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ABSTRACT

Implications of the six National Education Goals for African Americans and other minority groups are discussed in a paper that summarizes the status of student competencies. The question posed is why the school reform movement thus far has had such a minimal impact on overall student achievement. The focus of the reform movement of the 1980s is reviewed, particularly the "new basics," school-based management and parental involvement, and the curricular content issue. It is suggested that in spite of the twin goals of equity and excellence in the early 1990s, the reform movement continues to ignore the educational circumstances of poor and minority students; the national goals cannot be reached without substantially raising the performance of minority students. National Assessment of Educational Progress (NAEP) and Scholastic Aptitude Test (SAT) trends are cited to illustrate the levels to which minority students lag behind white students, and similar differences are noted in grades and course/program enrollments. The minority education agenda for the 1990s, it is further suggested, should begin with the elimination of tracking and proceed to identify instructional opportunities that give minority students a fair chance at meeting world-class standards. In addition, for the national standards and assessment movement to survive, school delivery standards must receive as much attention as student content and performance standards. Examples of effective efforts include active learning, flexible scheduling, interdisciplinary team teaching, continuous assessment, and collaborative learning. Contains 35 references. (LB)





THE NATIONAL EDUCATION GOALS: IMPLICATIONS FOR AFRICAN AMERICANS AND OTHER MINORITIES

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> The six National Education Goals set by the nation's governors and President Bush at the 1989 education summit fix a destination for all children to reach by the year 2000. The National Education Goals Panel (NEGP) was established in 1990 to measure the nation's progress toward reaching the goals during the decade of the nineties. Thus far, NEGP has produced two reports (1991, 1992) which show that some headway is being made in increasing high school completion rates (Goal 2) and in making schools safer and more drug-free environments (Goal 6). These same reports, however, show few signs of progress with respect to meeting Goals 3 and 4. Goal 3 calls for students to demonstrate competency in challenging subject matter (English, science, mathematics, history, and geography) in grades 4, 8, and 12. while Goal 4 stipulates that American students will be first in the world in science and mathematics achievement by the year 2000.

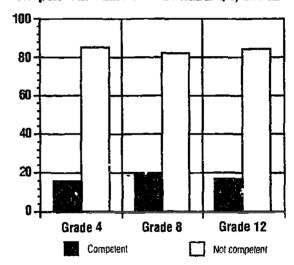
> The results of the International Assessment of Educational Progress (La Pointe, et al., 1992a; 1992b) compared the mathematics, science, and geography performance of 13-year-old American students with that of their counterparts in eight developed nations—Hungary, Slovenia, Canada, Soviet Union, Spain, Korea, Ireland, and Scotland. When the average performance of students in each area is ranked, American students place fifth in geography, last in mathematics, and eighth in science. These results mirror previous trends for American students on international assessments and show little evidence of progress.

These findings are not surprising, given the dismal performance of American students in mathematics and literacy as measured by the National Assessment "PERMISSION TO REPPODUCE THIS MATERIAL HAS BEEN GRANTED BY

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of Educational Progress (NAEP). Figure 1 shows the percentage of fourth, eighth, and twelfth grade students who achieve competency on the 1990 NAEP mathematics survey (see Mullis, et al., 1990).

Figure 1 Percentage of Students Who are Competent in Mathematics in Grades 4, 8, and 12



Source: Mullis, et al., 1990

Sadly, in 1990 the mathematics performance of well over three-quarters of American students lies below the level deemed competent by NAEP at each grade level, this despite almost a decade of school reform efforts inspired by the report, A Nation at Risk (National Commission on Excellence in Education, 1983). NAEP surveys done in other areas during the 1980s (e.g., reading, writing, and science) produced results that were equally disheartening (see Mullis, et al., 1990). These findings pose an important question for the national goals initiative in the 1990s—









why has the school reform movement thus far had such a minimal impact on student achievement overall?

School Reform in the 1980s

The answer can be found in the focus of the reform movement during the early years (1983-86). A Nation at Risk generally is credited with igniting the 1980s school reform movement. In its list of indicators of risk, the Commission highlighted the poor standing of American students on international comparisons of student achievement, rising levels of functional illiteracy among adults and youth, and declines in student scores on standardized achievement and ability tests such as the Scholastic Aptitude Test (SAT). The Commission made several recommendations to turn the tide. It called for strengthening state and local high school graduation requirements and ensuring that "at minimum" students receive a curriculum grounded in the "new basics." Unfortunately, much of the Commission's discussion of the new basics focused on time rather than new forms of content. For example, their report recommended that high school graduates complete four years of English and three years of mathematics. The Commission also honored the tradition of separate curricular tracks for college- and non-college-bound students by arguing that the former should take two years of a foreign language on top of meeting the requirements for generaltrack students.

Following this lead, many states and school systems "strengthened" curricula by reducing or eliminating "superfluous" courses and graduate requirements, and by establishing minimum competency testing programs to gauge students' preparedness for employment and productive citizenship. The first phase of the school reform movement, then, concentrated on the identification of a core curriculum bullt around basic skills or minimum competencies. There is some evidence that these actions did serve to increase the per-

centage of students completing high school having acquired basic skills (e.g., Harmon, et al., 1992a; 1992b).

The reform movement entered its second phase during the latter half of the 1980s when the merits of transforming the way schools and school systems operate attracted increased attention. Research describing the characteristics of effective schools (Edmonds, 1979; 1986) offered persuasive evidence that schools could be improved by shifting decision-making responsibility into the hands of teachers and parents and away from state departments of education and district central offices. School-based management, parental involvement, and teacher empowerment became the guiding principles of school reform during this period. While the effective schools movement underscored the need to change both the goals of schooling and the processes used to obtain them, the movement has had little to say about the specific curricular ends school processes should serve. Instead, it offered two general axioms as beacons for curricular change: all students can learn, and teachers should have high expectations for all students.

By 1989 the curricular content issue returned to center stage, largely as a result of the economic and social impacts of the globalization of the U.S. economy. The disappearance of whole industries that relied on workers with basic skills, coupled with the requirements of work in emerging manufacturing, health, and service industries (see Commission on Skills of the American Work Force, 1990) fostered numerous conversations about schooling and curricula for the 21st century. Efforts to redefine the "basics" stressed the Importance of oral (English and a foreign language) and written communication skills, reasoning and problem solving, teamwork, and the ability to acquire and use information (e.g., Resnick, 1987; SCANS, 1992; CCSSO, 1990). In addition to demanding higher levels of learning, curriculum reformers





argued that these new, higher standards be applied to the vast majority of American students. The latter recommendation represented a significant departure from the two-track system (college-bound and noncollege-bound) that had dominated American education for the better part of this century.

Equity and Excellence

The nation entered the 1990s, then, with twin goals for school reform: (1) to restructure schools in ways that enhance their effectiveness, and (2) to create curricula and instructional approaches that help all students attain world-class levels of achievement. This agenda is echoed powerfully in the six National Education Goals referred to earlier. While these goals hold all students accountable for reaching higher performance standards, the school reform debate has not been very vocal or specific about equity-how we ensure that those who are now disadvantaged educationally, socially, or economically have a realistic chance to meet higher standards. In 1983, the National Commission on Excellence in Education (NCEE, 1983) cautioned us against disregarding equity concerns:

The twin goals of equity and high-quality schooling have profound and practical meaning for our economy and society, and we cannot permit one object to the other either in principle or in practice. To do so would deny young people their chance to learn and live according to their aspirations and abilities. It also would lead to a generalized accommodation to mediocrity in our society on the one hand or the creation of an undemocratic elitism on the other. (p. 13)

Despite this admonition, the reform movement continues to be virtually silent about the often desperate educational circumstances of poor and minority children. For example, the six national goals chart a course for all students without sayling much about how students traveling in vessels of different size,

shape, and strength might reach the same destination by the year 2000. Kozol's (1991) bleak portrait of the schools attended by many poor and minority students offers clear evidence that high standards will be an unreachable goal for "all" students unless we pay attention to how we prepare students with different needs to meet the same learning goals (see American Council on Education, 1988). In essence, the national goals cannot be reached without raising the performance of minority students substantially. This long overlooked undertaking must begin with a sound understanding of the academic performance of poor and minority students and of the nature of the schools they attend.

Educational Status of White and Minority Students

NAEP Trends

As mentioned earlier, NAEP survey results during the last decade show that the average science, reading, writing, and math proficiency of white students has been stalled (Mullis, et al., 1990; National Center for Education Statistics, 1992; see Tables 1 and 2). While the performance gaps between blacks and Hispanics on one hand, and whites on the other, were reduced sharply during this same period, the average scores of blacks and Hispanics in each subject area remain 20 to 40 points below those obtained by white students at each age/grade ¹ (see Applebee, et al., 1989).

Even more alarming than the persistent achievement gap between minority and white students is what the average scores of each group tell us about our students' capabilities. Unlike the results of norm-referenced standardized achievement tests, NAEP proficiency levels in reading, mathematics, and science allow one to tie numerical scores to a defined level of proficiency. Descriptions of NAEP proficiency levels in reading and mathematics are presented in Tables 3 and 4 to illustrate this point.





Table 1 Average Reading Proficiency by Age and Race/Ethnicity: 1971—1990

Year	Age 9			Age 13			Age 17		
	White	Black	Hispanics	White	Black	Hispanics	White	Black	Hispr Ales
1971	214	170		261	222	†	291	239	1
1975	217	181	183	262	226	233	293	241	252
1980	221	189	190	264	233	237	293	243	261
1984	218	186	187	263	236	240	295	264	268
1988	218	189	194	261	243	240	295	274	271
1990	217	182	189	262	242	238	297	267	275

Source: National Center for Education Statistics, 1992

Table 2 Average Mathematics Proficiency by Age and Race/Ethnicity: 1973—1990

Year	Age 9			Age 13			Age 17		
	White	Black	Hispanics	White	Black	Hispanics	White	Black	Hispanics
1973	225	190	202	274	228	239	310	270	277
1978	224	192	203	272	230	238	306	268	276
1982	224	195	204	274	240	252	304	272	277
1985	227	202	205	274	249	254	308	279	283
1990	235	208	214	276	249	255	310	289	284

Source: National Center for Education Statistics, 1992

By transposing the average scale scores for race/ethnic groups shown in Tables 1 and 2 onto the proficiency level descriptions presented in Tables 3 and 4, one can capture the true meaning of what students on average are able to accomplish. The average score for black and Hispanic 17-year-olds on the NAEP reading and mathematics assessments rose considerably between 1971 and 1990, but remained below 300—the level at which students are able to use mathematics and literacy to engage in complex reasoning. Thus the gains made by African American and Hispanic students largely amount to improvements in their acquisition

of basic skills. This basic-skills ceiling effect is reinforced in NAEP data on the percentage of students who score at or above a particular proficiency level. In 1984, for example, 45 percent of the 17-year-old white students tested obtained reading proficiency scores at or above the Adept Proficiency Level (300 and above). Students who score at or above this level are able to comprehend, analyze, and summarize complex written information on familiar and unfamiliar topics. While 45 percent of white 17-year-olds per-







Table 3 NAEP Reading Proficiency Levels, 1998

Level	Description					
350	Can synthesize and learn from specialized reading materials					
300	Can find, understand, summarize, and explain relatively complicated information					
250	Can search for specific information, inter-relate ideas, and make generalizations					
200	Can comprehend specific or sequentially related information					
150	Can carry out simple, discrete reading tasks					

Source: Applebee, et al., 1989

Table 4 NAEP Mathematics Proficiency Levels, 1986

Level	Description					
350	Can solve multi-step problems and use basic algebra					
300	Can compute with decimals, fractions, and percents; recognize geometric figures; solve simple equations; and use moderately complex reasoning					
250	Can add, subtract, multiply, and divide using whole numbers, and solve one-step problems					
200	Can add and subtract two-digit numbers and recognize relationships among coins					
150	Knows some basic addition and subtraction facts					

Source: Applebee, et al., 1989

formed at or above this level, fewer than 20 percent of the 17-year-old African Americans tested did so (Mullis, et al., 1990).

These results paint a distressing picture of American students. They reveal that our schoolchildren on average are failing to achieve the very skills required by the new jobs being created in our nation's economy (Marshall & Tucker, 1992). Though the gains made by blacks and Hispanics are encouraging, their performance continues to lie well below that of their white counterparts. The fact that the majority of

blacks and Hispanics achieve scores indicating that they are ill prepared for high performance work and management (see Commission on the Skills of the American Work Force, 1990) bodes poorly for a society seeking solutions to the cause of the recent riots that gripped Los Angeles and cities across the country.

Scholastic Aptitude Test Trends

NAEP surveys are given to a sample of students who represent a cross-section of American schoolchildren. The results of the Scholastic Aptitude Test (SAT), however, offer a view of those students who are headed



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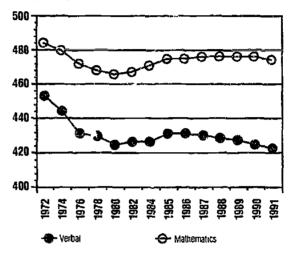
for college. From 1972 to 1991, the percentage of high school graduates who took the SAT Increased from 34 percent to 41 percent. Figure 2 shows the average verbal and mathematics SAT scores for high school seniors from 1972 to 1991.

Figure 2 shows the sharp decline between 1972 and 1982 in average SAT scores that sounded the alarm for school reform in the 1980s. SAT scores on the verbal and mathematics portions of the test rose somewhat between 1982 and 1986, but have remained fairly stable since 1986. Despite signs of progress, mean SAT scores for verbal and mathematics ability in 1991 remain below averages obtained in 1972-an outcome due in part to the increased proportion of high school seniors taking the test in 1991 (41 percent of all high school seniors) as compared to 1972 (34 percent). Most of the reports produced by various commissions and forums over the past decade, however, lay the majority of the blame for the decline in SAT scores to curricular and instructional deficiencies in American schools (see Quality Education for Minorities Project, 1990).

Minority Student Performance on the SAT

Here too. the picture over the last decade has remained fairly stable and bleak. Table 5 shows the average verbal and mathematics SAT scores for different racial and ethnic groups in 1980 and 1991.

Figure 2 Average Verbal and Mathematics Scores on the Scholastic Aptitude Test, 1972—1991



Source: National Center for Education Statistics. 1992

In 1980, the average score for all groups on the verbal and mathematics portions of the SAT stood at 424 and 466 points respectively. Eleven years later, the average score for all groups dropped two points on the verbal portion while rising eight points in math. Looking at the scores for specific groups, we tind that the average scores of African Americans, Mexican Americans, Asian Americans, and Puerto Ricans

Table 5 Mean Verbal and Mathematics SAT Scores for Various Racial and Ethnic Groups, 1980 and 1991

Verbal	Ail	White	Black	Mexican American	Puerto Rican	American Indian	Asian American
1980	424	442	330	372	350	390	396
1991	422	441	351	377	361	393	411
Math							<u> </u>
1980	466	482	360	413	394	426	509
1991	474	489	385	427	406	437	530

Source: National Center for Education Statistics, 1992





increased significantly on the verbal and mathematics portions of the SAT. Over this same period, the average verbal scores for American Indians increased slightly, while their average scores for mathematics increased by 11 points.

Generally speaking, while these gains helped narrow the disparity between the SAT scores of minorities and whites, with the exception of Asian Americans in the area of math, the average performance of minorities remains well below that of white students. A more complete picture of the dimensions of the minority achievement gap on the college entrance examination is captured in the following statistics reported by the Commission on Minority Participation in Education and American Life (1988):

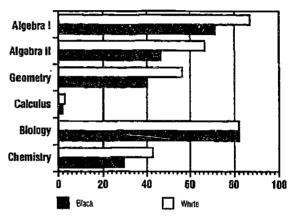
Of the 1.05 million high school seniors who took the Scholastic Aptitude Test (SAT) in 1985, just over 70,000 (9 percent) were black and a few more than 17,000 (3 percent) were Hispanic. Furthermore, of the black students, 73 percent scored below 400 on the verbal section and 64 percent scored below 400 on the math portion. Of the Hispanic students, 59 percent had verbal scores below 400 and 45 percent had math scores below that level. For whites, only 31 percent had verbal scores below 400 and only 22 percent had math scores that low. (pp. 5-6)

Differences in Grades and Course/Program Enrollment

Grades

The troubling minority student achievement gap visible in NAEP and SAT results is mirrored and perhaps rooted in the disparate school experiences of minorities and whites. Blacks and whites leave high school with grade point averages that differ considerably. In 1984, 35 percent of all black high school graduates obtained a grade point average (GPA) of C+ or better as compared to 60 percent of their white counterparts

Figure 3 Percentage of Black and White Students Enrolled in Specific High School Courses in 1989



Source: Policy Information Center, 1989

(Education Research Bulletin, 1989). It is somewhat surprising that African Americans receive lower grades in high school despite being exposed to a less challenging curriculum than their white counterparts. Figure 3 shows the percentage of black and white eleventh graders who report taking advanced mathematics and science courses (Policy Information Center, 1989).

Course Enrollment

According to these data, a smaller proportion of black as compared to white students take advanced mathematics and science courses in high school. The percentage of black students who report taking Algebra I and II is of particular concern, given the results of a recent study showing that success in coilege is highly correlated with completing algebra and geometry in secondary school (Pelavin & Kane, 1990). These findings prompted the College Board to sponsor the Equity Project, a program designed to increase the number of minorities who enroll in and successfully complete algebra and geometry. This initiative seeks to improve minority student participation and perfor-





mance by redesigning math curricula and providing special training for secondary school teachers and guidance counselors.

Tracking and Ability Grouping

Although the Pelavin and Kane study showed that success in algebra and geometry is associated with success in college, it would be premature to conclude that advanced mathematics skills alone are the sole factor driving this relationship. Students who complete advanced mathematics courses are also likely to be enrolled in higher level science and English courses

(American Association for the Advancement of Science, 1989). To our nation's detriment, trarking remains a pervasive feature of secondary schools, despite abundant evidence of its harmful effects on those assigned to lower curricular groups (Goodlad, 1984; Oakes, 1985; Cole x Griffin, 1987; Slavin, 1988).

Racial and ethnic variations in high school course participation can be traced to the long-term effects of ability grouping and tracking, which begin in elementary school and in some cases, as early as kindergarten (Rist, 1973). The disproportionately large number of African Americans and flispanics enrolled in special education programs (particularly those for the learning disabled and the educable mentally retarded), programs for the educationally disadvantaged (e.g., Head Start and Chapter 1), and in lower level academic groups and tracks (see Simmons & Grady, 1989; Garibaldi et al., 1988) provide sad testimony of the failure of this practice to raise minority student achievement. In short, tracking and ability grouping increase the likelihood that minorities will spend 12

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years of school in programs that are a path to basic skills rather than world-class skills. The minority education agenda for the nineties should begin with the elimination of tracking and proceed to identify instructional opportunities that give minority students a fair shot at meeting world-class standards.

National Standards and Examinations

The push for national standards and examinations has enormous potential to advance efforts to improve minority schooling if the attention paid to prerequisite instructional opportuni-

ties matches that already being devoted to standards and alternative assessment. Unfortunately, this does not appear to be the case. Up to now, the development of student content and performance standards and assessment systems has outpaced that of school delivery standards.

Numerous organizations such as the Council of Chief State School Officers, the New Standards Project, the National Assessment Governing Board, the National Council of Teachers of Mathematics, and the National Academy of Sciences have weighed in on the subject of content standards and assessment. The Labor Department's Secretary's Commission on Achieving Necessary Skills (1992) has defined a set of foundation skills and competencies that are becoming de facto national standards for work readiness. Similarly, the mathematics curriculum and evaluation standards published by the National Council of Teachers of Mathematics are being widely viewed as national standards for mathematics. Efforts to develop national curriculum or content standards in areas such as English language arts and history are being funded by



the Department of Education, while the National Academy of Sciences is i supporting efforts to create national standards for science.

On the assessment front, the New Standards Project—a partnership of seventeen states and six school districts organized by the Learning Research and Development Center at the University of Pittsburgh and the National Center on Education and the Economy—is developing a performance-based examination system that would be shared by the states involved. The NSP examinations system would include student portfolios and matrix examinations given

at three grade levels (4, 8, and 10) and in several subject areas. Another model for national examinations comes out of the work of the College Board. The College Board is supporting the Pacesetter Project, an initiative to specify content standards at the secondary level and develop a portfolio-based assessment system for high school students that could be used as part of the college admissions process.

This brief and incomplete description of the national standards and assessment landscape is meant to demonstrate the pace and breadth of this endeavor. This movement has the potential to benefit minority education in a number of ways. First, by emphasizing a single standard for all students, the national standards movement would seriously undermine the conceptual rationale for tracking—the belief that holding separate standards and expectations for students based on their "ability" is appropriate and effective. Second, the replacement of multiple-choice tests with performance-based assessments in schools serving minority and educationally disadvantaged youngsters would heighten the attention paid to critical thinking, prob-

The national standards and assessment movement is willing to hold students and perbaps teachers responsible, while being silent about school, district, and state accountability.

lem solving, and advanced knowledge in classrooms that all too often concentrate on the basic skills emphasized by traditional standardized tests.

School Delivery Standards

Thus far at least, the issue of instructional opportunities or school delivery standards has not found an institutional home, despite cogent analyses presented by Smith and O'Day (1992) and Porter (1992). Part of the caution given this subject is spurred by a desire to avoid describing inputs in ways that burden schools and programs without improving student suc-

cess significantly. While this concern is warranted, as long as school delivery standards remain an institutional orphan, the equity advocacy community has good reason to believe, as many now do, that the national standards and assessment movement is willing to hold students and perhaps teachers responsible, while being silent about school, district, and state accountability.

If the national standards and assessment movement is to survive, school delivery standards must receive as much attention as is currently being given to student content and performance standards. Insights about the experiences and resources needed to improve education, particularly for disadvantaged students, abound in initiatives such as the Comer School Development Program, the Accelerated Schools Program, Harvard's Performance Assessment Collaborative for Education (PACE) and Project Zero, the Coalition of Essential Schools, the Carnegie Middle Grade School State Policy Initiative, and the College Board's Equity Project.





These efforts stress:

- active learning that takes children from the classroom into the community and workplace;
- extended learning activities, such as projects and exhibitions that take weeks to complete;
- flexible scheduling and heterogeneous grouping of students;
- interdisciplinary teams of teachers who engage students in mathematics, English language arts, science, art, and social studies activities focused on a common theme or issue;
- challenging subject matter that requires students to reason and solve problems utilizing primary materials rather than textbooks;
- collaborative learning, where students work alone and in small groups to complete extended learning activities;
- continuous assessment using performance-based measures that emphasize student progress toward meeting a set of clearly defined standards; and
- collaborative teams of educators (teachers, principals, specialists) and parents who have the power to plan and make decisions at at allocating resources in ways that will enhance the school's ability to meet standards and goals established in concert with the district or state.

in addition, these programs often look beyond the child and attempt to foster a supportive learning environment in the home by using the school as a nexus for social and health services furnished by relevant public and private agencies (see Schorr, 1988). How can one use the evidence provided by these successful programs to define school delivery standards in a way that gives schools maximum flexibility and keeps institutions focused on meeting outcomes for students rather than regulations for programs? This is a central question that must be broached and ultimately answered to assuage concerns about the power of the

standards and assessment movement to improve education for all children, especially those from poor and minority backgrounds.

The answer lies somewhere in the vinculum between content and performance standards, relevant curricula and assessments, appropriate and effective instruction, and highly skilled educators and well-equipped schools. Defining these variables in a way that guides without restricting, and is equitable without being monolithic, will require the combined efforts of researchers, policymakers, and practitioners working alongside business, community, and government representatives. We cannot afford to leave any group out of this process because the result must be owned by so many. Moreover, as in the case of content/performance standards and alternative assessment, the process of defining school delivery standards themselves will help forge the community of learners essential to the improvement of education in the United States.

Note

 Early NAEP surveys used age groupings; later assessment groups were based on grade levels.







References

American Association for the Advancement of Science. (1989). Project 2061: Science for all Americans. Washington, DC: author.

Applebee, A. N.; Langer, J. A.; & Mullis, I. V. S. (1989). Crossroads in American education: A summary of findings. Princeton, NJ: Educational Testing Service.

Cole, M., & Griffin, P. (1987). Contextual factors in education: Improving science and mathematics education for minorities and women. Madison, WI: Wisconsin Center for Education Research, University of Wisconsin—Madison.

Commission on Minority Participation in Education and American Life. (1988). One-third of a nation. Washington, DC: American Council on Education.

Commission on the Skills of the American Work Force. (1990). America's choice: High skills or any wages. Rochester, NY: National Center on Education and the Economy.

Council of Chief State School Officers. (1990). Higher order learning for all. A report by the Council of Chief State School Officers on restructuring learning. Washington, DC: author.

Edmonds, R. (1979). Effective schools for the urban poor. Educational Leadership, 37, 15-23.

Edmonds, R. (1986). Characteristics of effective schools. In U. Neisser (Ed.), The school achievement of minority children: New perspectives. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

Education Research Bulletin. (1989). Vol. 1, No. 3.

Foertsch, M. (1992). Reading in and out of school: Factors influencing the literacy achievement of American students in grades 4, 8, and 12, in 1938 and 1990. Washington, DC: Educational Testing Service.

Garibaldi, A. M.; Jones, J. A.; & Brooks, C. R. (1988). Educating black male youth: A moral and civic imperative. New Orleans, LA: New Orleans Public Schools.

Goodlad, J. I. (1984). A place called school. New York: McGraw-Hill Book Company.

Harmon, M. C.; Lomax, R. G.; Madaus, G. F.; Maxwell West, M.; & Viator, K. A. (1992a). The impact of mandated standardized testing on minority students. Boston, MA: Center for Study of Testing, Evaluation, and Educational Policy, Boston College.

Harmon, M. C.; Lomax, R. G.; Madaus, G. F.; Maxwell West, M.; & Viator, K. A. (1992b). The influence of testing on teaching math and science in grades 4-12. Boston, MA: Center for Study of Testing, Evaluation, and Educational Policy, Boston College.

Kozol, J. (1991). Savage inequalities: Chiliren in America's schools. New York: Crown Publishers.

La Pointe, A. E.; Mead, N. A.; & Askew, J. M. (1992a). Learning mathematics: International Assessment of Educational Progress. Princeton, NJ: Educational Testing Service.

La Pointe, A. E.; Mead, N. A.; & Askew, J. M. (1992b). Learning science: International Assessment of Educational Progress. Princeton, NJ: Educational Testing Service.

Marshall, R., & Tucker, M. (1992). Thinking for a living. New York: Basic Books.





Mullis, 1. V. S.; Owen, E. H.; & Phillips, G. W. (1990). Accelerating academic achievement. Washington, DC: Educational Testing Service.

National Center for Education Statistics. (1992). The condition of education, 1992. Washington, DC: U.S. Department of Education.

National Commission on Excellence in Education. (1983). A nation at risk: The imperative for educational reform. Washington, DC: U.S. Department of Education.

National Education Goals Panel. (1991). The 1991 National Education Goals report: Building a nation of learners. Washington, DC: author.

National Education Goals Panel. (1992). The 1992 National Education Goals report: Building a nation of learners. Washington, DC: author.

Oakes, J. (1985). Keeping track: How high schools structure inequality. New Haven, CT: Yale University Press.

Pelavin, S. H., & Kane, M. (1990). Changing the olds: Factors increasing access to college. New York: College Entrance Examination Board.

Policy Information Center. (1989). What Americans study. Princeton, NJ: Educational Testing Service.

Porter, A. C. (1992). Some thoughts on school delivery standards. Unpublished nanuscript. University of Michigan, Ann Arbor.

Quality Education for Minorities Project. (1990). Education that works: An action plan for the education of minorities. Cambridge, MA: MIT Press.

Resnick, L. B. (1987). Education and learning to think. Washington, DC: National Academy Press.

Rist, R. (1973). The urban school: A factory for failure. Cambridge, MA: MIT Press.

Schorr, L. B. (1988). Within our reach: Breaking the cycle of disadvantage. New York: Anchor Books.

Secretary's Commission on Achieving Necessary Skills. (1992). Learning a living: A blueprint for high performance. Washington, DC: U.S. Department of Labor.

Simmons, W., & Grady, M. (1989). Black male achievement: From peril to promise. Upper Mariboro. MD: Prince George's County Public Schools.

Slavin, R. E. (1988). Synthesis of research on grouping and tracking in elementary and secondary schools. *Educational Leadership*, 46 (1), 67-77.

Smith, M. S., & O'Day, J. (1992). Educational equality: 1966 and now. Unpublished manuscript. Stanford University, Stanford, CA.

