York. There was so much material in them that it would have been impossible to cover it all, but you weren't expected to. Indeed, the instructions at the beginning indicated that the material was just illustrative. It showed the kinds of things that students studied in the various grades, and you, as the teacher, were to feel free to select on the basis of your youngsters' interests or what you thought they were able to do or what interested you. If you didn't find anything in the manual, you were free to pick something else. And many teachers did just that. Some teachers didn't work very hard--they got a copy of the *Instructor* or *Grade Teacher* and used the ready-made plans. Others did a tremendous amount of work on their own. But there was very little direction from the outside, and that is still the case. There are some exceptions. In Texas, for example, teachers are given check lists for almost every class period, and they check off which areas and skills they have covered. But for the most part, there is no system. If there is rigidity it comes from the inside. That is, teachers tend to do things the way they remember things being done when they were students.

The question of student achievement

There is some dispute as to whether the kids in our education system are generally doing well or poorly. Many educators view negative reports about student achievement as somewhat hysterical--perhaps even part of a right-wing conspiracy. However, most of them do not bother to look very closely at the evidence, such as that provided by the National Assessment of Educational Progress (NAEP). NAEP, one of the most important indicators of student achievement, has been testing representative samples of U.S. students in grades four, nine and eleven for over twenty years, and most people have confidence in its findings.

NAEP tests are not norm-referenced so you don't get test results showing that 53 percent of the kids are above average. A NAEP exam has four or five different levels of proficiency and no quotas for how many kids can be at a given level. Also, NAEP makes available examples of questions and answers so you can see, for example, what is meant by "elaborated" writing--the term for the highest level of achievement--what is "adequate" and what would be considered poor. The same is true for NAEP exams in reading and mathematics and the other fields in which NAEP tests students.

When you look at the results for 17-year-olds, you have to remember that NAEP isn't testing the 20 percent of students who have dropped out of school by then, most of whom would probably not do very well. At this level, it is testing only the relatively successful kids, the ones who are likely to get a high school diploma and the majority of whom will go on to postsecondary education. What you find when you look at these students' scores in the NAEP writing examination is that only about 3 percent of them can write what is considered an "elaborated" answer. And "elaborated" just means a good essay or letter: It's what used to be considered a good answer on a New York State Regents' exam and what is expected all over the world from kids who expect to admitted to university. Three percent, and this figure has remained stable since 1969 or 1970.

If you go down to the next level, where the writing is less thoughtful and has some grammatical and spelling errors but the youngster can still do a fair job developing an argument, you find only about 20 percent have achieved it. This figure, too, has remained stable over the years. In other words, 75 percent of students who are still in school when they are 17 will graduate with a writing achievement level that is very low. They are not

able to persuade or describe or tell a story; their writing is hard to understand, and it is loaded with spelling and grammatical errors. (2)

Moving on to reading or mathematics, you find that about 6 percent are able to perform at the highest levels. And the cut points at the next level are similar to the ones for writing. This means that a large majority of our students who graduate from high school are achieving at an elementary school level. (3)

One of the important results of education is the ability to engage in lifelong learning. But if you don't reach a certain reading level, you will read only if you have to. People who read for pleasure are proficient enough to lose themselves in what they read. If you have to stop every sentence or so to figure out what a word is or if you read very slowly, it's like reading a foreign language. Most of us who have had three years of Spanish or French or German *could* make our way through an article, but we would never do it for pleasure because it's just hard. So we are graduating a bunch of youngsters who will probably not continue to read, and as a result, they will lose whatever proficiency they acquired in school.

What about youngsters who attend private schools? We hear that they perform at high levels, but as a matter of fact, they don't do much better than public school students. Private schools do have certain advantages. A higher percentage of parents of private school students were college graduates and a much smaller number of parents were themselves dropouts. (4) And private school parents are likely to be concerned with their children's education because they are paying for it.

Private schools also have the advantage of deciding which students they want to admit and keep. Catholic schools make up the largest private school system in the country--about 81 percent of students who attend private schools go to Catholic schools--and most Catholic high schools have entrance examinations. (5) Catholic schools, like all private schools, have the option of getting rid of students who are not working out--when I was teaching, the toughest kids I had were the Catholic school kids who had been kicked out because they didn't behave.

Nevertheless, public and private schools are very close in terms of student achievement. If you say that other industrialized democracies with good school systems are three miles ahead of us, private schools are three feet ahead of the public schools—a difference that doesn't mean much educationally. (6)

Why aren't we seeing more dissatisfaction with our education system--even a revolution? It's because we are taking care of the problem at the top end. More and more colleges and universities are devoting time, space and energy to remediation. And college texts have been dumbed-down in order to meet the students at their level. Institutions of higher learning are playing this game because they are competing for students, which means there is pressure on faculty to be accommodating so they don't lose any customers. The result is a system in which huge numbers of students are getting their junior high and high school education in college. But parents and teachers like to be proud of their graduates, so we say that 55 percent go on to college and 35 percent are getting a degree. and we avoid looking at what is behind those figures. (7)

Foreign comparisons

How does this compare with achievement levels in other countries? These data sound very bad, but perhaps that's the way things are around the world.

It is not possible to compare exactly how well or how poorly U.S. youngsters do with the performance of children in other countries. Exams differ from country to country, and the international comparisons that have been set up to answer this question have many

problems that make their results inconclusive. However, you can get a pretty good idea by looking at the textbooks used in other countries. For instance, the textbooks for Japan's national system have been translated, so you can see what Japanese children at the equivalent of our sixth-grade level are doing and compare it with what our sixth graders study. You can also get textbooks from Russia, France, Germany and the U.K. (8)

Most of these countries have some form of school-leaving examination for the youngsters who are in the college-bound track, and by looking at the German *Abitur*, the French *baccalaureat* or the General Certificate of Secondary Education in the U.K., you can find out what is required of youngsters going to college. The American Federation of Teachers, in cooperation with the National Center for Improving Science Education, has put out a study comparing school-leaving biology exams in England, France, Germany, Wales, Japan, with the Advanced Placement (AP) biology exam in the United States. The exams in these other countries are more sophisticated, more difficult than the AP, although most adults would feel pleased to pass the AP. But if you consider how many kids take and pass the AP and how many pass these other exams, the differences are staggering. In England and Wales, 31 percent of the kids graduating from high school take the biology exam and 25 percent of the entire cohort pass. In France, 43 percent try the biology *bac*, and 32 percent pass. In Germany, 37 percent take the *Abitur* in biology and 36 percent pass. In Japan, if you count first and second tries, 58 percent take the biology exam and 36 percent pass. In the U.S.? Only 7 percent of our youngsters take the AP and 4 percent pass. (9)

All of this has important implications for area of teacher training. Every teacher in Germany, for example, has passed four subjects in the *Abitur,* before entering college or university. These exams are very demanding, and it's no exaggeration to say that anyone passing them would meet the standards for entering most of the elite colleges in the United States. In other words, everyone who becomes a teacher in Germany, might have gone to Harvard or Stanford in the United States. When I visit American schools, a lot of elementary teachers tell me they have never really understood arithmetic themselves or science. When I go to Germany and meet with German teachers and ask them how many never understood arithmetic, they look at me waiting for the punch line to this American joke.

Elitism and diversity

There are a number of arguments to explain why a system that works well in other industrialized democracies couldn't possibly work for us. People often say that the excellent education some of these countries offer their children comes at a price we would not like to pay. These countries, the argument goes, educate only a tiny percentage of their students. They have elitist systems whereas ours is egalitarian. But which is the elitist system? Is the German system, in which 36 percent of the graduating class can do something as difficult as the *Abitur* in biology, elitist? Or is elitist a better word for our system , which produces only 4 percent, who pass an easier exam? And biology is not the only thing these kids take. In England and Wales, students who want to enter college or university, have to take three different exams like this in three different subjects; in France, seven to eight *bacs;* in Germany, four subjects in the *Abitur;* and in Japan, three to four exams depending on what field students plan to enter. In the United States, students are not required to take Advanced Placement exams--or any other exams, for that matter-- in order to get into a college or university. That's a tremendous difference.

What about the youngsters who are not bound for college? Maybe these other countries do a good job educating the elite, but don't they throw all the others away? If you

look at the German system and include the apprenticeship program and the programs preparing students to enter technical schools, you see that just is not true. They not only do an excellent job with their top youngsters; they do very well with those in the middle and those at the bottom--and that goes for all their tracks. We do a much poorer job with all our students--top, middle and bottom--except for the top 3 percent or so. That's not true in the United Kingdom where they also throw away those who are not college bound. Like us, they haven't quite figured out what to do. (10)

People also use "diversity" to explain why an education system similar to the German, Japanese or French would not be feasible for us. Is "diversity" some kind of code word, and do we mean that a diverse population is not as capable of learning biology or mathematics as a homogeneous one? In fact, this argument won't wash either because the populations in these countries are no longer homogeneous. There has been an immense flow of refugees into Europe from Africa, Asia and Eastern Europe.

Some demographers are predicting that, because of the difference between the birth rates of the native French and the Muslim immigrants from North Africa, France will become a majority Muslim country within the lifetimes of most of the current population. The French response to this prediction is to use their school system to make sure that Muslim children will become French men and women. Instead of bowing to multiculturalism, the French have decided that, while they may move from being a Catholic country to being a Muslim country, they will still be French.

But there has also been a lot of unrest because of the increase in immigration. That's why you have the so-called skinheads in Germany attacking Turkish workers and their families, many of whom have lived in Germany for years. Indeed, diversity poses greater problems in some of these other countries than it does here. In Germany, for example, it is not expected that Turks will become German citizens, and in Japan it is extremely difficult for immigrants to become Japanese citizens. But when people come to the U.S., the expectation is not just they become citizens--though we do expect that--they are supposed to become Americans because being American doesn't come through the bloodlines the way being German or Japanese does. So the argument that the diversity of the U.S. makes it hard for us to educate all our students doesn't hold up.

A useful way to think about the problems we are having with our education system is to ask ourselves how we would go about solving a problem in which we had a great personal stake. Suppose that for many years we had been in business and done pretty well. Then our business started slipping very rapidly. What would we do? We might decide to alter radically everything about the way we did business. And we might try a lot of things that no one had ever tried and some other things that had been tried without much evidence of long-term success. But I don't think anybody whose livelihood depended on solving the problem would handle it in this way. A much better idea would be to look at the competitors' operations and see what they were doing that we were not. We might even engage in some form of industrial espionage--like hiring somebody who works for the most successful of our competitors. But has anybody ever heard of *educational* espionage? Here we are, in the middle of what most people believe is a crisis in education, and almost nobody is doing what they would do in their own lives, which is to look at what others are doing who are involved in the same enterprise and who seem to be more successful.

This does not mean there is a single model of the successful education system that we should try to import into the U.S. The French system is different from the German which is different from the British, and so forth. All are models that developed in accordance with their histories, their cultures and the tensions within their societies. Whatever we do here will also reflect our politics and history. Nevertheless, we should be

able to discover some common elements that help explain the success of these other systems and that we can consider adapting for our use.

Standards and stakes

What do all these systems have in common? They all have explicit standards for what students should know and be able to do at certain ages. They have fairly standardized curricula, sometimes national and sometimes state or provincial. They don't test and retest kids using standardized tests the way we do--nobody else uses these kinds of tests the way we do. But they do use tests at certain critical junctures to make decisions about what students will do next --because all of these systems do track students quite explicitly. In Germany, tracking starts very early, in the fifth grade; the Japanese start tracking in the ninth grade; and other countries start somewhere in between. So , though students in these countries do not take many examinations, the ones they do take have high stakes attached to them. There are stakes in the elementary and secondary system in terms of the track students are put into, and there are stakes involved when students leave secondary school and move on to higher education or apprenticeship or further training in some kind of technical school or a job.

I'm not saying that only external stakes are important. There are many other things that are critical in educating children--for example, the motivating power of ties with peers and parents and teachers. But external stakes constitute a powerful incentive for working and achieving. We have just seen the collapse of a huge experiment that took place in the Soviet Union and Eastern Europe, based on the notion that intrinsic incentives are sufficient and the extrinsic ones aren't needed. I agree that it would be a good thing if people acted responsibly because they knew it was the right way to behave, but abandoning external standards didn't work under communism and it isn't working in our schools.

What happens in American schools? Say I'm a teacher and I give my youngsters an assignment that is pretty demanding. The kids start yelling and screaming: "Mr. Shanker, that's not fair. My sister didn't have to do that last year when she was in this grade. Other teachers aren't this hard. They don't give this much work." So I am forced into negotiating with my students. If they believe I am some kind of ogre because of the work I give and they start ganging up on me, there's nothing I can do--especially since the parents are likely to side with their kids. In other countries if the kids start in with this kind of thing, the teacher can say "Look, here's what you are required to learn. You'll be tested on it and expected to pass, but it's the same for kids your age all over the country. Anyway, I'm here to help you." The relationship between teacher and pupil is like a coach preparing athletes for the Olympics rather than some ogre who takes pleasure in overworking students.

Similarly, external standards would have strengthened my position with my own children when they told me they didn't have to work to get into college. Because external standards did not exist, the onus of convincing them that learning is important and that learning more is better than learning less was on me, the individual parent—just as it is on the individual teacher. Parents are isolated and in most cases, they are not going to win. But there are other reasons for having a certain amount of standardization.

We have more mobility in this country than in any other society, so it would make sense to have a curriculum that allows students who move from one school to another to go right on with the work they were doing. Also, teachers constantly report that they have to waste time at the beginning of a new school year going back over last year's material because they have no way of telling what the new kids in the class know. This is boring for the kids who already know the material, and it means that our students learn much less

than students in education systems with external standards, where teachers don't have to waste time re-teaching last year's curriculum.

Furthermore, if you have decided what the curriculum is, you can prepare textbooks. Textbooks in Germany or Japan, for example, are about one quarter the size of ours, and many of them are models of clarity and brevity. Why? Because people in these other countries have figured out what they want students to learn and we haven't. Texas has decided one thing and California another, and the publisher wants the textbook to be sold in seven states. So we end up with huge, unfocused, confusing books.

And how do you prepare teachers if you don't know what the kids are supposed to be learning? Harold Stevenson, a scholar and researcher who has studied elementary schools in the U.S., Japan and China, describes the way Asian teachers teaching the same grade meet together to plan how they are going to teach a particular lesson--for instance, what examples they are going to use and what questions they will ask. Then, when the lesson is over, they meet again to talk about what explanations worked and what ones were confusing. They think in terms of perfecting a lesson over time, the way you might polish a stone. (11)

When Stevenson described this idea about teaching to a group of AFT vice presidents, Sandra Feldman, the leader of New York City's teachers, said that she didn't think American teachers would ever do that: "We think of ourselves as artists, and preparing a class is like standing in front of a blank canvas and deciding what we want to paint on it." Stevenson's response was that Asian teachers think of themselves as artists, too--performing artists. They are like pianists performing a concerto. They don't think they have to write the music while they are playing it. It may well be that our idea of creativity in teaching has to change. Writing the music at the same time as you perform it is too much to ask of most practitioners. I think that's true, whether you talk about music or medicine or accounting. The general procedures to be followed are decided through practice or the buildup of knowledge. There is a range of possibilities; there is leeway for individual practitioners; but other professionals do not have the freedom to improvise that we have in American education.

How does teacher training fit into this scheme?

One of the main issues in American education is how well our teachers are prepared in the subject matter they teach. David Cohen, who has been studying and writing about American education for a number of years, recently visited a number of California schools to see what happened to the state's new curriculum frameworks when they reached the classroom. He describes what he saw in an article called [TK]. Mrs. Oublier enthusiastically embraced the new math curriculum, but when push came to shove, she couldn't handle it because she didn't have a solid foundation in math herself. For instance, when kids questioned her about why they were supposed multiply in a given problem instead of dividing, she'd say something like, "I don't know why, but I know that if you do this, you will get the right answer." (12) That lack of knowledge is a direct result of the failure of our elementary and secondary education system as well as of how well we select teachers.

As I've already mentioned, only 3 percent of high school graduates are able to write a decent letter or essay. Since 55 percent go on to higher education, the number probably increases to 15 or even 20 percent. But the rewards and the prestige connected with being a teacher are such that most people in this elite group are not interested entering the teaching profession. So many classroom teachers are going to be like the one David Cohen observed. In Germany, you have well-qualified people lining up to get teaching jobs. The problem there is that every kid is going to be taught by a 60-year-old teacher, and many qualified young people will never get a chance to teach. But another way of looking at the

situation in Germany is to say that when you have a large number of people who are well educated and well prepared, then you are able to select.

One of the things that we need in the U.S. is a system of assessments to test prospective teachers. We have exams for lawyers and doctors and accountants and others, but in teaching we basically accept a college degree as an indication that the person is qualified to enter the profession. It's true that a test will not tell you if a person is going to be a good teacher. But it will tell you if somebody who is going to teach mathematics doesn't know any math. In other words, it will reveal people who are bound to be bad teachers because they don't know their subject matter. Furthermore, I am sure that if prospective teachers were tested on their knowledge of subject matter, the people who train teachers would pay more attention to whether or not their students have a solid grounding in the subjects they are going to teach. There is no pressure on education school professors to insist on mastery of subject matter now. They are meeting all the requirements that are being imposed on them.

I wouldn't give up on those who are already teaching. They may have been hired without the appropriate background, but there are steps we could take to help them overcome that deficiency. For example, instead of giving teachers money to go back and take 30 or 60 or 90 credit hours in pedagogy or whatever they choose, we could give them a salary differential if they passed an examination that showed they really knew their field. Though we tend to focus on what happens to people before they begin teaching, most important teacher education and training takes place after people have started to teach.

We could also help teachers improve if we got them out of self-contained, isolated classrooms so they were able to interact with their colleagues. I'm not talking about the kind of bull sessions that go on in teachers' rooms. I mean giving teachers the time to share ideas about teaching and problems they are having--time to ask questions like, "What are we doing with our students? What are our expectations? What is this textbook like? Is it better than that one?" Without this kind of chance to reflect on their practice and discuss it with colleagues, teachers are likely to go on doing the same thing they have always done--and incidentally, the same thing their own teachers did.

We talk a lot about new educational models, but teachers and future teachers have very little experience with any model except the one they grew up with. Every teacher was once a student, and unlike most new practitioners in other professions, teachers come in with a very definite picture in their minds about the nature of school and teaching. We need to give them other pictures and models. If we had enough schools like Deborah Meier's Central Park East, we could give every new teacher an internship in a school that is very different from our traditional schools. But there are other ways, as well. Prospective teachers could spend a year with a Boy Scout or Girl Scout troop and observe the merit badge system for motivating and assessing learning, Time in a summer camp that offers educational programs would also be useful. Or they could intern in certain industries where there is a good deal of internal mobility and the opportunity to develop new skills.

Teachers need a chance to discuss theoretical issues when they become practitioners. Most teachers are critical of the pedagogical courses they take when they are in college. It is not necessarily that these are bad courses--though some undoubtedly are. But when you are in the middle of the course work for your bachelor's degree and you've never taught, there is a certain unreality about discussing issues with which you have no experience. They are just words--and won't be anything more until you find yourself in the classroom. We need to develop a system of professional practice schools or internships of the kind doctors undergo to give prospective teachers extensive practical experience.

Finally, I think that we need to develop incentives for teachers to encourage these changes. It's difficult to get teachers out of their self-contained classrooms. At first, a teacher may find the situation very isolating and lonely, but later it becomes a protection.

How do you get people to work together? If you have small schools with a small group of teachers, you let your new teachers know in advance that they will be working together. But we are a long way from a system where this kind of collegiality will be the rule. So you may need incentives. You may need to say that schools making a substantial amount of progress over a certain period of time will receive some sort of financial reward. This won't be like the old individual merit pay, which was based on the principal's judgment. It will be a reward for everybody, and it will be based on student outcomes. If you do that, you'll force people to get out of their rooms because the teachers who are interested in getting the reward will start challenging those make no effort to improve their teaching. I don't think external incentives the only way of making these improvements; over time we could develop professional norms. But much needs to be done.

The value of the traditional model

When I talk about looking again at the traditional model instead of simply discarding it, I do not mean we should abandon looking for new and different ways to solve our educational problems. But while we are looking wildly around for alternative models, most of the world does a lot better than we do with what is considered a traditional educational model. Therefore, in the absence of another model that is clearly better or even as good as theirs, we should look seriously at the model they follow and the results they get.

These traditional systems connect a certain number of things: They connect standards with stakes with curriculums with teachers who know their stuff. The result is a large number of students who achieve at high levels using a teacher-centered system. It is foolish, and even immoral, to argue against such a system unless you have an alternative that is better. And we do not have an alternative that has been tried on any sort of mass basis.

Of course we should continue looking for and experimenting with alternative models--especially since there are kids for whom the traditional system does not work very well. If 70 percent of students do well with a traditional model and 30 percent don't, it is wrong simply to abandon the 30 percent. But this works the other way around, too. In medicine, if you have a treatment that works on 70 percent of patients but fails on 30 percent, you don't throw that medicine away until you've found something that works for everybody. That should be true in education, too. Maybe one of the alternatives we look at will do even better with the 70 percent, and if we find such a system, we should embrace it. But we should not refuse to take a system that we know works or stay with it until we have something better.

We've never really tried the system that other countries have. We may have used bits and pieces, but we've never put it all together: standards; curriculums and textbooks and assessments based on the standards; and teachers trained to be able to teach the curriculums. I don't know if we can. The Russians have an expression that says it's very easy to take an aquarium and turn it into fish soup, but very difficult to do the opposite. We already have the fish soup, and I hope that we can do the impossible.