The papers in this collection report on various aspects of a project which studied the effects of educational policies upon classroom teaching. The background of the project is a set of intensive interviews of 43 randomly-selected teachers in 3 diverse school districts. In "Teaching Standards or Standardized Teaching," the point is made that school systems serious about teacher quality must shun "remote control" accountability measures and treat teachers as professionals. "Beyond Standardization: State Standards and School Improvement" discusses state educational policies mandating standardized testing for students. "The Seduction of Central Office Administrators by Effective Schools Research" raises the question of the reliability of such research and how well state policymakers understand research results. "School Reform by Test Scores: A Logical Extension of American Educational Folly" critically examines the policy of basing teacher evaluation on the results of pupil performance on standardized tests. "Teacher Professionalism: A Radical Approach to Improving Schools" offers suggestions for lessening the bureaucratization of the schools and improving teacher education. "On Standards and Public Policy" argues that public officials are using the wrong approach in their efforts to improve education. (JD)
COLLECTED PAPERS

TEACHERS' VIEWS OF EDUCATIONAL POLICIES AND TEACHING

by

Arthur E. Wise and Linda Darling-Hammond

The Rand Corporation

Final Report, NIE Grant No. G-82-0023

January 16, 1984
The papers in this collection report on various aspects of the project, "Teachers' Views of Educational Policies and Teaching." The project is a study of the effects of educational policies upon classroom teaching. The background of the project is a set of intensive interviews of 43 randomly-selected teachers in three diverse school districts. The knowledge derived from these interviews has been combined with knowledge derived from the literature and knowledge about educational policies. The result, we hope, will help to illuminate the potential for and limits of reforming classroom teaching through educational policymaking. The papers collected in this volume have been or will be published in various education journals and magazines.

Arthur E. Wise
Linda Darling-Hammond
January 16, 1984
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School systems serious about teacher quality must shun remote control and treat teachers as professionals.

LINDA DARLING-HAMMOND AND ARTHUR E. WISE

Standards is education's newest buzzword. Higher standards for teachers are at the top of nearly everyone's reform list, and proposals for toughening up the teaching corps fly about like dandelion seeds in the wind.

Teacher competency tests and merit pay are two of the more popular panaceas. And, oh yes, higher salaries, sotto voce, if you please, would be a nice gesture if policymakers are so inclined.

The testing and merit pay proposals, like most reform proposals, have some merit and several drawbacks. Some proponents say they will professionalize teaching. In certain reincarnations, each of them in fact might further de-professionalize teaching. Neither of them, as popularly proposed, addresses a serious problem for teacher professionalism-the current working conditions of teachers which, along with low salaries, are an obstacle to the retention of highly qualified teachers. In this article, we counterpose some suggestions for improving teacher quality based on professionalizing teaching.

Good Teachers: How They Come and Go

Higher salaries, according to economists, are the most expedient way to attract better qualified people to any profession. In the case of teachers we see no reason to depart from this hypothesis. When a second-year teacher in one of the nation's wealthiest, most education-minded communities makes less money than a second-year sales clerk in

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1973). This should not be too surprising since the act of test-taking is different from the act of teaching. Further, many of the test questions on the National Teacher Examinations, for example, have nothing to do with knowledge of subject matter and little to do with the application of pedagogical principles to diverse classroom situations.

Most important, while the tests produce shortages that result in suboptimal instruction for students, they provide no incentive for better qualified—or even better serving—people to enter and remain in the teaching profession.

Misconceptions About Merit Pay

Merit pay is a concept that, having been abandoned by most school districts that tried it in the 1920s and 1950s, is again proposed as a means for rewarding good teachers and inspiring them to stay in teaching. Yet it has the potential to lower teacher morale and decrease public confidence in education while deprofessionalizing teaching.

First, merit pay as a reward or bonus given by administrators to a small group of selected teachers is not a professional concept. It is a factory model concept: workers who do well get a pat on the back from the supervisor. It is not clear how such a conception of merit pay, which excludes many hard-working teachers on yet undefined grounds, can professionalize or inspire the teaching force to a higher level of quality.

In addition, this conception of merit pay assumes the existence of good measurements of teacher performance—an erroneous assumption, considering the evaluation practices that exist in most school districts in this country. It's quite easy to say that we ought to get rid of bad teachers, reward good teachers, and evaluate all teachers carefully. But we often fail to recognize the high financial cost that is involved in performing this function adequately. There is a longstanding tradition in American public education that evaluation consists of the principal standing in the back of the classroom for ten minutes checking off a list. An administrator cannot claim to have an adequate assessment of a teacher's performance based on only a few minutes or, in some cases, no observation annually. The time required for adequate observation and documentation of every teacher's performance—whether by administrators or peers—requires substantial resources on top of the additional resources needed to pay teachers for their meritorious performance.

The combined resources needed to thoroughly evaluate all teachers and give bonuses to a few must come from either the instructional program or the salaries of the other unrewarded teachers. This will neither increase the chances of retaining the adequate, good, and nearly outstanding teachers nor improve the conditions under which teaching and learning occur for most students.

Finally, perhaps the most fatal flaw associated with merit pay is that parents will perceive that some teachers are meritorious while others are not. To
whom will parents prefer to have their children assigned—those the system designates as mentors, or the non-mentors? How can an institution that must serve the public equitably withstand a situation in which clients perceive they are receiving unequal treatment?

Master Teachers: Developing a Teaching Profession

An alternative conception sometimes hidden under the banner of merit pay is the master teacher concept. However, master teachers, teacher leaders, or differentiated staff, as they are variously called, are not merit pay recipients. Although sometimes master teachers receive small salary increments, these are in recognition of their additional responsibilities. Typically, they have some responsibility for supervising beginning teachers, for supervising or assisting their peers, for curriculum development, and so on. The pay increment is incidental to the teacher’s role as an experienced practitioner capable of defining and transmitting a standard of practice. The title constitutes a judgment by other teachers that he or she has already achieved that standard of practice and is capable of carrying out the designated functions.

Importantly, master teachers do not become administrators. In some instances, they are released from classroom duties for a year or two and then return to the classroom, or they exercise their additional responsibilities part time, so that they also remain classroom teachers. This means that competent people continue to teach students instead of simply being rewarded for meritorious classroom performance by becoming administrators. It also means that a standard of professional teaching practice is defined within the profession by those selected by the teacher cadre to represent that standard.

This is particularly important in the practice of teacher evaluation. When teachers participate in the evaluation of other teachers, as they do in some districts, we find that the quality and intensity of supervision can increase dramatically. Unfettered by competing administrative responsibilities, and armed with expert knowledge and experience in their grade level or subject area, highly qualified teachers can assist others in concrete ways that improve teaching.

In our studies of teacher evaluation processes that use peer review or peer assistance, we have also found that it is possible with both teacher and management support to identify, assist, and, if necessary, remove from the classroom those teachers who are truly inadequate. When this collaborative approach is used, the teachers’ organization typically does not initiate grievances about evaluation processes or outcomes. Evaluation results can be used for decision making when union representatives are involved in the entire process to protect due process rights while master teachers provide intensive assistance. The result is more realistic, less contentious evaluation coupled with increased teacher control over the membership and content of the profession.

Teacher input is largely missing from competency testing plans and from many merit pay proposals. A number of the reforms that have been designed to upgrade standards for both students and teachers consist of standards applied to teachers rather than by teachers. The process of defining what constitutes good teaching content and methods has increasingly been wrested from teachers and is instead conducted by policymakers. The result is a bureaucratic conception of teaching reflected in policies that prescribe educational processes and outcomes to be implemented by teachers.

Counterproductive Policies

In our study of how educational policies have affected classroom life, we have found that the more detailed and prescriptive the policies are, the more teachers tend to feel constrained in meeting what they perceive to be the needs of their students. Those who feel unable to exercise their professional judgment appropriately express dissatisfaction with teaching and are more apt to say they will leave the profession. Paradoxically, some policies designed to prevent incompetent teaching discourage the efforts of highly motivated and competent teachers.

There are several types of policies that teachers we spoke to found counterproductive to classroom teaching:

- Curriculum and testing policies that limit what can be taught and how
- Policies that create paperwork and divert teachers’ energies from teaching work
- Policies that deemphasize professional teaching by excluding teachers’ judgment about what constitutes appropriate teaching and learning such as mechanistic teacher evaluation practices, unidimensional student placement and promotion policies, and bureaucratic decisions about program design

Policies that prescribe the curriculum in detailed and specific ways, that emphasize testing and recordkeeping, and that establish decision-making procedures far from the classroom level use remote control methods for governing education (Wise, 1979; Shulman, 1985). Remote control education removes the discretion of the classroom teacher and requires that teaching time be used for testing and recordkeeping to supply data to policymakers. Standardized testing, the cornerstone of this approach, results in standardized teaching and, in frustrated teachers.

Teachers who teach in remote control school systems complain that they cannot involve their students in writing projects or in classroom discussions of interesting ideas. They feel they have no time for activities that are not geared toward discrete cognitive skills that will be tested on multiple-choice tests used for promotion purposes, tracking purposes, or accountability purposes.

Teachers complain that they have been limited in the choice of materials they can use—that they are limited, for example, to a single basal reader that doesn’t meet the needs of all of their children. They cannot pursue topics of the children’s interest because they are supposed to be on a particular page on a particular day or they are supposed to achieve certain objectives by the end of the classroom period. They feel constrained in their ability to meet what they see as the needs and interests of
their children. They also feel resentful of infringements of their teaching time. Nearly half of the 43 teachers we talked to said they would leave teaching if rationalization and bureaucratization of teaching were to continue.

In the face of the current onslaught of proposals for raising educational standards, these comments point to some important lessons. They do not suggest that raising goals and high standards is counterproductive. They do suggest, however, that how one seeks to improve teaching is as important or even more important than what the goals and standards are. Creating teacher-proof approaches for improving instruction and establishing elaborate accountability systems may control the least competent or committed teachers, but may also have the effect of driving the least competent and committed teachers out of teaching.

The solutions we must look for are those that professionalize the practice of teaching and that make education sufficiently attractive, financially and professionally, to recruit and retain talented people as teachers. These solutions will require a more serious investment than we have here to date in teacher recruitment, through student aid and higher salaries; teacher preparation, through more intense and practice-oriented teacher education; and teacher retention, through improved material and professional working conditions. Then we will be able to abandon remote control accountability schemes so that teachers can attend to the education of our young people.

References


BEYOND STANDARDIZATION: STATE STANDARDS 
AND SCHOOL IMPROVEMENT

Arthur E. Wise and Linda Darling-Hammond

June 1983
State policies intended to improve education generally try either to set educational standards or to shape the educational process. While states also seek to improve education through the allocation of funds, in recent years they have placed more emphasis on regulation—setting standards in the form of tests to be passed or educational procedures to be followed. Some policies are targeted on students; others on teachers. The policies, of course, also affect schools, school systems, and, in certain cases, schools of education. In this paper, however, we focus on how policies affect the teacher-learner relationship as it occurs in classrooms.

Policies intended to affect teaching and learning may seek to influence the goals, processes, or outcomes of education. In so doing, policymakers must make choices about who will enforce a law, how specific its guidance will be, and what penalties will accompany non-compliance. They must imagine what the direct and indirect consequences of alternative decisions will be. Is compliance technically feasible? Will compliance lead to attainment of desired goals? Will other unintended effects occur? Will non-compliance be widespread?

When they seek to influence what goes on classrooms, state policymakers must also consider how their policies will be transmitted over the long distance from the state capitol to the local classroom. Laws, by their nature, must be general, uniformly applicable, and enforceable from a distance. In order to reach teachers or students, the laws must depend on specified procedures for implementing and monitoring policy intentions. These procedures are enforced by a bureaucratic chain that extends from the state's center of bureaucratic authority to teachers who implement the state's in the classroom.
Bureaucratic implementation of policies can work under certain circumstances that satisfy the assumptions of the bureaucratic model:

1. When the relationship between policy means and ends is appropriate—i.e., when the ends are attainable given the means, or when the means are reasonable given the ends;

2. When procedures designed to ensure conformity to norms are appropriate—i.e., when conformity can actually be achieved if the procedures are followed and when the procedures are, themselves, technically and politically feasible; and

3. When organizations operate rationally—i.e., when they can establish consensual goals, plan and coordinate activities to meet those goals, and ensure that the activities are carried out as intended.[1]

The first two conditions are prerequisites for effective policy design. Policymakers must know that a clear relationship exists between means and ends; they must know that the procedures specified will ensure conformity to the norms implicit in the policies. The third condition is a prerequisite for effective policy implementation. Policies can only be implemented if an organization has the capacity to control the political and technical aspects of its work. The organization must be able to define clear-cut goals that are politically acceptable and manage the technical work process according to clearly-specified procedures that ensure desired outcomes.

Educational policymaking at the state level is particularly problematic when it seeks to improve the quality of schooling by prescribing goals, processes, or outcomes related to the "production" of teaching or learning. This is because quite often the relation between educational means and ends is unknown, and the procedures for ensuring conformity to norms are politically or technically difficult to enforce. Educational policymaking is also problematic because school organizations do not always conform to the rationalistic model of organizations. They do not always have consensus on goals, values, and norms, and they cannot always specify techniques that will result in desired outcomes.

In short, schools do not operate as model bureaucracies because the nature of teaching and learning work is not sufficiently technocratic, nor the nature of schooling sufficiently apolitical, to allow them to do so. This means that state policymaking about educational productivity matters must take into account important questions of implementation. Policymakers must understand how general, uniform policies based on partial knowledge of ends, means, and norms will wend their way down to the classroom in different school districts.

In this paper we examine teachers' views of actual or proposed state policies intended to influence teaching and learning. We focus specifically on standard-setting as implemented through testing mechanisms. Because tests are increasingly the measure of goal attainment, it is important to understand how both the policy goals and these implementation tools affect teachers and students. With respect to students, we examine test-based standards as well as test-based
instructional processes. With respect to teachers, we examine test-based standards for entry and retention in the profession.

We begin with the assumption that state policies, if they are to actually affect or improve education, must be mediated by teachers. Thus, it is important to know how teachers react to these policies and what they perceive as the effects of the policies. How they perceive the policies will affect how they respond to efforts to implement the policies. How teachers perceive the effects of policies is one major source of data which, properly analyzed, can provide insights into policy design and redesign. Some data employed in this report are drawn from the authors' ongoing study of the Conditions of Teaching Work.

The data are drawn from in-depth interviews with a sample of 43 randomly selected teachers from three large school districts in the Middle Atlantic states. The major purpose of the study is to gain in-depth understanding of teachers' responses to policies that shape the conditions of their work. Thus, the sample is necessarily small and drawn from an even smaller number of districts so that district and state contexts can be better understood.

STANDARDS FOR STUDENTS

Policies that set standards for students may take several forms. They may prescribe course requirements; they may specify learning sequences through which all students must pass; or they may establish outcomes levels that all students must achieve. In concrete terms, these policies may take the form of general or highly specific curriculum guides, broad outcome goals or particular tests that must be passed.
Standards directed at students are, of course, intended to influence the actions of teachers. Standard-setting is a means for rationalizing teaching by defining goals, methods for reaching the goals, and/or means for evaluating whether the goals have been achieved. Broadly speaking, standards are intended to improve the quality of education by focusing the attention of teachers and students on particular types of learning. Certain types of standards may focus attention on the required measurement tools rather than the policy's broad goals.

The effects of standard-setting policies on classroom teaching depend on how specifically the policies prescribe outcome measures, and on how relevant the measures are to the teaching context—the particular students, subject area, and school environment within which teachers operate. Teachers' responses to standards depend upon the degree to which the policies impose constraints on their ability to meet what they perceive to be the needs of their students. Their observations reveal a view of educational standards that is in some ways antithetical to the policymaking framework. The common meaning of a standard is that it provides a single, uniform measure of something. However, teachers' views of standards often depend on how multidimensional or flexible they perceive the standards to be.

Shulman addresses this seeming paradox in his discussion of the tensions between teaching and policy:

Why is the juxtaposition of 'teaching' and 'policy' the statement of a problem? We are wont to think of teaching as a highly clinical, artful, individual act. Since instruction is interactive, with teachers' actions predicated on pupil responses or difficulties, it appears ludicrous in principle
to issue directives regarding how teachers are to perform. ..

Teaching is the very prototype of the idiographic, individual, clinical enterprise. Policy connotes the remote, nomothetic, and unresponsive.[2]

His theoretical analysis is borne out by teachers' actual responses to educational policies. Their observations about the effects of test-based standards for students are most negative when their experience or expectations suggest inflexible application of policy tools. While many teachers support the establishment of generalized standards for students, they see dysfunctional consequences in the implementation of highly specified uniform approaches to teaching and learning. Below we examine teachers' responses to three types of standards: minimum competency testing, standardized testing used for decisionmaking about students, and competency-based approaches to teaching and learning.

Minimum Competency Testing

In the late 1970s, the leading state education policy initiative was minimum competency testing (MCT). MCT is a device for conditioning student promotion or graduation on test achievement. In a 1979 survey of over 1,700 teachers conducted by the National Education Association, only 14 percent of the teachers polled favored the use of standardized test scores for determining student promotions. In the three states in which our three districts are located, minimum competency testing had been proposed and trial-tested, but not yet used to deny promotion or high school graduation to students. Nonetheless, teachers had had opportunity to reflect on its significance for them and to begin to

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orient to it. In our sample, 30 percent of the teachers favored MCT, 25 percent favored it with qualifications, and 45 percent opposed it.

Those who favor MCT do so because it establishes a clear standard and places the onus for reaching it on the student.

I think it is good because this takes some of the responsibility and places it on the student. The student knows that he is not going to have time to come to school and clown and act up if he is going to be prepared to take that test.

I think it's a good idea in a sense. I think it's good to set some standards for all students to meet.

Some teachers gave the idea of MCT support, but conditioned their support on how MCT would actually operate. One teacher thought it would be beneficial if it operated in a sophisticated way:

I see a lot of general value in it, if it is a fairly sophisticated program with a lot of variables built in other than specific achievement on one test. I would like very much to see some work experience involved in a graduation requirement. . . . I would like to see special projects being conducted under the supervision of a good teacher and let that be part of the requirement for graduation—not specifically a test score, but a broad range of things required before you can say that you have been graduated from high school.

For this teacher and many others, the appeal of MCT is that it establishes a standard. However, the standard is a broad set of requirements rather than a single test score. Other teachers condition their support on expectations that may be unrealistic:

I can live with it. I don't think it determines the true quality of education, per se. It is always at a minimal level and it shows you where your greatest weaknesses are. [I can support it] as long as it doesn't put a rigidity in the curriculum because that is where the problem occurs. It if requires you to stop and teach something that is not part of
your normal curriculum design or your objectives, that would be the negative side.

This teacher favors MCT on the condition that it not interfere with the curriculum.

Those who oppose MCT do so for a variety of reasons:

I really hate to see a student's passing or not passing based on one test.

It's not as objective as it seems to be. It really depends on the child. A child . . . may just not be able to score well on this test because of things that are happening in their personal life, but maybe they know [the material]. I don't think that can be the entire evaluation.

I can see some students never passing each year and having a 15-year-old maybe in third grade. Wouldn't that be kind of devastating on society?

I don't think it's good. If you take this school district and compare it with district X or district Y, you don't have the same standards. Maybe you have the same materials, [but] you might not have as much extra help; you might not have as many activities or varied things for [students] to be associated with. I can't see how a state . . . can have a standardized test that is going to take into account all the individual differences they have in each district. Each district has different budgets, each district has different area managers or administrators. I just don't see how they can come up with a valid test to pass statewide for something like promotion. I really don't agree with that.

I would be opposed to it unless it was a very, very basic kind of thing. . . . I would rather see it be under the leadership of a smaller group where they know their schools—a county rather than a state.
Teachers' various objections to statewide minimum competency testing are based on a view that a single, uniform measure cannot adequately allow for the differences in student responses or abilities, nor can it take into account the variations in local resources and goals that exist in education. They do not want a standardized measure of the nonstandardization that results from local control of the schools. Some fear that because the connection between the test and what it seeks to measure is tenuous, the means will substitute for the ends: the test will serve as the goal of instruction rather than as a measure of instruction or learning.

The expectation that measures will become goals is well-founded. As we discuss below, standardized tests used in other contexts had important effects on teaching, particularly if they are used to guide decisionmaking about students or teaching.

**Standardized Testing**

Even teachers who have not yet had direct experience with minimum competency testing have had experience with other types of standardized testing. While standardized testing is not a discrete state policy, state accountability and evaluation requirements have caused increased use of standardized tests for making decisions about student placement and instruction. Standardized testing has been a powerful force shaping life in the classroom. In our sample, 60 percent of the teachers report that this increased emphasis has affected their teaching. More
significantly, when teachers were asked whether standardized testing affected other teachers, 95 percent report that standardized testing has had an effect. Thus, teachers perceive that the increased emphasis on standardized testing has affected the way they or their colleagues operate.

Our content analysis of the interview responses revealed that effects fell into five categories: altered curriculum emphasis; teaching students how to take tests; teaching students for the test (specific preparation for the test); having less time to teach; and feeling under pressure. The most common effect reported by teachers about their own behavior was that they altered their curriculum emphasis. Some viewed this change positively and others not. The most common effects reported about the behavior of their colleagues was that they taught for the test and felt pressured.

Some teachers value the increased emphasis upon standardized testing because it creates standards, expectations, and pressure. It causes them to change what they do in class in a direction they regard as valuable.

In the areas where these tests are given, I feel it puts pressure on the teachers and I see it as a positive type of thing, good pressure, to teach and cover specific areas and to get that information across rather than waste their time on what they happen to feel is important. I feel that there is a certain body of knowledge that kids should leave school with, and that standardized tests, if they're written properly, ensure that teachers are going to teach that particular body of knowledge because they don't want to see all the kids fail in it.

We go over those results very thoroughly in faculty meetings and look at all the areas that are either under expectancy for their IQ's or that are really lower than what we would expect, so that then we can give a little more emphasis to those.
areas. Like one year capitalization and punctuation was extremely low and whether or not we had just missed it that year or what or whether it was just the kids that year, we do go back over the results and take a good look at them and see what happened. So, it might affect what we would do in the future more than what we have done in the past.

Thus, for some teachers, standardized tests are a means for ensuring that a body of knowledge is covered in the curriculum. In a broad sense, the use of tests helps them orient their instruction to important topics that might otherwise receive insufficient emphasis.

More typically, however, teachers report that the use of testing as a management control device causes a narrowing of the curriculum. When tests are used as measures of teaching effectiveness or as indices of student competence, incentives are created for teaching the precise content appearing on the test rather than the educational concepts underlying the test. Some report that the emphasis on standardized testing causes them to teach tested knowledge at the expense of untested knowledge and to teach skills as they are to be tested rather than as they are used in the real world.

I spend more time testing rather than teaching. It has eliminated time to do some of what a lot of teachers feel are frills. I do less science. I have always been very strong on science but you have got to meet the standards of those tests basically in math, reading and language arts.

We've been more or less pressured from the top down, starting with the superintendent and supervisors and principals. Therefore you teach to the test. You need to teach format of tests so that they understand the kind of test that they are going to take. You teach similar types of problems that they are going to be faced with. There usually is a difference between the way it is taught in the classroom and the way it's tested on the test. For instance, in spelling you're taught to spell a word correctly. The test is a proofreading test. You find the word that is spelled wrong, or you look at a
group of words and indicate that there are none wrong. This is not the normal way of teaching in my classroom anyway, nor most others either. When you're talking about spelling it's a difficult thing because if you take the standardized tests you don't have someone giving a word for them to spell correctly. They've got to pick it out.

I've changed my teaching behavior... I do not use as many essay tests as I did before, because I try to give them things which they are apt to meet on standardized tests. I feel that it is hurting the children, rather than helping them because they don't have to write their own sentences.

For these teachers, the need to ensure that their students perform well on the tests has meant de-emphasizing other important types of learning. One reports that she cannot spend time teaching science; another reports that she cannot spend time teaching writing skills; a third reports that she must teach proofreading rather than spelling.

It is worth noting that while teachers report these changes in the curriculum, the National Assessment of Educational Progress (NAEP) tests have found increases in students' basic reading and mathematics scores counterbalanced by declines in science, writing, mathematical problem-solving and analytical reading.[2] A number of experts blame the emphasis on basic skills testing for these declines, noting that "a single-minded dedication to one goal—high scores on tests of minimal skills"[3] has changed what schools and teachers emphasize. "What can


be most easily tested and taught are now the teaching objectives in many schools," observed the National Council of Teachers of Mathematics president in hearings before the House Subcommittee on Elementary, Secondary, and Vocational education.[4]

A recent Commerce Department study from the Office of Productivity, Technology, and Innovation goes further in claiming that innovation and creativity are being squelched by "the basic educational philosophy" which is better "at preserving convention than sparking invention, developing logical than conventional thinking, promoting risk aversion rather than acceptance of change."[5] Learning theorists have likewise claimed that teaching children to produce correct answers on basic tests of reading and arithmetic skills does not teach them to read or solve problems analytically. Indeed, some argue persuasively that test-based instructional strategies are counterproductive to the acquisition of practical knowledge.[6]

Many teachers observe that when they are pressured to teach-to-the-test, scores in the tested areas increase, but other types of learning suffer. The more tightly tests are coupled to instruction, the more teachers resist the use of tests. Tight coupling of tests and teaching can occur either because of pressures to ensure that students

[4] Ibid.
make a "good showing" or because the curriculum is designed to enforce a teaching-testing sequence for every skill area.

Many teachers find the practice of gearing instruction to standardized tests to be educationally unsound and professionally unethical. They describe how pressures to teach to the test occur:

The principal made the teachers take [the test] and rewrite it so it wouldn't be exactly what the children were going to have, because he said he wanted the children to be sure they knew how to take the test... Two teachers didn't do it, so he told them he was going to write them up and he said it would go in their personnel file. He wouldn't let them see a copy of it, and they called in the local teachers' association about it.

Within a time frame of a couple of weeks before the standardized tests are given, we have booklets we are to present to the kids who are to be taking the tests and go over it with them. That takes time and energy out. That's what we are supposed to be doing. You can tell from my attitude that I don't particularly agree with it but that is what we are supposed to be doing.

I see more of a trend 'to teach to test' so that your students will do well. Our administration says absolutely tests will not be used to blame but I don't believe it. I just can't believe that because they put in the newspapers the scores of different schools. A realtor in my community even showed me the test scores... When parents come in, the realtor shows them the test scores of different schools when they want to buy a house in that community... So those scores are used in all sorts of ways they were never intended to be used.

Schools are very receptive to parents and so when parents demand, 'I want my son or daughter to do good on this test,' you have to meet those needs. I think some schools are very structured for these tests and they spend a lot of time working on the tests because that's the measure of achievement. You'd be foolish if you didn't.
Teachers talk about not getting to something because they had to deal with what is going to be on the test. They do spend a lot of time teaching what is going to be on the test. I certainly think that it is a problem and yet this school system is a school system that has built a lot of little altars to those stanines and those standardized tests.

Some it has put a great deal of pressure on because I don't think they are that confident about what they are teaching so they really teach to the test. There are others who have been infuriated by it because they are forced to do something that they don't particularly believe in. Many teachers do not like standardized tests at all and resent giving them to their students. I think it's a pretty well accepted idea that standardized tests are certainly different from tests given in most classrooms. You are more or less forced to teach the format of the test or you come up showing that your students haven't learned what you really feel they have learned.

I think it is frustrating a lot of [teachers] because it does limit what you can do and how you do really interact with the kids. It limits your time. Your attention is shifting from the student to "Will he pass this test?" Or how many will pass this test? Will a majority pass the test? What happens if they don't? How will this affect my job if they don't? That kind of thing. . . . It's just one more nail in the coffin. It's driving a lot of would-be good teachers out of the profession.

Why do teachers feel that teaching to the test is undesirable? Many report that testing and test preparation take time away from teaching, as though teaching for the test is not really teaching, and another type of instruction is what they ought to be engaged in. While many school board members and administrators apparently believe that teachers' resistance to testing is based on accountability avoidance,[7] teachers describe other motivations for their views.

Competency-Based Education

The strongest reactions to testing are in response to competency-based instructional approaches that tightly couple instruction to testing by requiring students to pass a test for each discrete skill before progressing to the next. Some teachers say that children who can perform practical tasks in the classroom cannot do so in the form required by the tests; others say that tests don't measure important areas of learning. Many worry that the type of thinking encouraged by test-based instruction is not conducive to stimulating interest and creativity.

I've just found that I need to give more tests, to teach certain things that will probably be on a test [rather] than branching off into a variety of different areas that may interest the students more. But you know what's going to be on the test; you know certain things that they have to have so you have to limit that. And I feel that often that stifles the kids' creativity because there is only one answer—only one right answer. Whereas the way the kid thinks, there may be more than one right answer.

The only problem with that is the fact that it tends to stifle a lot of creativity by the student. If it [testing] is used but creativity is allowed to flourish under it, then I think it can be good.

It just seems deadly. It seems like a real end to all growth and development. I mean would we have electric lights? What if somebody hadn't said you should learn how to do this? Would we have new inventions? Would there be anybody going off in different directions? Wouldn't we end everything? If we programmed "this is what you are going to learn," who would go beyond that? No, I just think that would be deadly.
In the first place, I don't know who is going to say what everybody needs in order to function in society—so that is going to be the hardest part: to set the objectives that they are going to have to know. But even if you did that, you are going to end up with just a mold of one kind of person. You are going to end up with a whole population of the same little mold and I don't think that that's what democracy is all about. I think it means to be an individual.

Whether these long-range fears are justified or not, inflexible implementation of test-based instructional strategies has visible short-term consequences.

Teachers who have worked in schools that use a competency-based curriculum often find its immediate effects troubling. One of our districts had implemented a mathematics curriculum that required computer-administered tests of each skill before a child could progress to the next. Teachers found the approach limiting for both slower students and faster students:

I have kids that are stuck at like level G (which is third grade) and they can’t progress until they can do those blocks [subtraction with cuisinaire rods] . . . They can do it on paper, but they can’t pass it on the computer which would finish out that area.

I have some children who still are on that same level that they started on in September. And if they try three times then that’s it. After the third time you’re not supposed to frustrate them so now they’re stuck in that category and they won’t be able to get out. . . . They’ve tried three times. Now they’ve had a couple of cases where they’ve said some children have had particular difficulty [so] they’d give them something else. But they tried three times and so they can’t progress in that one category.

If a student could not pass the test in a category, the student could not be taught anything else in that category. Testing thus prevented
both teaching and learning. Students who could pass the tests created another problem:

What they have done is that they have put down every objective that they want every child to learn from kindergarten through eighth grade. There are volumes of objectives—absolute volumes of objectives. Each child has to pass the objective at this level before he can pass the next objective. So when I tell you that I spend absolute hours testing these kids, I really feel like I have lost a lot of the math teaching time. I had the bright kids in the math—the top fifth and sixth graders in math. I was at the top so I had to get done [testing] everything that they were supposed to have passed. As the system operates now, I would throw it out.

Another district had begun to implement a competency-based curriculum for most subjects. In some schools, the use of the curriculum was not rigorously enforced. Teachers who could choose to ignore it often did. In others, textbooks and materials to accompany the curriculum were absent. Those who had attempted to implement CBC had mixed reactions:

What I have done is gone through the manual, twice, just to see what I could do with it. . . . There were a lot of examples that I couldn't use in my class because of their learning levels. Some I found were too hard. Others I found were boring—not useful, really. In other words, I felt that I could do something better . . . that would get over better. Sometimes I would say well, this is set up for an ideal class but it doesn't all work in the real world.

One teacher who did not find CBC useful for her own teaching nonetheless thought it was a good management tool for helping or forcing less competent teachers to do their jobs:
Let me mention this about CBC. I don't want you to think I'm totally against it, I'm not. For a beginning teacher and for many teachers who really are not doing what they are supposed to be doing, CBC is very good. Because it says what you should be teaching thus and so. If you're not, then you're shortchanging the kids. So I am not totally against CBC. I don't think it gives you enough flexibility. But I think it is good for people who are not doing their jobs. But I think it should have more teacher input.

Another thought that the effort to establish a common curriculum was valid, but the CBC approach itself trivialized the educational process:

I have no objection to some kind of definition of goals. ... You know, one can go too far in the other extreme if you have no commonality, then you have chaos. In some ways it is not very politically or socially responsible to allow that to happen. ... So I have no objection to some enunciation of goals or objectives. ... But to assume that people are going to learn or that the goals are going to be accomplished if all of us adopt these particular techniques and these particular structures to me seems to be absolute idiocy. ... If one has the notion that education is about learning pieces of knowledge or specific things to do in specific situations, if that is what one thinks education is, then education is headed for the down hill slide rather quickly. Whereas if you develop ... some kind of system where students were encouraged to think on their own or to analyze a situation or to develop the alternatives, one would be much better off than trying to say, 'In this situation one does this or whatever.'

For a lot of the very technical kinds of things, if one doesn't understand it, one can always look it up somewhere. So, the point becomes how does one express oneself, how does one write as opposed to knowing exactly how a gerund is used.

In schools where CBC is rigorously enforced, teachers feel torn between satisfying bureaucratic requirements and meeting the needs of their students:

You're given a guideline and each day when the student comes to class you're supposed to have on the board behavioral objectives for the day and a list of instructional aids and what have you. You're supposed to accomplish a, b, c, whatever, in that day. The administrators come in and they
evaluate it haphazardly. They check to see if your goals up, do you meet these goals this day, during this class period? That's really unrealistic because it depends on the class. It depends on how prepared the students come to class. If they come prepared with what you gave them the day before, and you can click it off one, two, three---fine. But if they haven't, man, you have to go over the material from the day before. Then you have to structure what you want to do today and you may be way off from what your goal is. It just makes it kind of rigid. . . . A kid might have a question that is off the track. Do you say, 'Well, no, I can't answer that question right now because I have these goals that I'm supposed to meet, and I just don't have the time?' You have to deal with what they want to know when they want to know it or you're going to lose their interest. But if your evaluator comes in and you have 'heredity' on the board but you're talking about ecology or evolution or something, well then they're going to mark you down, because you're not doing what you have on the board.

Some feel that their most valuable resources--teaching time and the ability to capitalize on children's interest in learning--are diminished by rigid curricular and recordkeeping requirements:

So much of the teacher’s time is spent in things other than teaching: record keeping, the rigid curriculum guide, the pre- and post-testing . . . and the massive record system to keep tiny little bits of it: when it is presented, when it is mastered, when it is re-taught and reinforced and post-tested. It is just mammoth. A great deal of time and energy is spent with these sort of things and it limits sometimes taking off on a tangent of the interest of the children because you have a guide that isn't in that direction. You have to meet that guide because you know the children are going to have to take a test. You may really get into something that you don't want to leave, [but] you won't come back to that thing because the schedule demands x number of minutes for this and that. You can't always teach an integrated core. I like a core curriculum where you can really integrate everything into it. I think it has more meaning to kids. I have only been able to do that one year. I had to have special permission and that was the best year I ever had.

In sum, efforts to improve education by setting standards for students have various effects at the classroom level. Sometimes standards, by providing a common yardstick, direct attention to areas of
the curriculum that would otherwise be overlooked. At the same time, policy tools that try to closely link these yardsticks to the teaching-learning process can have dysfunctional consequences when other valuable objectives are abandoned in favor of those that are measured.

In the policies we have examined above, teachers reported problems of means-ends disjuncture, of inability to reconcile diverse educational goals, and of faulty implementation of policies. In general, their observations stem from the difficulty in adapting uniform educational approaches shaped by standard performance measures to the perceived needs of their clients. At the same time, many acknowledged the usefulness of the policies in providing a common direction or preventing abuse of discretion on the part of those less competent or committed than they.

This situation typifies the classic dilemma of the street-level bureaucracy described by Michael Lipsky. Street-level bureaucrats must be simultaneously accountable to their clients and the public agency they represent:

The essence of street-level bureaucracies is that they require people to make decisions about other people. Street-level bureaucrats have discretion because the nature of service provision calls for human judgment that cannot be programmed and for which machines cannot substitute. Street-level bureaucrats have responsibility for making unique and fully appropriate responses to individual clients and their situations. . . . These considerations cannot be sensibly translated into authoritative agency guidelines, although it is on behalf of their agencies that street-level bureaucrats are accountable to clients. It is a contradiction in terms to say that the worker should be accountable to each client in the fashion appropriate to the presenting case. For no accountability can exist if the agency does not know what response it prefers, and it cannot assert a preferred response if each worker should be open to the possibility that unique and fresh responses are appropriate.[8]
Lipsky describes how efforts to exert management controls can ultimately subvert service quality by reducing workers' accountability to clients and to professional standards of conduct. This can occur, he points out, when goal clarification reduces the scope and mission of public services by de-emphasizing areas that are not the focus of performance measures. Teaching for the test can mean teaching narrowly defined skills rather than concepts and practical applications; it can also mean teaching decoding and computing instead of writing and science; sometimes it means treating topics superficially rather than taking time for in-depth inquiry. Decreased service quality can also occur when procedural constraints result in inappropriate treatment of clients. Teaching all students in a standard fashion may mean that some with different needs or learning styles will not be appropriately taught.

Teachers are in an awkward position when they perceive problems with accountability standards. They recognize that some form of accountability is necessary, that without specification of goals and/or processes, a common educational experience may not occur. Performance goals and measures may be necessary to ensure that everyone is doing his or her job in a manner that is responsive to the public mandate. But when standardization constrains the teacher's efforts to meet the needs of some clients, or when accountability tools take time away from real instruction, their frustrations surface in requests for autonomy that seem to beg the question of accountability.

If we could get the administration to leave us alone and let us teach we'd be able to. Now of course I guess not all teachers would teach if they were left alone. Because you hear the stories of the teacher sitting at his desk with his feet up reading his newspaper and the kids aren't doing anything. But I guess basically if they'd let us teach, we could. We spend I would say probably a good 30 percent or more of our time doing paperwork. A good percentage of that completely unnecessary and another percentage is something that could be done by a teacher's aide or secretary. Time that we could and should be using to teach we're doing paperwork. Most of it is just a waste of time.

Paperwork, of course, is the means by which others in the school hierarchy keep tabs on what is happening in the classroom. This teacher implicitly recognizes that reports of attendance, test scores, and teaching objectives are meant to ensure that teachers are teaching and students are learning. But he considers it a waste of time because his conception of his job is client-oriented. His argument suggests that if teachers could be trusted to teach, the need for bureaucratic controls would diminish.

One resolution of the dual accountability dilemma is to ensure competent teachers, thereby reducing the need for bureaucratic controls designed to prevent incompetence. Although policymakers do not always regard standards for students and standards for teachers as substitutes for one another, the pressures for accountability in teaching are at least partly a result of mistrust in the capabilities of teachers. In the next section we consider state policies designed to upgrade the quality of teachers.
Competency-based Teacher Certification

Over the last decade, the ideas of competency-based teacher education and teacher certification have been advanced as a way to upgrade training for and selection into teaching. Although full-fledged prototypes have yet to be developed, the ideas have been embodied in legislation in some states. While many teachers in our sample did not have direct experience with CBTE, they did have opinions about it. A definition of CBTE was contained in our question to them: "All the knowledge, skills and behaviors which they [schools of education] think a teacher must use are specified, and the prospective teachers must demonstrate them in order to pass." Of teachers in the sample, 21 percent favored the idea, 35 percent favored the idea in principle but qualified their support or voiced skepticism about its feasibility, and 41 percent opposed the idea. Those who were already familiar with the idea tended to oppose it.

Those who favored CBTE tended to interpret the definition as meaning good practice:

I don't see anything wrong with it. If those are pretty much the things you need to know to go into teaching, it's better to know before you start the things you are strong in and the things you might need improvement in. And I guess that you might start out with better teachers. If you start out with that, it might delay your employment for a year or something. I guess that would be the only drawback. You might not get a chance to go ahead and start. But it might satisfy the community and the parents a lot more and then you wouldn't get all the flack that you get about public schools.

Those who gave the idea qualified support tended to adopt a wait-and-see attitude:
I think it may be very helpful. I don't know, they didn't have anything like that when I was there. As I said, when I went into the classroom, I went in cold. So maybe this would be somewhat along the line of putting them into the classroom and letting them teach. Maybe by identifying these things, you have to show what they are and how to do them. So maybe that will cover the same thing that I was talking about. It doesn't sound like a bad idea, but so many sound so good and come out so bad when they get into the classroom. I'd like to see how it worked, and if it worked, fine.

Of those who opposed CBTE, some did so because they doubted that the skills could be compiled:

Well, I think if anybody could write down all of the things to set up any kind of program like that, I would like to meet the person. I would think that it would be absolutely impossible to set down in some kind of curriculum all the things a teacher had to be able to do to be competent. That would be just such a mammoth job. Maybe it would be possible but to test somebody on all the things that you need to be able to do ... I just don't see how it would be possible.

Others who opposed the idea did so because of the standardization of teaching implied:

I think that it is absolutely ridiculous. I don't think that you can mold teachers into ... It is not an area of skill like learning how to use a power saw. There is a difference between manual skills and working with people, and I don't think that you can mandate how a person is going to work with somebody and have it come out with a hundred people doing it all the same way.

One teacher had actually experienced competency-based teacher education.

That teacher's observations are particularly telling:

I am laughing because I went through something like that and this is the perfect example of what happened ... we were trying to program to do this. It was supposed to be set up on a computer ... this big design. You do the thing and they test you on it. Put it in the computer and you get the feedback. The only problem was that they never got it to the
computer to get the feedback on it. So, I have never seen one work. I don't know what competency-based teaching is. I don't even know what they are talking about. You talked about whether teaching was an art or a science—in its true form, I think it is an art. You have so many variables to deal with at any given time. Which variables are going to be most significant in a particular setting; the conditions change. When you do these kinds of things as far as philosophy of teaching, they are so narrow because they want to measure something specific. But human beings don't deal with problems that way. Human beings don't think linear, single thoughts. And so what are you doing? You're talking about, 'did this person do this at this time in a given situation?' And it is a very limiting kind of basis. Certainly, there is a place for that kind of instructional level in any kind of educational situation whether the students or the teachers are involved. But you have to recognize that that is a rather limited form. And I think that's probably the biggest failing with that. . . to say that it covers everything when it doesn't, in effect, do that. I can give you a perfect example—an audio visual course that I took once. You can learn step one, two, three . . . how to operate the projector and you can do a competency test and that's great. But that is not going to tell you how to give instruction with a film to a class of kids on a given topic.

In general, teachers' opinions of CBTE reflect the view that just as teaching itself is not a simple act easily reducible to discrete skills or behaviors, learning to teach is also more complicated than demonstrating easily measurable competencies on discrete tasks.

Competency-based teacher certification is based on a view of teaching that assumes the validity, stability, and generalizability of effective teaching behaviors. Teachers tend to see teaching as a context-specific activity that cannot be easily prescribed because appropriate teaching behaviors vary from one student or classroom to the next.

Research on teaching reinforces this conception of teaching work. Some efforts to link specific teacher characteristics or teaching behaviors to student outcomes have sought context-free generalizations about what constitutes effective teaching. Although this line of
Research strongly suggests that what teachers do in the classroom does affect students, claims that discrete sets of behaviors consistently lead to increased student performance[9] have been undermined by inconsistent and often contradictory findings.[10] The most extensive process-product study of teacher effectiveness, the Beginning Teacher Evaluation Study, conducted for California's Commission for Teacher Preparation and Licensing, found little support for linking teacher effectiveness to precise, uniform teacher behaviors. After that monumental effort, "(t)he researchers . . . concluded that linking precise and specific teacher behavior to precise and specific learning of pupils (the original goal of the inquiry) is not possible at this time. . . . These findings suggest that the legal requirement for a license probably cannot be well stated in precise behavioral terms."[11]

At best, the teaching performances advanced as having consistently positive effects on student achievement are relatively broad constructs rather than discrete, specific actions of teachers. As Centra and Potter[12] note, often-cited variables such as clarity, variability,
enthusiasm, task-orientation, use of student ideas, and questioning[13] are undoubtedly important, "but few of them could be usefully considered 'basic teaching tasks.'"[14]

Furthermore, subsequent research on these variables has found that the effectiveness of particular teacher behaviors often depends on the teaching context. Effective teaching behaviors have been found to vary for students of different socioeconomic, mental, and psychological characteristics.[15] and for different grade levels and subject areas.[16] Some teaching behaviors exhibit a distinctly curvilinear relation to achievement. That is, a behavior that is effective when used in moderation can produce significant and negative results when used too much[17]; or—as others have found—when applied in the wrong circumstances.[18] This kind of finding also makes it difficult to

develop rules for teaching behaviors that can be generally applied.

The conversion of teacher effects research findings to rules for teacher behavior is a cornerstone of many competency-based teacher education and certification models. These models implicitly assume that the rules are generalizable because student outcomes are determined primarily by particular uniform teaching behaviors. By implication, the models assume either that other contextual influences on student outcomes are relatively unimportant, or that these other influences do not call for different teaching behaviors in order for teaching to be effective. But, taken as a whole, research on teacher effectiveness lends more support to a context-specific view of appropriate teacher behavior in which judgment plays a large role than to a view which presumes that specific teaching techniques or behaviors can be uniformly applied. Based on their many years of research on teaching, Brophy and Evertson describe the teaching act as an interactive, highly judgmental process:

[Effective teaching requires the ability to implement a very large number of diagnostic, instructional, managerial, and therapeutic skills, tailoring behavior in specific contexts and situations to the specific needs of the moment. Effective teachers not only must be able to do a large number of things; they also must be able to recognize which of the many things they know how to do applies at a given moment and be able to follow through by performing the behavior effectively.][19]

Teachers' skepticism about competency-based teacher education results from their feeling that the most meaningful aspect of teaching—the ability to make appropriate judgments about what to do in specific

instances—cannot easily be reduced to a set of discrete, observable, and measurable behaviors. Their intuitions are supported by research on teacher effectiveness.

While only a few states have attempted to institute elaborate systems of competency-based teacher education or certification, a much larger number have attempted to upgrade teacher quality by requiring paper and pencil competency tests for teacher certification.

Testing for Certification

Testing of a potential teacher's knowledge of subject matter and pedagogy as a condition for certification is a recent state initiative. Technically, it is easy to devise a test of subject matter; it is more difficult to devise a test of pedagogy. Nonetheless, the imposition of such a test is far less expensive than competency-based certification. At least 16 states have enacted laws or rules requiring standardized tests as a means to raise the standards for entry to teaching. Teachers are divided in their views about the usefulness of competency tests for certification. In the 1979-NEA survey, 41 percent of teachers favored statewide tests for certification. In our sample of teachers, 33 percent favor the idea, 29 percent favor the idea with qualifications, and 38 percent oppose the idea.

Those who supported the idea felt that the test would screen out those who were not well-prepared and would help to create the image of a profession:

It probably is a good means of evaluating teachers' experience or ability to start teaching: ... I know in other professions, for example, lawyers have to take a test, doctors have to take tests. Other professional people do, so perhaps teachers, to be considered in full rights by many other people who are professionals, as professionals, maybe that is a thing we need to institute.
Many who gave the idea of the test qualified support did so because they believe that a test of subject matter is both reasonable and desirable, but they are skeptical of tests of pedagogy:

I certainly think that if you are going to teach a subject, you ought to be able to pass the basic requirements. . . . As far as the philosophy and everything, I don't think that being able to pass a test in that is too important.

A lot of the things that indicate a good teacher are not susceptible to standardized testing. . . . I feel again that it is easy for a person to play a game with standardized tests and come up with a good score. It is easy to say on paper what you might do and in fact you won't.

Those who opposed the test do not believe that a paper and pencil test can adequately predict performance as a teacher:

I think the proof of the pudding is seeing what the teacher is doing, observing the teacher and seeing what the children are learning.

Some even believe that schools of education would focus unduly on preparation for the test.

There again you get to a situation where teacher institutions are going to train their teachers to meet those competency standards and that's it. They will feel like they have done their job if they have done that. There is too much of that that goes on as it is. There is far too much teaching of those minimum standards in colleges and universities to teachers right now. And I would hate to see it become dignified through state law.

In sum, substantial support does exist for a test of subject matter knowledge which is seen as guaranteeing that teachers know what they will teach. Many teachers see such a requirement as a prerequisite if not a guarantee of good classroom performance. However, substantial
skepticism exists with regard to the feasibility and practicality of a test of pedagogy. For many of the same reasons that they doubt the usefulness of a competency-based approach to teacher education, teachers doubt the validity of a paper-and-pencil test of pedagogical knowledge.

Testing for Recertification

Most teachers in our sample (60 percent) oppose the use of tests for recertifying teachers every few years. Opposition to testing for recertification is stronger than that to testing for certification primarily because a practicing teacher has a track record which can be examined; a test is seen as largely unrelated to performance in the classroom.

Those who support the idea of testing for recertification see it as a mechanism to ensure that teachers remain current in their teaching field:

I think this is good especially in their major field. It keeps them abreast of the new currents, the current trends. It keeps them abreast not only in the current trends but it helps them individually. Teaching is a growing process just like learning is a growing process.

Some who gave the idea qualified support distinguished between a test of subject matter and a mechanism to assess pedagogical skill:

If you have stayed in the field and haven't kept up, something is wrong. As long as it is testing what is needed to be tested, i.e., being tested on the level that you are teaching. . . . I think the weeding out should be done more by administrative observation in some way rather than continued pedagogical testing.

Those who opposed the idea stressed the importance of assessing classroom performance:
If you can somehow rate a teacher's effectiveness and rate him on that... as my background being in economics... the way of testing output is to find out how many barrels go through the machine. You can't do that very well in a classroom. That is what you want, but I don't know how you go about getting it. Testing a teacher because of his knowledge in math and because of what he knows about how to teach, is not going to ensure that he is a good teacher at all.

I distinguish between understanding and performance. What you know, I think, can be tested in a standardized way. What you can do has to be evaluated personally.

The distinction between test performance and on-the-job performance is an apt one. Although these tests are meant to screen out incompetent teachers, studies have not found any consistent relationship between scores on teacher competency tests and measures of teacher performance in the classroom.[20] This should not be too surprising since the act of test-taking is quite different from the act of teaching. "Knowing" the answer to a question that asks for a definition of a pedagogical principle does not necessarily mean that one knows how or when to apply that principle in the classroom in the midst of competing pedagogical demands. Indeed, not knowing the answer to such a question may not preclude the ability to respond appropriately in the classroom setting.

Although the existence of tests may raise the status of the teaching profession in the eyes of the public, they will not completely answer the question of how to upgrade the quality of teaching that occurs in classrooms. They may reveal what a teacher knows about a

subject but will not reveal whether he can teach it and, if he can, whether he will.

SCHOOL REALITY AND EDUCATIONAL POLICY

The picture we have painted about the potential for improving teaching and learning by setting performance standards is not a promising one for state policymakers. In one sense, it is a picture that can be easily dismissed by those whose faith in bureaucratic accountability tools is strong. Their faith may be unshaken by the skepticism of those being regulated. After all, discretion and autonomy can as easily be codewords for incompetence or nonperformance as they can be conditions for competent performance.

In another sense, though, the observations of teachers must be considered. Teaching is a profession which is increasingly less able to attract and retain talented people in its ranks. If the normally tenuous psychic rewards of teaching work are further diminished by impediments to good performance as teachers' themselves perceive it, many among them will leave. A vicious cycle may be created by policies that in the aggregate make teaching less attractive. They lower the quality of the teaching force, thereby increasing the perceived need for more regulation to improve education.

Some might argue that those teachers who voice skepticism about accountability policies are among the least competent. Very likely some teachers complain about standards because they find them too demanding. Equally likely there are others who find them inadequate to the complexities of teaching work. However, most object to the standardization which results from the policies rather than the standards contained in the policies.
The most powerful appeal which student standards have for teachers is that they symbolize the importance of education. In recent years, many perceive that schools have experienced a deterioration of educational standards. Many teachers welcome the reestablishment of educational standards as a reaffirmation that education is important. This reaffirmation of standards is an indirect reaffirmation of the worth and work of teachers.

The symbolic importance of standards is, of course, associated with the actual establishment of standards. This gives students, teachers, and the community at large a clearer understanding of at least the minimum goals of schooling. Some teachers welcome a clear external standard because it places the onus of achieving it on the student while lightening the onus on the teacher. They welcome what they see as the positive pressure on students. The teacher does not have to struggle with the establishment of standards and avoids internal and social conflict over how easy or how hard to make the standards.

But teachers worry about the standardized test as an appraisal mechanism. They are concerned that the multiple-choice format is too limiting, that it cannot assess all the things which they teach. They are concerned about the results of a test being used to contravene their own judgment about what students should and do know. They wonder whether the test matches their conception of the curriculum.

More poignant, though, are the effects of standardized testing upon curriculum and teaching. Teachers see the tests as altering the curriculum, somewhat by inadvertance. Some of the effects are obvious: testing takes time; preparation for testing takes even more time; there
is less time to teach and there is the pressure (perceived as both good and bad) on students and teachers to perform. Less obvious are the distortions introduced in the curriculum. Some teachers begin to emphasize the content which they know will appear on the test. They begin to teach in a format that will prepare students to deal with content as it will be tested. Some teachers will even teach students the precise items which will appear on the test.

The increased emphasis on test-oriented content means, of course, that other curriculum content is deemphasized. Teaching as if there is always a right answer is thought by some teachers to stifle creativity. More generally, that which is not being tested is not being taught. In the minds of some teachers, the path from establishing standards to standardized testing to standardized curriculum and standardized teaching is short. One characterization of the effects of very prescriptive teaching policies is consonant with the perceptions of teachers:

Administratively mandated systems of instruction not only hinder teachers' responsiveness to students but over time discourage teachers from learning to be responsive, from developing sensitivity to individual differences, and from broadening their repertoire of approaches. Ultimately such systems become self-fulfilling prophecies: routinized instruction, and the attendant loss of autonomy, makes teaching unpalatable for bright, independent-minded college graduates and fails to stimulate the pursuit of excellence among those who do enter. Over the long run, then, the routinization of instruction tends to depersonalize teaching and to further discourage capable people from entering the field.[21]

Or as teachers put it:

I feel sorry for any teacher who is interested in teaching. It is going to be much worse in the years to come. For those who like the record keeping, and there are plenty of them; pathetic teachers but great record keepers, this would be a way of them moving up the ladder. It will help them. It won't help the good teachers. It will help the people who teach by the book (because) it is safe and it doesn't require any imagination.

The only thing that would make me leave teaching is if they ever computerize all those objectives and I have to sit there and check off forms for 38 kids and 250 different objectives. I think if it got down to that, I would simply resign because I would feel like I was spending more time on forms than on kids.

Standards for teachers are a somewhat different matter. The rhetoric of CBTE has a certain attractiveness to it. Teachers should be competent; their competence should be tested rather than undetermined; competence should be ascertained as a condition of graduation or certification rather than left to chance. Because the rhetoric of competency is so attractive, many teachers and others support the idea of CBTE. In fact, some see its standard-setting aspect as the definition of good teaching practice. But others see a large gap between the idea and the techniques necessary to make it work. Those opposed to the idea or the technique or both tend to see them as a mechanistic approach to education. In any case, the difficulties of implementing CBTE have largely prevented its actual use.

Testing for certification currently has more widespread appeal. It is seen as making teaching somewhat more like the professions of law and medicine where a test external to one's educational institution determines whether one is certified to practice. Many teachers, as many members of the public, perceive that unqualified people have been admitted to teaching. The test is seen as a way of screening out unqualified candidates.
Many teachers favor testing for subject matter knowledge which they see as ensuring that a prospective teacher has a sufficient grasp of the subjects to be taught. Knowledge of subject-matter is viewed as a necessary but not sufficient condition for teaching. How a teacher will perform is a function of many other conditions including a teacher's mastery of pedagogical skills. Almost universally, however, teachers are skeptical of the ability of tests to assess pedagogical skills. Consequently, the test endorsed by teachers does not reveal whether a person has the skills necessary to teach.

Testing for recertification is less well regarded by teachers. In this instance, teachers are more inclined to believe that classroom performance is a better measure of whether a teacher should be certified. Prior to initial certification, a teacher does not have a job and cannot exhibit actual on-the-job performance. Testing, while a less than perfect indicator of competence, may be the only measure possible. However, when a person has actually performed in the classroom, the idea of a test to measure subject-matter knowledge and pedagogical skills strikes teachers as irrelevant at best. Even if a test validly measures knowledge and skills, it does not measure how or whether a teacher actually applies them to the conduct of a class.

Thus, while some standards for students and teachers may be desirable and even necessary to prevent incompetence or slothfulness, the more fine-grained the standards are, the more they attempt to specify in detail what are desirable learnings or teachings, the more likely they are to miss the mark and even cause damage to some of the professed beneficiaries. Tom Green puts it this way:
Public policy is a crude instrument for securing social ideals. We would not use a drop-forged to quarter a pound of butter or an axe to perform heart surgery. Public policy is the drop-forged or the axe of social change. It is not the knife or scalpel. That is to say, public policy deals with gross values. It deals with the common good, not with my good in particular or my neighbor's or even with the good of us both together. Policy deals always with what is good in general, on the whole, and for the most part. . . . But the tools of policy are limited in another way. They are best construed as aimed not at the advancement of specific benefits, but at the prevention of specific evils. Injustice is always present to our conscience with more definiteness than justice. Injustices are nearly always specific. Justices seldom are. It is true that government can't do everything we desire, and therefore, it is equally true that public policy is not the fit instrument to secure all our desires. For example, even if we knew what is needed to make every school excellent and every teacher a paradigm of wisdom in the care of children, it would remain doubtful that we could express this knowledge in public policy and thus secure the good we seek. . . . Minimizing evil is a proper aim of public policy. Maximizing good is probably not. The latter assumes that we may shape the axe into a scalpel.[22]

If one accepts this analysis, the best policies are those that try to do the least; the most useful standards are those that provide general guidance to prevent gross injustices without exceeding their own capacity to effect change. State policies, especially, should be reticent in nature since they rely on technical and political implementation through many layers of a bureaucracy. In this view, course requirements for students are preferable to highly specified performance measures; teacher competency tests limited to knowledge of subject matter are preferable to tests of pedagogical skill. Where technologies are uncertain and means-end connections are tenuous, the use of an axe to perform heart surgery may kill the patient.

Put somewhat differently:

Educational policies must be designed as a shell within which the kernel of professional judgment and decision making can function comfortably. The policymaker can no longer think of any given mandate as a directive which bears continuing correspondence to teacher actions at all times. Instead, policies represent moral and political imperatives designed with the knowledge that they must coexist and compete with other policies whose roots lie in yet other imperatives. Federal and state policies profess a prevailing view, orienting individuals and institutions toward collectively valued goals without necessarily mandating specific sets of procedures to which teachers must be accountable.[23]

Of course, we come full circle to the accountability question. How will we know whether the street-level bureaucrat is violating policy intentions without specific performance measures that can be examined by those in authority?

The roots of the answer lie in the reason for the question. Policymakers adopt performance measures as a means for exerting remote control over the educational process because they are suspicious about the adequacy of teacher supervision. They fear that supervision does not take place or that the judgments rendered by supervisors are inaccurate. And studies of teacher evaluation practices suggest they are largely right.[24] Highly-developed and perceptibly effective teacher evaluation systems are rare in American education. The time and expertise of traditional supervisors are often inadequate to the task of critiquing, assisting, and monitoring the performance of teachers in a serious, concerted fashion. Indeed, the mistrust of teachers which

leads to standardization through policies extends to principals, their traditional supervisors, as well.

It is here that the school improvement movement offers a ray of hope for disentangling the accountability dilemma. By drawing attention to the role of the school principal as instructional leader, to aspects of school climate including norms of collegiality, and to the importance of shared schoolwide goals, the proponents of "effective schools" approaches point indirectly to a means for achieving responsible autonomy. Although there is room to quarrel with the specifics of particular school improvement plans (especially when they are couched as prescriptions), the central notion that schools are units of decision-making with their own incentive structures is important. The implicit view that professional interactions among principals and teachers can affect the quality of education is hopeful.

The effective schools research upon which school improvement approaches rely is often criticized for being too general. What is meant by strong instructional leadership, high expectations, or school climate? It is instructive to examine a description of what an effective principal does to create a client-oriented environment that supports the work of teachers.

In a recent article in the popular press entitled "Inner City Schools Lift Standards with Help of Strong Principals,"[25] two principals in Baltimore were highlighted as having dramatically increased their school's achievement test scores and having created not only an orderly climate but an academically exciting one. What did they do? Both established and enforced rules of discipline and class

attendance. Beyond that, the first—who is considered "a bit of a renegade who often ignores bureaucratic procedures"—brought in master teachers to guide other teachers and to find special teaching materials, and she brought in innovative, creative teachers while encouraging effective teachers already in the school and getting rid of poor ones.

The second principal believes in giving teachers "a disruption-free environment" and then a great deal of latitude in how to teach. He says "there is no single method of effective teaching." He does try to encourage teaching that increases students' "ambition, curiosity, and reasoning power."

The concepts of collective autonomy and responsibility guided by high standards of client treatment undergird their approaches. Lipsky's suggestions for resolving the seemingly impossible tensions between accountability and autonomy share certain of these concepts. He proposes that "decentralized units given full responsibility for practice" can "[make] the most of the reality that street-level bureaucrats primarily determine policy implementation."[26] As part of this approach, he suggests that we must "develop in street-level bureaucracies supportive environments in which peer review is joined to peer support and assistance in working out problems of practice."[27]

His approach includes peer assessments in the provision of services, worker contributions to determining assessment criteria, and ongoing consultation between workers and supervisors to provide systematic qualitative evaluations of actual practice.

[26] Lipsky, op. cit., p. 207.
[27] Ibid., p. 206.
Policies that would support this conception of quality control and improvement include staff development support for peer review and assistance processes and professional development models that allow interchange among analytic, supervisory, and service delivery roles for teachers. In this approach state policymaking is confined largely to providing incentives for professionalizing the practice of teaching. This type of solution will require a more serious investment in teacher recruitment, through student aid and higher salaries; teacher preparation, through more intense and practice-oriented teacher education; and teacher retention, through improved financial and professional working conditions coupled with serious evaluation and supervision.

The approach is risky for policymakers. It relies on people, and it relies on judgments. It places more weight on the development of client-responsive practices than on the definition of standardized practice. It assumes that those unable or unwilling to develop competence will be weeded out of the profession rather than have their damage controlled by prescriptions for performance. It assumes that others will become more capable by engaging in the joint construction of goals, definition of standards of good practice, mutual criticism, and commitment to ongoing inquiry. It assumes that investing in staff development, career incentives, and evaluation, i.e., in the street-level bureaucrats themselves, will improve the quality of service delivery.

The risks on the side of prescriptive policymaking, though, are at least as great. We have learned that many state policies have a short
life, are vague, and tend to be based on uncertain technologies. Of the once-popular policies reviewed in this paper, only teacher competency tests remain at the top of state agendas. As the true, expensive, and bureaucratic implications of policies like CBE and CBTE emerge, the popularity of the policies begins to recede. Minimum competency testing, while still in its implementation phase (and only this year for the first time used to deny diplomas in one state), no longer enjoys the prominence which it was receiving. Early in its history, it was seen as coming to cover the spectrum of high school graduation requirements; now it has been relegated to basic reading and arithmetic skills.

While these prescriptive policies may or may not achieve their intended effects, they always have other unintended and cumulative consequences. These additional effects must be weighed as one assesses the costs and benefits of a specific policy. In particular, attention must be paid to the collective impact of policies upon the role of classroom teachers—policies that in the aggregate may make teaching less attractive, thus lowering the quality of the teaching force which, in turn, causes policymakers to regulate in an effort to improve education.
THE SEDUCTION OF CENTRAL OFFICE ADMINISTRATORS

BY EFFECTIVE SCHOOLS RESEARCH

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The research on effective schools is quite seductive, especially to top-level policymakers and administrators in school districts and state governments. It is seductive because it seems impeccably logical and straightforward. And because at least some of the elements in the prescription seem tailor-made for policy mandates. We are told that an effective school should have a strong principal. And who can argue that a weak principal is better than a strong one?

We are told that an effective school should have a safe, orderly climate. And who will argue that a crime-ridden chaotic environment is better than a safe and orderly one?

We learn that an effective school should emphasize basic skills. And who will say that ignoring basic skills is better than paying attention to them?

We know that an effective school is one where teachers have high expectations. Who would plead the case for low teacher expectations?

We are told that such a school has a system for frequent, systematic monitoring of pupil performance that is tied to instructional objectives. And who can say that not knowing how pupils are doing is better than knowing how well they are doing? Or that assessing them based on things they've never been taught is preferable to assessing what has been taught?

The current generation of effective teaching research tells us similar things about classrooms. They emphasize basic skills in an orderly, businesslike environment. And they have mechanisms for frequent, systematic
assessment of student performance in the basic skills. Another great surprise in the recipe for an effective classroom is that the more time students spend learning, the more they learn.

It all seems so simple. But for policymakers the ingredients are not all readily at hand. Strong principals are not a dime a dozen. Teachers' expectations are not easily controlled from afar. Safe, orderly climates don't materialize out of thin air. In fact, some of these characteristics have a sort of chicken and egg quality about them when one talks of effective schools. What is left to policymakers and administrators is control—at least nominally—of the curriculum and of assessment, i.e., tests. And, of course, the effective schools research literature is based largely on basic skill test performance. A school is deemed effective if students perform well on tests of rudimentary basic skills. If one wants an effective school the answer seems self-evident: mandate basic skills instruction and then test a lot to see if it's happening.

There are only two problems with this straightforward prescription: (1) the adequacy of the research and (2) the effects that implementing it may have on people—who seem often to have a way of interfering with the obviously correct thing that is to be done.

First, the research. Now I will not quarrel with the whole of the effective schools or effective teaching literature. But I would like to take a moment to note that the current gospel about effective teaching—that is, that it consists of something called direct instruction—is not yet the King James version. In fact, one of the major current advocates of "direct instruction" summarized the effective teaching research 10 years ago and said that teachers should practice indirect instruction. I have
seen school district inservice flyers recently that summarize effective teaching for their teachers. Some of them instruct teachers to teach directly; others indirectly. One recommended both in different sections of the flyer. (Probably that was the only one that was right.) Let me explain:

Direct instruction includes many of the characteristics that are currently advocated in the effective teaching literature. As one of its proponents explains:

"It refers to teaching activities where goals are clear to students, the performance of students is monitored, questions are at a low cognitive level . . . , and feedback to students is immediate and academically oriented. In direct instruction, the teacher controls instructional goals, chooses materials appropriate for the student's ability, and paces the instructional episode. The goal is to move the students through a sequenced set of materials or tasks. Such materials are common across classrooms and have a relatively strong congruence with the tasks on achievement tests."

Direct instruction is characterized by single-answer questions and drill, large group instruction, and opportunities for "controlled practice." It takes place in an orderly, businesslike, teacher-controlled environment. Teaching behaviors that are discouraged include the use of higher-order, divergent or open-ended questions, exploration of students' ideas, student-initiated discourse or choice of activities, conversation about personal experience or about subject matter tangential to the immediate
objectives of the lesson at hand. This last set of behaviors is generally
termled "indirect instruction" and it is currently on the outs with those
who are searching for school improvement strategies that can be enforced
through policies.

The problem for policymakers is that there are about as many
methodologically credible studies that find increased achievement from
indirect instruction as there are that find increased achievement from
direct instruction. In both sets of studies, there are a fair number that
find that the effects of either approach differ for different types of
students, subject areas, and grade levels. This makes the search for the
one best teaching strategy rather difficult.

A more problematic finding is that the effectiveness of these two
very distinct sets of teaching behaviors varies depending on the goals
of instruction. Many of the direct instruction behaviors that seem to
result in increased achievement on certain kinds of standardized tests
and factual examinations are nearly opposite from those that have been
found to increase complex cognitive learning, problem solving ability,
and creativity. Indirect instruction has also been found more often to
increase students' independence, curiosity, and positive attitudes toward
school, teacher, and self.

It is futile at this point to argue which body of research is right
or wrong. But tight coupling of goals, objectives, content, and testing
lends itself more easily to policy mandate because it can be implemented
--at least superficially--in a concrete manner. One can mandate a curricu-

lum, check to be sure it is carefully adhered to, and give tests. And
when this is done, test scores go up. At least some kinds of scores do.
NALP results show that scores in basic skills (decoding, calculation) have been rising for the lowest achieving group of students, but falling for high achievers. Meanwhile problem-solving ability is steadily declining for almost all students. NSF, NCTE, and NAEP itself argue that the pursuit of basic skills has led to the demise of thinking. Perhaps this is too harsh a diagnosis. But it is thought-provoking.

This research poses 2 questions. One is, what is it that you want students to learn. The other is, what will make you believe that they have learned it? If there is one thing social scientists have discovered that has not yet been disproved, it is that if bureaucrats are evaluated by a performance measure, they will seek to maximize that metric at the expense of other areas of performance that are not measured. So if a certain kind of testing is emphasized, teachers will seek to maximize their students' test performance.

In a study that a colleague, Arthur Wise, and I are conducting at Rand we interviewed at length teachers from 3 mid-Atlantic school districts that have implemented mandated curricula tied to testing programs. Two-thirds of the teachers reported that the emphasis on testing caused them to change what they teach; 1/3 reported that they either teach testing or teach directly for the test. Well, what does this mean for what is going on in classrooms?

One high school English teacher told us how she no longer assigns essay assignments or tests because the curriculum is geared toward multiple choice, single answer competencies and tests. She said, "I feel that this is hurting the children rather than helping them because they don't have to write their own sentences."
An elementary school teacher in another district described how she was forbidden to use creative writing as part of her reading instruction program and was limited to the use of one basal reader which she felt did not meet the needs of many of her children. She commented, "It seems they're so concerned with back to the basics that they hinder good teaching at times. The teachers are very unhappy with the situation."

This teacher transferred into a Title I program where, ironically, she felt she had more freedom to use a wide range of techniques to meet children's needs.

A third teacher described how her principal made the teachers rewrite one of the standardized tests and then teach it to the students so they would do well when the real test was given. Two teachers who refused to comply were threatened with personnel actions. The teacher we spoke to said, "I've spent a lot more time when I would have been teaching doing testing."

What is it that actually happens when a tightly coupled curriculum is rigorously enforced? Here are explanations from teachers in each of the 3 school systems:

From school district #1:

"What they have done is that they have put down every objective that they want every child to learn from kindergarten through eighth grade. There are volumes of objectives—absolute volumes of objectives. Each child has to pass the objective at this level before he can pass the next objective. So when I tell you that I spend absolute hours testing these kids, I really feel like I have lost a lot of the math teaching time. I had the bright kids in the math—the top fifth and sixth graders
in math. I was at the top so I had to get done [testing] everything that they were supposed to have passed. As the system operates now, I would throw it out... For [the concept of] capacity, for measuring lengths and for weights and measures, what they really tested was whether or not a kid understood the decimal system. It really had nothing to do with [whether] these were kilograms and these were liters. So three separate times, along with testing decimals, I tested whether or not they understood the concept of decimals. So that was four times that I tested the same thing, and that was absurd, and it took absolute hours. It was time that took away from time that I could be doing something else. My other kids would leave the room to go to music and I would get out the sheets and start figuring out who needs what. [The amount of time I spent] was phenomenal and therefore it was lost on other things. The kids that I had all day long who were easier to plan for used to come in and I would be on the floor with this stuff all around me and they would say, 'All you ever do is math.' Some days they were right. That's an example of a program that they put in. Now the superintendent that put in that system wanted to do it for reading. He wanted to do it essentially, eventually for every subject that the district has. He is no longer with us, but his system is. It is expensive and their study shows that it makes no appreciable difference. Well, if it takes that much time and takes that much money and makes no differences, then I say throw it out."

From school district #2:

"So much of the teacher's time is spent in things other than reaching: record keeping, the rigid curriculum guide. The pre- and post-testing..."
and the massive record system to keep tiny little bits of it: when it is presented, when it is mastered, when it is re-taught and reinforced and post-tested. It is just mammoth. Then that is to go into a computer.

We have that in the office. But they have not yet been able to get the children down on a computer. A great deal of time and energy is spent with these sort of things and it limits sometimes taking off on a tangent of the interest of the children because you have a guide that isn't in that direction. You have to meet that guide because you know the children are going to have to take a test. You may really get into something that you don't want to leave, but you won't come back to that thing because the schedule demands a number of minutes for this and that. You can't always teach an integrated core. I like a core curriculum where you can really integrate everything into it. I think it has more meaning to kids. I have only been able to do that one year. I had to have special permission and that was the best year I ever had."

From school district #3:

"You're given a guideline and each day when the student comes to class you're supposed to have on the board behavioral objectives for the day and a list of instructional aids and what have you. So that means that each day that you come in, you're supposed to have this up on the board and you're supposed to accomplish a, b, c, whatever, in that day. It just doesn't work that way. The pressure is put on you to produce, produce, and produce. The administrators come in and they evaluate it haphazardly, they check to see are your goals up, do you meet these goals this day, during this class period? That's really unrealistic because it depends on the class. It depends on how prepared the students come to class."
If they come prepared with what you gave them the day before, and you can click it off one, two, three—fine. But if they haven't, man, you have to go over the material from the day before. Then you have to structure what you want to do today and you may be way off from what your goal is. It just makes it kind of rigid. I don't object to having behavioral goals, yes, you should. I don't object to you writing them on the board. But the idea that you should be able to produce, bang, bang, exactly that way every day is just unrealistic. A kid might have a question that is off the track. Do you say, "Well, no, I can't answer that question right now because I have these goals that I'm supposed to meet, and I just don't have the time?" You have to deal with what they want to know when they want to know it or you're going to lose their interest. But if your evaluator comes in and you have "heredity" on the board and you're talking about ecology or evolution or something, well then they're going to mark you down, because you're not doing what you have on the board."

Many teachers feel hassled by the paperwork burden that accompanies these kinds of programs and by the seemingly arbitrary way in which the rules are enforced. I will give you only one example of the many frustrated comments we heard from teachers who prefer to spend their time teaching.

"Well, you have to start out for each semester, and you have to give a full set of what you're going to cover, the goals and objectives, the way you're going to get there, class activities, and everything for the semester. You have to write all this down in triplicate for each class."
Then you have to do daily goals and objectives and those have to be on your board each day. Then you have to do your other paperwork. You have to have a triplicate for each of your classes. In other words, say you teach three geography classes. You can’t just do one for the three classes. You have to do one triplicate report for each of the three classes. We also have daily attendance reports. I keep my roll on a form 39, I think it is. I take my attendance for each class and homeroom on this roll. Then for home room I have to copy it over on attendance cards. We also have to fill out a form 50, a little white sheet where you put who’s absent that day and send down to the office. At the end of the month you also have to fill out a form listing any student who has been absent more than two days—you have to put their name, age, and home address and phone number and send that to the office. Now you also have to send an individual form each time any student is absent any more than two days from your home room. You have to fill out an individual form and send it to the office. Now why the monthly form couldn’t be used for that, I don’t know, but it can’t be. You have to do an individual one. Then, after you figure up your grades you have to put them on your computer forms. You also have to put the attendance on those. So that’s five different things with the attendance on. For our [curriculum] paperwork, we have to submit it and it has to be OK. Well, the first time we did it, most of the teachers had theirs returned, saying they weren’t adequate and to do them over. The first time I did it, I did it the way I planned to teach and what I planned to do and I was told it was completely wrong, do it again. So I went to one of the social studies teachers who had had hers approved the first time and I took and almost copied hers basically
word for word and turned it in. It still wasn't right, even though hers
had been approved the first time. So I went back and did it a third time.
Basically I did it over like I did it the first time, the way I planned
to do it anyway, and I turned it back in. Not only was it approved, it
was highly recommended, and I was told would I please help some of the
other social studies teachers with theirs. This is the kind of thing that
nobody knows what is supposed to be done. One person will approve it, the
next person will disapprove the same thing. It's just a bunch of bull.
The way it's being done, it is used more as a punitive measure than
anything else. People are looking at this and they're saying, "Why? This
is supposed to be an aid, it's supposed to help me teach the students.
It's not supposed to be something somebody can hold over my head." I
know two teachers it has caused to leave and I know of one who says if he
can find a job, he'll be gone at the end of this year."

We found some few teachers who appreciated the curriculum programs
because they said they no longer had to plan for their classes or worry
about making up tests. It is easier they said, not having to think about
it. However, most of those who talked enthusiastically about their students
and the excitement of teaching felt they were being pushed to leave the
profession. We found ourselves wondering what effects a rigidly enforced,
standardized program with a detailed reporting system might do to the
quality of teachers attracted to and kept in the profession.

When we asked if there were any school policy that would make teachers
consider leaving teaching, 45 percent of our sample said that increased
standardization of the curriculum or prescription of teaching methods
would make them leave. Most said they were already considering leaving. Here are a few of their comments:

"I feel sorry for any teacher who is interested in teaching. It is going to be much worse in the years to come. For those who like the record keeping—and there are plenty of them; pathetic teachers but great record keepers—this would be a way of them moving up the ladder. It will help them. It won't help the good teachers. It will help the people who teach by the book [because] it is safe and it doesn't require any imagination."

"The only thing that would make me leave teaching is if they ever computerize all these objectives and I have to sit there and check off forms for 38 kids and 250 different objectives. I think if it got down to that, I think I might resign simply because I would feel like I was spending more time on forms than on kids."

"My most basic concern right now is what I'm seeing happening to education in this district. I'm seeing many more restrictions than there used to be and not as much innovativeness. Those things concern me [because] I think we need to keep looking at the individual child. I think we need to retain a certain amount of creativity. We're talking about back to basics, I don't want to see the creativity lost. I'm afraid that that's happening in some situations. Innovative teachers are being squashed because of this back to basics. I'm wondering if this is coming from the district, if they want this kind of thing going on. If they want to take every bit of say so away from the teachers. I think so because the emphasis seems to be on objectives and goals and often times they forget about the children who are involved in the learning
process. They just set up these things that they think should be covered and then spend a lot of money on equipment and materials to cover these goals. If you ask most any teacher given a choice of new materials or smaller class size, they'll take the smaller class size any day. Any creative teacher can use those materials and change them in such a way that she can manage and get by. I feel that a lot of time in this district is spent on writing goals, writing curricula, revamping curricula, using a lot of paper and a lot of time and a lot of jobs doing the same thing every year. There is some friction there because the child is oftentimes not even considered. If this continues, the county is going to lose its best teachers."

What does all of this mean for encouraging effective schools and effective teaching? I don't think it necessarily suggests that having goals and objectives and strong basic skills instruction is wrong. I think it suggests that how one seeks to improve teaching is as important—probably more important—than what one's goals and objectives are. Creating people-proof packages for improving instruction and then establishing elaborate accountability systems may have the effect of helping the least competent or committed teachers, but may also have the effect of driving the more competent and committed teachers out of teaching. Depending on how it is implemented, it may also have the effect of rewarding principals for managing paperwork rather than managing people. As one teacher remarked:

"The principals have gotten to the point now where they have no time to spend really seeing how the school is run because they are stuck in their offices filling out ten thousand more forms for somebody else to shuffle."
A good principal—a strong principal—in most teachers' views is one who keeps the bureaucracy off their backs, gives them material and psychological support, and then lets them teach in their own ways. I think this is consonant with the effective schools research, but I think many who would apply that research view a strong principal as one who rigorously enforces district policies.

Just this morning an article appeared in the Wall Street Journal entitled: "Inner City Schools Lift Standards with Help of Strong Principals." Two principals in Baltimore were highlighted as having dramatically increased their school's achievement test scores and having created not only an orderly climate but an academically exciting one. What did they do? Both established and enforced rules of discipline and class attendance. Beyond that, the first—who is considered "a bit of a renegade who often ignores bureaucratic procedures" brought in master teachers to guide other teachers and to find special teaching materials, and she brought in innovative, creative teachers while encouraging effective teachers already in the school and getting rid of poor ones. She lobbied for an advanced academic program (in a school with most of the children in free- or reduced-price lunch programs) full of non-basic subjects taught in non-basic ways.

The second principal believes in giving teachers "a disruption-free environment" and then a great deal of latitude in how to teach. He says "there is no single method of effective teaching." He does try to encourage teaching that increases students' "ambition, curiosity, and reasoning power."
My final recommendation from my research and my knowledge of research on teaching is that creating effective schools requires a great deal more attention to people than it does to curriculum policies. Teacher- and principal—selection, retention, and evaluation are critical features of district-level policymaking. These activities should be given as much time and financial support as curriculum and testing efforts, and they should focus as much on the support of outstanding people as they do on the control of less competent people in the system. In fact, teaching policies should be designed to find those outstanding people before their frustration drives them away and give them as much autonomy and freedom to perform as the system can possibly tolerate.

It is often difficult in large organizations to create and enforce policies that deal selectively with problems of non-performance and good performance. It is difficult to allow autonomy for those who need it while dealing with inadequacies that seem to result from too much autonomy. But until we know unambiguously exactly what teachers must do to be effective or what a principal must do to be strong, we must rely on the judgments of those who are energetic and committed at the school level and find help for those who seem to be floundering— or encourage them to find a more suitable line of work. If we try to force them to do what some researchers or administrators think is best, we will succeed only in discovering more quickly and painfully the limits of research and the dysfunctional consequences of administrative controls.
Dallas superintendent Linus Wright has recently devised a remarkable answer to the quest for better teachers and better teaching. Beginning this year, the Dallas merit pay plan will award salary bonuses to teachers on the basis of students' standardized achievement test scores. Eschewing other forms of teacher evaluation because of their expense and subjectivity, Dallas has made test scores the single measure of teacher competence. This move is notable because it is the farthest extension thus far of the current logic of American educational reform.

The Dallas plan is only one of a rapidly proliferating group of reform proposals triggered by the recent series of Commission reports deploring the declining quality of American education. The reports have spurred a wide-ranging debate on the question of how to achieve educational excellence. Unfortunately, two other important questions have been largely ignored, namely "What is excellence?" and "How do we know when we've got it?"

This is a curious situation, which, in Lewis Carroll's words, is growing curiouser and curiouser as the reform movement gathers speed without pausing to define its goals. The Wonderland quality of this movement results from the fact that, although numerous concepts of "excellence" have been advanced, only one measure of excellence is used to frame the debate. That measure -- student scores on standardized, multiple choice achievement tests -- is used to establish that we don't have excellence now, and it will be the means for knowing when we have
excellence once again. There is only one problem with this measure. It is largely unrelated to most of the things that we say we want when we set out in pursuit of educational excellence.

Educational excellence, according to the Commission reports, involves the teaching of "higher order" intellectual skills, such as the abilities to analyze, draw inferences, solve problems, and create. It entails abilities to speak, write, and reason intelligently. It includes proficiencies in advanced science, mathematics, foreign language, and the humanities and the arts. In short, educational excellence is different from educational mediocrity because it emphasizes students' ability to think well and perform challenging tasks rather than merely decode and compute.

Using standardized tests as the sole measure of educational excellence, however, confuses the medium and the message. The measure is ill-suited to the goal.

Standardized, multiple choice achievement tests do not, of course, measure creativity. They assess one's ability to find what someone else has already decided is the one best answer to a predetermined question. The tests do not measure the most important aspects of problem-solving ability -- the ability to consider and evaluate alternative explanations, to speculate on the meaning of an idea based on first-hand knowledge of the world, to synthesize and interpret diverse kinds of information, to develop original solutions to problems.

Moreover, the tests do not really measure performance of any kind. Performance, of course, means the ability to do something; it is active and creative. Recognizing a correct answer out of a predetermined list of responses is fundamentally different from the act of reading, or
writing, or speaking, or reasoning, or dancing, or anything else that human beings do in the real world.

Being able to recognize misspelled words and identify synonyms does not necessarily mean that a person can write coherently or even grammatically. Being able to conjugate verbs or decode passages in a foreign language does not mean that a person can speak or write in that language. The converse of these statements is also true. One can speak a foreign language fluently without understanding what it means to conjugate a verb, or write well without knowing what synonyms are. It is even true, as the International Reading Association concluded a decade ago, that one can master the subskills tested on standardized tests of reading achievement, without being a good reader, and vice-versa. That is, there is no clear, causal connection between an identifiable group of subskills and the actual act of reading.

Standardized tests do measure something. They measure the very particular recognition of some very particular skill applications pretty well. They can tell you if a test-taker can recognize correct punctuation or spelling, if he or she can find what the test-maker considers to be the topic sentence in a paragraph or the correct answer to an arithmetic problem or the closest synonym to a given word. They will not tell you the full range of a child's achievement even in these areas, however. Because of the way the tests are constructed, they don't include questions to which too many, too few, or the "wrong" subset of students know the answers. In the final analysis, standardized tests turn out to be a very narrow gauge of what students actually know, either individually or collectively.
Despite these limitations of standardized tests, we have adopted them as the single relevant performance measure for schools, students, and teachers. We use this measure because it is cheap, easy, and convenient. It seems to be objective. It is a nice tidy variable for data collectors, decisionmakers, and the media. It is more simple than spending the time and energy to make complicated human judgments about what students are learning and teachers are teaching. We use this measure increasingly to make decisions about students, about educational adequacy, about how to design the curriculum, and about how to manage schools. In Dallas, it will be the sole measure of teacher competence.

Unfortunately, when standardized tests are used as management control devices, rather than as sometimes useful sources of information, a set of bureaucratic incentives is created that distorts the educational process as well as the curriculum. Rather than being a sample of what students know, test items soon become the universe of what is taught and learned. This is true not only of the topics that are tested but also of the types of thinking and the modes of performance required by the tests.

Researchers are beginning to discover that, as more and more important decisions are based on test scores, teachers are more likely to teach to the tests, for the tests, and the tests themselves. The more a school district designs its curriculum around standardized tests, the less teachers are encouraged or even allowed to spend time on nontested subjects (science and social studies are big losers here, along with the arts) or on nontested activities, such as writing, speaking, problem-solving, or real reading of real books.
After recently completing a massive study of over 1000 American classrooms, John Goodlad confirmed that this is just what has happened in our schools. He found that students listen, respond briefly to questions, read short sections in textbooks, and take multiple choice quizzes. They rarely plan or initiate anything, create their own products, read or write anything substantial, or engage in analytic discussions. In Goodlad's words, we have drowned out the message that "there are goals beyond what the tests measure" and that "pursuing these goals calls for alternative teaching strategies." That many creative, innovative teachers are frustrated with this state of affairs seems to trouble test-using policymakers not at all.

The Dallas school administration has only extended the logic of American educational reform to its outer limit. Having forgotten the history of Wonderland, they seem doomed to repeat it. Because this history is not well-remembered, I will retell a bit of it here.

Once upon a time in Wonderland, a prestigious national commission declared that the state of health care in that country was abominable. There were so many unhealthy people walking around that the commission declared the nation at risk and called for sweeping reforms. In response, a major hospital decided to institute performance measures of patient outcomes and to tie patient dismissal decisions as well as doctor's salaries to those measures. The most widely used instrument for assessing health in Wonderland was a simple tool that produced a single score with proven reliability. That instrument, called a thermometer, had the added advantage of being easy to administer and record. No one had to spend a great deal of time trying to decipher
doctors' illegible handwriting or soliciting their subjective opinions about patient health.

When the doctors discovered that their competence would be judged by how many of their patients had temperatures as measured by the thermometer as normal or below, some of them complained that it was not a very comprehensive measure of health. Their complaints were dismissed as defensive and self-serving. To ensure that their efforts would not be subverted by recalcitrant doctors, the administrators then specified that subjective assessments of patient well-being, such as the reported presence or absence of pain, would not be used in making decisions. Furthermore, any medicines or treatment tools not known to directly influence thermometer scores would no longer be purchased by the hospital administration.

After a year of operating under this new system, more patients were dismissed from the hospital with temperatures at or below normal on the thermometer. Prescriptions of aspirin had skyrocketed, and the use of other treatments had substantially declined. Many doctors had also left the hospital. Heart disease and cancer specialists left in the greatest numbers, arguing obtusely that their professional obligation to their patients somehow required them to pay more attention to other things than to scores on the thermometer. No one understood what they meant by that, and since thermometer scores were the only measure that could be used to ascertain patient health, there was no way to argue about whether they were right and wrong.

Some years later, during the centennial Wonderland census, the census takers discovered that the population had declined as mortality rates had dramatically increased. As people in Wonderland were wont to
do, they shook their heads and sighed, "Curiouser and curiouser." And they appointed another commission.
I. THEME FOR: TEACHER PROFESSIONALISM: A RADICAL APPROACH TO IMPROVING SCHOOLS

1. As the public and policymakers lost confidence in the public schools, they legislated learning and bureaucratized the classroom.

2. As policymakers sought to create and impose standards through externally managed testing programs, etc., they began to make teachers practice their craft in ways which prevented them from serving their clients as they saw fit. Thus, bureaucratization was associated with the deprofessionalization of teaching. Standardized testing and standardized curriculum leads to standardized teaching which, almost by definition, does not meet the needs of students as perceived by teachers.

3. These conditions of teaching work have made growing numbers of teachers, especially the more talented, become dissatisfied with teaching. They have also made it difficult to attract and retain talented young people. Low salaries and new career opportunities for those who traditionally formed the talent pool for teaching have exacerbated the problem.

4. Bureaucratic controls as a substitute for public confidence in the talent of teachers leads to a downward spiral. Because policymakers have not trusted teachers to define the curriculum and certify when students have learned it, they have made teaching less tenable.

5. The choices for policymakers are two: (1) continuing efforts to find better bureaucratic controls; and (2) a new approach which will
attract more talented people to teaching. This will permit the public to have confidence so that teachers can make professional decisions.

6. There are residual issues, however. The schools are public institutions which must take direction from the public. Hence, we must find ways to establish and impose standards which do not interfere with teachers' professional judgments. And/or, we must reform teacher education, certification, and evaluation so that they reinforce a standard of professional practice which is accepted so that all a school board need decide is which courses to offer.

There are as we will see a variety of means by which policymakers may try to improve education. Leaving aside, for the moment, the content of instruction the means require regulating who can teach, regulating the process of teaching or regulating the outcomes of teaching, that is, student learning. We argue that regulating process or outcomes inevitably creates a more elaborate school bureaucracy which inevitably must fail to achieve all but the most trivial goals of education. Goal displacement will force attention to the goals which are measured. Not only does this attention crowd out the unmeasured goals, it even distorts the measured goals as the test items or test ceases to sample what a student knows (the traditional function of tests) but becomes the universe that he will be taught. Regulation of outcomes alone is enough to cause some good teachers to become frustrated with teaching. But when it is coupled with regulation of the teaching process as when methods of instruction are prescribed, good teachers are driven from the field. Bureaucratization then is doubly destructive.

A second approach for policymakers to improve education is to better regulate who can teach. If policymakers can come to have confidence
in who is teaching then they can allow professional controls to operate. This will require:

- Reforming teacher education so that it is intellectually rigorous and actually prepares people to teach.
- Reform teacher certification so that prospective teachers must prove that they know their subject-matter and can actually teach.
- Clarify the role of the teacher and the administrator so that administrators facilitate rather than manage teachers.
- Commence recruitment efforts so that some talented young people will enter teaching.
- Institute rigorous evaluation procedures so that incompetent new teachers are eliminated as are experienced teachers who cease to perform competently.
- Institute a career progression so that those competent teachers who choose can exercise leadership without ceasing to be teachers.
- Value the teaching of independent thinking, creativity, problem solving, and writing rather than performance on tests of basic skills.
- Institute procedures which allow teachers to enforce a professional standard of practice.

The last becomes the quality control mechanism. If policymakers can be assured that a quality control mechanism is operating, then bureaucratic regulation is rendered largely superfluous.
Course requirements mandated at either the state or local level communicate general content expectations to teachers. The standards of practice communicates not only proper instructional strategies but also specific course content expectations. These, of course, are under continuous evolution as knowledge is generated and transmitted.
TEACHER EDUCATION

Teaching remains one of the few careers requiring a college education for which an undergraduate degree suffices. The undergraduate program combines liberal arts courses, education courses (e.g., educational psychology), methods courses (e.g., teaching reading), and practice or student teaching. The preparation for teaching is thus combined with the traditional liberal education function of the undergraduate years. Criticism abounds. Professors of education complain that prospective teachers are neither liberally educated nor adequately prepared to teach specific subjects. Prospective teachers complain that they do not feel adequately prepared to teach; experienced teachers complain that they were not adequately prepared to teach. The public, policymakers, and school board members do not have confidence in the graduates of teacher education programs.

There are a few suggestions for reforming teacher education, some of which are contradictory. Some believe that teachers should be well-educated in the liberal arts, so that they can be better transmitters of our cultural and scientific heritages. Others believe that teachers should be fully grounded in the subjects which they will teach. History teachers should have at least undergraduate majors in history, if not masters degrees in history. Elementary school teachers should have solid courses in all fields taught in the elementary school. Some believe that little or no preparation in pedagogy is required; others that preparation for teaching should be extended to five or six years. Some believe that preparation should be postponed to the graduate level so that schools of education can function more like other professional
schools. Others believe that clinical or practical teaching experience should begin very early so that unsuitability to teaching can be discovered early.

One approach is to extend the teacher preparation system already in place, perhaps by creating a combined bachelor's/master's program, running five or six years. This would accommodate most of the preceding suggestions. It would allow for more courses in liberal arts, subject matter to be taught, education, methods, and practice teaching. It would accommodate early exposure to practice teaching.

It would, however, require an early career decision by a college student. Those interested in teaching would have to commit themselves earlier than their peers interested in other fields. Conversely, those who subsequently decided to become teachers would presumably have difficulty entering the teacher preparation process.

More significantly, though, this approach, with liberal education, professional education, and practice teaching intermingled, might be seen as only a modest departure from current practice. Indeed, for those opposed to the current practice, it would be seen as more of the same. If the number of education and methods courses were increased, then those opposed to current practice would see it as even more of the same.

While the approach sketched here is inherently neither bureaucratic nor professional, it is an approach which would not detract from the influence of schools of education; indeed, it would increase it. To the extent that the low prestige of teaching is associated with the low prestige of schools of education, this approach will do little to enhance the prestige of teaching.
More subtly, and more profoundly, however, those associated with schools of education sometimes contribute to a bureaucratic conception of teaching. Some characterize teaching as a science, thus suggesting a predictable relationship between educational means and educational ends. A belief in the existence of such relationships predisposes school systems to adopt and teachers to accept bureaucratic routines intended to master known educational ends. Some help to devise rationalistic approaches to teaching such as competency-based education. These are used to give substance to bureaucratic routines. Many emphasize a rational planning process embodied in lesson plans. Acceptance of the process (which begins with formal statements of goals) is compatible with the hierarchical imposition of goals. Some emphasize the importance of standardized testing which permits external evaluation of the work of teachers. In short, to the extent that educational methods loom larger in the preparation of teachers, there exists the possibility that teachers will be taught techniques which reinforce a bureaucratic conception of teaching.

An alternative approach is to extend and modify the teacher preparation process by requiring an undergraduate degree in the liberal arts as a condition for entry to a master's program in education. This approach would also accommodate many of the suggestions listed earlier. It would allow for more courses in liberal arts, subject matter to be taught, education, methods, and practice teaching. It would not, however, allow for early exposure to practice teaching.

The approach would, however, defer the career decision to a later age—a stage comparable to the stage at which entry to other professional
education also occurs. An incidental effect, and possible benefit of the approach, is that it would make teacher education more comparable to other types of professional education.

More significantly, though, this approach would intensify liberal arts and subject matter preparation. Presumably, prospective secondary school teachers would major in the fields in which they might wish to teach; prospective elementary school teachers might major in any of the liberal arts, with some choosing fields to be taught (e.g., English) and others choosing fields that might facilitate teaching (e.g., psychology). The effects of this approach on teacher supply in the various disciplines is hard to predict. College freshmen who are considering teaching as one of several alternatives would not be deterred from teaching by being forced to make an early career decision. College seniors who were considering teaching as one of several alternatives might be lost to teaching by not having been forced to make an earlier career decision.

The approach would be seen as enhancing the substantive background of prospective teachers. To be sure, some schools of education, especially for prospective secondary school teachers, rely on liberal arts departments for subject matter preparation but many do not. Moreover, many schools have substantive courses which are especially targeted at prospective teachers. In general, the approach would increase the exposure of prospective teachers to courses which are clearly designed for liberal arts majors. Subsequently, these liberal arts graduates will enroll in schools of education for education and methods courses and practice teaching.
While the approach sketched here is inherently neither bureaucratic nor professional, it might diminish the influence of schools of education, and certainly would diminish the time over which their influence is exercised. To the extent that schools of education promote an inappropriately rationalistic view of education, this approach would favor a professional conception of teaching. Moreover, when this approach is coupled with reformed certification procedure (to be described below) schools of education will be sharing control over entry to the profession.
Until recently, the certification of teachers was more or less automatically associated with graduation from an accredited school of education. A person who successfully completed a program of teacher preparation in a school accredited by an accreditation association and/or approved under a state approval program was certified to teach. Recently, there has been a trend toward the use of standardized tests for certification. Not only does the candidate have to be graduated from an accredited school, he or she must pass a standardized test which purportedly demonstrates that the candidate is competent to be a teacher. The most widely used test is the National Teacher Examination of general education (liberal arts) professional education and specialized subject areas. The standardized tests have been imposed by states as a means of ensuring competence in the teaching force. The legislative pressure for improving the quality of the teaching force shows no signs of abating in the near future.

As we contemplate alternative approaches to teacher certification, it may be important to examine the components of effective teaching. Teachers must know the subject matter that they are to teach. They must know how to teach that subject matter. Knowing how to teach is also dependent on an ability to relate to students. And it would help if the teacher is generally well-educated.

Tests are effective for ascertaining certain of these competencies but not effective for ascertaining others. Tests are reasonable indicators of competence in subject matter and general education. Common
sense bears this out; the public believes it. Practicing teachers believe that a test of academic competence is a good idea. Because tests are accepted as the measure of cognitive knowledge, teachers' scores on tests of cognitive knowledge are taken as prima facie evidence that the teachers know the subject matter being tested. While the equation is open to some dispute (tests are a less than perfect measure of what a person knows), the equation is so widely accepted that it appears likely that its use will grow.

Tests of pedagogy are another matter. Research has so far failed to produce the kind of evidence necessary to link specific teacher actions with specific student learning. Absent such a research base, it is not surprising that tests which purportedly measure teaching competence (based on knowledge of pedagogical techniques) fail to predict teaching performance. Teachers themselves do not believe that tests of pedagogical knowledge predict teaching performance. Consequently, while the use of statewide testing for teacher certification is spreading, its use is not justified.

More subtly and insidiously, the persistence of tests of pedagogical knowledge are inevitably based upon the belief that there is "one best system" of teaching. Advocates of testing will urge that even if a current version of the test is less than perfectly reliable and valid, further research will improve the test. Meanwhile, the search for the one best system of teaching goes on. The belief in the ultimate discovery of the one best system is, of course, compatible with the bureaucratic conception of teaching. It is a search for the procedures
to be prescribed by the managers of the bureaucracy for the employees of the bureaucracy.

An alternative to tests of pedagogy for certification would be assessments of on-the-job performance. Under this approach a teacher would not be fully certified until he or she could demonstrate competent performance at teaching. Thus, a person would not become a certified teacher for some period of time (one to three years) until after graduation from a school of education.

For practical reasons, the locus of the certification decision would thus shift from the school of education to the employing school district. While a variety of actors and evaluation procedures might be involved, one will be discussed here. Many of the standard approaches to teacher evaluation are based upon procedures in which a supervisor briefly observes a teacher and checks off a list of desired teaching behavior. This approach has never been validated through research. As an alternative, a system in which one or more experienced teachers work with and then evaluate a new teacher can be devised. In such a system the experienced teachers can enforce proper standards of educational practice. The importance of this approach is that it does not rest on the currently indefensible posture that there is one best system of teaching. Experienced teachers can exercise judgment concerning whether a new teacher can teach. They can judge whether the teacher has mastered the various methods of instruction and uses them appropriately. There can be the recognition that different teachers may favor different methods and that different students require different methods. There can be recognition of the school system's role in shaping curriculum. Flexibility can be accorded the new teacher so long as he or she neither
violates the expectations of the district nor the standards of practice.

Obviously, this approach places the enforcement of standards of educational practice and the certification decision in the hands of teachers. Moving these decisions away from schools of education is a by-product of the belief that the best way to find out whether a person can teach is to watch them actually teach. This cannot be tested in artificial settings and more importantly cannot be fairly determined until a person has had an adequate supervised internship. While this approach does take time, and some students will be exposed to inadequate instruction, two protections will help to minimize the damage. First, new teachers will still have to undergo supervised student teaching as part of their school of education experience; those obviously unfit to teach should be eliminated by this method. And, the approach calls for intensive supervision of new teachers by experience teachers. Thus, students will have an additional protection against the effects of not-yet-competent or incompetent new teachers.
BETTER SCHOOL TEACHERS OR BETTER SCHOOL FACILITIES?

Recent commission reports advocate a variety of means by which to improve education. Perhaps because each of the reports lacks a coherent philosophy or framework, each makes recommendations some of which are internally inconsistent. One example, from the Education Commission of the States' Action for Excellence reveals a possible inconsistency. On the one hand, the report recommends that states and localities "express a new and higher regard for teachers and for the profession of teaching" (emphasis added). Three pages later the report recommends that "the school principal in each school be acknowledged as the school's leader and as the manager of its instructional program." The prevailing conception of the principal's role as informed by the "effective schools" literature would contravene a professional conception of teaching. The report advises:

The principal should be freed from distractions; encouraged to give priority to improving classroom instruction; given sufficient discretion over personnel and fiscal planning; and put squarely in charge of maintaining the school's morale, discipline and academic quality. This means that in many places, the prevailing definition of the principal's role must be changed to put the principal squarely in charge of educational quality in each school.

But strengthening the principal's role in this manner implies that the principal is to be in direct control of teacher work activities. In

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* p. 37.
** p. 40.
*** p. 40.
this conception, the principal treats teachers as laborers or as bureaucrats, employees whose actions are to be governed by rules.

But seeing teachers as professionals implies a very different role for the principal:

For teachers to work as professionals, principals need to view themselves as "administrators." Effective administration involves the maintenance of adequate support services (such as budget making, food services, transportation, etc.) and the articulation of a system of ethical norms which are expected to support a professional work structure. Principals need to understand the details of support service operations and to know how to keep these support services functioning efficiently. Rather than personally evaluating teacher job performance, principals being asked to adopt this view of teaching need to be trained to organize and implement a system of peer review. Professional teachers need to believe that they have a formal responsibility for evaluation of their peers in order to prevent malpractice and secure public respect for the profession.

Thus, it is not enough to say that we should improve education by improving the quality or the performance of principals and teachers. At one level, of course, the recommendation is unexceptionable. At another level, however, we see that we must choose the role which we expect teachers and principals to perform.

The bureaucratic and professional conceptions of the teaching role contain different expectations of teaching work. The bureaucratic conception implies that curriculum planning is done by administrators and specialists; teachers are to implement a curriculum planned for them. Supervision of teachers' work is conducted by superiors whose job it is

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** Wise.
*** Mitchell and Kerchner, p. 236.
to make sure that the teacher is implementing the curriculum. The product of the teacher's work, that is, student learning, is to be inspected through examinations prepared by others, sometimes administered by others, and always graded by others. In the pure bureaucratic conception teachers do not plan or inspect their work; they merely perform it.

In the professional conception of teaching work, teachers plan, conduct and evaluate their own work. Teachers anticipate the needs of their students, assess the resources which are available, take cognizance of the school system's goals, and decide on their instructional strategies. They conduct instruction, modifying their strategies to make sure that their instruction meets the needs of their students. And they assess whether the students have learned, reporting through grades and report cards to students' parents and school officials. Supervision of teachers is conducted largely by peers who make sure that appropriate standards of practice are being employed. Where there is school-wide or system-wide planning, teachers play a major role.

In reality, school systems, in varying degrees, operate using a mixture of bureaucratic and professional conceptions of teaching, creating for the teacher the classic dilemma of the "street-level bureaucrat":

The essence of street-level bureaucracies is that they require people to make decisions about other people. Street-level bureaucrats have discretion because the nature of service provision calls for human judgment that cannot be programmed and for which machines cannot substitute. Street-level bureaucrats have responsibility for making unique and fully appropriate responses to individual
clients and their situations. . . . Other considerations cannot be sensibly translated into a directive agency, guidelines, although it is on behalf of their agencies that street-level bureaucrats are accountable to clients. It is a contradiction in terms to say that the worker should be accountable to each client in the fashion appropriate to the presenting case. For no accountability can exist if the agency does not know what response it prefers, and it cannot assert a preferred response if each worker should be open to the possibility that unique and fresh responses are appropriate.

The dual accountability of the teacher—to student and to agency—consumes a lot of the teacher's energy. For the last two decades, schools have been becoming more bureaucratic, a development which has not produced the learning which our policy system desires. As the policy system confronts the prospect of change, it ought to decide whether it wants to promote a bureaucratic or professional conception of teaching because, as we discuss below, each has implications for the kind of teaching force which will be needed.
TEACHER RECRUITMENT

Although for the last decade there has been a general surplus of teachers, shortages of mathematics and science teachers now exist. Spot shortages of other types of teachers have also begun to develop. Due to demographic, social and economic trends, a general shortage of teachers appears likely by the mid-to-late 1980's. During the last decade, the quality of those entering the teaching force has been declining. Without major changes in society or the educational system, the trend is likely to continue.

The declining talent pool for teaching is perhaps more troublesome because it points to profound problems in the occupational structure of teaching. Among those who are "recruited" to education as a line of work (education majors and those who have taught in elementary or secondary schools), those who actually enter and remain in teaching tend to be the least academically able (Vance and Schlecty, 1982). That is, recruits who do not end up taking a teaching position and "defectors" (those who leave after a few years) are generally more academically able than those who enter and stay in the teaching force. As Vance and Schlecty observe, "Teaching is an occupation that selects by attrition; high-scoring persons are less likely to enter and more likely to leave" (p. 19). Their work points to the interrelatedness of the processes determining the pool of teaching talent comprising the teaching force, from occupational choice through training, certification, hiring, and retention.

Our own research suggests that the more academically-oriented teachers are more likely to chafe under the constraints imposed by
bureaucratic management of schools. When combined with Vance and Schleety's findings concerning the declining measured academic ability of those entering an increasingly bureaucratic school system, the inference of a connection is suggested. Perhaps it is the more academically able teachers wishing to be treated as professionals who are repelled from teaching. Conversely, perhaps it is the less academically able who are willing to teach in a bureaucratic environment. While the same result can be explained by more occupational alternatives being available to the more academically able, that explanation also underscores the question of what sort of person we want teaching in our schools.

It is generally assumed that the economy and society of the future will require a more educated citizenry; certainly to succeed an individual will have to be able to think, write, analyze, discuss and create. To teach these higher order skills probably requires teachers who themselves have these skills. Yet these may be precisely the people who are being repelled from rather than attracted to teaching. Those teachers who are being attracted to and who remain in teaching are those who are more likely to feel comfortable in a bureaucratic setting. In turn, they are more likely to teach according to the standard curriculum, to follow the bureaucratic routine, to emphasize the basis and to feel comfortable preparing students to pass achievement tests.

We have yet to speak of the role of low compensation which, when combined with unattractive working conditions, conspires to make teaching unattractive to those with other options. By any relevant comparison of starting, median and top teachers' salaries are low. Much of the coming
general teacher shortage can be solved by simply raising salaries somewhat. But raising salaries alone is not likely to attract people who want to practice an education profession. Thus, policymakers need to decide: do we want to staff the schools with bureaucratic functionaries or with professional teachers?

To attract talented teachers will require a three-part strategy. In the first place, given the likely slow pace of real salary increases for teachers, talented young people will need to be induced to become teachers. Competitive fellowships should be made available to those who are interested in becoming teachers. These would likely need to be financed by the federal government. If the federal government were interested in fostering the professional conception of teacher education (described earlier), then it might permit their use only at universities which required a bachelor's in a liberal arts for admission to a master's in education. The fellowship would then need only cover the period of master's study.

The outcomes of the fellowship program would be several. A cohort of academically talented people would be attracted to teaching. There would be national affirmation of the importance of teaching. Teaching would gain new respectability. Others who were not able to receive a fellowship but who were nonetheless able might still enter teaching. With a view that talented people were becoming teachers, the efforts to regulate the schools in the interest of improving them might decline. In turn, they would become more attractive to talented teachers.

The fellowship program would be costly but not prohibitive. If the master's program were a two-year program, it might cost $25,000 per
participant. The number of schools of education graduates is estimated to be 150,000 by 1987. A reasonable number of fellowships might be 5 percent of the graduating class or 7,500. The cost would be $187,500,000 for the second year and thereafter. Variations on the number supported, the level at which they are supported, and the duration of the support could vary.

In the second place, we must reform the process of becoming a teacher so that it is intellectually rigorous, prepares people to teach, and screens out those who cannot. The sections on teacher education and teacher certification have described possible changes.

In the third place, teaching must be reformed so that those who are recruited and who are able will be willing to remain in teaching. Most of the sections of this paper describe possible changes.

We have placed special emphasis in this section on attracting especially talented people to be teachers. This we think is necessary to create support for the concept of a teaching profession. But obviously not all teachers will be especially talented. We nonetheless believe that the vast majority of teachers will perform better under a professional rather than bureaucratic regime. For those who do not measure up, we describe in the next section a rigorous teacher evaluation system, to remove from teaching those who cannot.
TEACHER EVALUATION

The traditional approach to teacher evaluation is based upon a bureaucratic model of organization. The principal or another bureaucratic superior of the teacher directly inspects the work of the teacher (i.e., observes the teacher engaged in the act of teaching). The principal typically assesses the observed behavior against a list of criteria furnished by the central administration. The teacher then is given an overall score by the principal.

The traditional model causes discomfort to both principals and teachers for the model assumes that teaching is planned, stable, and predictable and principals and teachers know that it is not:

Some jobs are structured primarily through "rationalization." That is, specific tasks are preplanned (by either managers or the workers themselves) and then undertaken as a matter of routine enactment of standard operating procedures. In other job settings, however, tasks are primarily adaptive--requiring accommodation to unexpected or unpredictable elements within the work situation. In this case, the task definitions cannot be embodied in a preplanned program. Instead, the emphasis must be on responding to conditions arising on the job, exercising proper judgment regarding what is needed, and maintaining intellectual and technical flexibility.

Teachers have ambivalent feelings about having their behavior sampled once a year. One sentiment favors predictability. It is important to know when one is being evaluated, to know when the evaluator is coming, to prepare for the evaluator. And to know that the evaluator will not sample one's behavior again. The benefit of

this predictability outweighs the risk that the students will not perform properly on the designated day. Another sentiment is that a one-time sampling of one's behavior is not enough. It may not be a "good day." The students may not perform properly on that day. More frequent—and, therefore, more representative sampling, is to be preferred. Presumably more frequent sampling means informal observation—the teacher does not know when the evaluator will come. The risk that the class will be operating in an improper way is offset by the fact that the evaluator will be sampling behavior at other times.

Yet having the principal regularly and directly inspecting the teacher's work creates a bureaucratic environment in which more and more prominence is given to the specification of criteria and to their observation. Under such a regime, teachers feel that they are less able to make their own instructional decisions. And principals find that they are stretched beyond the limits of their span of control and called upon to make judgments beyond their expertise.

An alternative to the bureaucratic approach is an approach which involves master teachers in the evaluation of other teachers. By "master teachers" we mean experienced teachers who have been selected for such special tasks as evaluating other teachers. (How they are selected is described in the section on Teacher Retainment.) The role of the master teacher is to help enforce a professional standard of teaching practice. The approach requires the evaluator to judge the appropriateness of teaching decisions. It assumes that professional teachers must have sufficient knowledge of subject matter and child development necessary to make appropriate decisions for different
students and classes. It further assumes that independent observers who have this knowledge can reach agreement about when an appropriate or inappropriate teaching decision has been made.

The approach also requires consensus on what constitutes proper standard of practice in a given teaching area. The lack of consensus plagues education and is the major obstacle to professionalism. Competing conceptions of teaching methods exist in all subject areas and levels of education—indirect instruction vies with direct instruction, open classrooms with closed classrooms, individualized instruction with group instruction, and so on.

Rather than attempting to force a consensus on the proper-standard of practice, it would be preferable to operate on a consensus of what is improper or inappropriate practice. Since there is not a consensus on the one best system of instruction, master teachers can sanction different standards of practice. Different methods are called for by different circumstances and different teachers’ personalities may lend themselves to different methods of instruction. The task of evaluation is to ensure that malpractice—improper educational process—does not occur. For the professional conception to work, teacher evaluation must serve fairly circumscribed purposes. Done well, it is labor-intensive and, therefore, expensive. Done widely, it would be not only expensive but also organizationally disruptive. It might work best: (1) where efforts concentrated on ensuring that teachers new to the system were professionally competent and (2) where it was assumed after that most teachers remained professionally competent and (3) where mechanisms existed to identify teachers whose performance became incompetent.
TEACHER RETENTION

The career of the teacher is largely undifferentiated. The expectations for a first year teacher are nearly identical to those for an experienced teacher. In general, first-year teachers are expected to function without special assistance or supervision. The same is, of course, true for experienced teachers. As a teacher gains skill and experience, generally he or she is not expected to do anything but teach classes. From the perspective of teacher considered professional, he or she is expected to be a fully qualified professional from the start. From the perspective of teacher considered as bureaucrat, he or she is expected to be interchangeable. To be sure, there are some quality control and improvement mechanisms associated with the teaching career. Tenure is not granted generally until the third year. Most systems have some form of teacher evaluation ostensibly to help find those teachers who cannot or are not teaching. Most systems require teachers to renew themselves by taking courses. And many systems have staff development activities. These mechanisms provide some semblance of career. But teachers who want what is recognized as a career must normally leave the classroom.

Teachers who wish to extend their influence beyond their own classrooms must do so largely as volunteers. They may become active in teacher association or union-affairs. They may on their own help their colleagues. They may volunteer for school or system-wide committee work. But most such endeavors do not receive formal school system recognition—or compensation.
Yet, even before the recently discovered political interest in education, some movement toward differentiated staffing could be discerned. By differentiated staffing, we mean formal recognition for a role in which a classroom teacher performs functions not associated with his or her own classroom. In a few systems, experienced teachers have, following a selection process, been designated as teacher leaders, consulting teachers, master teachers, etc. A selection process requires applicants to apply and be screened by one or more decisionmaking authorities. Teachers participate in the selection process. Through self-selection and screening decisions, less than competent teachers are likely to be screened out. Those selected are likely to be teachers who are well regarded by their colleagues and administrators but teaching competence is likely to be but one of the criteria on which differentiated staff are selected. Presumably, they are selected for their social and political as well as technical skills. Thus, differentiated staff will not necessarily be the most competent teachers. Indeed, many competent teachers are likely to be uninterested in expending energy outside the classroom. Still, this embryonic differentiated staffing movement is likely to satisfy career aspirations for some teachers. They receive additional responsibilities, external recognition and, in a growing number of cases, additional compensation.

Perhaps more importantly though, the embryonic movement signals a growing concern that teaching has been overly bureaucratized. Over the last decade or two school system bureaucracies have become more elaborate. This development signals the fact that more important decisions are to be made centrally and by administrators and fewer by
teachers. Teachers, then, see themselves less as professionals and more as bureaucratic functionaries. The movement, perhaps soon to accelerate, is a return of some responsibility to teachers. Teachers chosen for differentiated staffing will have their spheres of influence extended. Some experienced and competent teachers will choose not to become members of a differentiated staff. They presumably will derive career satisfaction from teaching. The conditions of classroom teaching will, however, have to be such that they can practice their profession in a manner that they judge best: (The fact that some qualified teachers will choose not to take time away from their own classroom teaching to become differentiated staff means that no opprobrium will be associated with not being a member of the differentiated staff. Thus, "good" and "bad" teachers will not be marked as they would be under some merit systems.)

The continuation of the bureaucratic approach to school improvement means a continual accretion of decisionmaking authority by school personnel who are not teachers. Teachers who want to formally extend their influence must cease to be teachers and become administrators. Those who remain teachers have less opportunity to teach the way they judge to be best. Increased standardization of the curriculum or prescription of teaching methods loom large as factors which would make many teachers leave teaching.

A professional approach to school improvement in which teachers are the dispensers and recipients of advice and decisions is an alternative. Currently, new teachers are thrust into the classroom, by their own accounts, unprepared to teach. Differentiated staff in
various configurations could provide help to and then evaluate new teachers. They could similarly assist and evaluate more experienced colleagues who are having difficulty. They could participate in curriculum design, staff development, etc. These are opportunities for leadership to be exercised by teachers who are able and willing to do it.

Retention in education is not well understood. Teachers of higher measured academic ability have been found more likely to leave. Teachers who want to be able to make their own professional judgments say that they will leave teaching if they are prevented from making those judgments. A bureaucratic conception of teaching is, we think, less likely to retain good teachers in the classroom than is a professional conception of teaching.
TEACHING OR TESTING

In this section, the beginnings of which are in the "Seduction of Central Office Administrators," we discuss how the bureaucratic approach leads to teaching-the-skills-to-be-tested-approach whereas the professional approach allows for teaching not only skills but also creativity and love of learning, etc.
STANDARDS FOR TEACHERS OR STANDARDS FOR STUDENTS

The nucleus of this section is the executive summary of "Beyond Standardization" in which we show the tradeoff between controlling teachers vs. controlling teaching.
On Standards and Public Policy: A Conversation with Arthur Wise
Arthur Wise, Senior Social Scientist at the Rand Corporation, Washington, D.C., criticized the tendency of courts and legislatures to bureaucratize schools in his 1979 book, *Legislated Learning*. In this interview Wise, a consultant to the ASCD task force that investigated the Florida legislature's new graduation requirements, argues that public officials are still using the wrong approach in their efforts to improve education.

**RON BRANDT**

The Commission on Excellence recommends higher graduation requirements, more stringent standards, more homework. What will be the results if those recommendations are followed? Well, to some degree American education has become soft, so we must have higher standards—intelligently applied. We have gone too far in allowing students to choose electives and we have not expected as much in the way of homework and hard work as we should. But when state policymakers get into the act, there is a tendency for them to try to translate their goals and aspirations into something more concrete by passing legislation.

For example, in the middle and late 1970s, many of the states adopted minimum competency testing. As some of us predicted, that led to an overemphasis on basic skills and preparation for tests. The failure of minimum competency testing to improve education should have taught legislatures something, but it probably did not.

You've been opposed to minimum competency testing from the beginning.

It's too simplistic. Its only effect could have been to cause the state to become a more active determiner of educational policy and practice than it should be. You may recall that many of the states said they would start with tests in basic reading and arithmetic but that they planned eventually to cover the entire high school curriculum. In other words, there would be a statewide test for graduation that would in effect determine the high school curriculum. Fortunately, we haven't seen that happen, and while minimum competency testing remains on the books, people are paying less and less attention to it, in part because policymakers have recognized the limitations of that approach as we face the obviously growing demand for a more highly educated citizenry.

Is there a difference between minimum competency testing mandated for a whole state and tests used at the local level to check whether students are learning what they should? Tests are a necessary part of good school management. What bothered me about the minimum competency testing movement is that if it were taken seriously, it would have led to the creation of a state level bureaucracy that would not only have planned the tests, but would slowly have gotten into the management and design of the curriculum.

And even though testing is necessary, I think standardized testing is overemphasized in this country. Instead of teaching children reading and history in a way that will help them gain appreciation for those subjects, we teach them so as to ensure that they will do well on the tests.

How did we get to be so dependent on testing? It arises partly because we no longer trust teachers to tell how well students have learned. It used to be that teachers' grades were accepted as an accurate statement of students' learning. Schools continue to have report cards, of course, but they've also been developing external mechanisms to check on teachers, and teachers recognize that.

Tests are part of a wide-ranging set of forces that are undermining the teacher's role and making teaching less attractive, which in turn causes fewer talented people to choose teaching as a career. That brings us full circle: Having intervened repeatedly in the last decade or two to try to improve the quality of education, policymakers may have made things worse, which in fact will result in even poorer teachers than we have now. That is the real crisis in education.

You're saying that policymakers have actually contributed to the crisis. I believe that at the root of people's lack of confidence in education is their perception of the quality of people staffing our schools. And the regulatory efforts of the last decade and a half that I explored in *Legislated Learning* were attempts to control what was being done in classrooms, even though in fact very little could be done. For the last decade we have had pretty much a static teaching force. American education couldn't be reformed by changing either the nature of the people going into teaching or their preparation experiences. The steps that were taken—regulation, legislation—made the role of the classroom teacher more bureaucratic. And according to research I am conducting with Linda Darling-Hammond, my colleague here at the Rand Corporation, teachers are unhappy about it, especially the best qualified ones. Those with more degrees and those with degrees in the academic disciplines are the most likely to chafe under these restrictions.

So some of them may quit teaching and it will be hard to find people of their caliber to take their place.

Complicating the situation is that in three or four years there will probably be a shortage of teachers, for demographic reasons. And of course research shows that over the last decade or so the average measured ability of people entering teaching has been declining. So not only will we probably have an absolute...
If the public has evidence that academically talented people are becoming teachers, they will begin to develop confidence in the schools and may be willing to leave teachers relatively alone to practice their profession.

I hate shortage of teachers, but we almost certainly will have a shortage of people whom the public would regard as highly qualified. Now, having high measured academic ability does not ensure that a person will be a good teacher, but in the public's mind, especially now, there is a close association. So if they know that academically inferior people are becoming teachers, they will not have confidence in the schools.

Conversely, if the public has evidence that academically talented people are becoming teachers, they will begin to develop confidence in the schools and may be willing to leave teachers relatively alone to practice their profession. That, it seems to me, is the key to solving many of the problems that beset American education.

Are there some ways that legislators and other policymakers can do a better job of foreseeing the results of their actions? Well, there is an approach we use at the Rand Corporation called “policy analysis.” Typically, you either look back at policies enacted by governments and try to trace their effects, or you try to predict the consequences of policies being considered. These two classes of activities—retrospective and prospective policy analysis—are rather closely related. To analyze possible effects of policies currently under consideration, you try to apply lessons learned from the application of other policies in the past.

Policymakers haven't displayed a lot of interest in policy analysis in recent years; indeed, there is almost a disdain for it. The Commission on Excellence, for example, did not betray any great understanding of the findings of educational research or of policy analysis. Their report seems to have been written by thoughtful people, but they did not take a lot of time to try to understand the full implications of what they were saying.

What's an example of successful use of policy analysis in the public sector? Policy analysis is only one ingredient in policy making. Policymakers are driven more by a desire to gain credit for having done something about a problem as by any other motivation. I'm not suggesting they are deceitful or cynical, but that political careers—even bureaucratic careers—are made by proposing new things. You get credit for raising people's hopes about your ability to solve a problem shortly down the road. Nobody in the political arena gets credit for saying he or she is going to solve a problem 10 or 15 years from now. It has to be within the next three years. When you're trying to have rapid impact, you may have a beneficial effect, but you may not. And I'd have to say that much of what has been tried over the last 15 years has missed.

If legislation trying to force higher standards won't work, what is a more appropriate strategy for policymakers? Most of the policies tried in recent years, particularly at the state level, have cost very little or nothing. They were regulatory initiatives. The result was what could have been expected: pay a little, get little. I'm afraid that what is needed is going to cost money. Teacher salaries, for example, have been declining in recent years in real terms. We have a long way to go to make beginning and average salaries of teachers somewhat competitive with the alternatives available to able people.

Besides that, I think that frankly we're going to have to fire people into teaching. College education these days is very expensive; so you could get young people to think about teaching by offering financial assistance—scholarships, fellowships, loans—either for teaching generally or for teaching in specified fields.

Paradoxically, some things that need to occur may not be all that expensive. In some cases we have evolved rather elaborate bureaucracies in our school systems that are costly and tend to de-professionalize the work of classroom teachers. If you have central administrators doing all the planning and decision making, you downgrade the role of the classroom teacher. One of the ways to make teaching more attractive is to delegate some of the responsibilities that have gravitated upward in the bureaucracy. That is, I think that teachers—while remaining classroom teachers—must be freed part of the time to do the important work of inducting new teachers into the school system, of helping evaluate their peers, of planning the curriculum, of providing in-service workshops, and so on.

A final comment on higher standards? The road from standards to standardized testing to standardized teaching to standardized students is a short one. We must keep from going all the way down that road. We have to find a way to establish high standards and expectations and communicate them to the people who need to know and use them, without the rigidities I've seen associated with much educational policymaking.