

however, have leaned toward leaving proficiency determination largely in the hands of teachers. Since a proficiency decision is a reasonably "high stakes" decision it probably will need to involve more than one teacher and could involve a panel of students, parents, teachers and school administrators.

While we still are in the process of sorting out what all the above means for standard-setting and decision-making around the performance of individual students, we also are having to deal with two pragmatic questions. The first pertains to *how high is high* when setting "high" performance standards? Everyone agrees that our expectations for student accomplishment should exceed what they are now, but this does not translate easily into scores required on an examination or levels of quality required in an essay or project. Setting such standards is not a simple nor inconsequential task.

A related question pertains to lead time and opportunity for students to learn. Requiring students to demonstrate kinds and levels of academic accomplishment for which they have never been prepared is unreasonable, as well as unconscionable. Asking teachers to prepare students to accomplish these new kinds and levels of proficiency in a short period of time is equally so. Striking a balance on such matters will always be subject to debate.

PART II. Confronting the Past as Prologue to the Future

The design for America's public schools that emerged in the last half of the 19th century, and persisted throughout the 20th century, is antithetical to the kind of schooling outlined in the previous pages. Our schools currently do not set high expectations for learning; they ask largely for indirect rather than direct evidence of learning; and they do not require that learning accomplishments meet established standards--unless grades of C or D are considered a standard--as a condition of progressing through school. The legacies that our 19th century school design have

left as obstacles to overcome in implementing a standards-based design for schools are discussed at some length in this section of the paper, for without a reasonably clear picture of the shape these legacies have taken it will be difficult to move beyond them. The section draws heavily on the early work of Benjamin Bloom on mastery learning and the current work of Lauren Resnick and her colleagues in the New Standards project.

Low Expectations For Learning

Resnick and Resnick (1977) have described our 20th century school heritage as deriving from both a "high literacy" (education for the elite) and "low literacy" (education for the masses) tradition. They point out that the high literacy tradition, with an emphasis on "... reasoning, rhetoric, mathematical and scientific thought" was an established feature of both public and private academics in colonial times, and was carried forward in a variety of institutions through the 19th and early 20th Centuries. These were schools providing a classical education for children of the elite, and the educational underpinnings needed by those preparing to be scientists, engineers, lawyers, physicians, or clergy. Schools of this kind have served only a small portion of the young in our nation at any point in time.

Schools for the masses arose to meet a different set of needs in our society, and had different historical roots. By the time of the Revolutionary war Benjamin Franklin had established in Philadelphia an "academy" which had as its primary focus practical rather than classical studies. This represented the first major break in American education from its European heritage, and signaled the beginning of a divisive, rancorous debate about the purposes of education that has continued in America for 250 years. Many of today's designs for standards-based schools offer a new compromise in this age-old debate, and a new way of dealing with the issues that are central in it.

While the roots of American education were established in the Colonial Period it was not until the nation was firmly established after the Revolutionary War, and well into its expansion westward, that the full importance of schooling to the national welfare was realized. As various political, ethnic, and religious constituencies laid claim to the right to self-determination, political leaders turned to education as the instrument for forging a commitment to common interests. The stage was set for the emergence of the "common school" as a unique American invention, and with it the passage of laws making education compulsory.

The evolution of American education during the eighty years separating the Civil War and World War II proceeded at a pace paralleling and reflecting changes in the nation at large. New schools had to be created to accommodate the arrival of massive numbers of immigrants (it has been estimated that 60,000,000 immigrants came to North America between 1821 and 1932, with as many as 1,500,000 entering the United States *each year* at the turn of the century); curriculum had to be developed to prepare the new arrivals to function as citizens in their new homeland; teachers had to be prepared to help children learn who had English as a second language and whose families were expanding ever westward.

The industrialization of the nation, with its attending shifts in population from farms to the city and the growing need for literacy on the part of workers, had an equally far reaching impact on the nature of the educational system emerging in the nation. Publicly supported higher education also was emerging at the time with its attending impact, through admission requirements, on curricular offerings in the public schools.

As a consequence of all these changes the American "high School" came into being by the late 1800's, and by the early 1900's our public school system as we know it today was fairly well in place.

The mass education system that evolved under these circumstances prior to World War I focused largely on elementary schooling, with sharp distinctions between elementary and secondary education. In her seminal monograph *Education and Learning to Think* (1987) Lauren Resnick describes this system and its consequences as follows:

Almost everyone went to elementary school, although a limited number finished the entire eight-year course. Only a few went to high school or its equivalent. The elementary schools served the masses and concerned themselves with basic skills of reading and computation, with health and citizenship training, and the like. Routinized performance rather than creative and independent thought was stressed. Mass education was, from its inception, concerned with inculcating routine abilities: simple computation, reading predictable texts, reciting religious or civic codes. It did not take as goals for its students the ability to interpret unfamiliar texts, create material others would want and need to read, construct convincing arguments, develop original solutions to technical or social problems. The political conditions under which mass education developed encouraged instead the routinization of basic skills as well as the standardization of teaching and education institutions. Standardization was a means of ensuring that at least minimal curriculum standards would be met, that teachers would be hired on the basis of competency for the job rather than political or familial affiliation, and that those responsible for the expenditure of public funds could exercise orderly oversight over the educational process. (p 5)

The vast social and economic changes in the nation following World War I pressed for the purposes of education to move beyond providing the most basic of what is now thought to be "basic skills." These changes also outmoded the apprenticeship system that had formerly existed in the workplace, leaving to schools much of the responsibility for helping youth make the transition from family to work. As an accompaniment to these changes compulsory attendance laws were passed requiring all students to be in school until they reached the age of 16, and high schools had become "tracked" much as we know them today: an academic curriculum for students preparing to enter college; a vocational curriculum for students clearly not intending to go to college; and a "general" curriculum for everyone else. Even with this kind of curriculum differentiation, however,

fewer than 25 percent of students entering high school in 1920 completed four years of study, and only 40 percent did so in 1940.

These many changes were accompanied by intense debate around the purposes and organization of schools, and it continues today. I rely again on Lauren Resnick to tell the story:

This debate concerns what the appropriate curriculum ought to be for secondary schools designed to serve everyone. The terms of the debate were set, in great part, by a National Education Association (NEA) commission report entitled *The Cardinal Principles of Secondary Education* (Bureau of Education, 1918). The report provided a theory and ideology for the place of a vocationally oriented curriculum in the high school as part of a diversified secondary program adapted to different types of students. This represented a clear challenge to the older ideology that organized the high school curriculum around a common core of the traditional liberal disciplines.

The tension between vocationalism and traditional disciplines as the center of the high school program has never been resolved. Responding to post-World War II manpower needs, the 1950s and early 1960s saw a greater emphasis on traditional disciplines, especially mathematics and science. Yet political and social pressures from many quarters sustained the demand for vocational training and other programs designed to keep students in school as long as possible. Other developments in the late 1960s and 1970s led to a near-complete abandonment of the traditional core curriculum, even for students who had been its traditional consumers. Schools continued to require academic courses, but the requirements were often minimal and course content focused increasingly on application and practical topics--often replacing more traditional, demanding material. Written composition and other activities that engaged higher order skills all but disappeared from the curriculum. (Resnick, 1987, pp. 5 and 6)

This probably is more on the history of American education than anyone attending the symposium wants or needs, but it is a history that seems essential to understand as we ask schools to set high standards for learning and then insist that students meet these standards in order to progress through school. There is little in our educational history to support such a view, and little in current theory or practice to help us implement such a view even if the political, cultural, and social desire to do so are able to be mobilized. The legacy of the "low literacy" tradition in our

public schools is many sided and has deep cultural roots. It will not be cast aside nor overcome with ease.

Building On Aptitude Rather than Effort

As our late 19th/early 20th century design for schools was taking shape a theory and related technology appeared on the scene which served to reinforce the nation's low expectations for academic achievement by public school students. This was the conception of intelligence and its measurement by Binet and Simon in France at the turn of the century.

While known as the "father of intelligence testing" Alfred Binet began his work within the context of education. He and his colleague Simon published their first tests in 1905 as a means of identifying "the feeble minded group" who could benefit from additional education help. This early effort to predict who could or could not benefit from schooling led to a narrowing of the conception of intelligence to higher level reasoning abilities while ignoring "the manifestations of intelligent behavior in social roles or in coping with everyday problems." (Shepard, 1989, pp. 553-54).

The work of Binet and Simon first received widespread attention in America through its adaptation by the American military in selecting recruits for World War I. This application of Binet's thinking and methods led to further applications of "intelligence testing" after the war, and the conclusion that a large segment of the American population had a mental age not exceeding fourteen (Marshall and Tucker, 1992). These authors go on to point out that

A few used this "information" to argue for an elitist approach to schooling. But most did the opposite, arguing that in a democratic country, the only fair response to this information was to construct an intellectually undemanding curriculum for everyone. . . In 1940, Lewis Terman, a respected psychologist, opined that an IQ of 110 was required for serious academic study. He estimated that less than 40 percent of American youth had an IQ of 110 or above, showing, he said, that 60 percent were not fit for intellectual activity. (p 21)

While educators and psychologists in other countries did not make similar connections between intelligence and schooling, and continued to insist that all children could learn demanding material, educators in America--and ultimately most citizens--adopted the view that success in school-based learning was largely a matter of inherited ability (as measured by "intelligence" tests) and not too much should be expected of students with low measured ability.

This relatively narrow and constraining view of intelligence dominated thinking about education in America for the first two-thirds of the 20th century, and continues to influence it today. Several developments during the latter third of the century, however, have forced educators to begin rethinking this view. The first was the dramatic results obtained by Benjamin Bloom and his colleagues with "mastery learning" (Bloom, 1971; Block, 1971; Block and Burns, 1976) in testing John Carroll's model of school learning (1963). Bloom interpreted Carroll's model as follows:

... if students are normally distributed with respect to *aptitude* for some subject and all students are given exactly the *same instruction* (the same in terms of amount and quality of instruction and learning time allowed), then achievement measured at the completion of the subject will be normally distributed. Under such conditions the relationship (correlation) between aptitude measured at the beginning of the instruction and achievement measured at the end of instruction will be relatively high (typically about +.70). Conversely, if students are normally distributed with respect to aptitude, but the kind and quality of instruction and learning time allowed are made appropriate to the characteristics and needs of *each* learner, the majority of students will achieve mastery of the subject. And, the correlation between aptitude measured at the beginning of instruction and achievement measured at the end of instruction should approach zero. (Bloom, 1976, p 4)

Bloom's 1976 report on the results of more than a decade of research on mastery learning was organized as a direct challenge to the prevailing *aptitude dependent* view of schooling. He opened the book with three remarkable sentences:

When I first entered the field of educational research and measurement, the prevailing construct was:

1. *There are good learners and there are poor learners.*

During the early 1960s, some of us became interested in the Carroll Model of School Learning, which was built on the construct:

2. *There are faster learners and there are slower learners.*

During the past decade, my students and I have done research which has led us to the view that:

3. *Most students become very similar with regard to learning ability, rate of learning, and motivation for further learning when provided with favorable learning conditions.*

Bloom stated this conclusion more fully in even more astounding terms:

Essentially, it is that what any person in the world can learn, almost all persons can learn *if* provided with appropriate prior and current conditions of learning. While there will be some special exceptions to this, the theory provides an optimistic picture of what education can do for humans. It holds out the possibility that favorable conditions of school learning can be developed which will enable almost all humans to attain the *best* that any humans have already attained. What is defined as *best* will, of course, vary with time, place, culture, and even individuals. However, the theory holds promise that in any time and place, the schools can provide the best of education for virtually all of their students-if the schools choose to do so. (p 7)

Other lines of work appearing in the latter third of the 20th century which have challenged the aptitude dependent view of schooling include both research and practice within the various domains of "special education", research on "effective schools", and research leading to the concept of "multiple intelligences".

The cumulative results of these and related efforts over the past thirty years argue strongly for what Lauren Resnick has called an *effort dependent* view of schooling. Her argument for this view runs as follows:

Early in this century, we built an education system around the assumption that aptitude is paramount in learning and that it is largely hereditary. The system was oriented toward selection, distinguishing the naturally able from the less able and providing students with programs thought suitable to their talents. In other periods, most notably during the Great Society reforms, we worked on a compensatory principle, arguing that special effort, by an individual or an institution, could make up for low aptitude. The third possibility--that effort actually *creates* ability, that people can *become smart* by working hard at the right kinds of learning tasks--has never been taken seriously in America or indeed

in any European society, although it is the guiding assumption of education institutions in societies with a Confucian tradition. . . . It is not necessary to continue this way. Aptitude is not the only possible basis for organizing schools. Educational institutions could be built around the alternative assumption that effort actually *creates* ability, that patterns of who tries hard can directly influence ultimate patterns of competence in society. If we worked from an effort, rather than an aptitude, assumption, our education system would be designed primarily to foster effort, even if occasionally some opportunities for recognizing and promoting extraordinary native talent were foregone. (1996, p 3)

Resnick goes on in the same article to articulate what an effort dependent educational system might look like, and it reflects to a large extent the conditions listed in the premise advanced in the opening pages of this paper.

Using Achievement Tests To Sort Rather Than Educate

A legacy that has had effects on educational practice much like those that have followed from our treatment of intelligence comes from the way in which we have designed and used educational achievement tests. Part of this legacy stems from the fact that achievement tests in the United States have been patterned on our approach to intelligence testing, both in form and use. Historically they have focused on isolated bits of information or quickly solved performance tasks that require only the marking of short answers (most often multiple choice or true-false), rather than *creation* of answers, and like intelligence tests they have been used almost exclusively to compare students with one another rather than against publicly established standards of accomplishment. Relying on bits of information and short answers also reflects the view that performance on achievement tests is only "an indicator" of a student's academic accomplishment, rather than a direct measure (Resnick and Resnick, 1992), and the closely related view that test scoring time and costs should be kept to a minimum.

Another part of our achievement test legacy stems from how such tests are constructed and, as a consequence, what a score on an achievement test means. Each item included in a test is

selected on the basis of the response of a sample of examinees for whom an item is targeted. In traditional approaches to item analysis this involves computing an *index of item difficulty* (the proportion of examinees in the sample answering an item correctly) and an *index of item discrimination* (the extent to which an item differentiates among examinees). Only those items which discriminate well among the sample of students taking part in the item analysis studies, *and which have been answered correctly by approximately 50 percent of the sample*, are included in the final form of the test. While a great deal more goes into item preparation and selection than outlined here (see Millman and Greene, 1989, and Hambleton, 1989) the point to be made is that items are selected for inclusion in an achievement test on the basis of their ability to *discriminate* among examinees rather than assess a level of accomplishment expected. In developing achievement tests for use in America's schools this process is repeated grade level by grade level for each subject assessed.

The consequence of all this is that American achievement tests are focused on whether students are performing "at grade level" in a particular subject area, with grade-level performance being defined by the response patterns of one or more samples of examinees to the various items included in the test.

Grade level is set not according to what students are expected to know or be able to do at a given age but according to comparisons with other students. Being at grade level means that 50% of students in a norming sample scored below you and 50% scored above you. It means that you fell at the 50th percentile in a distribution *and nothing more*. It says absolutely nothing about what mathematics you know or what you can be expected to do with that knowledge. (Resnick, Briars and Lesgold, 1992, p 189)

These authors go on to speak to the impact this reality has on the lives of students:

For children with scores in the lower portions of the distribution, the message of the standardized test score is profoundly discouraging. It does not take a great deal of experience to realize that, unless all the "smart kids" stopped working and waited for you to catch up (hardly a policy for national educational excellence),

no amount of hard work is ever likely to give you a really high score. The effect of these tests on the high scorers is almost as demotivating. With high scores already in place and with no clear achievement standards to work toward, why should they put forth much effort? The devaluation of effort that is built into the American testing system thus affects rich and suburban schools as well as poor and urban ones. (ibid., p 189)

Unfortunately the impact of our achievement test legacy in the United States plays out in other ways as well, all of which need to be overcome if the conditions called for in standards-based teaching and learning are to be implemented fully. Here are some additional consequences:

- measures most widely relied upon in judging the effectiveness of our schools are not aligned well with what state or local curriculum guides indicate should be taught, and thus learned, in schools (item analyses of widely used standardized achievement tests in relation to the content of curriculum guides rarely show more than 40 percent agreement, and usually ranges from 15 to 30 percent);
- achievement tests tend to be administered at a time in the school year (usually Spring), and results returned at a time (usually late summer or Fall), when whatever benefit test scores might have for a teacher can rarely be used (the students a teacher has at the start of a school year are not those they had in the Spring, and instructional planning for the Fall has usually been completed by the time school opens);
- in many schools teachers never see achievement test results, and they rarely see evidence that their school or district ever uses achievement test information—other than for a somewhat ritualistic reporting of test scores in a local paper or advanced as a reason to adopt a new textbook series or implement a new instructional program;
- even in schools or districts where good-faith efforts have been made to attend systematically to achievement test information it has been only within the past decade or

two that test reports have included analyses of the performance of *individual* students taught by a *particular* teacher.

Given these circumstances teachers have never had great trust nor found much utility in achievement test data, though they understand its importance--both symbolically to the public and practically to the future of a student. So they are caught in having to attend to what is emphasized in the standardized tests used by their school or district, while simultaneously attending to what their state and local curriculum guides indicate should be taught.

Research has shown repeatedly (Cohen, 1987; Shepard, 1989) that teachers caught in this bind tend to succumb to the power of tests to shape instruction. When this occurs workbooks tend to replace extended writing and bits of information take precedence over thoughtful engagement with ideas or extended problems. The bind is particularly keen for teachers working with disadvantaged children. In a recent study on the impact of mandated testing on curriculum and instruction in science and mathematics (Maxwell, et. al., 1992)

... teachers and administrators working with minority students reported spending dramatically more time teaching children the skills and content of the tests (including practicing on items similar to those on the tests) than did teachers and administrators working with non-minorities. It is easy to see why this situation would occur. The standardized tests are used widely as a policy tool in managing efforts to improve minority achievement. At a minimum, school scores on the tests are published widely in districts serving large proportions of minority children. Furthermore, special supplementary funding programs for poor children, such as Chapter I, are monitored on the basis of standardized test scores. In these communities, especially when starting test scores are low, teachers are under a great deal of pressure to produce better test scores. (Resnick, Briars and Lesgold, 1992, pp. 189-190)

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modified, college admission requirements to be redesigned, and a willingness on the part of the massive industry supporting it all to see a highly profitable and continuously expanding market decline. Such is the scope of this legacy, and the magnitude of what needs to happen within it if we are to redesign teaching and learning as envisioned in Oregon's design for 21st century schools.

Normative Standards and Unclaimed Responsibilities

A fourth legacy of our 20th century design for education in America, which is consistent with and to a large extent has evolved from the interlocking legacies previously described, has to do with judging the quality of work students accomplish in school and who assumes responsibility for its quality. The consequences of our legacy in this regard may be the most difficult of all to overcome in attempting to shift to a standards-based approach to schooling, for our standards for quality now tend to be *relative* rather than fixed and responsibility for quality *diffuse* rather than clear.

Our current standards for judging the quality of student work are relative in that the student's performance is compared with the performance of classmates, not an explicit standard that is to be accomplished, and grades of A through F are assigned to convey this relative standing. While a teacher may convey to students "what it takes" to get an A or B or C, and may have his or her own internal standards for judging quality, these rarely are conveyed clearly to students and grades assigned to student work almost always take into account the work of others, grade point distributions within a class as a whole, and such other intangibles as "grading policy" within a school, student history of performance, complications posed by "cooperative learning", and "student effort"--either in individual or group projects (Guskey, 1996; Natrelo, Riehl and Pallas, 1994; Stiggins, 1994). With such uncertain and sliding targets for learning it should come as no

surprise to have students spend as much time as they do in clarifying what a teacher expects, what will be covered in examinations, what grading criteria are to be used, and the like.

A particularly troublesome aspect of using relative rather than fixed standards in judging the quality of student work is its failure to hold anyone responsible for students meeting a particular standard of performance. Students can work as hard or as long or as smart as they choose, depending on the grade they wish to receive and the level of competition they face from their classmates. If a C is good enough, regardless of reason, effort will be expended accordingly and learning will reflect whatever has been negotiated. Responsibility from a student's perspective is showing up on time, not missing too many classes, and doing what needs to be done to receive an acceptable grade--not achieve a particular level of accomplishment with respect to a particular learning goal or task.

Teachers also are handicapped by this heritage from the perspective of standards-based schooling because they have no formal obligation to help students reach a particular standard of accomplishment. Level of accomplishment in learning is a matter for each student to determine, and pursue to the extent to which they are interested and able. Teachers are expected to help students reach their respective learning goals, and in the vast majority of cases do so reasonably well, *but targeting a learning goal and pursuing it are primarily the responsibility of students.* Teachers also must evaluate the quality of a student's work to see whether it is worthy of an A or B or C, in the eyes of the teacher, and duly register that evaluation in the form of a unit or class grade. These two functions, helping a student accomplish the level of learning he or she wishes to pursue and then evaluating the level of learning accomplished in terms of either explicit or implicit criteria of quality held by the teacher, constitutes the central responsibility that a teacher has for student learning in a norm-referenced school.

These conceptions of the nature of student and teacher work in school, and perceptions of who is responsible to whom for what, do not bode well for implementing standards-based teaching and learning. If the conditions outlined in the early pages of this paper are to be met performance standards for students can no longer be normative, students can no longer opt to work for Cs or Ds with impunity, and a teacher's work is no longer over when grades are calculated, assigned and reported. In a standards-driven system a student's work is not done until performance standards have been reached, and a teacher's work is not done until each student has reached them!

The Sum of Our 20th Century Legacy for Students and Teachers

The interlocking, mutually reinforcing set of legacies described in the previous pages add up to a way of thinking about teaching and learning, and a set of resources (textbooks, tests, etc.) for students and teachers to work with, that are totally at odds with those required for standards-based teaching and learning. Students rarely have a clear picture of the learning goals they are to accomplish (textbook assignments with "surprise" quizzes by teachers and end-of-year achievement tests with "secure" test items are not particularly helpful in this regard), and when students do have a reasonably clear picture of learning goals to accomplish these rarely focus on thoughtful engagement around issues and ideas or the solution of complex problems of personal or practical importance. Students also tend to be exposed to a pre-established set of expectations for learning by teachers, and often by parents, with expectations higher for those who learn quickly and are well grounded in the intellectual skills needed for academic learning and lower for those without such traits.

When these two conditions are coupled with an educational system that recognizes and rewards academic accomplishment relative to the accomplishment of others, structures time for learning that is essentially equal for everyone, uses tests to sort or rank students rather than help

them learn, and lets responsibility for both teaching and learning be negotiated in terms of the “grade” a student is willing to receive rather than learning goals to be accomplished it is a minor miracle that anger, withdrawal and cynicism are not more prevalent within our schools than they are.

The sum of our legacy for teachers is equally handicapping from the perspective of standards-based schooling. Most teachers currently in our schools have had little experience or training in establishing learning standards for students, beyond “setting objectives” for instructional units or lesson plans, and even less experience in helping students internalize a goal or objective for learning and devise a plan for its pursuit. Most of today’s teachers also would find the idea of “teaching to a standard of accomplishment” as foreign, and would not have the knowledge or skills of assessment needed to monitor the progress of students toward a standard of accomplishment. Nor would they be prepared through their training nor exposed through their own experience as learners to engage with students in substantive debate around issues or ideas, or explore with students alternative solutions to complex problems. Nor would they be inclined through their training or experience to “coach” students in their performance of academic work, or to adapt and then adapt again their instructional plans to accommodate the intellectual and emotional needs of students as they strive to reach a high standard of accomplishment.

Designing learning activities that will be engaging to students without a clear sense of the short- and long-term learning goals to be accomplished, lecturing or making textbook or homework assignments without equal clarity of purpose, or holding review or discussion sessions and then assigning grades to reflect work accomplished relative to the performance of others, will not suffice in a standards-driven system of schooling. Standards-based teaching requires a very different set of practices:

- Clarifying for students and parents what is to be accomplished in school;
- helping students understand what this means in terms of their responsibilities and the responsibilities of their teacher(s);
- helping students develop work plans which lead to long-term accomplishments, monitoring the progress of each student toward the level of accomplishment to be reached, and providing assistance where needed;
- helping students assemble evidence to be used in *demonstrating to others* that the level of accomplishment expected has in fact been reached; and
- *certifying to others* that level of accomplishment expected has in fact been reached.

These practices constitute the classroom work of teachers in standards-based schools, and teaching of this nature is what will enhance the productivity of schools. Until it occurs not much else is likely to make much difference.

The deep and abiding legacies of our educational history will not let such a redesign in student and teacher work occur easily, for it involves much more than what occurs between students and teachers in a classroom. It also involves the restructuring of schools so that time is organized differently for both teaching and learning, and textbooks are treated as resources for learning rather than definers of what is to be learned. It also involves treating standards of performance rather than grades as the coin of the realm, and using tests to refine, facilitate and document learning rather than sort and categorize students. And equally if not more important it involves reshaping the *culture* of classrooms, schools and communities.

Everyone involved in or touched by schools needs to reaffirm that the business of schools is learning, and that all who engage in schooling are engaged in that business. And as in other lines of business, particularly business involving public trust and public funds, it is a business that has to

attend to *results*. At present school goals are rarely linked to student achievement (Bonstingl, 1992; Schmoker, 1996); schools are rarely organized to act upon information about student achievement for purposes of improvement; and classrooms or schools are rarely viewed as “communities of learners”--or even “caring” communities (National Commission on Teaching and America’s Future, 1996).

Many agree that such structural and cultural dimensions of schooling need to change before the nature of teaching and learning in classrooms can change. Perhaps. But a decade of effort that has focused on structural and cultural change in schools has left essentially unchanged what occurs in classrooms (Cohen 1995; Elmore, 1995). Emerging research (see, for example, Aness, 1995; Darling-Hammond, et. al., 1993; Elmore, 1996; Darling-Hammond, 1996; Hartenbach, Ott and Clark, 1996; Jervis, 1996; Marshall, 1996; Meier, 1995; Murnane and Levy, 1996) suggests a reverse view: *change the dynamic of teaching and learning in the classroom, and change in the structure, organization, and culture of schools will follow!* The remaining sections of the paper are devoted to the specifics of how teaching and learning will need to change for this to occur.

PART III. The Redesign of Student Work in Standards-Based Schools

The broad outlines for the redesign of student work in standards-based schools, and its rationale, have been sketched in the previous pages. In this section these outlines are elaborated. The purpose of doing so is to provide enough detail for an informed discussion of the proposed redesign to occur among those who wish to fully understand its implications for teaching and learning, with suggestions made as to what should be refined, modified or discarded.

The conditions of standards-based learning sketched in the pages which follow should be approached as “work-in-progress”. Ideas are not fully developed, concepts not fully defined, and