The testing of prospective teachers is one of the most important issues in education today. We have been through a three-year wave of reform, and many people are surprised that reform sentiments continue. Yet new reports keep coming out and legislators are still concerned. And though some thought this round of reform would be a short-lived fad, I did not agree.

This reform movement is not the result of a Sputnik or a baby boom, that is, some external challenge. The reform movement this time came as a result of a rather mature understanding, mainly by the business community but also by the political community, of certain realities. The investment in rebuilding our physical infrastructure, our industries, or our military capability would not be successful unless there were parallel investments in the human infrastructure.

Today's concern with education is more like the energy crisis; our approach to it. While we do not face the shortages of 1973-1974, we all know that we still must be concerned about conservation. And even if we are relieved that oil prices are low right now, we have
retained that consciousness of concern. It is an understanding that is very different from the flashes of public interest that often afflict us. In fact, the public is not only aware of the need for educational reform, but also, in state after state, has approved tax increases for education. Unfortunately, the public often expects results overnight; this is not likely to happen.

A return to basics. The current reformers are asking us to take the schools back to where they were in 1950; that is, have a core curriculum, test teachers before they enter the classroom, do not promote students automatically. Given the schools of 1950 and the schools of 1975, I would prefer the schools of 1950. I prefer a system that is tighter, that has requirements and expectations, and in which everyone does not automatically succeed as a result of merely attending.
Unfortunately, the system of 1950 is not one which will serve our country well. What percentage of the students in 1950 graduated, and how many dropped out? How many went into vocational or general programs that simply stored them for a while? We have today heightened expectations to match our greater needs. For example, when the first person retired on Social Security, 15 people were in the workforce to support that person. By 1996, for every person depending on Social Security, there will be three adults in the workforce, and one of those three will be black or Hispanic. If we do not do a better job of reaching blacks, Hispanics, and those whites who are not making it, we may very well have an America in which for every two people who are working, one is supporting a person on Social Security and the other is supporting someone on welfare. That speaks to an economic situation with a drastically reduced standard of living from what we enjoy now. A change of that magnitude threatens the entire fabric of society.

Public schooling. We are also at a point in history when people are asking whether public education will continue as the major delivery system of education. This is a more open question than it has been through most of our history. About 50 percent of the American people now believe that the government ought to subsidize (through tax breaks and vouchers) their right to take their children out of public schools and find other alternatives. The decision on this issue will not hang on general arguments over whether public education is worth maintaining. I have met quite a few parents who philosophically believe in public education but do not want to "sacrifice" their own children. The issue will be resolved on whether the quality of public
education can be improved sufficiently so that it is satisfactory to a well-educated public with high expectations. And the key to that is attracting and retaining a high-quality teaching force into our nation's schools. We all know what that involves, even though we don't act on it: better salaries and a real professional environment for teaching. But less well understood is the role of tests in professionalizing teaching and making it a more attractive profession. Current tests simply don't fit the bill.

This chapter will return to the relationship of testing to these issues, but I would like now to focus on the topic of what teacher certification tests should measure, what makes for a valid measurement instrument? As many have noted, "validity is a multifaceted concept. It entails legal and technical concerns as well as educational issues." I think that sentence indicates the order of priority many, including most in the testing industry, place on testing. The order of the statement is symptomatic of the current condition and mentality in teacher testing. It emphasizes testing as a technical, legal, and bureaucratic concern. The educational issues enter at the very end. In discussions in recent years on testing issues, people seem primarily concerned with, Will the test stand up in the courts? Will the states or districts buy it? How much does it cost? The issue of what kinds of teachers do we want, or need, to attract and retain in our schools is never engaged.
Emphasis on the technical.

Testing of prospective teachers is purely instrumental, a matter of sorting and screening, where to set the cutoff score, how to prove job relatedness, which test items to delete on the basis of a field test, and the like. The fanatic is one who redoubles his efforts after he has forgotten his aims. In testing, we have been redoubling our efforts with an eye toward technical and legal concerns without bothering to look at what we may be trying to accomplish in education.

It is this focus that gives testing, and eventually teachers, a bad name, because sooner or later a researcher comes along with a study that shows that doing well on these tests has nothing to do with good professional practice. That should be no surprise. Today's tests have little to do with substance and are driven mainly by procedural and technical concerns.

A higher function. There is another function for tests, and that is rarely mentioned in the discussions of testing. It is a function that does exist in other professions. That purpose is the role of tests in defining the professional knowledge base. What is worth knowing ought to be the first question in developing a test.

Candidates for, say, a bar exam or an exam in medicine or architecture, know what they have to study. They know the knowledge domains that they must master. They know what and how they are going to have to demonstrate that knowledge. Those exams reflect a standard of professional knowledge that does not fluctuate with pass rates or
cutoff scores. A truly professional test, in contrast to teacher
tests, is driven by the relevance of the knowledge rather than by the
reliability of the individual test items, by the value of the knowledge
and the knowledge domain in professional practice rather than by the
job validation procedure.

Content tests. One can argue, of course, that the current teacher
tests do reflect a standard of knowledge. But let us look at what
these tests say about what a teacher ought to know. If we take a
subject-matter test, for example, the National Teacher Examinations
(NTE), we find it is based on what a college major in that subject
ought to know. But the NTE tests leave off at factual recall; few
underlying concepts are ever engaged. Other tests are based on the
content of the school curriculum, which means that teachers need know
only what they will be asked to teach in the grade level at which they
will be teaching. If one will teach high school math, then one need
know only high school math. But what of the structure involved in
mathematics, the ways of conveying that structure to different kinds of
students? What of the students who will not understand it when the
teacher has presented it one way, and for whom the teacher may have to
present it in a second way, and a third way, a fourth, and fifth way?
Each of these other ways may involve a level of understanding of
mathematics that is considerably above and beyond what the students are
supposed to know.
Tests of pedagogy. The situation with tests of pedagogy is even worse. In what other profession does one routinely have untrained people, usually newspaper reporters, sitting for an examination and passing it easily as a part of an "experiment"? What other profession uses tests that contain one sentence, context free, with four or five proposed multiple-choice answers, two or three of which may be correct, depending on the situation? Anyone who knows anything about education would answer most of these questions with "It all depends."

Current tests of pedagogy measure knowledge of context-free techniques, the ability to read, and test-taking skills. Instead, there ought to be ways for these tests, like other professional tests, to allow candidates to demonstrate judgment and the ability to deal with context and contingencies. That is what teaching, like other professions, is all about. No multiple-choice test, which is all we have, can do that.

In fact, this approach can lead to real problems. For example, on Florida's presumably research-based test, one is forced to choose one the side of the research evidence, again, with no context. The answers in the Florida tests presume that whole-class instruction is the right approach to teaching. If one doesn't work from that perspective, one will have great difficulties on that test. Obviously, the test itself does not state its assumptions. On the other hand, the NTE has a clear bias toward individualized instruction. Doing well on the Florida test may mean doing poorly on the NTE unless one knows in advance the assumptions that underlie each. Thus the tests do not really reflect the knowledge base of professional education or even skill in pedagogy.
The Case for a Professional Test

It does not have to be this way. Other professions have figured out ways of incorporating context, uncertainty, and judgment. We have looked too little at how professional examinations operate in other fields.

Bar exams. For example, the bar examination uses case approaches, in which candidates are given a variety of materials necessary for developing a brief. They must organize the materials into a coherent, defensible argument. Also, bar examinations use essays, so that the candidates are able to display knowledge of the issues, precedents, and cases and can bring much of themselves to their answers. The tests have no absolutely right answers; many applicants will answer in very different ways or will reach different conclusions. The important issue is how candidates reach their conclusions and whether the process is professional and acceptable. A lawyer, looking at the reasoning, would say that this or that person can practice side by side with us because he or she engages in the same type of thinking, arguing, and intelligence gathering that is necessary to function successfully in law.
Other areas. In medicine, examinations use simulations of cases on computers, with the presentation of information and an interactive questioning mode. In psychiatry, simulations with real patients, one-way mirrors, and a jury of psychiatrists observing the candidate interviewing a patient are a part of professional assessment. The point, again, is not the right diagnosis but the appropriateness of the questions and interactions that are used to elicit the information and to arrive at a diagnosis. The candidate is also interviewed by the jury observers and has an opportunity to explain why he or she took a given approach.

The Role of the Profession

Why do other professional examinations evidence this level of sophistication, this respect for knowledge and the role of uncertainty and judgment? Why are these exams professional while teacher exams look more like those for a driver's license? Chief among the reasons is that other professional exams are controlled by the profession. The development of the exam may be contracted out, but the client is the profession itself. It is this kind of professional control that would lead to the definition of the knowledge base in teaching and to the further professionalization of teaching.

Right now the tests accurately reflect what teaching is: a bureaucratic occupation, a technical enterprise. The largest single
category of questions on the NTE, for instance, has to do with appropriate bureaucratic behaviors, not the ability to put knowledge into practice. For example, there is a question that states, more or less: "What do you do if a group comes to you and complains about the textbook you are using? A. Refer them to school board policy. B. Talk to the principal about it. C. Ask them if they can suggest something better to use. D. Claim first amendment rights to determine what to teach." The correct answer on the NTE is C, although why is not clear to me. Basically, the correct answer is the one that creates the least problem for central administration. The test also asks about the ethics of taking a second job when you are a teacher, student and being certified. Unfortunately, some research shows that tending well to administrative features of teaching, such as paperwork routines and planning around behavioral objectives, has substantial negative correlation with student achievement. The resulting problems are apparent.
The profession as client. So long as the bureaucracy and not the profession is the client of the test, this situation will continue. There is currently no professional client in teacher testing. To be sure, the testing companies enlist advisory committees, and there is teacher input, and all the "right" political actors are at the table. Despite the input, there appears to be no control over the body of knowledge that represents the profession. Similarly, to the extent that the teaching profession has control over cutoff (passing) scores, it is only through a process that has teachers and teacher educators commenting on whether an item is easy or hard. So long as teachers are adjuncts to this testing process rather than its clients, so long as test developers rather than the teaching profession develop the body of knowledge that defines teaching, teacher tests will continue to be a subject of ridicule, the people who pass them will gain little more respect than those who do not.

Knowledge base. With all due respect to the test developers, I do not think that you will solve this problem, and I also believe that you have inadvertently contributed somewhat to the debasement of teaching by attempting to define the knowledge base in education, a task that rightly falls to teachers themselves. The key issue here is that of knowledge base. If there is no knowledge base, obviously there is nothing to test except subject matter. If there is a knowledge base, it needs to be assembled. It needs to be assembled and should assert that there are correct answers on issues of professional knowledge.

Admittedly, we in education do not have a very good history in
this respect. Most principals or superintendents, if challenged about doing things in a certain way using a certain textbook, urging a certain curriculum would respond, "It is all a matter of opinion; nobody really knows anything for sure." This is a ridiculous defense, because if nobody knows anything, why should we be certified to teach in the first place? One cannot defend public investments and a credentialing system unless teaching requires something that nobody else has. Defining that content and finding individuals who possess that knowledge is the job of a test for teacher certification.

Directions for Teacher Testing

I would like to close this chapter with a number of suggestions about testing that I think are necessary if we are to get on the right track.
A national examination. Several years ago, I suggested a national teacher examination to replace the varied state examinations and offerings from private companies. It is critical that the examination be based on the work of the outstanding minds of the country as to what the knowledge base for education is. The purchaser of the test should be a national board of professional education, not individual states or districts. The national board should comprise a group of outstanding and knowledgeable practitioners and should be independent of government or other political control.

Currently, individual states are developing their own examinations. Each of those states is likely to duplicate, at least in part, what exists. The result is twenty or thirty states, each with its own version of the same thing. Besides being counterintuitive, it exacerbates the mobility problem for teachers. One does not have to become a doctor or a pharmacist all over again when one moves from state to state. But a teacher who moves is likely to be required to take education courses and another examination, as well as give up his or her salary base and pension. The reason a lot of people "used to be" teachers is that people are not about to start all over again every time they move somewhere. We need to say to the public that a teacher may move from one place to another without having to requalify and without sacrificing earned benefits. A national instrument will contribute to this solution.

Internships. Any examination must be connected to an internship or residency program. It is important to find out if a person is going to be a good teacher solely on the basis of test results. It is true
that one can find out if a candidate is illiterate or lacking in
content knowledge, and those are very important pieces of information.

If a person is illiterate, I do not care what other qualities a person
has (warm, motivation). So the written parts of the examination are
necessary, but not sufficient, indicators of teaching potential.

Part of an examining system should be an internship. Teaching is
the only field where one is given the same responsibilities on the
first day of employment in the profession as one will have thirty years
later. As a result of that, I believe that idealistic and
knowledgeable teachers come into a classroom with all sorts of ideas
about what they are going to do. They are immediately faced with the
problem of how to defend themselves and how to control the students;
the result is the abandonment of many learned teaching techniques. And
yet we do not devise training programs that confront this issue
realistically. An internship period would be invaluable in helping new
teachers through that difficult first period. For example, the
Califomia Commission on the Teaching Profession report calls for an
recommended internships.
Conclusion

Let me return to the very beginning. The importance of how these issues are resolved cannot be overestimated. At the same time, as the public has developed high expectations and political figures have invested additional dollars for education, what is likely to happen is that states are likely to spend more and more money to get teachers, but the teachers are likely to be less qualified.

The reason for this is, in large part, that some traditionally male professions are becoming increasingly open to women. These would include accounting, advertising, banking and finance, business and management, computer information sciences, data processing, engineering, journalism, law, personnel management, and pharmacy. In each the percentage of women who got bachelor's and master's degrees in these fields increased dramatically between 1973 and 1983. In some the majority of degrees were earned by women.

What we do during this reform period is key to whether the public decides to continue investing in public education or selects alternatives. Teachers who will enter the classroom in the immediate future include many who are barely literate and for whom we are paying more and more money. The result is a school system that looks worse and worse than it was ten or fifteen years ago. There is dynamite in this, and it will explode public education.

We have to devise tests that make people proud to be entering the
field because they are being asked to do something that challenges them, that is of value, and that is close to the heart of what they will be doing as professionals. At stake is nothing less than the future of public education.