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ABSTRACT

This paper is an inquiry into standard setting as educational reform, stimulated by the emergence of projects and initiatives engaged in during the development of new standards. The publication is organized into five sections. The first section provides a brief discussion of the idea of a standard together with a definition that indicates the generally pragmatic cast of the paper. Section 2 describes and compares three models of educational reform--the systemic reform model, the professional model, and the reform network model. Each of these employs standard setting as a central and distinctive element. The third section contains a discussion of cross-cutting issues implicated in these models, focusing on normative and conceptual concerns in and the political dimensions and dynamics in standard setting. Section 4 presents a set of strategic approaches and scenarios through which various standard setting initiatives might be joined, thereby providing the firm, consistent guidance sought by policymakers. Section 5 offers some concluding observations that step outside the pragmatic frame to raise alternative perspectives on standard setting. An appendix provides Comer's nine components; guiding principles of the accelerated schools model; and nine common principles of the coalition of essential schools. (Approximately 125 references.) (LL)

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STANDARD SETTING AS EDUCATIONAL REFORM

Gary Sykes
Peter Plastrik
Michigan State University

U.S. DEPARTMENT OF EDUCATION
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Introduction

> *No technical system or procedure can guarantee its own humane or rational application. It is one thing to* perfect *an instrument, but it is quite another to make sure that it is* only put to use *in ways that are just, virtuous, and rational.*
>
> —Stephen Toulmin, *Cosmopolis*

> *Culture is vulnerable whenever technology is free to follow its own logic, unrestrained by the human need for activities that are ends as well as means.*
>
> —Philip Selznick, *The Moral Commonwealth*

This paper is an inquiry into standard setting as educational reform, stimulated by the rapid emergence of many projects and initiatives engaged in the development of new standards. Although educational standards of various kinds have long been part of American education, the contemporary interest is noteworthy for several reasons. One is the simultaneous turn to national policymaking coupled with a growing distrust, across the political spectrum, of the tradition of local control. Many of the standards projects seek a national consensus, even a national system. Presumably, then, the new standards will require changes in our traditions and mechanisms of educational governance; in fact, new institutions have been founded, and more proposed, to preside over standard setting. Another is the conjunction of the two topics, standard setting and educational reform. Standards most commonly regulate practices or transactions, not reform them. Yet the ambitions of many of the new standard setters are to revolutionize education in America. Can standards serve as agents of change? A third remarkable feature is the sheer volume of activity that seemingly has emerged all at once to target a wide range of educational processes and outcomes. Can "the system" coordinate all these initiatives? Should it?

The current interest in standards may be traced to the early 1970s when the minimum competency testing movement was launched in the states. The focus expanded in the 1980s to include curriculum standards in the form of new graduation requirements, increased student testing, and substantial revision of teacher licensure standards. By the early nineties, the scope had expanded further to encompass national examinations and curriculum frameworks, advanced standards for teacher certification, and substantial reforms in the assessment methods used to judge both students and teachers. State and federal governments, foundations, professional associations, local school networks, colleges, and universities are all involved now in developing standards for nearly every aspect of education: students and learning, curriculum and instruction, teachers and teaching, K-12 schools and schools of education, and home-school-community partnerships.

If any single concern underlies this explosion of standard setting it is to provide firm, stable, and shared guidance to the educational system. Yet paradoxically, the sum of so many individual good intentions may be to deepen the disease, not to effect a cure. Policymakers have begun to worry that the pell-mell proliferation of standards may lead not to stronger education for all children, but to continuing discord and fragmentation as various projects collide with one another in supplying contradictory guidance to the education system. As policymakers create all these new standards there is worry that the whole will not hang together.

The analysis to follow explores this and other problems of standard setting as educational reform. It is organized into the following sections:

- a brief discussion of the idea of a standard together with a definition that indicates the generally pragmatic cast of the paper;
- a description and comparison of three models of educational reform, each of which employs standard setting as a central and distinctive element;
- a discussion of cross-cutting issues implicated in these models, with an eye toward prospects for coordination, compatibility, and coherence in standard setting;
- a set of scenarios through which various standard setting initiatives might be joined, thereby providing the firm, consistent guidance sought by policymakers; and,
- some concluding observations that step outside the pragmatic frame to raise several alternative perspectives on standard setting.

I. THE IDEA OF A STANDARD

The etymology of the term *standard* suggests the irresistible appeal that policymakers find in standard setting as well as the inherent and inconclusive complexities they also must address. The term's original meaning arose in a military context, as "the distinctive ensign of a king, great noble, or commander, that served as the rallying point of an army." In its earliest recorded usage more than 8 centuries ago, a flag-topped wooden mast—or standard—called attention to the battlefield act of taking a stand "to conquer or die." In this sense, a standard represents an action, a commitment: a combative stance that well suits contemporary education standard-setters, who see themselves planting a flag in a field of endless, high-stakes conflict.

The second root meaning of standard is an "exemplar of measure or weight." Within this root, several distinctive contexts of usage suggest important nuances.

One is the legal magnitude of a unit of measurement, such as the Greenwich mean time, or the legal rate of intrinsic value, as in "the gold standard"; i.e., a commodity the value of which is treated as invariable in order that it may serve as a measure of value for all other commodities. This set of meanings draws attention to both the importance of measurement, the process of stipulation with its overtones of arbitrariness, and the force of law as a standardizing influence.

Measurement, in this sense, has extraordinary and enduring power in the society: it is a permanent and public good. The original standard is that of which others are copies, and against which the adequacy of others is judged. The power to set measurable standards that become the dominant, if not sole, reference for judgments about education would have natural appeal for education reformers concerned about the variation of standards that litter the field. But the power to standardize ultimately is political and uncertain. It depends on the application of the law, about which there usually are conflicting philosophical approaches.

A second usage refers to an authoritative or recognized exemplar of correctness or perfection. Within an ecclesiastical context, the standard is the books or documents accepted by a church as the authoritative statement of creed or doctrine. This usage conjures an image of the history of disputation within particular religious sects or denominations, together with an eventual authoritative resolution, sometimes after extensive bloodletting. Even within such doctrinal statements, however, continuing interpretation of texts is the rule, as in the tradition of biblical exegesis or the multilayered commentaries on the Talmud. Such usage stands in stark counterpoint to the notion of crisp, unambiguous measurement, suggesting instead a more conflict-laden process of searching for meaning.

A final context of usage extends the sacred connotations into the secular realm by referring to "a definite level of excellence, attainment, wealth, or the like, or a definite degree of any quality." So we speak of a "standard of living" or, in the context of British public schools, of a recognized degree of proficiency as tested by an examination, according to which schoolchildren may be classified. Here we encounter the meaning that approaches the current interest in education standards.

The idea of a standard is complex in several ways. Historically it has evolved along two tracks: as a rallying point or a commitment to a position, and as a unit of measure or an imposition of position. In addition, within different contexts, a standard takes on different meanings and utility. One context is time and space, the physical world we measure. Another is communication, the language and ideas we construct, examine, and reconstruct for meaning. Yet another is cultural, the norms we assess, reward, and sanction.

These complexities reveal a tension that foreshadows the following analysis of standard setting as an educational reform. It is clear that the primary functions of standard setting are to measure and to rally. Both of these require precision and politics, neither of which is unchangeable, both of which are open to honest and endless dispute.

The attempt to set and command allegiance to a standard requires a balancing along an axis that stretches from the potential permanence of a measurement to the pragmatic need for usable, contextualized and therefore revisable specification; and along an axis that at one end considers the autonomy of individuals within the society and, at the other, the authority of the society to impose standards and other conditions upon its individuals. Standard setting, then, like other matters for human judgment and social decision making, embodies a complexity that belies its simpler images.

A definition at the outset may be useful in conveying our conceptual approach. We define a standard *as a tool for rendering appropriately precise the making of judgments and decisions in a context of shared meanings and values.* This definition is intended to suggest that:

- A pragmatic orientation to the activity of standard setting will frame this analysis; standards are tools used to accomplish certain purposes, even multiple purposes. Standards may be *uniform measures* that organize transactions and exchanges; *rules* that are monitored for compliance; *signals* that convey information; *exemplars* that represent ideals; and *principles* that direct action. The worth of standards should be judged according to the consequences of their use.

- The degree of precision that is appropriate will vary according to the subject of the standard. A judgment will be necessary about the degree of precision and prescriptiveness that is desirable in a particular case. This feature draws attention to issues of measurement and to the formatting of standards along dimensions that extend from general principles to specific rules and particular cases.

- Standards serve to assist and direct the making of judgments and decisions. The judgment might concern how to teach third-grade mathematics and what mathematics to teach, or how to determine the effectiveness of a school of education. The decision might be to grant a teaching license, to graduate a student, or to place a teacher on probation.

- Standards are justified with reference to some system of meanings and values—sources of authority—that supply the ultimate terms and grounds for evaluation of the standard itself. Expertise might be one source of authority, as when oenophiles render judgments about the quality of wines using the exquisitely evocative language of their field. Or democratic/bureaucratic authority might be invoked, as when regulatory agencies promulgate detailed rules to implement laws.

- Creating a shared normative frame is a dynamic and problematic element of standard setting. The means to forge a consensus are various, and the process of standard setting combines the political with the technical.

II. THREE MODELS OF REFORM

Standards play a significant role in three models of reform. In the first, commonly identified as systemic reform, standards target educational goals, curriculum, and student assessment at national and state levels. A second model pursues the professionalization of teaching through development of standards for licensure, certification, and accreditation, also at national and state levels. The third model stimulates the emergence of a number of reform networks connecting schools around the country to a set of shared principles. Within such networks as the Coalition of Essential Schools, standards provide general direction for work at the local level, rather than serving as policy instruments at national or state levels.

These three approaches to reform overlap in various ways[1] but differ in their central tendencies. They concentrate on different parts of the system and embody different ideas about the nature and use of standards. To assist in describing these differences we locate the central tendencies of each model in terms of a common standards framework (see Figure 1) that arrays the primary targets for standards. The three commonplaces are: curriclum— a conception of what is to be learned (goals, content, materials); demonstrated mastery— some means for determining the learning that takes place (outcome or performance assessment); and opportunity to learn— an account of the resources marshalled to support the desired learning (institutional characteristics). These commonplaces may refer both to students and their learning and to teachers, their teaching, and their learning-to-teach.

Figure 1. The Standards Framework

	CURRICULUM (goals, content, materials)	DEMONSTRATED MASTERY (performance assessment)	OPPORTUNITY TO LEARN (institutional capacity & quality)
STUDENTS/ LEARNING			
TEACHERS/ TEACHING			

Among many complexities in the relations among the commonplaces four are elementary. What is (or should be) the relation between

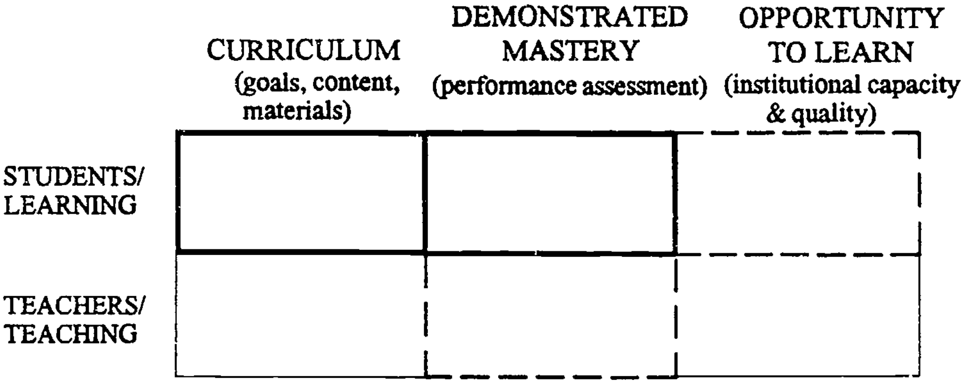
- standards for students and those for teachers?
- the goals and content represented in curriculum guidance and conceptions of teaching?
- the goals and content represented in various forms of curriculum guidance and the forms of assessment used to measure learning?
- institutional resources and the desired curriculum, teaching, and learning?

Identifying the commonplaces and their elementary relations helps both to distinguish among the models and to suggest possibilities for linkage.

The Systemic Reform Model

One family of initiatives aims to create a strong system of standards around student learning, the heart of which is guidance on curriculum goals and content coupled with new forms of assessment. The model potentially embraces other elements as well, including institutional capacity and standards for teaching, but these additional elements are more controversial, less well specified, and more variable across the school curriculum. Figure 2 locates this model within the standards framework. Solid lines represent the core target for standards; dotted lines represent potential additional targets. A number of states including California, Vermont, Delaware, Texas, New York, and Florida are seeking to implement reforms of this sort, and a number of national efforts also have emerged. These include the National Educational Goals Panel and its proposed operational arm, the National Educational Standards and Assessment Council; the National Science Foundation's (NSF) systemic reform program of grants to states; and the New Standards Project launched by the National Center on Education and the Economy in cooperation with the Learning Research and Development Center at the University of Pittsburgh.

Figure 2. The Systemic Reform Model



Note:
Solid lines represent core targets for standards
Dotted lines represent potential additional targets

Systemic reform proposes that policymakers and educators collaborate in developing and coordinating an array of policy instruments aimed at providing firm guidance for teaching and learning. Accounts of the array vary somewhat. Smith and O'Day (1990) indicate a "unifying vision and goals" for schools, a set of specific learning outcomes for students, and an instructional guidance system that includes curriculum, preservice and inservice teacher education, and assessment. Cohen and Spillane (1992) nominate five policy instruments: instructional frameworks, instructional materials, assessment of student performance, oversight of instruction, and requirements for teacher education and licensure. The twin standards documents developed by the National Council of Teachers of Mathematics ([NCTM], 1989, 1991) set forth standards for curriculum, evaluation, teaching, evaluation of teaching, professional development of teachers, and support and development.[2] Yet more extensive is the set of elements supplied in the NSF's (1990) program solicitation for statewide systemic initiatives in science, mathematics, and engineering education. The 10 categories in the NSF list include such items as "organizational structure and decision making," "provision and allocation of resources," and "facilities and equipment."

In the systemic reform model the starting points are the *content standards* that define the curriculum and the *performance standards* that define what students should learn. Some advocates also add *delivery standards* that specify the resources required for equal opportunity to learn. Advocates for the model project a complex vision for its effects, linked to a critique of the status quo. The arguments and images for this conception of standards frequently draw on cross-national comparisons, a significant point. Worry in the United States over achievement levels compared to other nations has been one stimulus for the systemic reforms, coupled with reports and research that describe apparently desirable and powerful elements of other nations' education systems. Implicit, sometimes explicit, in these arguments is the prospect that the

United States might import elements from other nations. The model's theory proposes four sets of effects that operate on instruction, on student motivation, on supporting capacities, and on public understanding and expectations.

Directing, Focusing, and Changing Instruction

Systemic reform advocates envision that the coordination of content, performance, and related standards and their connection to high stakes will directly affect teaching and learning by directing, focusing, and changing instructional practice (Porter, 1989b). The image of *directing or guiding instruction* relies on the alignment of multiple policy instruments such as frameworks, texts, tests, incentives, and teacher training. The problem, according to critics, is a tower of instructional babble from which sounds a cacophony of guidance. Student testing is not aligned with textbook content, teacher education is not coordinated with the curriculum of schools, states and districts vary in school goals, and signals about the content of curriculum change with amazing rapidity. The U.S. system of education is more accurately a fragmented, uncoordinated, nonsystem of multiple, competing influences. Although there is virtue in local control, responsiveness to particular communities, and openness to innovation, the cost in uncertainty and conflict has been high. By contrast, other nations with strong central ministries have been able to create more uniform and equitable systems of education whose positive results are evident in international comparisons of achievement.

A related advantage of systemic reform is the *focusing effects* of standards. Once established, standards will help to delimit the work of teachers and students to a manageable core of widely shared learning outcomes. Critics have charged that the school curriculum is far too susceptible to fads and to heedless additions in pursuit of a range of social problems. The goals of schooling, the roles of teachers, and the content of the curriculum become impossibly broad; in the attempt to accomplish too much, the schools do not perform their central mission well. The new standards are intended to secure consensus on a central mission of helping all students to develop and use their minds well through deep engagement with subject matter knowledge. Crucial to this model, then, are the mechanisms for securing such consensus that combine expert knowledge in the production of standards with democratic authority in their adoption and implementation.

Cross-national comparisons suggest the possibilities. One study, for example, portrayed marked differences between French teachers' classroom-centered, academic role focused on transmitting cultural knowledge and traditions with English teachers' wider range of objectives often characterized as child-centered and progressive (Broadfoot & Osborn, 1987, 1988). These differences owe much to culture and traditions, but derive also from the policy frameworks and state institutions that direct and focus schooling.

A third instructional aim of systemic standards is to reform fundamentally, even to reinvent, teaching and learning. Many of the standards projects seek to *change how teachers teach and children learn* by creating new visions of teaching and by developing assessments that parallel and call forth new instructional practices. Broadly speaking, many of the new standards initiatives promote a vision that emphasizes

- teaching and learning for deeper conceptual understanding of subject matter;
- students' active construction of knowledge through engagement in authentic tasks and problems;
- creation of learning communities where the social relations of instruction support ambitious and collaborative learning;
- connections between children's learning in and out of school;
- responsiveness to student diversity that enables cultural "boundary crossing" for children not in the middle class, white mainstream; and,
- the expectation that all children must have access to and can profit from challenging learning.

Compared with current practice in many schools, this vision is a dramatic departure whose realization would require substantial changes in teacher knowledge, beliefs, dispositions, and skills; in teacher and student roles in the learning process; in the schoolwide organization of instruction; in schools' relations to parents and community; in the policy framework; and in public understanding and expectations. Systemic reformers recognize the scope of this agenda, but argue that new content and performance standards constitute the right leverage point for the necessary capacity building in the future.

Motivating Students

A second effect of standards works in combination with the stakes or incentives attached to new performance outcomes to affect the motivations of students. "There is a distinguishing feature in the American education system," notes Marc Tucker, "that might account . . . for the low academic achievement of our kids compared to the achievement of kids in many other countries: namely that for most American kids in secondary school . . . there is no incentive to take a tough course or to study hard in school" ("By All Measures," 1992, p. S3). Our education system, he continues, robs teachers of a vital learning resource—motivated students. Student testing historically has influenced only the college-bound elite seeking entry to selective colleges and universities. For this small minority, SAT scores, Advanced Placement exams, and the New York Regent's Exam have served to motivate students. In the future, assessment standards linked to a wider array of stakes and postschool futures, particularly apprentice programs and employment opportunities, will spur student effort in school.

This connection between standards and incentives considerably broadens the systemic reform model to encompass stronger links between education and the economy. "Our conception of how to restructure the workplace," note Marshall and Tucker (1992, p. 145), "depends on replacing the whole system of educational design standards, from course specifications to time-in-the-seat requirements, with a system of performance standards. Furthermore, we believe that performance standards can be used as a framework for reforming not just the schools, but the whole system of education and training." They propose four components that include standards for entry to a college preparatory or technical studies program; for jobs that do not require a baccalaureate degree; for teacher qualifications; and for both entering and leaving college (see also Commission on the Skills of the American Workforce, 1990).

This proposal attacks one of the most persistent problems in our educational system, the difficulty of engaging high school students, who do not plan on attending college, in an academically rigorous course of study. Analysts note that other nations such as Japan and Germany link education and employment through school-leaving exams connected to an apprenticeship system, thereby supplying motivation to a greater cross section of students (see, for example, Bishop, 1989, 1990; and Rosenbaum & Kariya, 1989).

Standard Setting as Capacity Building

To realize these aims of directing, focusing, and transforming teaching and learning, the system reformers envision a range of capacity-building developments. One is the creation of new instructional materials and assessments. The primary tools of the teacher's trade—the texts and tests currently in use—are woefully inadequate to the new agenda of teaching and learning. The new standards will serve as the basis for substantial revisions of teaching materials.

But as the NSF curriculum reforms of the 1960s revealed, changing texts and other materials coupled with modest teacher training will have limited impact. The new standards projects also aim to supply direct guidance about teaching that embody the new principles and goals of learning. The NCTM pointed the way by issuing two sets of standards. The first, *Curriculum and Evaluation Standards for School Mathematics* (NCTM, 1989) set forth goals, content, and student evaluation standards. Two years later, a companion document, *Professional Standards for Teaching Mathematics* (NCTM, 1991) added six standards for the teaching of mathematics, eight standards for evaluating mathematics teaching, six standards for the professional development of mathematics teachers, and four standards for support and development of the new mathematics teaching.

This work has set a precedent. Under contract to the U.S. Department of Education, for example, the National Science Education Standards project will develop curriculum, assessment, and teaching standards that closely parallel the NCTM's approach (National Research Council, 1992). Other projects sponsored by the U.S. Department of Education (e.g., in history, geography, and language arts) will follow suit. The prototype NCTM documents considerably broaden the coverage of standards to embrace a systemwide perspective on the reform of mathematics teaching and learning. The standards themselves, then, will project a vision not only for what is to be taught and learned but also for the teaching itself and for the capacity-building measures needed to support such teaching.

System reformers also seek influence over teachers' role conceptions and sense of professional responsibility. The comparative study of French and English teachers referred to earlier illustrates the prospects. The investigators found that, "the most significant influence on teachers' practice in both systems was not the formal apparatus of external obligation and control but the personal sense of professional obligation held by teachers themselves" (Osborn, Broadfoot, Abbott, Croll, & Pollard, 1992, p. 140). The professional ideology, not the administrative system, makes a reality of central control in practice, with marked differences in the two countries. The French teachers, they found, were deeply committed to the need for a national curriculum both as a basis for equality of opportunity and to relieve themselves of the burden of creating their own versions. By contrast, English teachers expressed an equally strong commitment to local control and a more child-centered and expansive sense of the teacher's role.

Cultural traditions in the two countries undoubtedly play a dominant role in shaping teacher norms, values, and beliefs. Over time, however, systemic reformers judge that shifts in policy and its administrative apparatus may influence teachers' shared beliefs about their roles, responsibilities, and practice, i.e., their professional ideology. The systemic model seeks to create a stronger, more delimited focus on the academic aspects of the role thereby eventually shaping the professional ideology.

Related to this line of influence is another that also draws its imagery from cross-national comparisons. Studies in Japan, China, and Taiwan portray Asian teachers as refining and perfecting their craft around certain common principles and practices of teaching. "Polishing the stone" is one powerful image that captures this honing of craft knowledge around lessons whose format contains standard elements within which master teachers improvise (Stigler & Stevenson, 1991). This conception of teaching is akin to the development of artistry, where the creative freedom of the artist-teacher is based on mastery of the rudiments within a stable structure of practice and tradition.

> The model for teachers in China is that of the virtuoso. Their art is teaching. It is through the combination of their accomplishment of the necessary knowledge of their subject and some personal teaching aesthetic that they can achieve excellence. The virtuoso teacher is one who has so mastered the technical knowledge of the text that she or he is able to transcend it, adding a piece of one's own self, one's own interpretation, in organizing the presentation, communicating it (transmitting the knowledge), and rendering it understandable for the audience. This is a goal for teachers in China. As with musicians... true virtuosity involves not simply "technical wizardry," but also "heart." For teachers, this means that teaching requires mastering the technical (that is, knowledge) base, but the ideal is to be able to transcend that. (Paine, 1990, p. 54)

Within this model, teacher education may be closely related, even directly derived from classroom practice. Abetting this relationship is the presence of a canon—the classic texts around which teachers organize instruction, together with the Ministry of Education's traditional role in recommending the entire curriculum for each department in the normal universities that prepare teachers. While system reformers do not seek to import this model wholesale, they are intrigued with the prospect of connecting both preservice and inservice education to the content, performance, and teaching standards set for the schools. What undercuts the effectiveness of teacher education, in this view, is the lack of connection to stable, shared goals of instruction and patterns of practice. In other countries much stronger connections are evident, supported by cultural traditions as well as the policy framework.

A final capacity-building effect of systemic reform is the creation of a basis for school-, district-, and association-sponsored professional community. Reformers envision teachers discussing the new standards, interpreting their teaching in light of them, and assisting new teachers in their uses. Furthermore, the new assessment procedures that feature portfolios of student work, performance tasks and simulations, and writing assignments of various kinds will blur the distinction between instruction and testing so that the process of assessment comes not at the expense of instructional time but is rather a natural extension of instruction. Implementation of the standards then will supply professional activities for teachers, including development, use, and scoring of the new student assessments. Particularly around assessment the system reformers envision a powerful focus for professional development. "The New Standards Project is committed to the position that children will not be taking assessments unless their teachers have participated in the building and scoring of them," writes Lauren Resnick ("By All Measures," 1992, p. S6). She projects substantial teacher involvement in standards and assessment development, reckoning that teachers may need 4-8 weeks of paid time each year for such work. Here too cross-national comparisons enter, for reformers note that Japanese and Chinese teachers spend up to one half of their paid professional time developing lessons, reviewing student work, and evaluating and improving their teaching (Stevenson & Stigler, 1992). The system reformers argue that the work of standard setting will constitute the basis for professional activity and community within schools, setting a new agenda around which teachers can organize productive relations that build capacity while contributing directly to student learning. (See Cohen & Barnes, 1993a.)

Effects of Standards on Public Expectations

A final pathway from system standards to educational improvement traces effects on public and parental expectations. From this perspective standards influence expectations through the information they provide about outcomes. A significant problem in the United States appears to be the low and unrealistic expectations for learning held by parents. In their research, for example, Stevenson and Stigler (1992) discovered that compared to their Asian counterparts, United States mothers had very low expectations for their children's learning relative to actual achievement, yielding the anomaly of high satisfaction coupled with low performance. Stevenson and Stigler judged that one contributing factor to this problem is the absence of clear, external standards in the U.S. system.

A second disturbing bit of evidence comes from a Committee for Economic Development survey given to four groups—parents, high school students, employers, and college representatives—who rated students on a list of 15 attributes related to future success at work and in college (e.g., "learning how to write well," "being able to work cooperatively," "learning how to solve complex problems"). Results revealed a large reality gap between the ratings given by parents and high school students and those of employers and college representatives. "The current crop of students and their parents," the report notes, "are deluding themselves . . . students and their schools need to be made aware of what standards are demanded" ("The Great Divide," 1992, p. 35). Standards will supply the necessary benchmarks for shaping more realistic and ambitious public expectations about learning.

The Issue of Delivery Standards

The systemic reform model potentially includes one additional and controversial element. Some of the system architects include *delivery standards* along with content, performance, and teaching standards. School delivery standards would provide assurances in the form of indicators or other measures that each student in a school has a fair opportunity to acquire the knowledge and skills set out in the content standards. Delivery standards might include evidence that the school has adopted a curriculum in line with the content standards, that the curriculum is in use, that teachers have the capacity to teach the curriculum, that the necessary instructional materials are available, that school policies and practices promote student mastery (including no tracking), that the school marshals parent and community support for the desired learning, and others. (See O'Day & Smith, 1993) .The addition of this element to the model shifts the standard-setting focus from supplying direction based on learning outputs, results, or performances to judging the adequacy of institutional structures, processes, and resources. In terms of the traditional distinctions, delivery standards would encompass inputs and processes as well as outputs.

Underlying the systemic reform model is the principle that the practical pursuit of values requires their specification, measurement, and reward. This is the American way of school reform, claims Lauren Resnick. "Whether we like it or not, our way is to do things through measurement" ("By All Measures," 1992, p. S8). Delivery standards explicitly introduce equity into the reform model on the same footing as the value or goal of quality or excellence. Beneath the evident technical difficulties in creating such standards lies the value issue. In the name of what *set* of values do we create standards? Some of the system reformers answer, excellence and equity, and see standard setting as a means of promoting equality of educational opportunity, not only through an insistence on ambitious learning for all, but also through measured attention to resources and institutional characteristics.

Delivery standards signal a central issue in the theory of accountability. Systemic reformers clearly seek policy tools that serve both to guide instruction and to hold educational institutions accountable. But the concept of accountability implies a contractual relationship involving the exchange of benefits and obligations between parties (Hill & Bonan, 1991). In return for the obligation to meet performance standards, school-site educators seek the benefit of adequate resources. If the resources are not made available, however, then the implied contract is broken and the obligation to meet standards loses its moral—and perhaps legal—force. If measurement represents a principal means for taking standards seriously, then measuring only outcomes within a framework of accountability is a clear indication of bad faith. One party to the contract—the state or federal government—has failed to meet its responsibility. To the extent, then, that standards operate within an accountability framework, there must be attention paid to inputs as well as outcomes if the reciprocal terms of the implied contract are to be met.

In this context recall one of the functions we indicated standards can serve, to regulate exchanges or transactions. The systemic reformers speak of creating a "social compact" that exchanges performance accountability for the necessary resources ("By All Measures," 1992, S4). Within such an agreement, standards serve as the starting point for a complex political process aimed at securing greater resources for education in return for greater accountability. Standard setting, according to this calculation, is a strategy for pursuing equity and adequacy in educational finance. Standards supply the political basis—the currency—for an exchange between public policymakers who control resources, and educators who control instruction. Delivery standards or some functional equivalent are necessary to operationalize one side of this social compact, performance standards the other side. We return to this issue below.

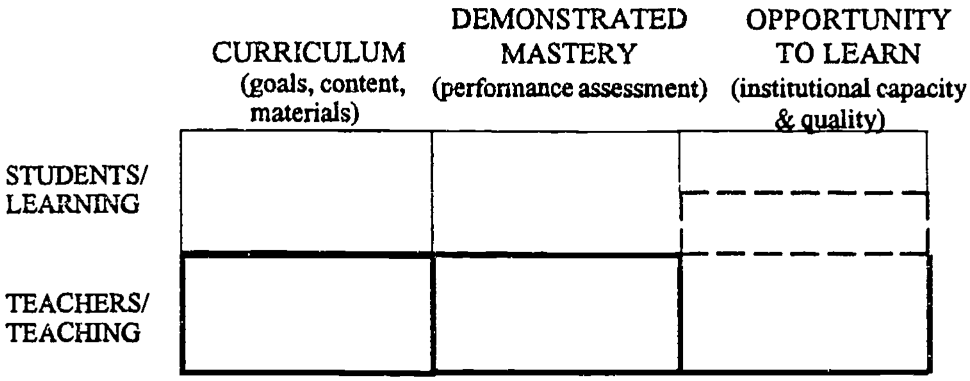
The Professional Model

A second model that prominently features standard setting as a reform strategy draws on the ideology of professionalism and cross-professional, rather than cross-national, comparisons. The principles that capture the basis for teacher professionalism are:

- Knowledge is the basis for permission to practice and for decisions that are made with respect to the unique needs of clients;
- Practitioners pledge their first concern to the welfare of the clients; and
- The profession assumes collective responsibility for the definition, transmittal, and enforcement of professional standards of practice and ethics (Darling-Hammond, 1990, p. 25).

In practice, this model concentrates on three sets of standards, for the initial licensure of teachers, for their advanced certification, and for approval of the programs and accreditation of the institutions that prepare teachers. Full standards for the profession, however, also include school-based or worksite processes such as teacher selection and induction, evaluation, ongoing professional development, and creation of professional culture and norms. Figure 3 portrays this concentration, noting via the dotted lines that full professional standards penetrate institutional characteristics of schools.

Figure 3. The Professional Model



Note:
Solid lines represent core targets for standards
Dotted lines represent potential additional targets

Over the past decade, states have substantially reformed their licensure procedures and have initiated a range of additional policies in the name of professionalism (Darling-Hammond & Berry, 1988). Among the more notable and ambitious reforms were those implemented in Connecticut that included revision of licensure tests, creation of state mentor teachers, and a first-year assistance/assessment program. Such other states as Minnesota and California also have invested in exploration and development of new licensure policies. California, for example, created the New Teacher Project that funded a range of pilot endeavors for the support of new teachers together with a research and development component that field-tested innovative teacher assessment practices (California Department of Education, 1992a, 1992b).

As many states continue to revise their licensure standards, powerful new initiatives have emerged at the national level. The most prominent professional model reforms include the establishment of the National Board for Professional Teaching Standards (NBPTS), which is creating a process for voluntary, advanced certification of teachers (NBPTS, 1991); the Interstate New Teacher Assessment and Support Consortium (INTASC) of the Council of Chief State School Officers, which is developing national guidelines for the reform of state licensure[3]; the PRAXIS series developed by the Educational Testing Service for teacher licensure (Dwyer & Villegas, 1991); and the recent and ongoing reforms of the policies and procedures of the National Council for Accreditation of Teacher Education ([NCATE], 1990, 1992a).

The Nature of Professional Standards

Whereas the systemic model aims to rationalize teacher education and licensure around curriculum content and student performance standards, the professional model justifies standards on a somewhat different, somewhat broader basis, questioning the relationship between standards for teachers and for curriculum content and student outcomes. A fundamental tension is at stake here, identified by the sociologist Robert

Merton (1976, p. 29) among others: "laymen tend to appraise professional performance in terms of outcome; whether it succeeds or fails to solve the problem. Professionals tend to judge performance in terms of what is accomplished in relation to what, under the circumstances, could be accomplished." Merton argues that this fundamental ambivalence inherent in professional work not only makes quality judgments difficult but produces inevitable conflict between lay persons who care mostly about results and professionals who confront uncertainty in the face of circumstances they imperfectly control. Such ambivalence produces disagreement over the basis for professional standards (Millman & Sykes, 1992).

At the heart of professionalism lies the professional school charged with the twin, related functions of generating knowledge upon which to base practice and producing well-trained, well-qualified practitioners. To fulfill this mission, a fourfold framework of standards emerged, most clearly in medicine, that included (1) required premedical coursework coupled with a demanding entrance examination; (2) a course of study in a medical school accredited by the profession; (3) a supervised, structured, and clinically based internship also subject to accreditation standards; and (4) a multipart, staged licensure examination required for permission to practice. Medicine subsequently developed a complex set of advanced standards that included additional training, supervised residencies, and certification examinations by a variety of medical specialty boards. Other professions such as law, architecture, accounting, and engineering developed variations on this model but at the center of all lie a course of study, an internship, and an examination. Claims for the professional model, then, rest on conceptions of the knowledge underlying practice that may be represented in curriculum and licensure, and on characteristics of the professional school and the settings in which preparation for practice occurs.

The systemic reform model also embraces elements of professionalism, proposing to anchor teaching and teacher education in curriculum content, student performance, and possibly school delivery standards. The model's advocates recognize that many instructional pathways may connect curriculum content to student learning outcomes. Teachers are encouraged to innovate, to tailor approaches to their particular students, to create their own versions for how to teach to and achieve the specified standards. To employ Lee Shulman's (1983) metaphor, within the shell made up of content and performance standards exists the kernel of teacher freedom, responsiveness, and creativity.

But this image of kernel and shell leaves unanswered several significant questions. How do teachers learn to teach to the new standards, particularly against the heavy weight of their prior experiences in schools? If the new goals of learning require research and development into new instructional methods, how will such work be organized, supported, and put into practice? And, if systematic inquiry is useful to educational practice, through what institutional means will such knowledge be generated, sifted, selected, organized, and conveyed to practitioners? The professional model attends to these and related questions through the three processes of accreditation, licensure, and certification.

A New Framework for Teacher Standards

At the national level the outlines of a vision of professional reform are emerging, most evidently in the plans for cooperation among NCATE, INTASC, and the NBPTS.[4] This vision includes the following assumptions:

- States should agree on a common framework for teacher licensure. Within this shared framework, states might vary their licensure requirements and categories, but maintain the common principles. The proper forum for forging such agreement is a voluntary confederation of states that cooperate in developing and promulgating the framework.

- The common licensure standard should be compatible with, and lead naturally to, the advanced standard represented in Board certification. In this way the teaching profession can create a career-based, developmental conception of teaching competence and so organize the trajectory of teachers' professional development over time. Within this conception, genuine excellence in teaching is attained steadily but surely as teachers hone their skills, expand their repertoires, and deepen their knowledge over time and in relation to a shared framework of external standards based on the articulation of initial licensure and advanced certification.

- The standards framework should be both dynamic and reform oriented. "Dynamic" means responsive to the steady accumulation of knowledge about teaching and learning upon which to base best practice. "Reform oriented" means consonant with contemporary visions of teaching, learning, and schooling represented in such consensus statements as the NCTM standards and others.

- Accreditation processes lead to creation of settings where future educators acquire the means to practice in relation to the new standards.

In keeping with basic tenets of the professional model, the principles that define a reform-oriented standards framework for teaching are:

- *The standard is performance based,* focusing on "what teachers know and know how to do." The emphasis is on the application of knowledge and skills—knowledge in use and adapted to specific contexts. This principle contrasts with traditional approaches that define teacher competence in terms of courses taken, paper-and-pencil test scores, and measures of generic teaching skills displayed without reference to such features of the teaching context as the subject matter and the diversity of students.

- *The standard encompasses professional dispositions* that form one basis for recruitment and that must be nurtured through participation in educational settings that reinforce, model, and support their development. This principle is meant to include a range of fundamental beliefs and attitudes that underlie the professional and ethical basis for practice. Such dispositions, this principle holds, are best cultivated through creation of strong norms in the learning communities that shape professional identity, in both university and school settings, where teachers learn to teach and pursue their careers. Dispositions, as the saying goes, are "caught not taught," indicating how participation in a setting shapes attitudes, values, and beliefs.

- *The standard requires disciplinary knowledge that is deep, broad, and integrated with other kinds of knowledge.* To realize the new goals of teaching and learning, educators must possess a deeper and richer grasp of disciplinary knowledge than has heretofore constituted the standard. The various standards documents detail the kinds of disciplinary knowledge that are indispensable to teaching for conceptual understanding of subject matter together with the connections between such knowledge and (a) knowledge in other disciplines, (b) characteristics of learners, and (c) real-world problems where such knowledge serves as a resource.

- *The standard calls for teacher knowledge of and sensitive response to student diversity.* Higher learning standards for all students coupled with demographic trends and contemporary policy commitments that favor integrated, mainstreamed, and heterogeneously grouped students converge to place new demands on teachers to manage diversity in schools and classrooms. Teaching standards consequently all stress teachers' knowledge of the sources of diversity together with a willingness to work with diverse groups of students and to employ a range of instructional practices that celebrate and make wise use of such diversity.

- *The standard includes steady, expanding mastery of the best general and content-specific instructional practices.* Systematic research and development together with practitioner-generated ideas and innovations are contributing a range of theories, models, instructional resources, vocabularies, and other guides to best practice that teachers should acquire and integrate into their work. This standard, however, also requires that teachers be aware of the weaknesses and limitations of particular practices and of the range of arguments, pro and con, that surround particular approaches. The standard, that is, calls for teachers to make wise and critical use of the technical knowledge that is accumulating in the field.

- *The standard calls for educators to be critical, reflective, inquiring learners.* Sound practice is based on judgment, wisdom, and decision making under uncertainty. Teachers must complement reliance on best practices and technical-theoretical knowledge with processes of reflection and inquiry into their own practices. The knowledge available to guide teaching practice is incomplete, often general and abstract, often contested. Consequently, teachers cannot base their work entirely on the accumulating technical knowledge.[5] They must engage in complex processes of critique, adaptation, and discovery. Teachers must learn to become students of children's learning as well as inquirers into their own practices and into larger social and institutional processes that affect their work.

- *The standard is role based,* as well as performance based, and includes teachers' work with colleagues, parents, and community on a range of schoolwide issues. Teachers may pursue extended responsibilities both informally, through their work on curriculum, assessment, staff development, community-based projects, and others, and formally through such advanced positions as mentor or master teacher, team leader, department chairperson, and others. As schools restructure, teachers will be asked to take on a wider range of roles and responsibilities, and such work is integral to professional conceptions of the teacher's extended role within the educational system.

Producing Professionals: Accreditation Standards

Schools of education are the research and training arm of the teaching profession. Their mission is to produce new knowledge in collaboration with the field and to represent such knowledge in programs of preparation. Such programs, however, do not simply convey technical knowledge and skill. They also are responsible for processes of socialization and induction into the profession, in partnership with school districts and schools. Accreditation standards provide guarantees that the institutions and programs charged with these responsibilities possess the necessary capacities. In this context, "capacity" refers to institutional processes and characteristics that may be specified, judged, and sometimes measured.

The assessment of institutional effectiveness, however, is fraught with complexities. Two broad approaches have emerged (Rowan, 1985). The *goal-centered view* identifies an institution's goals, then assesses their attainment. The *natural systems view* regards most organizations as too large and complex to specify a finite number of goals. Instead, organizations are seen as oriented toward overall health and survival. An institutional process perspective might include attention to efficient management procedures, organizational culture and climate, and environmental adaptation, including resource mobilization, market development, and innovation (Ewell, 1992).

Accreditation typically comb[illegible]es these approaches, but has three options upon which to base evaluative judgments. An organization's performance may be compared to the performance of other organizations, to its own past performance, or to an independent standard of performance. No simple rules exist for choice among these options, but most accreditation procedures establish an absolute standard against which to compare institutional performance.

The NCATE (1990) unit standards are an example. They include 10 preconditions, 18 standards, and 94 "criteria for compliance." The preconditions specify that formal arrangements are in place including written policies of various kinds and other documentation. The standards themselves are grouped into the categories of (a) knowledge bases for professional education, (b) relation to the world of practice, (c) students, (d) faculty, and (e) governance and resources. The standards stress *processes* such as student admissions, advising, and assessment, core *values* such as responsiveness to cultural diversity, and *resources* such as the quantitative standard that specifies no more than 18 full-time equivalent students per 1 full-time equivalent faculty member for supervision of practicum experiences.

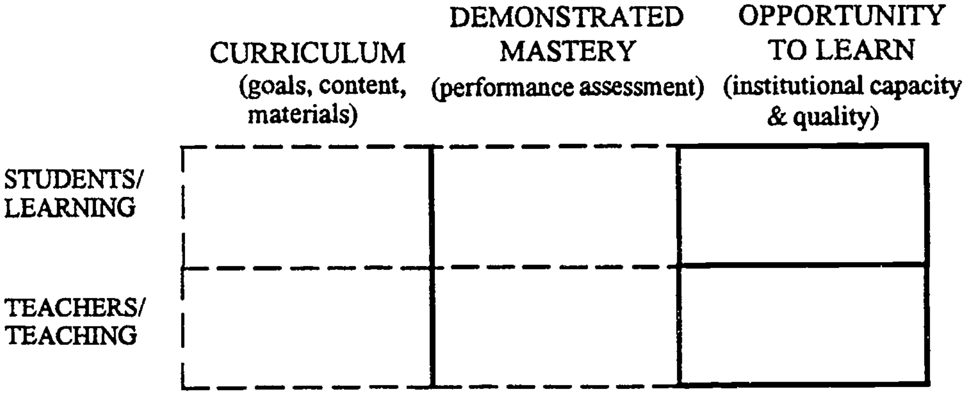
The NCATE (1992a) program standards developed in collaboration with 18 specialty associations specify the coursework and other experiences required of teachers, indicating coverage of key concepts, topics, skills, and competencies related to the subject matter, to the teaching, and to field experiences, by school level and curricular subspecialty (e.g., the various disciplines within science).

Within the professional model, accreditation standards complement licensure and certification standards in several ways. First, in keeping with the performance-based principle, accreditation standards include attention to institutional processes of student evaluation. Second, vanguard reforms of licensure include provision for school-based internships that supply opportunity for professional education coupled with performance assessment. Capacity building will be needed to create quality-controlled sites for the internship, jointly managed by schools of education and school districts, that integrate the professional curriculum with the school curriculum. Standards for internships, then, may be developed that complement existing NCATE unit standards together with the new emphasis on performance-based licensure. Prototypes for internship standards already have been advanced (see California Department of Education, 1992b; Darling-Hammond, Gendler, & Wise, 1990; Darling-Hammond, Klein, Gendler, & Wise, 1992; Wise, Darling-Hammond, with Berry, & Klein, 1987).

The Reform Network Model

A third model of reform adapts standard setting to what Seymour Sarason (1982) has called the culture of the school and the problem of change. The reform network model displayed in Figure 4 attacks an array of issues that bear on children and learning: (a) the connection of a school to the culture and capacities of its surrounding community; (b) the involvement of parents in both the students' learning processes and the schools' decision-making processes; and (c) the restructuring of fundamental features of schooling in the name of a set of principles shared by the school and community. The principles are standards that serve to draw hundreds of individuals within and around a school into a shared account of educational failure and a shared commitment for change of the school.

Figure 4. The Reform Network Model



Note:
Solid lines represent core targets for standards
Dotted lines represent potential additional targets

The reform network model operates where many reformers fear to tread: at the school site, a setting that is notoriously politicized and resistant to fundamental change. The school is seen as an organization within which the teaching and learning processes are embedded. The design and effectiveness of the organization's structure and climate can greatly help or hinder the quality of instruction and curriculum and learning outcomes. The advantage of this approach also is its disadvantage. The model takes seriously the problem of managing the challenges posed by the unique culture of the individual school, a problem often bypassed by other models. But taking schools as cultures seriously also takes extraordinary time—at least 5 years of steady work, according to some leading reform network practitioners. And taking schools one-by-one seems destined to make hardly a dent in the U.S. "market" of 100,000 schools.

Still, the reform network model spread rapidly in the 1980s and its reach is growing in the 1990s. The model comes in several major versions, all of which share two key characteristics of standard setting: the use of standards as a basic tool for organizing reform activity in a school, and the application of the standards to a number of dispersed sites, ranging from a handful to several hundred schools.

For example, reform networks are being developed by universities with a focus on renewing teacher education. The Holmes Group, a consortium of 100 research universities, and the Center for Educational Renewal launched by John Goodlad, both are involved in a growing set of schools based on the ideas expressed in the principles they have articulated: the Holmes Group's original manifesto (1986) and the six principles for the design of professional development schools (1990); and Goodlad's (1990) Nineteen Postulates.

This analysis will examine the standards established by three of the more mature reform network initiatives: the School Development Program, initiated by James Comer, a Yale psychologist, and adopted by more than 150 schools; the Accelerated

Schools program launched by Stanford educator and economist Henry Levin, operational in 300 elementary schools; and the Coalition for Essential Schools, pioneered by Theodore Sizer, a school administrator at Brown University, that now counts more than 200 schools. (Recently, the Sizer and Comer organizations joined forces to develop a successful proposal for the New American Schools Development Corporation [NASDC].)[6]

Assumptions About Schools

The trio of efforts begun in the 1980s shares a remarkably similar genesis. Working independently, the university researchers conducted extensive inquiries in schools, developing theories of reform that are captured in each of their network's standards. Comer found in the cultural dynamics of the school a set of nine "components" for reshaping the entrenched attitudes and resistance to change that keep poor African-American students out of the educational mainstream. Levin discovered his three basic principles for school transformation in the way that schools compartmentalize their "at-risk" students, thereby denying them a meaningful education. And Sizer found in the school's policy instruments—design, curriculum, assessment, and structure—a set of nine common principles or "points of entry" for essential change (see Appendix).

These sets of standards specifically address key elements of the school culture: the goals of the school, the governance of the school (decision making and accountability), and the operational mechanisms used by the school. Underlying the standards are several assumptions, found more often in the writings of Comer, Levin, and Sizer than in the standards themselves. These assumptions are carefully crafted to enlist support in the typically resistant and often contentious school cultures. They include an appealing account of school failure that blames practice in general but no one in particular; a philosophical commitment to the individuality and diversity of schools and communities that assures the locals that they will control change; a rejection of instructional approaches that fail to account for and capitalize on the diverse behavior, motivation, and potential of each individual student; and a comforting belief that school transformation must be a gradual process.

School Failure

The reform networks tell a tale of inequity. America's schools, they assert, produce an inequitable distribution of learning outcomes for students, particularly for those outside of the society's white, middle-class "mainstream." That the school's goals should apply to all students is a persistent Sizer theme; and "every Accelerated Elementary School should aim to bring all children into the educational mainstream by a set deadline" (Hopfenberg, Levin, Meister, & Rogers, 1990, p. 8). These admirable declarations are somewhat routine in contemporary education; they could adorn the rose-colored "mission statements" of many a school. But in each case the network reformers further announce that schools have erected a vast array of barriers—the attitudes and beliefs of school personnel, the curriculum, instruction, and organizational structure of schools—that stand in the way of these goals.

Schools are seen as organizations that lack critical capacities for success. What they don't know can hurt them and their students—in Comer's view, a typical school staff lacks training in child development theory and practice and will fail to understand the behavior, motivation, and potential of low-income students. What schools do not expect or demand of students will not materialize. Hopfenberg et al.(1990) argue that the typical compensatory education program,

> reduces learning expectations on the parts of both the children and the educators who are assigned to teach them, and it stigmatizes both groups with a label of inferiority. . . . The combination of low social status and low expectations is tantamount to treating such students as discards who are marginal to the mainstream educational agenda. (p. 1)

What schools do not envision for their students cannot be achieved by their students. In his analysis, Sizer (1992a) evokes a fictitious Every School:

> The curriculum does not help. Franklin High School has a statement of goals, but it is as vague as it is hortatory and conventional. The goals connect only rhetorically to the Formal Course of Study. The latter is laid out by course and grade and is usually cast as a list of ideas, classics to be read, facts, skills, procedures, and qualities of character to be admired, opportunities to stock one's mind. Simply, the curriculum, however artfully described, is a listing of what the *teachers* will do, what "things" the kids will be "exposed" to. The students remain invisible, lumped in their age-graded cohorts, ready to watch the teachers' parade of things. (p. 6)

School and Community Diversity

The network reformers reject the notion that socioeconomic and racial diversity of students and neighborhoods provides an explanation for the failure of schools. Likewise, they are concerned that some standard setting efforts seek to suppress the influence of these factors on the educational process in favor of standardization. Instead, they assume that the uniqueness of each school and community should be valued. Comer argues that schools have failed to adapt to the student behaviors that are the result of unique, community-based social structures. This has had particularly damaging consequences for minority and low-income children:

> Because of pre-school experiences in families under stress, a disproportionate number of low-income children presented themselves to the schools in ways that were understood as "bad," under-motivated, and of low academic potential. The behavior, in fact, reflected underdevelopment or development that was appropriate on the playground, at home or other places outside of school, but inappropriate in school. (Comer, undated, p.1)

From the belief that the differences between schools and communities are a source of strength for educational processes, the network reformers assert a principle that profoundly shapes their use of standard setting. "There is no one best model . . . each school must be shaped by its own people and must respect the community it serves" (Sizer, 1992a, p. xi). Every school is unique, but still they share certain organizational or cultural characteristics that become the basis for the standards initially employed by network reformers. "No two schools are quite alike but all share principles that give shape to their effort" (Sizer, 1992a, p. 207). These principles, or standards, aim not to suppress but to cultivate the diversity of schools and communities. As a result, one step they take is to support a new collaboration between community and school, inviting parents, students, and others into the schooling process.

Student Diversity

The network reform model seeks to link equitable learning outcomes for students with a vision of higher quality of learning. Thus a commitment to learning for *all* students goes hand in hand with the assumption that educational processes must be tailored to the needs of *individual* students. "All students will reach the destination but not in the same ways or at the same rates. The program will be flexible . . . the rate of progress will be tailored to the student's capacity" (Sizer, 1992a, p. 44). For Comer and Levin this view is encapsulated in the phrase "mainstream education," describing the kind of learning outcomes that are possible only for white, middle-class students whose education is shaped to engage their background and support their aspirations.

Gradual Change

Comer's view on how to change schools reflects the caution with which reform networks address the school's culture:

> mechanisms must be created that allow parents and the staff to engage in a process in which they will gain and apply child development, systems, and individual behavior knowledge and skills to every aspect in a way and at a rate that is understandable and not threatening. Each successful activity outcome for staff, students, and parents encourages the staff to use these ways of working again, until the new way eventually replaces the old. (Comer, undated, p. 3)

Hopfenberg et al. (1990, p. 5) echo this view—"Practices cannot change without deeper transformations in the attitudes, meanings and beliefs of schooling." And they estimate that, "the change process will occur over a five-six year period for each school" (p. 21).

Standards to Guide School Operations

Because the assumptions of the developers of reform network models are derived largely from analyses of schools as organizations, they lead mainly to standards that seek to provide practical new guidance about the who, what, and how of operating schools. Because they signal rather than govern behaviors, the standards offer a precision (or imprecision) that leaves substantial latitude for judgment and interpretation while unmistakably reflecting the guiding assumptions detailed above. In general, then, the standards of the three reform networks we are examining address the goals of the school, the governance of the school (decision-making and accountability), and the operational mechanisms used by the school.

- *School Goals*—The standards do not specify what the goals of a school should be, although the assumptions of the mainstreaming of and tailoring for all students are suggested. Rather, they stress that without articulating goals that describe *specific student learning outcomes* a school cannot focus the efforts of parents, teachers, students, and administrators. Goals become, as the principles for Accelerated Schools state, "the focal point of everyone's efforts" (Hopfenberg et al., 1990, p. 10). Goal setting can provide motivation and accountability, as part of a comprehensive effort to change a school.

- *School Governance*—The standards would restructure the authority and power within a school in order to cast a wider net, bringing parents, teachers, students, and administrators into a genuine collaborative process. Under Comer's model, a "governance and management team" of parents, teachers, administrators, and support staff is formed to develop consensus about the goals and plans of the school. Levin's Accelerated Principles emphasize that, "Empowerment . . . of key participants of a school community in the school and at home" is needed in order to, "break the present stalemate among administrators, teachers, parents and students. . . . Such an approach requires a shift to a school-based decision approach with heavy involvement of teachers and parents and new administrative roles" (Hopfenberg et al., 1990, p. 11). Sizer's principles prescribe new roles and responsibilities for principals, teachers, and students, backed by new incentives. In addition, "parents should be treated as essential collaborators" (1992a, p. 208).

- *Operational Mechanisms*—Each of the reform network's standards addresses quite different elements of a school's operations, with the focus derived from the original concern of the university researcher. For example, Comer the psychologist states the need for a school-community team to address the mental health needs of the students in a comprehensive and integrative fashion. Sizer the school administrator links a school's goals for student learning with student assessment; each high school student should complete a successful "final demonstration of mastery for graduation—an Exhibition" (Sizer, 1992a, p. 208). More generally, the standards offer guidance on a range of a typical school's operational functions, including budgeting, planning, staff development, assessment, instructional strategies, curriculum, staff salaries, and even upper limits of the cost of reform.

The Models Compared

None of these models yet exists in fully realized form; consequently much of the debate over standard setting relies on projections, designs, and complex webs of assumptions yet to be tested. Nevertheless it is possible to identify tendencies and dimensions for comparison.

Power and Participation in Systemic Reform

The systemic model appears to be the most far reaching in its ambition to combine expert authority with the power of the state to command and coordinate the widest range of elements. It enjoys the advantages and suffers the disadvantages of such grand ambition. From a policy perspective, the model promises effective coordination of powerful influences on what is learned in school—the content and goals of the curriculum, the materials of instruction, the devices of assessment, the stakes attached to outcomes, and the various capacities for delivery. The model rests on a widely acknowledged observation that the current set of influences on teaching and learning are fragmented, incoherent, and fickle. "Cleaning up the mess"—the imposition of rational planning—is a hefty cultural trope possessing evident face validity and high political salience. Systemic reform also offers handsome prototypes—most notably the NCTM standards—and a workable agenda around which to organize progress. The story contained in the model regarding both what is wrong and how to fix it is plausible, even compelling, and appealing.

Systemic reform potentially supplies a basis for professionalism as well. Recall the image of virtuosity cultivated among Asian teachers. A stable, shared practice rich in conventions and traditions within which improvisation and creativity may be exercised is an attractive image. Advocates argue that without a strong framework that focuses and directs the work of teaching, there is little basis for professional practice. Agreement on content and performance standards, however, would allow best practices to emerge as teachers worked collaboratively on a set of common outcomes and tasks, building up and sharing craft and technical knowledge about how best to promote the learning established by the framework.

But the systemic reform vision also conceals dilemmas, conflicts, and some heroic assumptions. Perhaps the central dilemma is that the model's potential adverse consequences multiply in direct proportion to its power, defined in terms of the rewards or sanctions attached to compliance with standards. If content and performance standards are instituted as a form of voluntary guidance, many policymakers would predict they will be ignored by schools, teachers, and students. If such standards are attached to powerful stakes such as progress through and graduation from school, admission to higher education and access to employment opportunities and training, the consequences will lay bare and potentially exacerbate our society's continuing, unresolved, and systemic inequities. Furthermore, much evidence indicates that the imposition of external, high-stakes accountability produces negative effects on student motivation (Deci & Ryan, 1985; Lepper, 1983) and on the character of teaching (Carlson, 1992; Corbett & Wilson, 1991; Madaus, West, Harmon, Lomax, & Viator, 1992; Smith, 1991)[7]. Systemic reform advocates argue that the new assessments will not produce the adverse consequences associated with standardized tests of basic skills, but the issue concerns the stakes attached to assessment and their effects on teachers and students, not the form of assessment.

Other tensions surface around teacher role conceptions, teacher learning, and change in teaching practice. As the comparative study of French and English teachers suggests, the breadth and complexity of role conceptions is at issue. Systemic reform tends to narrow (or focus) the teacher's role on engaging students with academic content within the classroom. Such focus is an explicit aim of the model, but many educators today argue for a more expansive teacher role in school and community that embraces work with "the whole child," with parents, and with colleagues on a wider range of issues than the academic character of instruction. Building a powerful framework of mandates, incentives, and oversight around an aspect of the role may provoke resistance from educators working within the other models, who envision a broader, more multifaceted role for teachers.

The model also is vague on how teachers will learn to teach to the new goals of instruction—demanding content and high engagement for all students. Systemic reform clearly implies dramatic change in teaching practice, but contains no plausible account for how this might occur. The current system of professional development for teachers fits poorly with the emerging vision of teaching and learning and requires substantial, accompanying reform against the bureaucratic grain (Little, 1992). Because schools and school districts are not organized to promote teacher learning, it is difficult to imagine how content and performance standards alone can carry the day. More fundamental reforms would be necessary that enable and empower teacher learning. What this would look like in terms of state and district policy or school organization and practice is not clear.

The model contains two heroic assumptions. One concerns prospects for technical breakthroughs in assessment methods together with the rapid, widespread replacement of existing norm- and criterion-referenced tests with the new methods. Ingenious and promising work is underway around the country on new assessment methods, together with promising trials in such states as Vermont. But technical constraints have emerged in some U.S. experiments (see, for example, Shavelson, Baxter, Pine, 1992), while political opposition has slowed the use of performance assessment in England (Nuttall, 1992). These obstacles and difficulties do not appear insurmountable, but system reformers likely have underestimated the powerful hold and deep rootedness of the existing regimen of testing in the schools. Replacing the current system, or even modifying it substantially, will not be easy.

The second assumption concerns the likelihood of achieving consensus on the central goals of schooling conceived as content and performance standards in a small set of academic subjects. Nations such as France and Japan, notes Harold Noah (1989), have the advantage of a clear sense of their culture together with a relatively homogeneous population. Yet, in both cases, heated conflict over the school curriculum periodically spills into public debate. "If even these countries," he asks, "have their serious disputes and fundamentally unsettled questions about the curriculum, what chance is there that this country with its cross-cutting social, economic, political, and ethnic divisions can reach national consensus on the substance of the curriculum, which is, after all, the basis for standards?"

Finally, delivery standards constitute the most politically divisive feature of the model. Partisan dispute over their development already has erupted around the work of the National Educational Goals Panel. Conceptualization of both input and process indicators is primitive and problematic, yet champions of equity will insist that without guarantees that all students have a fair chance, the new standards by themselves constitute a cruel, unattainable mockery of the American dream. Delivery standards, however, are likely to challenge fundamental features of the system, not least its financing, thereby creating significant political problems.

Teaching Practice and the Locus of Professionalism

The professional model's advantage is its concentration on a generous and dynamic conception of teaching practice. Professional standards address the character of teaching itself, the teacher's role, the norms and expectations that govern conduct, the process of learning to teach, and the advancement of teaching practice through research and development. The model potentially brings a wide range of considerations to bear on the question, "what is good teaching?" that include but extend beyond the systemic reform triad—school goals, curriculum content, and student outcomes—to encompass pedagogical knowledge and skill, professional manner and dispositions, and such other capacities as curriculum planning and construction and the conduct of inquiry.

Advocates of the professional model conceive the role in broad terms that include teacher as subject matter expert, but that extend as well to teacher as policy critic, as child advocate, as community worker, as social activist, as reflective practitioner, as team player, as researcher, and as lifelong learner. Professional reformers do not speak in one voice about these matters, and their implications for teacher education, teacher work, and school organization are contested. These images suggest aspects of teacher role definition that are complex and controversial. Each is present to some degree in programs of teacher education, each has implications for knowledge relevant to professional practice, and each reflects commitments by teacher educators to visions of school improvement and of the teacher's role in such reform. In a period of reform, then, advocates of teacher professionalism contribute important ideas to the debate about teachers' roles in restructured schools.

Finally, the model insists on the centrality of the professional school to the profession. Creating new knowledge and connecting it to practice is indispensable to educational progress and improvement. Accreditation standards support the institutional capacity of education schools in their functions of preparing professionals and conducting research and development. Such standards, particularly extended to internships and school-based practica, help build the capacity needed to improve the teaching of teachers and to bring new knowledge to bear on practice.

The professional model also raises a range of serious questions. Foremost is the relation between the various standards for the profession and student learning. The connection seems remote to many policymakers, who do not see professional standard setting as strongly related to instructional improvement. The relationship between the knowledge claims of teacher educators and the improvement of instruction is often indirect and tenuous. Particularly in comparison with the systemic reform model, professional standards appear remote from the core work of schools. Some have argued that professional reforms may be interpreted more accurately as self-serving attempts by teacher educators to elevate their status within the university than as serious efforts to improve teaching and learning (Labaree, 1992a, 1992b).

A second difficulty is the mismatch between the aspirations of professional reformers and the current ethos of the occupation as reinforced by the conditions of work. Much of the sociological and historical commentary on teaching portrays the occupation's ethos as antiprofessional in such fundamental respects as the absence of a shared technical culture, of client-centered norms (e.g., the expectation that all children can learn), and of peer evaluation, coupled with the presence of privatism, individuality, routinized approaches to practice, and even anti-intellectualism (Lortie, 1975; Cohn & Kottkamp, 1992).[8] Teacher orientations, however, appear not as individual preferences but as collective adaptations to such working conditions as the lack of time for professional interaction and reflection, inadequate professional development, isolation within the classroom, bureaucratic subordination, and overload.

These observations raise a question about the locus of professionalism. Advocates for the professional model concentrate attention on the creation of an integrated framework of licensure, certification, and accreditation standards. But the sociological portrayal of teaching's ethos argues for the cultivation of school-based professional work cultures within which norms and standards are socially constructed and negotiated (Lieberman, 1988; Rosenholtz, 1989). This perspective questions whether the larger system of professional standards is likely to affect teachers' work culture. The professional model does not much attend to this issue of linkage and impact.

Finally, the professional model shares with systemic reform a reliance on technical breakthroughs in assessment methods. The hope is to create performance-based licensure and certification processes that reflect best practice in teaching, and that will inspire public confidence in the profession. The NBPTS in particular is investing heavily in creation and careful testing of new procedures, but it is too early to judge the results. The criteria for such assessments—that they be administratively feasible, economically affordable, publicly acceptable, legally defensible, and professionally credible—are stringent, while the design and implementation problems are formidable. Compromises may be necessary, whose effects on the overall strategy will be uncertain.

Reform Networks and the Scope of Impact

The reform network model has three significant advantages as a reform strategy. First, the projects reviewed encompass a broad range of factors likely to affect students' success and engagement in school. These factors notably extend to include the participation of parents and of other professionals who supply services to children at risk. Whereas systemic reformers seek to orchestrate a range of factors around instruction and the professional model targets teaching practice, the reform network projects aim to mobilize school communities around children's lives—around the development of full human potential.[9]

Second, reform networks engage schools and communities on a voluntary basis, securing commitment to change via local dialogue and problem assessment. To employ the classic distinction, the change strategy is normative-re-educative, not power-coercive (Chin & Benne, 1976), and potentially offers greater likelihood of sustained, significant school-based change.

Third, reform networks attend to the culture of the school and the problem of change, by concentrating strategies and resources at the school level, and by initiating processes within individual schools, supported by outside resources, that are more likely to yield deep change. Reform networks, that is, encompass not only a program of change but the process of change; they include a theory of change as well as a theory of education (Fullan with Stiegelbauer, 1991, pp. 46, 112)[10]. By contrast, the other two models are much less explicit about how the envisioned reforms will enter and transform schools.

But the reform network projects also face three significant problems. Because they work on a voluntary, school-by-school basis, their widespread impact is open to question. The dilemma that voluntary efforts face is captured in the phrase, "preaching to the converted." Schools and communities most in need of reform may choose not to join. The reform network strategy does not include a strong theory about how to achieve widespread, systemic impact.

Second, the projects tend to be supported through a combination of foundation and corporate funding, together with some public assistance. The support base tends to be soft, fragile, and not yet institutionalized. But the lessons learned from past efforts to convert reform networks into government programs suggest that too often the result is bureaucratization and displacement of animating ideals (Elmore & McLaughlin, 1988). The very fragility of funding and the existence of reform networks outside the government mainstream can contribute an esprit de corps associated with the power of social movements. Converting social movements into public policy and programs, however, typically produces both gains and losses.

Third, the reform principles articulated within particular networks appear to offer relatively weak guidance to practice. Stated more positively, the principles require substantial local problem solving and innovation, often on the basis of inadequate knowledge and resources. Two cases in point are the injunctions to replace superficial coverage models of curriculum with in-depth explorations of subject matter knowledge and to de-track the school curriculum. Both reform principles require attention to technical, normative, and political dimensions of change that often exceed local capacity (see Newmann, 1988; Oakes, 1992). Consequently, progress across a dispersed network of reform sites is typically halting and uneven.

The Role of Standard Setting in the Reform Models

What role does standard setting play in each of these models? If we return to the initial ideas about standards, some interesting differences emerge. Systemic reform seeks to utilize specification and measurement to gain greater control over outcomes.

Analysts (Porter, Archbald, & Tyree, 1990) have identified five dimensions of an instructional guidance strategy that include input and outcome controls for teachers and students. In general, the greater the number and type of outcomes and inputs controlled, the more *prescriptive* is the policy framework. Prescriptiveness is further enhanced through *specificity*. For example, curriculum frameworks may include vague, general guidance or detailed specifications regarding what is to be taught, when particular content and skills are introduced, the breadth and depth of coverage, and the degree of local flexibility in response to national or state specifications (Smith, O'Day, & Cohen, 1990).

A third characteristic is the *consistency* of guidance across instruments and jurisdictions. The remaining characteristics distinguish the *authority* of instruments and controls from their *power*. Authoritative policy (or standards) achieves influence through persuasion, as when a well-regarded professional association such as the NCTM establishes voluntary standards, while policy power derives from rewards or sanctions attached to compliance (e.g., high-stakes testing).

This model originated in the context of research that explored the sources of influence over curriculum content and coverage (see, for example, Porter, 1989a; Porter, Floden, Freeman, Schmidt, & Schwille, 1988), but within systemic reform has shifted significance from an analytic tool to a policy strategy. The aim is to increase the prescriptiveness, specificity, consistency, power, and authority of standards. The idea of a standard within this strategy takes on two classic meanings.

The curriculum frameworks are intended to serve as "authoritative exemplars of correctness or perfection," the national or state standard against which local statements and guidance will be judged. Such frameworks derive their authority from public and professional consensus—through recourse both to democratic process and to expert knowledge.

The student performance standards establish a "definite level of excellence or attainment," secured through precise measurement. The strategy requires not only that new assessments be developed, but that levels of performance be set. The standard, in this second meaning, refers to a criterion level determined through empirical and judgmental procedures. That such procedures also mix politics with science is evident in Berk's (1986, p. 137) comment that, "The process of setting performance standards is open to constant criticism and remains controversial to discuss, difficult to execute, and almost impossible to defend." At the heart of systemic reform, then, is the creation of exemplary inputs—curriculum frameworks, goal statements, instructional materials—and the measurement of outputs—performance assessments and criterion levels. Left relatively unspecified is the teaching process that connects inputs to outputs.

Within the professional model standards appear both as rallying point and as exemplar of sorts. Standards for teaching such as those put forth by the NBPTS or the NCTM serve as principles around which the profession can rally, which are intended both to direct the development of assessments and to project a normative vision of teaching. Standard setting within this model emphasizes not precise measurement but the creation of statements of midrange specificity to facilitate judgment in guiding and evaluating teaching. About the NCTM standards, for example, one of the authors writes that they are to, "direct, but not determine practice; to guide but not prescribe teaching" (Ball, 1992, p. 2). She goes on to claim that, "no tight implications for practice" (p. 7) may be inferred from the standards. Rather, their implementation in the classroom calls for interpretation, judgment, and experimentation on the teacher's part.

Others utilize the same imagery in describing the use of professional standards in the assessment of teaching. Wilson and Wineburg (in press), for example, supply a detailed interpretive analysis of the performance of two history teachers on several assessment exercises. They comment that, "In proposing that teachers' work be evaluated according to professional judgments—judgments principled and disciplined but resistant to pat formulas and generic rules—reformers may be calling for a system that appeals to the narrative traditions of the humanities and the social sciences" (p. 33). And, the detailed account of attempts to score performance exercises in the Teacher Assessment Project at Stanford University reveals the struggle to locate a vocabulary for grounding interpretation, in contrast to the creation of checklists to measure performance (Kerdeman, 1991). A teaching standard such as, "is able to teach all students in culturally relevant ways" requires substantial elaboration around the phrase "culturally relevant," whose import is unlikely ever to eliminate ambiguity or the need for judgment calls when applied to particular cases of performance.

Emerging professional standards for teaching, then, employ narrative, not numbers, to stimulate judgment rather than precise measurement. This usage recalls the ecclesiastical context of the term "standard" and the ongoing process of interpreting the authorized versions of sacred texts that constitute the standard within particular communities of worship.

Finally, within the reform network projects, standards appear more like general principles that animate communities of believers or cultural norms constructed within local settings. They are intended to supply broad direction and commitment to a shared vision toward which a school is working. On the coming of national educational standards the philosopher Maxine Greene (1989) reflected, "Persons are more likely to be norm governed, to choose or adopt standards if they see themselves as members of a community marked by certain commitments and always in the process of renewing itself." Standards here "mark the commitment" rather than measuring performance levels or assisting in the judgment of teaching practice. Paramount in this usage is the rallying or committing function of standards. This idea shares with the professional model the necessity of interpretation and continuous refinement—or renewal in Greene's terms.

At the heart of these nuances of standard setting lies the problem of change. The systemic model appears to work from the outside in, to contain teaching within a framework of content and performance specifications intended to reform the practice. In contrast, professional standards work outward from practice, to encompass the supporting conditions needed to bring about the vision of reformed teaching. Both models project systems that will come to exercise dominion on a wide scale. Reform network standards recall the dictum to "think globally, act locally." They embrace a comprehensive vision of the good school community that can only be realized through intensely local actions. As this comparative critique has highlighted, these models and their associated standards each have strengths and weaknesses, but none of them is likely soon to bring about deep change on a widespread basis. This raises the question whether together they might produce greater impact. What are the prospects that these approaches might be coordinated and harmonized? We turn next to this question.

III. MANY STANDARDS: CAN THEY BE HARMONIZED?

An obvious irony lurks in this analysis. The various reformers at work on standards all envision a stronger, more coherent system of education united around some common principles and goals. Yet the very pace and proliferation of standard-setting activity belies this hope. To set the stage for consideration of linkage possibilities among the models and standards, we explore two sources of conflict that are likely to complicate efforts at collaboration among the projects and initiatives underway.

First, we can examine the *conceptual-normative relationship* among standards. Recall that our original definition of a standard emphasized appropriate precision in the making of judgments within a context of shared meaning and values. Standards according to this definition are based on conceptions of teaching, learning, and schooling that are open to continuing debate. Are the various standards compatible with one another, or do they harbor contradictions?

As we have described throughout, standard setting relies on the formation of consensus through political bargaining and negotiation. A second question concerns the *political relations* among various interests in standard setting. Ideas and values are not the only stakes in the standard-setting process. Interest groups, factions, organizations all are involved and seek to maximize their benefits and positions. We can ask about the prospects for and consequences of conflict among the involved parties.

Normative and Conceptual Issues in Standard Setting

Identifying conceptual issues is an exercise in judgment, influenced by the level of analysis. A macro-level issue might address conceptions of the purposes of schooling, while a micro-level topic might be approaches to the teaching of reading. Both are germane to standard setting, as would be discussion of standards that are sensitive to particular school contexts and communities. We do not attempt any systematic and thorough analysis here, but rather nominate a small set of issues, cast at a general level, that appear salient, based on the standards documents and supporting literature under review. The issues cover the cultural context of schooling, the goals of learning, the content and structure of the curriculum, the nature of teaching practice, and the teacher's role.

At a most general level the prospects for discord around standard setting stem from cultural conflicts over basic values and life-styles. Our nation is deeply, perhaps irreconcilably, divided along ideological fault lines originating in the Enlightenment challenge to traditional, religious worldviews. On one side are religious fundamentalists—Baptist, Catholic, and Jew—who fear and resist the secularization of American culture and the promotion through public institutions of moral relativism. On the other side are liberal progressives of various stripes who fear the intolerance and parochialism of the fundamentalists. The culture wars (Hunter, 1991) between these groups are waged in many arenas, including the schools. The textbook controversies in West Virginia; the opposition to the NSF-sponsored curriculum, *Man: A Course of Study*; and the struggles over censorship and state textbook adoption bespeak the deep divisions among Americans over what the schools should teach. Whereas secular progressives favor developing a spirit of critical inquiry and independence in the young, the fundamentalists insist on the transmission of traditional moral values grounded in religious convictions. In such struggles, there appears relatively little ground for compromise and accommodation.

An equally fateful cultural conflict concerns multiculturalism and the passionate desire of many minority groups to influence the school curriculum around issues of language and culture. The American school is quintessentially a white, middle-class institution that increasingly must accommodate students from outside this cultural mainstream. The school curriculum always has been a contested terrain, but the demographics point to a sharpening and an intensifying of the cultural conflicts. Curriculum content standards may appear as a technically neutral anchor for the rationalization of teaching and learning, but the history of struggle over the school curriculum belies such a naive notion.[11]

A second tension involves a mismatch that has emerged around the goals of learning. In many schools today, particularly in urban areas (Carlson, 1992), a regimen of basic skills instruction is deeply entrenched and supported by texts, tests, inservice education, administrative oversight, and community expectation. The new standards, however, project more ambitious learning outcomes for all students and constitute a direct challenge to the current system. Much of the instructional guidance in place operates on the assumption that basic skills constitute a prerequisite to advanced skills and/or that advanced skills are a kind of enrichment that more able students receive after mastering the basics (while the less able receive "remedial" instruction).

The new standards for learning, however, call for students to engage from the outset in higher order cognitive processes, integrating skills development into learning tasks and projects that are more demanding and ambitious than drill work in the basics. A range of instructional practices such as reciprocal teaching of reading, whole language approaches to literacy, process approaches to writing, and discourse strategies in mathematics and the sciences to promote conceptual understanding exemplify the new goals of learning, together with such meta-cognitive aspirations as to encourage more self-conscious, self-directed learning (Bereiter & Scardamalia, 1987).

Around such goals there is substantial agreement among reformers operating within each of the three models. Such consensus on the new goals of learning is a promising starting point for collaboration. However, the heavy weight of the current system, including public perceptions and preferences, continues the press for more basic goals pursued through traditional teaching.

Furthermore, minority educators have raised serious questions about the appropriateness of progressive methods for children outside the middle-class, white mainstream whose "cultural capital" places them at risk (Delpit, 1986, 1988). Minority educators do not advocate abandonment of ambitious learning goals for children of color, but rather raise questions about whether pursuit of such goals will come at the expense of basic competencies needed to function in the larger culture.

The new agenda for learning suffers a critical strategic disadvantage as well. A relatively well-developed technology for basic skills instruction has emerged that is nicely adapted to many features of the school system. In contrast, there is more uncertainty about how to teach to the new goals. Such teaching appears to place greater demands on teachers and students alike, and to multiply ambiguities around process and outcomes. The standards for such teaching cannot be expressed as detailed specifications and procedures, for these do not exist. Rather, they must be couched as principles whose use requires adaptation, improvisation, and ongoing revision by teachers. Whether the political culture surrounding the schools and the work culture within the schools will support increased uncertainty and experimentation at a time when accountability demands are increasing is a serious question.

A third source of controversy is the content of the curriculum. The NCTM standards have given hope to policymakers that a broad-based consensus is possible around curriculum content, but mathematics may not be a good predictor of other disciplines. One recent comprehensive review of the school curriculum (Gehrke, Knapp, & Sirotnik, 1992) identifies longstanding, continuing disagreements among educators in the social studies and language arts areas, where three versions of the curriculum are in contention (see also Kliebard, 1986). One stresses the intellectual aspects of history and the social sciences as academic disciplines together with broad acquaintance with the literary canon. Another emphasizes mastery of basic literacy skills and transmission of citizenship-related information and values. A third adopts "process approaches" that feature inquiry and reflective thinking in the social studies and the construction of knowledge through authentic literary activities. This review goes on to note the consensus within the mathematics community and the efforts underway to forge a parallel consensus within science. Overall, the authors conclude,

> In only one field, mathematics, is there consensus about the direction the curriculum in that area ought to take. In all others, conflicting viewpoints are exerting pressures, on the one hand, toward a discipline-based orientation, and, on the other hand, toward a process-of-thinking orientation; some seek an integration of the two. These are not new conflicts but are traceable to earlier eras, and they hinge on the inherent tension between the society and the individual student as the primary source for the curriculum. (Gehrke et al., 1992, p. 97)

Another curriculum-related problem concerns its structure and differentiation. Reform goals typically are expressed in egalitarian terms (e.g., "all students"), but the current structure of the curriculum features a maze of structural devices that differentiate students into tracks, ability groups, pull-out programs, special and regular education, gifted and talented programs, remedial and enrichment experiences, and so on. A critical question for curriculum content standards concerns whether to adapt standards to the current differentiated structure or to propose a single set of content standards for all students.

One recent study examined mathematics and social studies frameworks in California, Florida, New York, and Texas and found that only California emphasizes a common core of study (Porter et al., 1990). The other states differentiate course content by level and by outcomes. Florida's math guidelines, for example, contain fewer higher-order content objectives in the lower-level courses, and in New York only the Regent's or honors curriculum in mathematics has been the target for reforms consonant with the NCTM standards. Newmann (1993) points out that, "Significant tension exists between the differentiation of schooling due to cultural diversity, vocational specialization, individual differences, and local political control, and the desire for standard, more uniform outcomes across a larger number of schools."

Another study (Wilson & Rossman, 1993) explored the impact of increased graduation requirements in five high schools in Maryland. The overall effects were complex and variable, but indicated that this standard-raising effort did little to alter the pattern of winners and losers in these schools: "... sorting students and sustaining status systems are not lessened by the reform of graduation requirements" (p. 99). Local circumstances in the schools played a large role in the impact of the new policy, but in general, this state's attention to graduation standards had little effect on the high school stratification system, a fact that champions of equity would find unsurprising, but troubling. At stake, then, is the interplay of standard-setting with the twin, conflict-laden pursuit of excellence and equity.

A fifth source of potential conflict is apparent in interstate variations in the categories for teacher licensure. Just as the curriculum is differentiated, so too is the teaching profession, but the structure of specialization in teaching is neither uniform nor stable. Licensure categories reflect not only patterns of practice in schools but efforts of special interest groups to gain state sanction for new specialties (Sykes, 1990). In many states, for example, the middle schools movement has lobbied successfully for special licensure, and the various categories of special education teacher continue to be contested. The NBPTS has established its own set of categories for advanced certification, around which it will create assessments, but the NBPTS categories map imperfectly onto those of the states. Professional reformers face the task of reconciling the varieties of teaching licenses and endorsements if they are to realize their vision of a national, developmentally organized system. At stake is the conceptualization of special and general knowledge in teaching as reflected in patterns of practice in the schools.

Conceptions of teaching constitute yet another fertile ground for continuing debate, particularly in approaches to the curriculum of teacher education and to the assessment of teaching. Some analysts propose global distinctions between, for example, traditional and progressive approaches to pedagogy (Newmann, 1993). Others identify particular issues such as the teacher's role in instruction, characterized as facilitation or delivery; the balance of general and content-specific pedagogical knowledge; the role of specific models and techniques in the teaching repertoire; the significance of teaching as inquiry or as skillful performance; and the place of educational foundations—social, psychological, political, historical, and philosophical—in the knowledge base for teaching (for a fuller review, see Sykes with Judge & Devaney, 1992).

Around this topic a substantial gulf has always existed between, on the one hand, relatively narrow, instrumental conceptions of teaching represented in state licensure examinations, district evaluation schemes, and the content of inservice education, and, on the other, the more diffuse social and intellectual concerns of the university-based curriculum of teacher education.

A related issue already alluded to is the conception of the teacher's role represented in standards. Many of the academic standards project a role for the teacher that is circumscribed largely by the classroom and the content of the curriculum. Other reformers, however, argue for an expanded role that envisions teachers as exercising schoolwide leadership, engaging with parents and the community, participating on teams, and taking on advanced roles in the school. Such role conceptions potentially expand the terrain of standards beyond the academic requirements of effective instruction and have implications for teacher education and assessment.

Related to these role issues is the question of control over teachers' work. Teaching has been analyzed, perhaps over analyzed, in terms of the distinction between bureaucratic and professional conceptions of the role within the school hierarchy (see, for example, Firestone & Bader, 1992; Shedd & Bacharach, 1991). To overstate the difference, standards may be imposed as rules and routines to be used in the administrative oversight of teaching; or they may be cast as discretionary guidance for use within professional work cultures (Darling-Hammond with Sclan, 1992). How the standards are used to define organizationally the role of teachers in relation to management will be a likely source of tension in implementation.

These issues are illustrative of conceptual and normative conflicts that must be managed in the development of standards. We next consider standard setting as a political process.

Political Dimensions and Dynamics of Standard Setting

Standard setting as reform raises fundamental questions about educational politics and policy and about competing public values and multiple control structures (Mitchell, 1989). Some of the reform critiques implicate traditions and mechanisms of governance in producing the fragmentation and incoherence of U.S. educational standards. This suspicion leads logically to proposals to reform governance as a prerequisite for creating a strong system of standards. The hope of forging a new consensus, however, flies in the face of the historical evidence of deep and abiding divisions over public education. Nevertheless, reform hopes rest in part on new governance arrangements including a pronounced shift from local to state and national control, the creation of new consensus-building organizations (e.g., the National Educational Goals Panel, the National Board for Professional Teaching Standards), and a reliance on new federal strategies that promote cooperation among the states in forging common standards.

Yet the governance dilemmas rooted in our political culture and institutions are unlikely to ease. "While the design of American government incarnates a deep mistrust of state power, the design of most education policy express[es] an abiding hope for the power of government and a wish to harness it to social problem solving" (Cohen & Spillane, 1992, p. 7). Institutional checks and balances and the shared authority within a federal system were constructed by the founders to frustrate the powerful, centrally coordinated action that some reformers now admire in countries with strong ministries of education.

Conflicts over standard setting play out along two axes. One involves the balance of public or democratic control with professional forms of authority, while the other balances federal relations among levels of governance. The first axis creates a dilemma for teacher policy insofar as public and professional forms of control over standard setting are in tension with each other (McDonnell, 1989). Democratic control derives from the consent of the governed as exercised through popular representation. Professional control, as we have described, assumes that members of an occupation possess a specialized body of knowledge and work on complex, nonroutine problems requiring judgment and discretion, exercised in the interest of the client and disciplined by a code of ethics.

Of the current balance between these forms of control one study recently found that,

> attention to democratic control received greater emphasis than professionalism in the enactment of recent teacher policies. Performance standards were often defined through the political process, with limited input from teachers or the organizations representing them. Implicit in this emphasis was a belief that teacher quality had diminished and no longer met the electorate's performance expectations for a public institution. Therefore, rather than allowing the teaching profession to rejuvenate itself from within, state officials enacted policies requiring teachers to conform to performance criteria designed by public agencies and private test developers. (McDonnell, 1989, p. vi)

Central to this policy preference in the regulation of teaching is the issue of trust. Professional control relies on public trust and is a delegated relationship. However, the teaching profession has never enjoyed a high level of trust and so popular forms of control have predominated.

Such mistrust is unmistakably evident today and is directed both at K-12 schools and at the universities that prepare educators. The interest in performance standards for students and teachers alike stems in part from a desire to increase public accountability. By contrast, input standards in the form of program requirements and accreditation policies are regarded with suspicion as constituting unjustified, state-sanctioned monopolies. One move, then, is to replace "design" or input standards with "performance" standards (Marshall & Tucker, 1992; Murnane, Singer, Willett, Kemple, & Olsen, 1991) as a superior means for holding educators accountable. However, professional reformers will object that such a strategy is too narrow and fallible, and likely will result in disinvestment in public and professional education. The prospects appear great for continuing tensions around public and professional control over standard setting.

Intergovernmental relations within our federal system are a second major arena for conflict. Some public opinion polls reveal greater public acceptance today of national educational goals, curriculum, and testing programs, but such sentiments do not distinguish between national and federal initiatives. The role of the federal government in sponsoring or promoting a national school curriculum is unclear, but the designs so far are cautious. The National Educational Goals Panel, for example, proposes to act in an assistance and advisory capacity to the states, supplying expertise and the legitimacy of a representative convening authority. Likewise, the New Standards Project conceives its role as a producer of high quality assessments that states and localities may adopt. Their products will compete in a state and district policy marketplace rather than being mandated.

States also attempt to balance compliance- with assistance-oriented policies partly in deference to traditions of local control. The strongest rationale for state mandates exists around issues of rights and of equity. Around questions of teaching and learning, however, the state's regulatory role enjoys less legitimacy; state intervention runs the perpetual risk of "hyperrationalization"—legislating beyond the proper bounds of knowledge and control (Wise, 1979). And, as the Porter et al. (1990) study reveals, states vary in the power and prescriptiveness of instructional guidance policy, partly as a result of state political cultures. Analysts have long distinguished high and low control states, raising the question whether greater uniformity across states is possible or desirable.

Control and resources are at stake in any strategic shifts among governance levels. Proponents of local reform networks argue strongly for the necessity of local control in the creation of meaningful standards. A common element in the ideology of reform networks is a reliance on local adaptations and problem solving, coupled with external support and assistance. But the relatively weak accountability built into public support for innovation networks is a serious political liability to long-term support. In contrast, both systemic and professional reformers seek to create new compacts that exchange resources for accountability. Such bargains, however, generate political conflict among reform models over the targets for public investment (e.g., preservice teacher education, assessment development, inservice education) and between local educators and federal-state policymakers.

Conflicts between levels of governance will be inevitable as the new standards are used for accountability purposes. If local educators are held accountable to performance standards without being provided the necessary resources, they will resist. More accurately, those schools and districts that lack resources will resist, while well-funded communities may be more likely to comply. Within the frame of the new compacts, the accountability standards will be easier to secure than the funding. Already states such as California and Minnesota that have invested in new forms of teacher assessment and assistance face stark fiscal realities that have slowed the reforms. The spectre of unfunded mandates coupled with the gross inequities in the educational system constitutes a serious challenge to any new compacts forged around standard setting.

A final complication in the politics of standard setting concerns the dynamics of conflict, rather than the interests and stakes involved. Two provocative analyses have been advanced recently that connect democratic processes with the growth of public bureaucracies. In Chubb and Moe's (1990) account, the institutions of democratic governance give rise to efforts to impose "higher order values" on the schools. Because ruling groups cannot guarantee their tenure in the hurly-burly of democratic politics, they seek to protect their policies through formalization—the imposition of rules and regulations—that serve both to reduce local discretion and to insulate it from future unfriendly administrations. Democratic politics, they argue, are inherently destructive of school autonomy and inherently conducive to bureaucracy. Over time bureaucratic regulation of the system increases, but in an incoherent manner as successive administrations institutionalize their priorities in the structure.

A second, remarkably consistent account by James Morone (1990) also argues that the search for more direct democracy builds up the bureaucracy. He describes Americans as filled with a deep suspicion of government, coupled with a "democratic wish" for more direct, popular participation in pursuit of a shared communal interest. But this populist wish is a myth based on the denial of competing factions seeking domination over one another. The dynamics of the democratic wish give pause to the prospects for "tidying up the system"—creating greater coherence. Morone discerns four stages:

> First, the process begins (as it ends) in the political stalemate of American liberalism. Ideology, institutions, and interests all block change. The antistatist ideology . . . is reflected in chaotic institutional fragmentation (celebrated as checks and balances). (p. 9)
>
> We reach the second stage when the call for the people provokes a popular response. . . . Scholars perpetually debate the matter of who, precisely, issues the call for reform. Oppressed classes? Public sector officials aiming to expand their authority? Private elites searching for social control? . . . all three can be true. (pp. 10-11)
>
> The third stage begins with the implementation of new political institutions. Once the reforms are in place, the image of a united republican volk evaporates into the reality of classes and interests scrapping for partisan advantage. (pp. 11-12)
>
> Finally, the organizational innovations expand the boundary of government power. . . . The fourth step is a return to the first—the reassertion of a liberal political equilibrium (around a new political status quo). In order to empower the people, reformers design new political rules and institutions. Once the political smoke has cleared, those are what remain. (p. 13)

Standards reformers of all stripes swear that they do not equate standards with standardization, preferring to invoke the other root meaning of "taking a stand" or "standing for." Yet the mechanisms available to domesticate the inevitable political conflicts around standard setting may very well result in increased bureaucracy, greater standardization, and continuing fragmentation. Chubb and Moe (1990, pp. 202-205), for example, argue that state or national standards boards under the control of organized teachers will not increase professional autonomy within schools because this type of public-professional democratic control resulted in teachers' bureaucratic subordination in the first place.

The political dynamics of standard setting present a puzzle for reformers. To produce the consensus necessary for shared, stable, and powerful standards, it appears that governance reforms are necessary. Yet the democratic processes that produce new governance arrangements are likely to yield an increase in bureaucracy[12] that inevitably will distort and perhaps frustrate the deep intentions of the reformers. Ironically, these reformers are united in decrying the current bureaucratic rigidities of the educational system. Whether these political dynamics may be circumvented in the standard-setting reforms remains to be seen.

IV. PROSPECTS FOR LINKAGE AMONG STANDARDS

The tenor of the analysis thus far casts doubt on the prospects for harmonizing the various standard-setting initiatives and for reforming education through standard setting. The reforms envisioned would be dramatic departures from the status quo in schooling that require extensive and intensive change. The new standards rely on consensus to have widespread, beneficial effects. What appears inevitable though is conflict over cultural values; in assumptions about teaching, learning, and schooling; and among the interests contending for control over education, coupled with the emergence of unintended, unattractive consequences.

As a rhetorical strategy this analysis and conclusion may conjure up the lone swordsman, backed into a corner by a dozen, heavily armed brutes, who cheerfully declares, "Now I've got you right where I want you!" Given the formidable obstacles and complexities that we have identified, what are the odds of accomplishing reform through collaborative efforts across models and projects? To answer, we shift into the subjunctive mode to explore hypothetical prospects and scenarios. First we describe four strategies to manage or adjudicate among the various conflicts we have noted. These may be used in combination by standard-setters to secure workable agreements. Next we outline three scenarios that explore how the various standards and models might interact to produce a desirable and achievable outcome.

Strategic Approaches to Common Standards

Standard-setters may rely on some combination of four strategies to construct relations, exchanges, and agreements over standards.[13] One employs democratic procedures to forge consensus; another utilizes the authority of experts and reference to research results to settle disputes and resolve questions; a third resorts to the force of law to impose agreements via legal-bureaucratic mandates; and a fourth relies on norm formation in the context of local community to build shared commitments. (A fifth method substitutes consumer choice in a market for these various forms of social decision making. We review this option briefly in the concluding section.)

At this early stage in the movement to establish new standards, the use of democratic process is most evident. Nearly all the standard-setting efforts assemble a representative group of stakeholders to participate in the development work. Various task forces, committees, governing boards, and working groups serve as the locus for negotiation among the affected parties. Formal groups such as the National Educational Goals Panel, the NBPTS, the INTASC group, the NCATE, and others work in this manner. These groups mix public and professional interests, with one or the other in the majority depending on the nature of the standards.

Coupled with the widespread use of representation is a reliance on expert advice in the form of consultants and contractors whose research and development informs the deliberations of the governing bodies. The reliance on expertise is primarily an adjunct to the other strategies, rather than a dominant or sole strategy in itself. Science does not settle policy questions, it contributes perspectives and information for use within the political process. The combination of politics and science—democratic representation fortified by expert opinion and advice—appears to be the American way of forging and legitimating consensus.

Yet a third feature of democratic process is recourse to voluntary association as a means of promoting consensus on at least a limited basis. The voluntary principle is most evident in the reform networks, but is present as well within the other models. Board certification, NCATE accreditation, participation in the New Standards Project, all are voluntary. This principle of free association is basic to our democratic traditions (Cusick, 1992, pp. 219ff), and supplies one political strategy for centralizing policy within the tradition of local control. One way of managing the contradictory pressures to develop uniform centralized standards yet respect local control is to rely on assistance and persuasion as the means for securing local but voluntary compliance (Swidler, 1986). State and local governments as well as professional associations may create formal innovation and assistance networks through which to implement new standards, relying on technical assistance, modest financial inducements, appeals to professional motivations, and the solidarity of social movements.

This general strategy of combining democratic representation with expertise in voluntary associations may enter a more advanced stage in which linkages form among disparate standards-setting organizations. For example, a new federalism may employ the strategy of confederation among government entities. In emulation of other professions such as medicine, the education field is beginning to explore a confederation model for licensure and accreditation. The INTASC project sponsored by the CCSSO could evolve in this direction. At present the project is developmental and its standards are advisory. Under the auspices of the CCSSO, perhaps in collaboration with other state education policy groups (i.e., the National Governors' Association), a confederation of state organizations could form with the authority to adopt national licensure and accreditation standards. Such association would be voluntary, and might involve varying degrees of flexibility across states in the implementation of common standards.

Similar developments might unfold through the work of the National Educational Goals Panel in conjunction with the National Governors' Association. The research and development work underway on content and performance standards could form the basis for nationwide standards implemented through a state confederation that allows some state and local flexibility. Within such voluntary confederations sponsored by national organizations representing state government, the federal government would have an important role to play. It might serve as a convening authority, provide national visibility and leadership, and supply funds for research, development, and other support.

Coalition formation is a related strategy likely to emerge in addition to or in combination with confederation. This development already is underway, but within rather than across reform models. Within the professional model, the INTASC project seeks to create board-compatible licensure standards, the NBPTS is exploring relations with NCATE, and the Holmes Group has begun discussion with the NBPTS and

NCATE. Within the reform networks, Sizer and Comer have formed an alliance represented in their NASDC project. And within systemic reform the leading coalition joins federal agencies with subject matter associations and several vanguard states. Prospects for the future include cross-model coalitions that might join systemic with professional reform projects to explore connections between standards for students and for teachers; or cross-fertilization between the reform networks and the professional reformers around the curriculum of teacher education.

Recourse to the third strategy, the force of law, both solves and creates problems for coordination of reform-oriented standards. Voluntary association is a relatively weak means of producing widespread impact. Many of the reform projects eventually may seek the force of law to impose their standards on schools. The new standards for curriculum content, student assessment, and teacher evaluation may replace the current versions. The systemic reform vision also includes high stakes attached to assessment, enforced and implemented by the states. And board certification may require the introduction of formal incentives such as pay and advancement opportunities to encourage teacher participation.

Because many of the reformers see the current system as contributing to the problems of education, they seek to uproot this system by introducing reform standards in the form of new curriculum frameworks, tests, texts, preservice and inservice education, and resource requirements. Without the force of law, however, the power of the existing system, rooted in legal and bureaucratic mandates, is likely to overwhelm reforms that are voluntary, experimental, and developmental. To have impact, to change the existing system, the new standards will require the force of law at some point.

But recourse to this strategy also will increase tensions and conflicts. The evidence is strong that high-stakes student testing has adverse effects on intrinsic motivation to learn and on teaching practice. High-stakes testing also will highlight the equity issues and so increase political opposition. Systemic and professional standards may collide around these issues.

We anticipate that moves to enforce the new standards through legal and bureaucratic mandates will be the most difficult strategic choice facing the standard-setters. There may be no way to avoid collisions of values, policies, and interests. One possible buffering device, however, might be a phased implementation of mandated standards on a generous schedule that allows for local capacity building. A variation is to treat new standards as moving benchmarks, set within achievable range initially, but moved upward as the system responds. Yet a third possibility is to utilize paired standards that include both inputs and outcomes, tracking each simultaneously as part of new social compacts emphasizing the twin pursuit of equity and quality. In the final section we discuss these possibilities in more detail.

The fourth strategy, norm formation in local communities, appears as a necessary complement to the others if commitment and capacity building at the local level is to emerge. Representation and voluntarism alone cannot guarantee widespread teacher commitment to reform standards. Fullan with Stiegelbauer (1991) comment on this fallacy of change:

> One of the great mistakes over the past 30 years has been the naive assumption that involving some teachers on curriculum committees or in program development would facilitate implementation, because it would increase acceptance by other teachers. . . . As far as most teachers were concerned, when the change was produced by fellow teachers, it was just as much externally experienced as if it had come from the university or the government. (p. 127)

As we have described, only the reform network model takes seriously this problem of change by attempting to intervene in the culture of the school, where standards assume lived and felt meaning in the beliefs and practices of educators. The various national—and nationalizing—projects may manage skillfully the building of coalitions and the forging of agreements through negotiation by representative bodies fortified with the latest theorics and research, but they will require an implementation strategy that reaches the local level if the standards are to assume more than symbolic significance in the educational system.

Recent syntheses of research on implementation (McLaughlin, 1987, 1990) find that belief may follow practice, that a combination of pressure and support is most effective in producing change. This suggests that policy mandates around new standards may be necessary in the initiation phase of change. But the follow-up will be crucial if teachers are to genuinely understand and embrace the new standards. This is particularly true when implementation requires innovation and experimentation by teachers, because their actions will literally construct the new standards.

As we have indicated, the new teaching standards represented by the NCTM documents and others supply guidance that requires judgment, decision making, and inquiry to implement. Teachers will have to learn for themselves and with each other how to teach to these standards in a wide diversity of settings. This learning agenda can only be carried out in local communities stimulated and supported by outside support networks. Extended professional communities with a firm base in schools appear to be a strong prospect (see Lichtenstein, McLaughlin, & Knudsen, 1992; Little, 1992). Prototypes include projects such as the Urban Mathematics Collaborative, the Los Angeles-based Professional Links with Urban Schools, the Philadelphia Alliance for Teaching Humanities in the Schools, and the National Writing Project.

The policy system, then, will need to employ networking principles to create communities of interest and innovation around the new standards as a capacity-building adjunct to accountability-oriented mandates. In the past, states have not coordinated these strategies very well, frequently legislating the mandates without providing the assistance. If the standards are to genuinely direct practice in schools, however, better support for school-based learning will be essential.

Scenarios for Collaboration in Standard Setting

We envision three scenarios for linking various standards. None of them will eliminate the tensions, but each suggests ways of moderating some of the problems we have identified with standard setting as educational reform. These scenarios we describe as *a new professional compact*; *linking teacher learning to systemic reform*; and *utilizing the reform networks*. Finally, we note that the standards-setting movement has not made equity a central concern. We believe that the legitimacy of standards will be seriously compromised if their widespread realization is not strongly linked to equal opportunities made explicit in new standards-setting compacts.

Within the professional model the outlines of *a new professional compact* are emerging that supply an agenda for widespread work on a system of common standards for the teaching profession. The elements of agreement include admissions or entry requirements, an accredited program, an accredited internship, performance-based licensure, and advanced certification. Particular elements of this compact, forged through confederation agreements among the states, include the following:

- The conceptual basis for licensure standards is set forth in the INTASC documents that include both general and specific field standards. These are drafted to be compatible with (1) the curriculum and teaching standards developed by the national projects and organizations; and (2) the certification standards of the NBPTS. These efforts also are coordinated with the ETS' PRAXIS series, with an eye toward fashioning a consensus on a common base of standards.

- The NCATE pursues its new policy of streamlining unit accreditation procedures and coupling those to development of state-based performance licensure systems; the new policy states that, "In lieu of specific program standards, the state is using or developing a performance-based licensing system which tests teaching knowledge and assesses teaching skill" (NCATE, 1992b, p. 7). States work with NCATE to create lean unit accreditation standards together with strong performance-based licensure.

- In collaboration with INTASC and state policy organizations, the NCATE develops standards for school-based internships that combine assessment with assistance. The internship serves both as an extension of preservice education, an induction into teaching, and a base for licensure-related performance assessment. The intern arrangements would be established within dedicated sites that agree to serve the special purposes of teacher induction. These dedicated sites may be professional development schools around which program standards take shape.

- The NBPTS integrates board certification within the emerging compact. Options include use of board-certified teachers as mentors and assessors in performance-based licensing, in preservice education, and on unit accreditation teams. Professional development schools would include substantial numbers of board-certified teachers. And, the licensure standards will initiate the process of preparing for advanced certification.

- Under NCATE auspices, professional associations begin development of advanced program standards for the education field that are compatible with the unit standards.

These moves point toward a national system of standards for the teaching profession. A second scenario seeks to *join teacher learning to systemic reform* by connecting the new content and performance standards for students with preservice and inservice education for teachers. As we indicated, the professional reformers seek a broader base for teaching standards than delivery of a prespecified curriculum, but the systemic reformers point to the weak relationship between the curriculum for the schools and for teacher education. If the new content and performance standards are to stimulate change in teaching practice, then strategies to promote teacher learning will be needed. Furthermore, much of the activity related to implementing the new content and performance standards constitutes a useful basis for school-based professional development that can enhance teacher learning. (See Cohen & Barnes, 1993a, b).

There are three avenues to travel within this scenario. First, systemic reformers can explore connections between standards for curriculum and student assessment on the one hand, and teaching standards on the other. There should be a demonstrable relationship between the content of teacher licensure and certification standards and the content of student learning standards. To effect such relationships will require consultation and negotiation across systemic reform and professional reform projects.

Second, connections can form between the curriculum of teacher education that is a university responsibility and the new content and performance standards. Working through the organizations of teacher educators, the systemic reformers can promote projects that introduce the new standards directly into the teacher education curriculum, encouraging teacher educators to rethink their work in light of the new standards for curriculum and student learning. Teaching future teachers to use the new standards would not involve crude training procedures. Rather, the standards would become subjects for scrutiny, inquiry, and trial in the context of teacher education.

Third, state and district inservice education must focus on the new standards for curriculum and student learning. One approach might involve the teacher professional associations in creating state-sponsored networks around implementation of the new standards. Specific networks might form around mathematics, science, English, and social studies teaching, jointly sponsored by the states and the associations. Another strategy involves state technical assistance and support to school faculties that are working on developing and using student performance assessments keyed to the content standards. The NSF projects already have stimulated such activity including the promising pilot assessment work underway in Vermont.

A final scenario would make policy use of insights and developments emerging from the work of the reform networks, *utilizing network principles to stimulate school change* in conjunction with standard setting. Reflecting on the government's role in managing societal change, Donald Schon (1971) has explored this possibility. He writes,

> For government to become a learning system, both the social system of agencies and the theory of policy implementation must change. Government cannot play the role of "experimenter for the nation," seeking first to identify the correct solution, then to train society at large in its adaptation. The opportunity for learning is primarily in discovered systems at the periphery, not in the nexus of official policies at the center. Central's role is to detect significant shifts at the periphery, to pay explicit attention to the emergence of ideas in good currency, and to derive themes of policy by induction. The movement of learning is as much from periphery to periphery, or from periphery to center, as from center to periphery. Central comes to function as facilitator of society's learning, rather than as society's trainer. (p.177-78)

This process of inductive policymaking relies on local networks that pioneer new approaches to schooling from which policy guidance may spring. Rather than legislating systemwide changes based on untested theories, this approach advocates that governments learn from far-flung entrepreneurial developments. The reform network projects constitute a fertile basis for policy guidance on schoolwide standards, principles, and practices. The leaders of these projects would not advocate heavy-handed legislation of their principles, but might appreciate public support that gradually but steadily spreads their ideas to more schools. Such approaches to government-sponsored innovation have a history. The National Diffusion Network, for example, is a prototype that concentrated on discrete innovations, not schoolwide programs. But the precedents are available to guide such use of reform network practices and principles.

Reform networks also constitute a means for connecting state and national standards to individual schools. As we have indicated, a great implementation problem hangs over the entire standards-setting enterprise. The opening moves—to generate the documents, pilot test assessment procedures, and begin cautious policymaking—are promising. But this is the easy part. The hard part is connecting any of this work meaningfully to the life of individual schools. In conjunction with mandates that supply pressure, assistance networks sponsored by states, foundations, and professional associations appear the most effective strategy for introducing new practices into schools.

None of these scenarios directly addresses the equity question. Can standard setting promote equity in educational reform? The answer is unclear, but only the reform networks concentrate attention on schools that receive the least resources. For equity to become more prominent in standard setting, several developments will be necessary.

One is a phasing in of standards so that the least advantaged institutions have time to respond and are not penalized. Standard setting may be able to lead reform in the most disadvantaged schools, but only if such schools are given a fair chance, and this will mean either moving targets that encourage progress on a schedule; or a gradual period of capacity building with assistance to localities in need before accountability pressures are brought to bear. Standards are not by themselves inequitable. In fact, standards serve equity goals by signaling what we expect for all children. But if they are imposed within a framework of accountability, then many schools, teachers, and students will not measure up because they do not have a fair chance. Ensuring genuine opportunity must be an integral part of any reform-oriented, standards-setting compact.

Measured attention to learning opportunities will be necessary if the standards movement is to take equity seriously. To evaluate reform we will require measures of opportunity and of learning outcomes that may be reviewed and evaluated jointly.

V. ALTERNATIVE PERSPECTIVES ON STANDARD SETTING

There are four perspectives on standard setting that fall outside the pragmatic cast of this analysis but are worth brief consideration because they counter and perhaps might loosen the powerful grip that standard setting has on education reformers.

One treats standard setting as an organizational move to preserve the logic of confidence surrounding schools, rather than as an effort to provide instrumental direction to the work of schools. A second challenges the assumption that incompatibility among standards is a problem to be avoided, and offers a functional account of the manifest and latent purposes that incompatibilities might serve. A third reflects on the limits of standard setting as reform strategy. Perhaps the factors that most influence the outcomes of schooling are not amenable to standard setting. Finally is the view that the mechanisms of the market—in which consumer and producer preferences and choices reign—are a viable alternative to standards that would be developed and imposed administratively.

These contrary perspectives raise in different ways the general concern that standard setting will not, should not, or cannot live up to the claims of its proponents. Why not?

Preserving the Logic of Confidence

Schools can be understood as organizations with the normal goals of self-preservation and maximum autonomy. An organization's survival and freedom depend on successfully managing external demands and expectations by ensuring acceptance of and confidence in the organization's purpose and performance (Meyer & Rowan, 1983). For schools, which by design as democratically governed organizations, serve as lightning rods—some would say "dumping grounds"—for the society's concerns, securing public confidence has been an enduring problem. Their external environments contain countless sources of signals of concern, among them the federal, state, and local governments' agencies, as well as diverse interested parties such as parents, unions, employers, university researchers and educators, education policy networks, even students. Typically these concerns compete with each other for the school's attention; often they conflict with each other; and always they present new burdens on those within the school's organization. The fragmentation of the school's external environment has meant that rarely can a single concern or promoter of concern dictate significant change to the school. The role of the school's political and administrative bureaucracies is to blunt external forces of change that might upset organizational inertia (Cusick, 1992). Specifically, they seek to maintain confidence "out there" in what the schools are about, in order to prevent the uncontrollable growth of any single force of change or the coalescing of multiple forces.

Viewing schools, then, through the lens of organizational behavior, what comes into question is the motive behind standard setting. Is it simply an organizational effort to preserve the logic of confidence by appearing to respond to increased and coalescing concerns about school performance? Is it in fact a bureaucratic strategy that tempers temporarily appeasing gestures with the organizational wisdom that "this too shall pass"?

One response to this skepticism might be that standards ultimately cannot be dismissed by school organizations because they contain a built-in measurability that allows judgments to be made about the quality of school performance and responsibility to be assigned for improving that quality. Still, assessment and accountability depend on judgment and values as much as standards do. Traditionally they have been hotly disputed and unresolved elements of the education system. How would standard setting change that?

The Virtues of Incompatibility

Incompatibilities among standards can be valued, even cherished, rather than bemoaned if they are seen as a practical consequence of pursuing a democratic education. The account of schooling-as-democratic-education holds "local control" as an ideal: millions of individuals in hundreds of thousands of schools in thousands of communities naturally create a countless variety of educational practices that are an essential, if somewhat messy, source of democratically determined social progress. In this view, the enemies of democracy are readily identified: those who would constrain the use of public schools to accomplish this flowering process. Theodore Sizer (1992b, p. 293) sums the case eloquently:

> democracy and education are profoundly intertwined, with the health of the former prudently dependent on the wisdom of thoughtful individuals . . . the people are educated both in schools and by "configurations" of other and newly powerful educating institutions, most notably television.
>
> Today the drift is to disrespect the individual and his or her immediate communities and to have state and national government orchestrate what are the proper "standards". . . for the people. Further, the other sorts of "schools"—telecommunications, for example—are without a whisper left to commercial interests rather than to the public interest.
>
> There is a myopia and arrogance in today's purposeful neo-Progressivism, which leaves education either to the vagaries of the marketplace or to centrally appointed experts. The mediating role of the common school close to the people is discarded.

A second source of admiration for diversity among standards may be found in the view that richness of effort is a necessary condition for initiating and transmitting innovations through the education system. Drawing on the analysis of school systems as "loosely coupled" organizations (Meyer & Rowan, 1983), it can be argued that school change follows no planned path; rather, the many parts or levels of an educational organization change, relatively independently of each other, in response to pressures. Innovations can pervade, but not systematically.

The Limits of Standard Setting

It can be argued that standard setting is essentially a conservative strategy for change because it stays mostly if not entirely within the confines of the existing education system in identifying targets for change. Many factors that most influence the outcomes of schooling may not be within the influencing reach of standard setting precisely because they lie outside of the education system. Social and economic in nature, they form the context within which education is designed and practiced.

Many arguments for a strong framework of standards rely on international comparisons, particularly with Asian countries. From these data come the concept of "world-class" standards as general goals for and specific measures of the competitiveness of education systems, as embodied in several of the National Education Goals. However, the same comparative analysis also reveals that school achievement may have more to do with cultural factors than with formal standards (Stevenson & Stigler, 1992).

An example of a limiting cultural factor is the expectations that parents have of their children's academic performance in school. American parents tend to assume that learning is fundamentally a matter of a child's innate ability rather than a child's effort to learn. They pass on to their children the belief that hard work does not make a significant difference in learning; that complying with the school's rules for work may be necessary, but that when it comes to achievement a student either has it or doesn't. This widespread attitude is in marked contrast to the beliefs of Asian parents, who emphasize to their children—excessively, some would say—the necessity of applying themselves diligently to the school's learning processes. And the emphasis is not just rhetorical; Asian parents consistently invest their time and resources in supporting their children's efforts. (Another cultural limiter also observed by Stevenson and Stigler is the way that the high or low status of teachers positively or negatively affects the quality of the talent pool from which future teachers are drawn.)

A second factor which may limit standard setting is the labor market system that sends powerful signals to students about the connection between their educational achievement and their economic prospects. The system is driven by the aggregated demands of employers which in turn is the result of a confluence of cyclical and structural business factors such as overall economic conditions (e.g., unemployment, availability of business financing), the adoption of new technologies, and employer attitudes about hiring young workers for entry-level jobs with good prospects. In some nations, the labor market system is managed deliberately as a lever to motivate students to perform well in school, but not in America.

In response to these concerns, some of the systemic reformers argue that standard setting has the potential to trigger changes beyond the workings of the formal education system. Thought of as a form of public communication, standard setting can send persuasive signals to a vast array of individuals and institutions, such as parents and employers, thus raising expectations and boosting activism. There is some evidence that public education campaigns, in which mass communications are combined with legal actions and the development of support capacities, can influence social judgment and behavior. Campaigns against drunk driving, cigarette smoking, drugs, AIDS, and for seat belts, come to mind. Can standards for education become a sort of "usable knowledge" for the public as part of a comprehensive re-education program?

The Market as Alternative

Among the major ways that modern societies organize to solve problems are the use of government authority, through processes of democratic representation and bureaucratic control, and the development of markets, the use of mechanisms for exchange in which individuals exercise their preferences and capabilities (Lindblom, 1977). In practice, these means for social problem solving often are blended, forming and reforming an overall hybrid in response to changing political forces and situations. A relatively new account of the education system's failure advanced as we have noted by Chubb and Moe (1990) blames democratic governance of education for leading to the system's overbureaucratization and unresponsiveness. The antidote, they say, is markets. Unleash the consumers of education—parents in particular—to express and act upon their preferences; let the stubborn schools beware!

The models of education reform use standard setting as a guiding *input* to the work of the education system, whereas markets treat standard setting as an *outcome* that arises from numerous transactions. Governments can elect to substitute the market for complex processes of centrally managed social problem solving (Lindblom & Cohen, 1979). To put it simplistically, a school would meet the market's standards if its work is "purchased" by sufficient numbers of consumers. Control of the system is in different hands. Therefore, the consequences of failure may be differently distributed.

In summary, these four contrary perspectives identify serious challenges to the logic of standard setting: the self-interested inertia and manipulations of the school organization; the decentralized, diverse, community-based democratic impulses for local variation and governance; the large-scale and slow-changing cultural and economic structures that shape attitudes and behaviors; and the reliance on administered change that constrains the preferences and choices of individuals, thereby minimizing the potentially creative forces of market mechanisms. Arguments can be mustered in response to each of these concerns. Indeed, each standard-setting model takes on some of these matters. Perhaps, these perspectives can best be understood as the forces that will shape education if standard setting fails, or as the forces that will be overcome (and lost) if standard setting succeeds.

Appendix

Comer's Nine Components

1. A governance and management team representative of parents, teachers, administrators, and support staff
2. A mental health or support staff team
3. A parent's program
4. Development of a comprehensive school plan with specific goals in the social climate and academic areas
5. Staff development activities based on building-level goals in these areas
6. Periodic assessment that allows staff to adjust the program to meet identified needs and opportunities
7. Participants on the governance and management teams who cannot paralyze the leader (usually the principal)
8. Decisions made by consensus to avoid "winner-loser" feelings and behavior
9. A "no-fault" problem-solving approach used by all of the working groups in the school; eventually these attitudes permeate the thinking of most individuals

Accelerated Principles

The Accelerated Schools model is constructed on three guiding principles and a set of fundamental values underlying those principles, which are necessary to establish the curricular, instructional and organizational changes. Active practice of the three principles and the values on which they are based can serve as vehicles to becoming an Accelerated School.

1. *Unity of Purpose*—refers to agreement among parents, teachers and students, and administrators on a common set of goals for the school that will be the focal point of everyone's efforts. Clearly, the unity of purpose should focus on bringing children into the educational mainstream so that they can fully benefit from their further schooling experiences and adult opportunities.

2. *Empowerment/Responsibility*—refers to the ability of the key participants of a school community in the school and at home to (a) make important educational

decisions, (b) take responsibility for implementing those decisions, and (c) take responsibility for the outcomes of those decisions. The purpose is to break the present stalemate among administrators, teachers, parents, and students in which the participants tend to blame each other as well as forces "beyond their control" for the poor educational outcomes of students.

3. *Building on Strengths*—refers to utilizing all of the learning resources that students, parents, school staff, and communities bring to the educational endeavor.

The Coalition of Essential Schools: Nine Common Principles

1. The school should focus on helping adolescents learn to use their minds well.

2. The school's goals should be simple: each student should master a number of essential skills and be competent in certain areas of knowledge.

3. The school's goals should apply to all students, but the means to these goals will vary as these students themselves vary.

4. Teaching and learning should be personalized to the maximum extent possible.

5. The governing metaphor of the school should be the student as worker, rather than the more familiar metaphor of teacher as deliverer of instructional services.

6. Students embarking on secondary school studies are those who show competence in language and elementary mathematics. . . . The diploma should be awarded on a successful final demonstration of mastery for graduation—an Exhibition.

7. The tone of the school should explicitly and self-consciously stress the values of unanxious expectation . . . of trust . . . and of decency.

8. The principal and teachers should perceive of themselves first as generalists . . . and next as specialists.

9. Administrative and budget targets should include substantial time for collective planning by teachers, competitive salaries for staff, and an ultimate per-pupil cost not more than 10% higher than that at traditional schools.

Notes

1. Although these models represent distinctive approaches to reform, each incorporates elements of the others into their overall strategy. For example, systemic reform appropriates the rhetoric of professionalism to project a vision of professional community around content and performance standards related to teacher learning and development. In its field test network, the National Board for Professional Teaching Standards (NBPTS) has created a set of local sites that resemble aspects of a reform network, and the New Standards Project is also a network-like operation linking local sites through research, development, and innovation. The Coalition of Essential Schools is supported by the Education Commission of the States and so has ties to—and perhaps aspirations to influence—state policy.

2. We describe the National Council of Teachers of Mathematics (NCTM) content and teaching standards within the context of the systemic reform model, but refer to the teaching standards as well within the professional model. As we have indicated, there is overlap between these models; they are presented as devices to help sort out the use of standards in educational reform, rather than as part of some typology.

3. A parallel project, sponsored by the National Association of State Directors of Teacher Education and Certification (NASDTEC) has issued a preliminary report (see "Draft of Outcome-Based," 1992).

4. Each of these *entities* already includes the close involvement of other *major partners* in standard setting for teaching, including the two major teacher organizations, the teacher professional associations, state government, teacher education interests, and others.

5. Popular conceptions equate professionalism with full competence and control, but analysts emphasize that professional knowledge must legitimate *both* the claims of specialized expertise *and* the necessity for judgment and discretion in the face of uncertainty—i.e., in cases where available knowledge is insufficient to guide practice. Professionals, that is, must work under uncertainty because their knowledge is imperfect and incomplete (see Jamous & Peloille, 1971; Nilson, 1979). The claim that teachers must be reflective practitioners is in keeping with the general ideology of professionalism.

6. The reform network model is spreading through diverse efforts. Recently, the New American Schools Development Corporation announced the investment of millions of dollars raised from U.S. corporations in 11 proposals, most of which

appear on the surface to have reform model characteristics. Less in the model's mainstream is the Edison Project, Chris Whittle's privately backed venture to start a network of schools. The controversial "standard" so far articulated by Whittle is that the schools must generate profits.

7. In June, 1991, the American Educational Research Association convened a group of testing, measurement, and policy experts in Washington, D.C. to present perspectives on the proposal to develop national standards and tests. In general, this group of experts expressed skepticism about the proposal and urged federal policymakers to go slow, to invest in careful research, testing, and trial of new assessments before creating a national system, even on a voluntary basis. The collection of papers produced for this occasion represents a solid summary of the evidence on the effects of testing in the United States, with emphasis on the standardized tests currently in use. The papers were subsequently published as a special section titled "Accountability as a Reform Strategy" in the November, 1991 edition of the *Phi Delta Kappan*. These papers are worth reading for the summaries of the research on the effects of testing.

8. A yet more fundamental challenge to teacher professionalism looks not to working conditions but to the structure of authority over education. Kimball (1988) argues that the professional guild must control the work, but precisely this is lacking in education, where the professional judgment of teachers is directly subject to that of publicly elected officials. The tradition of local control, buttressed by legal decisions that circumscribe the right of teachers to make decisions against school board policies, undercuts prospects for professionalism. Kimball judges that even if organized teachers develop standards, they will not be able to exercise the authority to implement them in cases of conflict with public policies and decisions.

9. However, this observation does not hold equally across reform networks. The School Development Program attends centrally to the developmental needs of children, largely in elementary and middle schools, while the Coalition of Essential Schools concentrates more on reforms to the academic program at the secondary level.

10. Sadly, but predictably, the promise of reform networks to stimulate change is often frustrated in practice. It is true to say that the network projects are most attentive to the local factors that affect school change, and that the projects seek to take these factors into account in their standard-setting activites, but the stubborn realities of school cultures still disrupt the best laid plans. Recently published reports on progress toward the principles in the Coalition of Essential Schools reveal the typical problems of consensus-building among faculty, escalation of conflict, and latent political tensions. For these early reports, see Muncey & McQuillan (1993a, b).

11. A recent book on cultural conflicts and the curriculum challenges the presumption of this paper—and of the systemic reform strategy—that securing consensus among contending groups is a requirement for a coherent curriculum. In the context of American higher education, Gerald Graff (1992) argues that instead of seeking to forge or impose a consensus, we "teach the conflicts" within the curriculum. In Graff's view both sides of the polarized disputes fail to recognize the educative value of bringing students into the cultural conversation about what knowledge is of most worth, and into the arguments that currently divide conservative and radical faculty on many college campuses. The implications of this position for curriculum frameworks are not obvious, but Graff's argument provides a useful corrective to simplistic notions of coherence that force choices among contending value positions. In pursuit of Graff's position, it may be that curriculum frameworks and assessment criteria and procedures should consciously include the central conflicts and tensions within particular fields, establishing an understanding of these conflicts as part of the goals of both P-12 and professional education.

12. More so than Morone, Chubb and Moe regard the growth of public bureaucracy as an evil and equate reform with reducing bureaucratic constraints and rigidities that fetter local educators. Bureaucracy, however, has its defenders. In his review, James Wilson (1989) supplies a sympathetic description of public bureaucracy, associating its behavior with the political environment in which it exists. As a case in point, Philip Cusick (1992) argues that bureaucracy allows schools to champion the public good in the face of constant pressures from various elites to pursue private benefits through public education. He says "Were it not for the bureaucracy insisting on equal treatment, equal time, resources, and teachers, the competing factions would Balkanize the schools to death; the advantaged would run away with their advantages" (p. 227). Bureaucracy, he claims, is the guardian of equity. Our schools may be unequal, but he believes they would be more so if we organized them on some other principle than bureaucracy.

13. These strategies, together with the market mechanism, bear a fascinating similarity to basic forms of human relations that Alan Fiske (1991) identifies in his masterful synthesis. His four elementary forms are evident across cultures and comprehend the essential possibilities for structuring social life: *communal sharing* corresponds with what we call norm formation within local community; *authority ranking* includes as one of its varieties the reliance on experts; *equality matching* relates both to the democratic process (one man, one vote) and to the force of law (all equal under the law); and *market pricing* regulates relations through consumer choice and market exchange. This parallel with Fiske's work suggests that the strategies constitute a general but complete set of alternatives for standard setting as one form of social regulation.

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