DOCUMENT RESUME

ED 340 716 TM 017 670

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TITLE The State of Inequality. Policy Information Report.
INSTITUTION Educational Testing Service, Princeton, NJ. Policy Information Center.
PUB DATE 91
NOTE 35p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Achievement; Access to Education; *Court Litigation; Educational Finance; *Educationally Disadvantaged; Educational Opportunities; Elementary Secondary Education; *Equal Education; *Expenditures; Legal Problems; Public Schools; *School Districts; State Aid; *State Programs
IDENTIFIERS Kentucky; National Assessment of Educational Progress; New Jersey; Texas

ABSTRACT

This report provides data on inequality in school funding systems and the status of the legal challenges taking place. Disagreements about what is needed to resolve inequality are resolved through the political and legal process, professional judgment, and facts and objective data. This report provides facts and objective data. The first part describes large expenditure disparities among and within states and within local school districts. For example, after cost-of-living adjustments, New York spends 2.5 times the amount that Utah spends on schools. The second part shows how these expenditure disparities translate into disparities in educational programs. Such disparities are the basis of several court decisions relating to school funding. Data from the 1990 National Assessment of Educational Progress show the link between instructional materials and resources available to teachers and the mathematics proficiency of their students. The third part describes court decisions requiring greater equity in educational expenditures. Changes resulting from these decisions in Texas, Kentucky, and New Jersey are reviewed. The educational research community has not been able to determine the extent to which resource differences affect educational outcomes. Inequality in providing and financing public education represents a policy issue for all levels of government. Ten figures, one table, and a 33-item list of references are included. Four appendices contain four tables of expenditure and resource data. (SLD)

POLICY INFORMATION REPORT

THE STATE OF INEQUALITY

POLICY INFORMATION CENTER
Educational Testing Service
Princeton, New Jersey 08541-0001

CONTENTS

Policy Information Reports **are published by the ETS Policy Information Center, Educational Testing Service, Princeton, NJ 08541-0001; (609) 734-5694.**

Preface

At this beginning of a new decade, two dramas are being played on the stage of education. One is the national education reform effort, embodied in the goals set by the President and the governors for the year 2000. The other is the reshaping of education and educational finance systems by a wave of litigation and state court decisions declaring these systems inequitable in the distribution of resources for education.

The two dramas have their tensions as well as potential for mutual support. In one state, Kentucky, the whole school system was recently declared unconstitutional, and that state is proceeding to deal with equity and reform as two acts of the same play.

This report is intended to inform a broad audience about the degrees of inequality in the education system, and the movement under way to provide greater equity. The academic analysis and debate over this, as well as the reporting of complex litigation, have been exceedingly arcane. Our aim has been "plain talk," although we have not always succeeded. And, as is the intent of all reports by this Center, we intend to inform the debates taking place, not enter them. This, too, we recognize, is easier said than done.

Paul Barton
Director
Policy Information Center

Acknowledgments

This report was written by Paul E. Barton, Richard J. Coley, and Margaret E. Goertz. We were assisted considerably by some thoughtful reviews of the manuscript. At ETS, reviewers were Stephen Koffler, John Mazzeo, and Howard Wainer. Outside reviewers were Robert Berne, New York University; James S. Coleman, University of Chicago; Alan Hickrod, Illinois State University; and Wayne Riddle, Congressional Research Service. While this report reflects adjustments recommended by all reviewers, not all would likely agree with all aspects of the final product.

Carla Cooper of the ETS Policy Information Center provided word processing services. In the ETS Publications Division, Carol G. Carlson edited the manuscript, Rick Bruce was the designer, and Roseann Spano was production coordinator

Dave Freund at ETS was particularly helpful in providing data.

HIGHLIGHTS

In the United States there are vast differences in the resources we devote to our children's education, in the scope of the curriculum, in the quality of physical facilities, and in the extracurricular opportunities available. By any measure, the playing field is not level.

While academics debate and disagree over how these resource and program differences affect educational achievement, state courts across the nation are striking down inequitable school funding systems. Beyond the legal interpretations of state constitutions are two more basic questions facing the public and its representatives: how much equity should its system of free public education have, and how do persistent and wide disparities affect the ambitious goals set by the governors and the President for the year 2000.

- New Jersey spends well over $8,000 per pupil, more than triple what Utah spends. Adjusted for estimated cost-of-living differences, the gap narrows somewhat, with the top state, New York, spending 2½ times what Utah spends (see Figures 1 and 2).
- In terms of the proportion of personal income that state residents spend on education (a measure of *effort*), Wyoming residents spend almost 8 percent, over 2½ times the 3 percent their fellow citizens spend in New Hampshire (see Figure 3).
- Differences *within* states, *among* school districts, can be as large as differences among states. In Texas and Ohio, the highest spending districts spend nearly triple the amount per pupil as the lowest spending districts. In contrast, most districts in Delaware, Nevada, and Maryland spend about the same amount per pupil (see Figure 4). Differences exist within school districts as well.
- A large body of research, conducted over three decades, has failed to find a systematic relationship between gross measures of resources (expenditures per student, pupil-teacher ratios, etc.) and student achievement. Other researchers, however, dispute the conclusions of these studies. Courts have ordered states to end such disparities as good school buildings in some areas and decrepit ones in others; science labs in some schools and not in others; and art and music courses offered in some schools and not in others.
- According to recent data from the National Assessment of Educational Progress (NAEP), instructional resources are likely to be less available in poor districts and disadvantaged urban districts (see Figures 6 and 7).
- While these NAEP data show little relationship between gross state education expenditures and math proficiency, they do show that availability of instructional materials and resources in the classroom and proficiency are related; the less available the materials, the lower the student average math proficiency (see Figure 8).
- A wave of litigation and court action over these equity matters began when the California Supreme Court declared the school finance system unconstitutional in 1971 *(Serrano v. Priest)*. Since then, finance systems were declared unconstitutional in 14 states and upheld in 13 states (see Figure 10).
- A new wave of decisions began in 1989, with four state systems struck down since then. Litigation is ongoing in 21 states.
- Dealing with disparities in educational resources, and reforming and restructuring schools, are usually viewed as either separate or competing needs. But this is not necessarily the case; Kentucky has embarked on a comprehensive effort to do both (see the Kentucky case study on p. 21).
- The report asks:
  - For the year 2000, will a student's education be considered the responsibility of just a school tax district, a whole state, or a nation?
  - Will huge resource disparities impede progress toward the year 2000 goal that "academic performance...will increase in every quartile?" Is there any danger that some approaches to equalizing resources will impede progress at the top?
  - What are our concepts of equity and equality in education as we head toward the next century?
  - Can we succeed in being world class in our educational attainments while remaining provincial in our financial commitment to schooling?

INTRODUCTION

This reform era in American education is rife with proposals for change. The education press is filled with calls for "restructuring," for creating national standards and performance examinations, for "choice," for world class achievement levels, and for achieving the composite of proposals called America 2000.

As for what is actually happening, that same press is regularly chronicling a different wave of change rippling through the system. State courts are ordering the equitable funding of education. The legal battles over funding disparities, which began afresh in the late 1980s and are likely to continue in the early 1990s, may change the face of American education as much as any other initiatives now under way.

While the battlefield has largely been the courts, the issue is more than just the legal interpretation of the provisions of state constitutions. The large disparities in resources available for education pose issues for legislative and executive branches of government as well. Having achieved universal free schooling, how equal do we want that schooling to be? How much will the attainment of our national education goals for the year 2000 be impeded by the inequality that exists?

America was well into the nineteenth century before free, state-supported schools became a reality. Universal free public schooling through high school then became commonplace in the next century. But the cost and quality of education has always been more or less a function of where you happen to live. If you trek up the mouth of a mountain hollow (wade, after a rain), you might find an ill-equipped one-room school. If you stroll from your large suburban house on the North Shore of Chicago, you will find one of America's best staffed and equipped high schools.

Americans have largely accepted this disparity because they are accustomed to a system based on local control of education funded by a local property tax. In reality though, the federal constitution gave the control and responsibility for education to the states, not to local political jurisdictions. State constitutions provided for a system of schools, typically requiring that it be a "thorough and efficient," or "uniform" system. States, to varying degrees, controlled the content and operations of schooling, and for many years, provided limited state revenues for a "foundation" level of spending. Over the decades, the state share of education spending grew.

As the 1970s began, state constitutional provisions for education came under sharp scrutiny and several state court rulings required a reduction in spending disparities. This period of legal challenge and considerable state action to reduce disparities, however, was followed by a return to business as usual. The legal scene heated up again at the close of the 1980s as state education financing systems once again came under strong attack, and change began anew.

This brief report is designed to inform a general audience of the data that exist on the state of inequality in our schools, and on the status of the legal challenges taking place. While Americans largely agree with the objective of equality, not all agree on what it means, or what it will take to achieve it. Such disagreements are resolved through 1) the political and legal process, 2) professional judgment, and 3) facts and objective data. This report deals only with the third category, and aims to provide information that will inform all parties to the debate that is now taking place.

The first section of the report details the large disparities that exist among the states, within the states, and within local school districts.

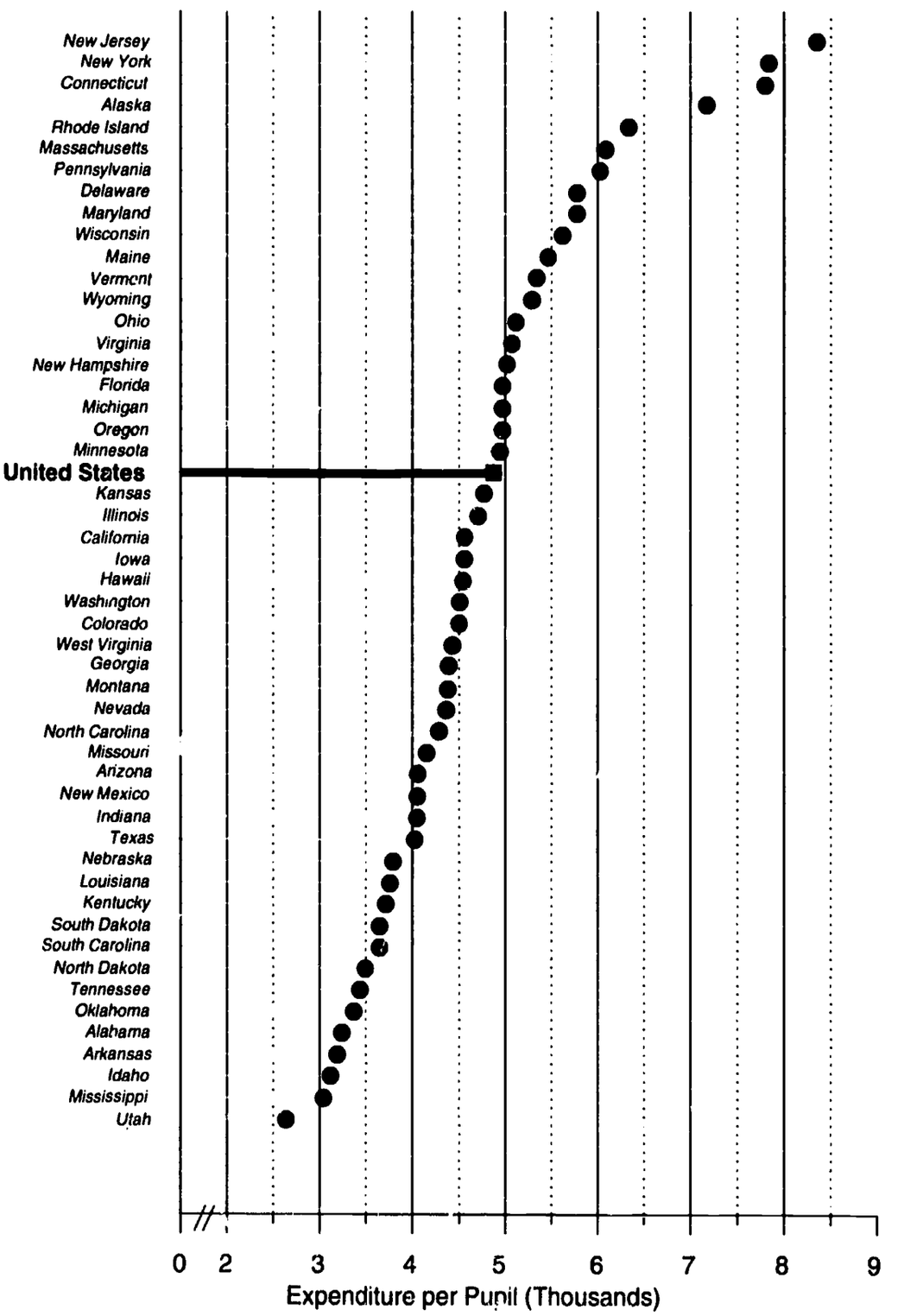
The second part shows how these expenditure disparities translate into disparities in educational programs. While the jury is still out on how much these program disparities translate into differences in educational outcomes, they are the basis for a growing number of court decisions striking down school funding systems. New data are presented from the results of the 1990 assessment of mathematics by the National Assessment of Educational Progress (NAEP), showing a link between the instructional materials and resources that teachers have available in the classroom and the mathematics proficiency of their students.

The third part describes the first wave of court decisions requiring greater equity in educational expenditures that began in 1971, and the second wave that began in 1989. The drastic changes brought about by these decisions in Texas, Kentucky, and New Jersey are described in some detail.

The final section of this report provides a summary and conclusion.

Figure 1

Average Expenditure per Pupil, 1989-90



Source: See Appendix Table 1.

INTRODUCTION

There are large differences in per student spending for elementary and secondary education in the United States, as this section will show.

- First, comparisons are made among average state expenditures per student, using gross expenditures, expenditures adjusted for price differences, and expenditures as a proportion of personal income.
- Second, average expenditure differences among school districts within states are presented, contrasting expenditure differences for schools at the top and at the bottom of the expenditure distribution.
- Third, some data on expenditure differences within school districts are presented.

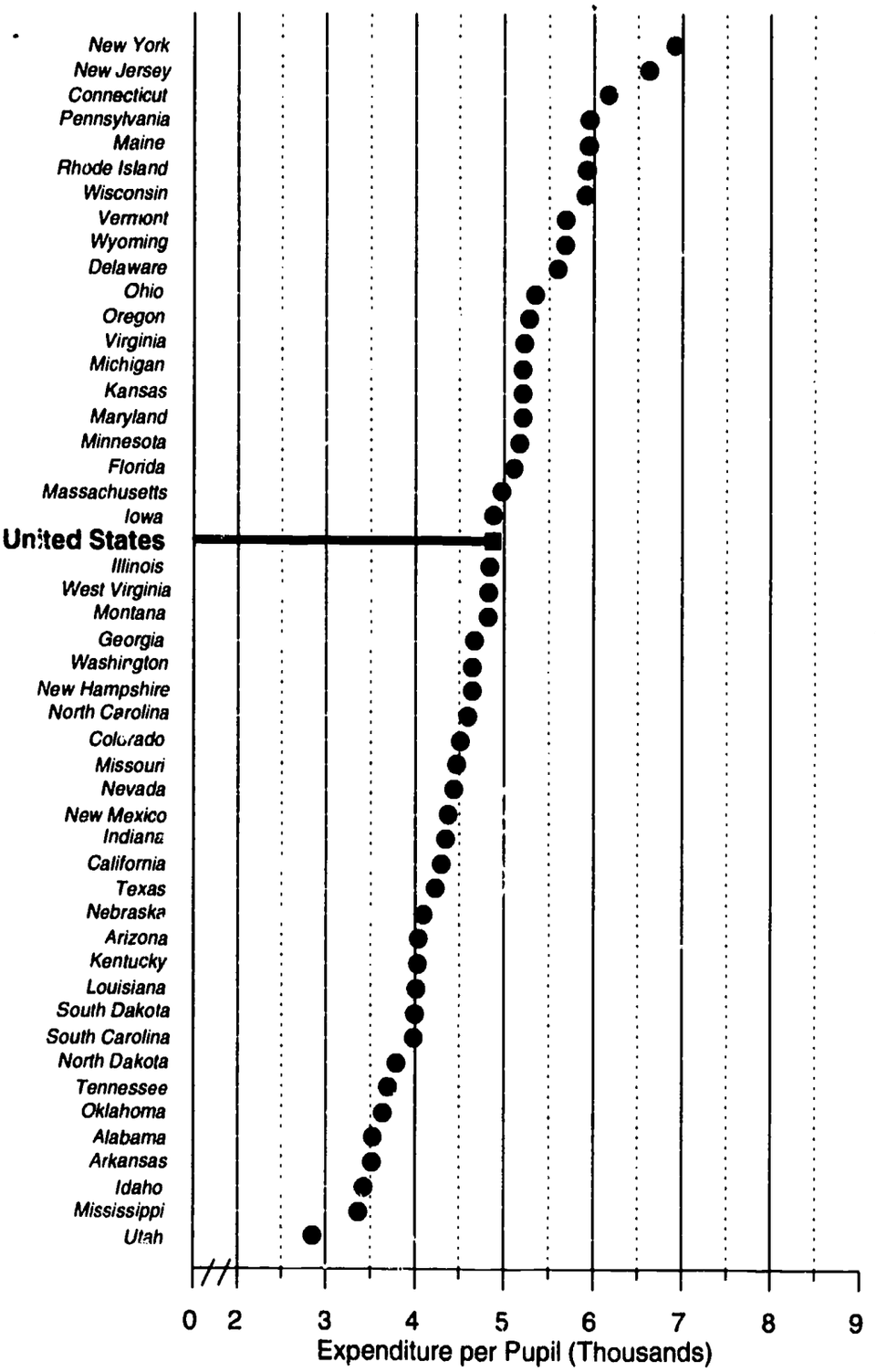
DIFFERENCES AMONG STATES

State spending for education differs enormously (see Figure 1). The state of New Jersey, for example, spent an average of $8,439 per student in the 1989-90 school year, more than three times as much as the $2,720 spent in Utah, the lowest spending state.

However, these disparities are narrowed somewhat when cost-of-living differences among the states are taken into account. Expenditures adjusted for cost-of-living differences, shown in Figure 2, show a range

Figure 2

Average Expenditure per Pupil, Adjusted for Cost-of-Living, 1989-90



Source: See Appendix Table 1.

Note: Adjusted expenditures are unavailable for Alaska and Hawaii because of unique factors involving climate and transportation.

from $6,994 in New York to $2,928 in Utah, making the expenditures of the highest spending state more than double those of the lowest spending state.[1]

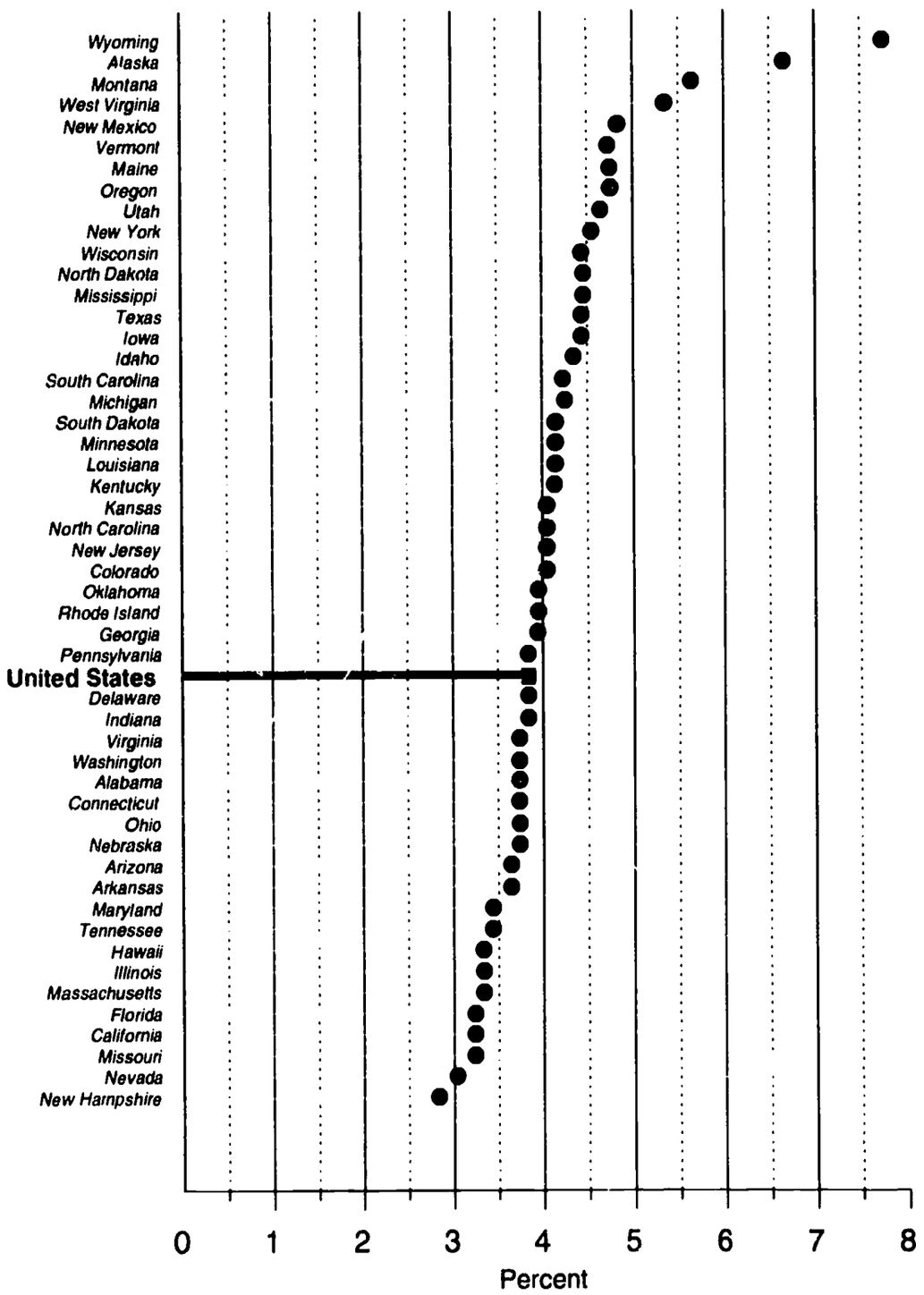
Of course, the states also vary considerably in their income and wealth, and their absolute expenditures are not necessarily a true measure of their relative effort on behalf of education. One way to examine relative effort is to look at how much each state spends per student as a proportion of its per capita income. In Figure 3, states are arrayed by the percent of their personal income they spend on elementary and secondary education. In terms of this combined measure of wealth and effort, the range is from a high of 7.8 percent in Wyoming to a low of 2.9 percent in New Hampshire, a ratio of over two and a half to one.

The rankings by this measure of resources and effort shift considerably from those based on absolute expenditures. New York and New Jersey, first and second in Figure 1, drop considerably in the ranking. Utah, dead last in absolute per pupil expenditure, rises toward the top in terms of this measure of effort.

[1]The cost-of-living can, of course, vary within a state. For example, one recent study by Illinois State University estimates that the cost-of-living between upstate and downstate New York differs by almost 40 percent.

Figure 3

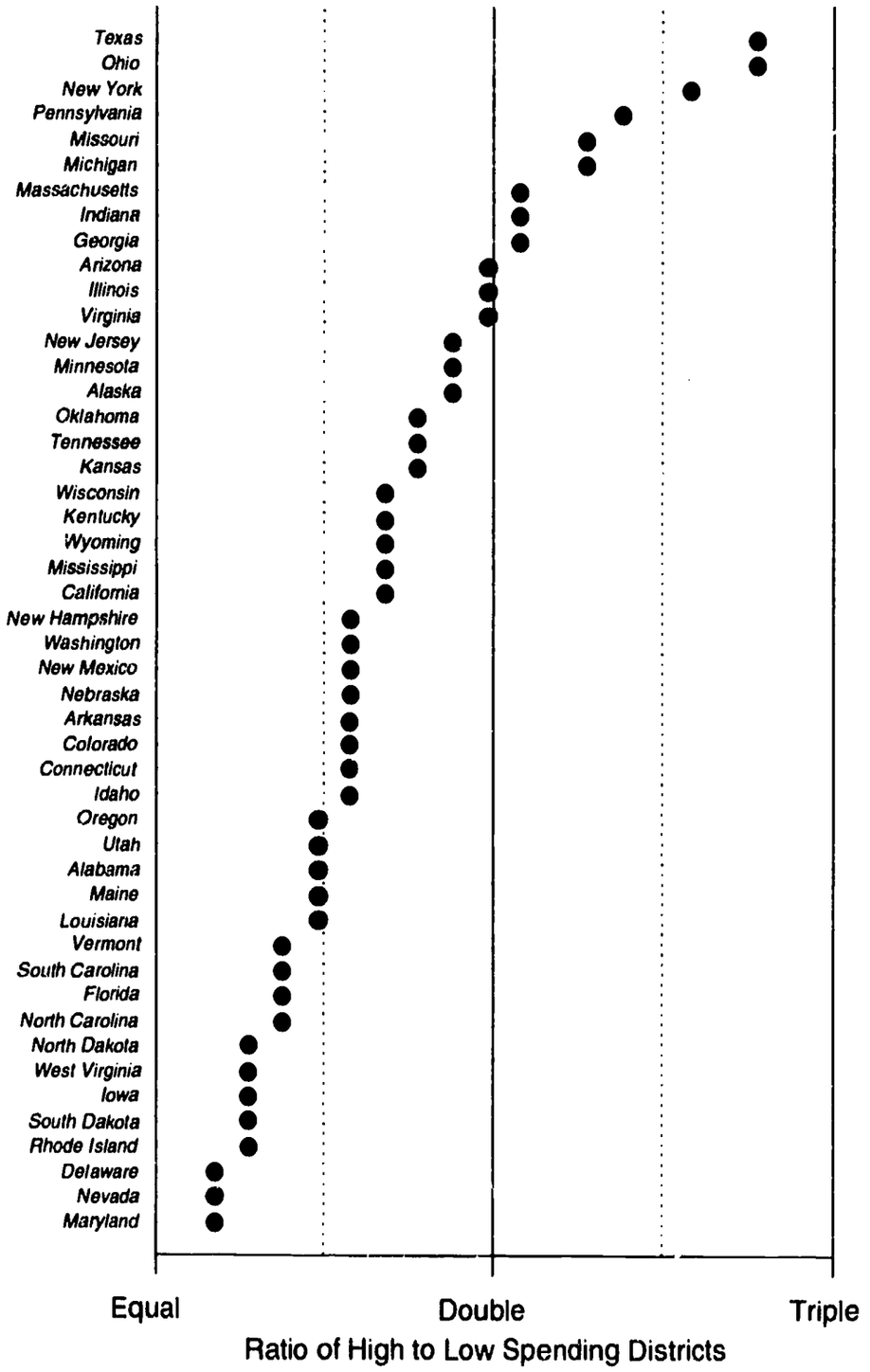
Education Expenditures in 1987-88 as a Percent of Personal Income in 1988



Source: See Appendix Table 1.

Figure 4

Ratio of Education Spending Differences Between High and Low Spending Groups of Districts, 1986-87



Source: See Appendix Table 1.

Note: Ratio is the average expenditure of the 10 highest spending districts in the state divided by the average expenditure of the lowest spending 10 districts. See also the note on Appendix Table 1.

DIFFERENCES WITHIN STATES

As differences exist in expenditures per pupil among states, differences also exist in school district expenditures *within* a state. Because school finance experts use a variety of measures to describe this inequality, and since dispersions of expenditures are being compared, the story is not always a simple one. In addition, cost differences can affect spending differences within as well as across states. One approach is to compare school district expenditure per pupil at the 95th percentile of pupils with the district expenditure at the 5th percentile. Simply put, how much more is spent by the district near the top of the distribution than by the district near the bottom? This is the approach used in a study published by the Decision Resources Corporation and written by Myron Schwartz and Jay Moskowitz, using data for 1984-85 and for 1976-77. Based on the limited comparisons allowed by the data, the authors conclude that "no major changes in average equity have occurred over that period."

Figure 4 uses 1986-87 data from a study conducted by the Congressional Research Service. In this study the average expenditure of the 10 districts within a state with the highest average expenditures is called the

"highest spending," and the average of the 10 districts with the lowest, the "lowest spending." The states are ranked by the ratio of expenditures per student in the highest spending school districts to expenditures in the lowest spending school districts.

According to these data, Delaware, Maryland, and Nevada are the most equitable. Ohio, Texas, and New York are the least. The actual dollar differences in a high spending state such as New York can be staggering, where the difference between the top and the bottom is over $6,000, more than most states spend per pupil on education.

While ratios show the degree of inequality, the absolute dollar differences show what is available to buy educational services. A two to one difference in Illinois is $1,150; a two to one difference in Massachusetts is $3,300.

Some changes have likely occurred since the mid-1980s. According to a report by Policy Analysis for California Education (PACE), California's expenditures per pupil are now within a very narrow band (although the measure used is not comparable to the measures reported above). Nothing, however, has happened to change the overall picture of widely varying degrees of disparities within the states.

DIFFERENCES WITHIN DISTRICTS

In the debate over equity and the requirements of state constitutions, most of the legal action has focused on disparities among districts. But there are significant equity questions within districts as well. Over 30 years ago, a study of Detroit found that upper income White children attended better schools with better facilities and staffing ratios than children from minority groups. More recent research in Los Angeles and St. Louis has found similar patterns.

A study of New York City by the Temporary State Commission on New York City School Governance found that pupil-teacher ratios are smaller in the poorer and minority schools. However, they are staffed with less experienced, less educated, and less tenured teachers.

Disparities that exist within districts are not easily reported because of the large number of them; there are over 15,000 school districts in the United States, and studies about them are few.

FACES OF INEQUALITY

How do these differences in dollars spent translate into different resources for teaching? How do these differences show up in poorer schools as compared to richer schools? And how do different resources for teaching affect learning outcomes?

Since school finance is still tied to the property tax (although less so as the years go by), we would expect that the poorer school districts would have fewer dollars to spend, and therefore less quantity and quality in staff, facilities, and instructional materials.

CONTRASTS

One source of information for comparing school districts is actual court cases on inequality — the kind of information on which judges have based school finance decisions.

- In *Alabama*, a plaintiff's brief describes the following conditions in low spending school districts: a kindergarten through 12th grade school with only one guidance counselor for over 1,000 students, an elementary school with no nurse or medical professional, schools without science laboratories, art rooms, or music rooms, and with plumbing in disrepair.
- In *Kentucky*, the state Supreme Court found that poorer districts had lower teacher salaries and less adequate programs in mathematics, science, foreign languages, music, and art.
- In *Montana*, studies commissioned by the plaintiffs showed that wealthy districts had a ratio of 13 students per teacher, compared to ratios in the high 20s and 30s in poor districts. Poor districts were found to have
  - substandard facilities
  - outdated equipment
  - outdated textbooks
  - fewer offerings in English and music.
- In *New Jersey*, the plaintiffs introduced data showing that
  - foreign languages were studied at the preschool level in Montclair, a high income city, but not until the 9th or 10th grades in Paterson, a poorer city
  - while Princeton High School had seven science labs with up-to-date equipment, there were few true science classrooms at Camden High School
  - while a fifth of 11th and 12th graders in wealthier Moorestown participated in Advanced Placement classes, none were offered in the distressed cities of Camden or East Orange.
- In *New York*, data from a court action showed that the wealthy Shoreham-Wading school district reported spending $17,300 per pupil, had computers in every classroom, and a vast array of extra-curricular programs, while in the much poorer William Floyd School District, nearly half the students attend classes in trailer-style buildings because the district cannot build new ones.

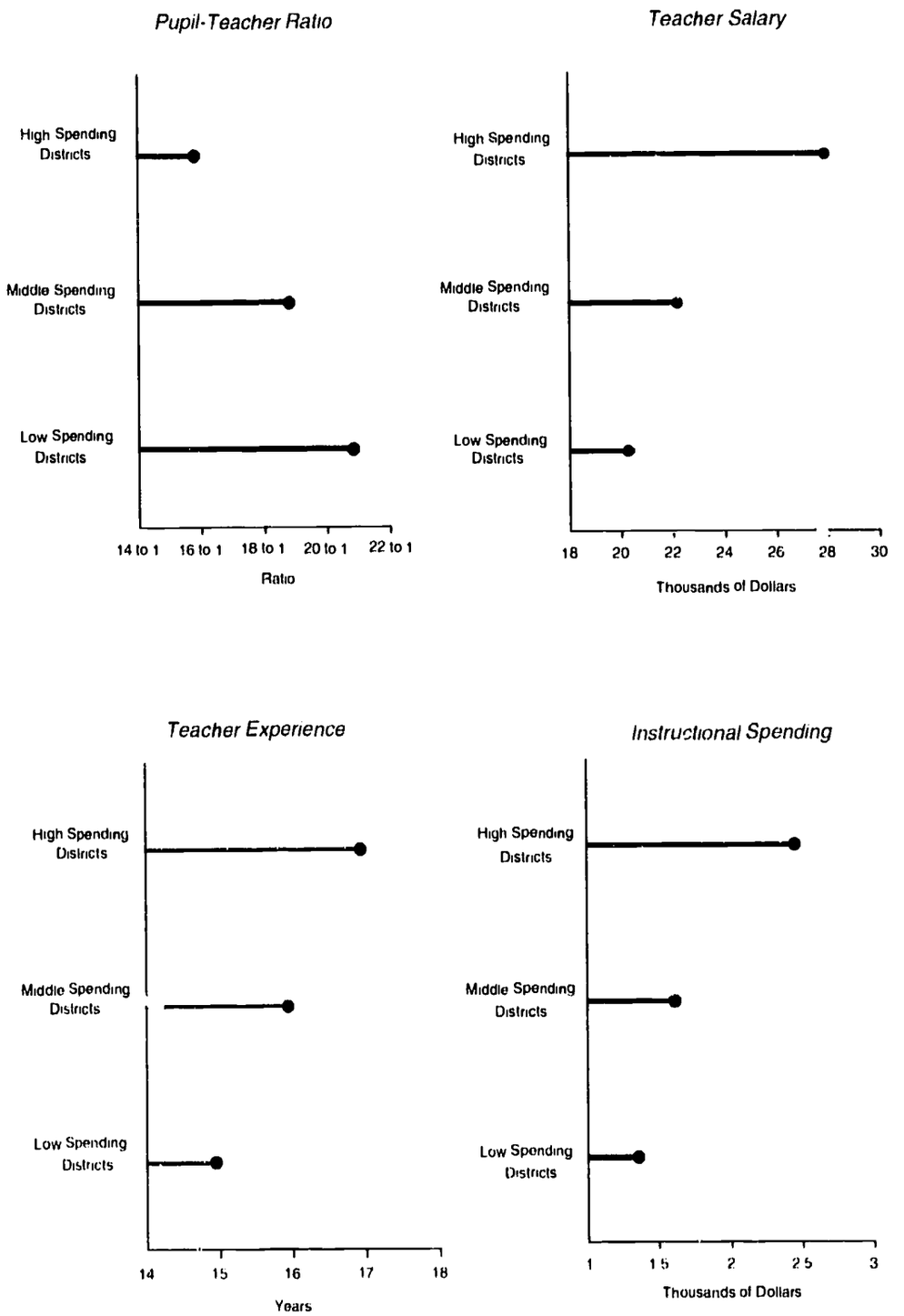
A study of the state of Pennsylvania by William T. Hartman, published in 1988, systematically compared school districts with high, medium, and low average expenditures per student. The study addressed the question of how these different levels of expenditures translated into differences in the quantity and quality of personnel and instructional resources. Expenditures per student averaged $4,298 in the highest spending group of districts, $2,759 in the middle group, and $2,266 in the low spending group. The disparities were systematic (see Figure 5).

- The ratio of students to teachers was 16 to 1 in the highest spending group, 19 to 1 in the middle group, and 21 to 1 in the low spending group.
- Average teacher salaries were $28,065 in the highest spending group, $22,345 in the middle

Figure 5

Relationship Between School District Expenditures and Pupil-Teacher Ratio, Teacher Salary and Experience, and Instructional Expenditures in a Sample of Pennsylvania School Districts, 1984-85

Higher Spending Districts Have Smaller Classes, Higher Paid and More Experienced Teachers, and Higher Instructional Expenditures



Source: William T Hartman, "District Spending: What Do the Dollars Buy," *Journal of Education Finance*, 13, 4, Spring 1988, pp. 436-459

group, and $20,474 in the low group.

- Average teacher experience was 17 years in the highest group, almost 16 years in the middle group, and almost 15 years in the low group.
- Looking only at direct instructional expenditures per student, the high group spent $2,493, the middle group $1,650, and the low group $1,388.

WHO GETS THE RESOURCES?

National data on more direct measures of variations in basic instructional materials, by the economic level of the student body, are hard to come by. One striking finding is from the questionnaire given to the teachers of 4th grade students assessed in reading in 1988 by NAEP. Teachers were asked, "What best characterizes your situation with respect to getting instructional materials and other resources you use to teach your class?" They answered in terms of "all," "most," "some," or "none." From previously unpublished data we have their answers, classified on the basis of what percentage of students are poor.

- In schools with the largest percent of poor students, the teachers of 59 percent of the students say they get only some or none of the instructional materials and resources they seek, compared with just 16 percent in schools without poor students (see Figure 6).
- For schools with *no* children below the poverty line, the teachers of 25 percent of students get *all* the instructional materials they seek. The percentage declines as the proportion of poor students rises. In schools where 30 percent or more of the students are poor, the teachers of just 12 percent of students get all the resources they seek.

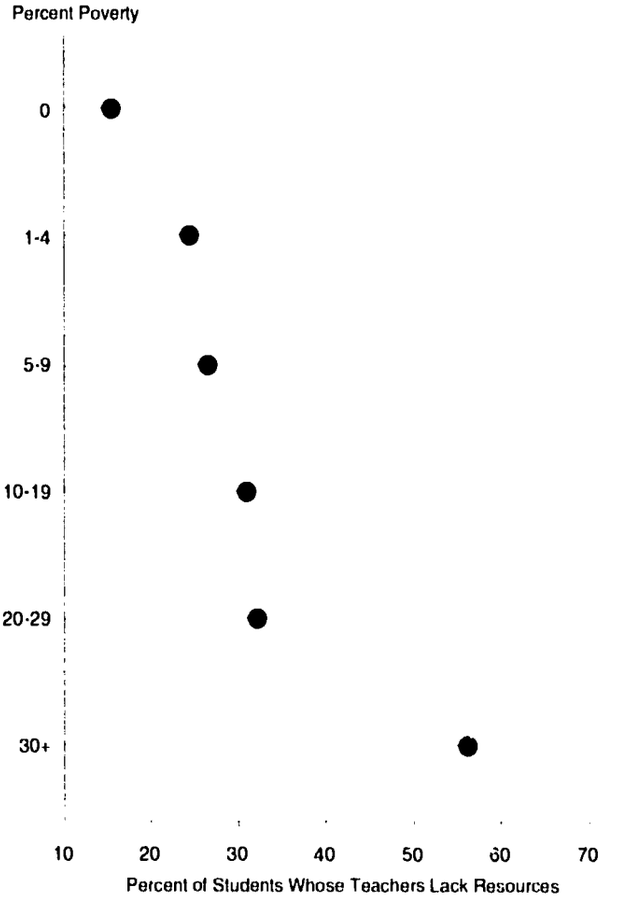
In the 1990 NAEP assessment of mathematics, teachers of 4th and 8th grade mathematics students were asked, "How well supplied are you by your school system with the instructional materials and other resources you need to teach your class?" Results are shown in Figure 7 for students whose teachers report that they are poorly supplied.

- In the 4th grade in advantaged urban areas, only 15 percent of the students have teachers who say they get only some or none of what they need, with 85 percent getting all or most. In disadvantaged urban areas, almost half (48 percent) get just some or none of the materials they need. This was true also for 44 percent of students in extreme rural areas.
- In the 8th grade, only 10 percent of the students in advantaged urban areas have teachers who get only some or none of the instructional materials and resources they need, and 90 percent get all or most; 40 percent get some or none in the disadvantaged urban areas, and 31 percent in the extreme rural areas.

Figure 6

Percent of Fourth Grade Students with Teachers That Report That They Get Some or None of the Instructional Materials and Resources They Need to Teach, by Percent of Poverty, 1988 NAEP Reading Assessment

Students in Poor School Districts Are More Likely to Lack Instructional Resources



Source: See Appendix Table 2.

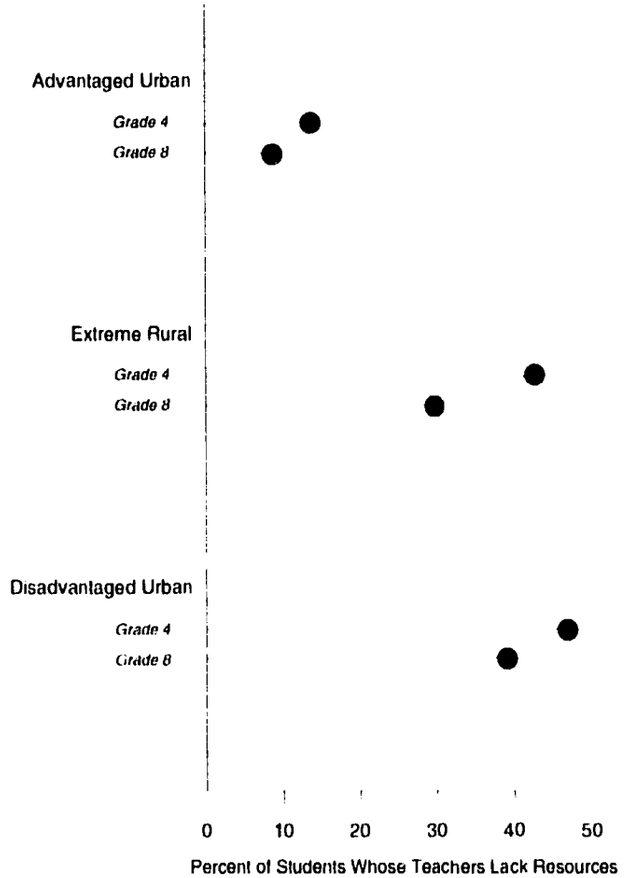
The 1990 NAEP Trial State Assessment of 8th grade mathematics achievement in individual states (public school students only) also showed large differences across states in teacher perceptions of the adequacy of the instructional resources they received.

- In Iowa, 85 percent of the teachers of students taking 8th grade mathematics got all or most of the instructional materials and resources they need to teach.
- In Louisiana and the District of Columbia, the teachers of just 42 percent of the students said they got all or most of what they need.

Figure 7

Percent of Students with Mathematics Teachers Who Report That They Get Some or None of the Instructional Materials and Resources They Need, by District Type, 1990 NAEP

Students in Disadvantaged Urban and Extreme Rural Districts Are More Likely to Lack Instructional Resources and Materials



Source: See Appendix Table 3.

NAEP assessments also disclose variation in the availability of advanced course offerings. In 1990, 81 percent of 8th grade students in advantaged urban areas were offered algebra courses for high school placement, compared to 73 percent in disadvantaged urban areas and 55 percent in extreme rural areas. In Delaware, 98 percent of 8th grade students were offered algebra, compared to about half in Arkansas and Montana.

THE DIFFERENCE IT MAKES

Thus, it can be established with national data that educational resources are unevenly distributed. It is also clear that, on average, students in poorer areas are likely to have fewer educational resources than those in wealthier areas. There are also wide variations in the effectiveness of schooling, after differences in socioeconomic status are considered. However, given the nature of the resources that educational researchers have identified in their studies, it is not clear how resource levels are related to educational achievement in any systematic way.

The most comprehensive effort to relate educational resources to achievement remains the 1965 report, *Equality of Educational Opportunity*, by James S. Coleman. When socioeconomic background was controlled, the study found "that differences between schools account for only a small fraction of differences in pupil achievement." Since then, researchers have not had the luxury of a similarly designed massive study focused on the relationship between school characteristics and achievement, and have had to make do with analysis of data in studies designed for other purposes.

In March 1990, Eric A. Hanushek identified and summarized 187 such studies. Of these, 152 looked at the relationship between the teacher-pupil ratio and output measures (usually test scores), 113 at teacher education, 140 at teacher experience, 69 at teacher salaries, 65 at expenditures per pupil, 74 at facilities, and 61 at "administrative inputs."

Hanushek's general conclusion was that

> **research spanning two decades and observing performance in many different educational settings provides strong and consistent evidence that expenditures are not systematically related to student achievement. Moreover, the dramatic differences that exist in teachers' performance have not been captured by any account of differences in their backgrounds or classroom behaviors.**

Hanushek points out the many weaknesses in the individual studies he summarizes, but gives weight to the large number of them in his summary. Hanushek would go beyond a focus on the equalization of expenditures to the question of how to change educational structures to improve performance. This is the conclusion Kentucky reached, in its effort at total reform, as we will see later.

Another view of the studies Hanushek summarized is offered by *Policy Briefs,* published by the Center for Policy Research in Education:

Other researchers, while agreeing that the data indicate little direct effect on achievement of variations in expenditures, reach different conclusions. One argument is that the studies themselves are flawed and do not address some important variables. For example, it is particularly difficult to separate the effects of variations in school finances from the effect of what money buys. Thus, high quality teachers may opt for lower salaries in districts that pay for high quality working conditions. A second argument is that few studies have controlled adequately for the cost of purchasing services. Thus, a relatively high per pupil expenditure in a central city may not purchase the same level of resources as a lower per pupil expenditure in a less costly setting.

Such studies have had to deal with the difficult statistical problem resulting from the high intercorrelation of spending with socio-economic factors, making it difficult to determine the effects of spending alone.

Studies like those Hanushek summarized have been cited in the courts by those arguing that there was no evidence that inequality of resources was responsible for inequality in educational achievement. In considering such arguments, Judge Steven L. Lefelt of the state of New Jersey rendered judgment:

I...FIND that the existing education research is relatively primitive and does not reveal very much about student learning and therefore does not compel the rejection of input equalization or input comparisons between and among districts.

Because these studies were generally developed for other purposes, the data they use are largely gross measures, such as total expenditures per pupil or years of education of teachers. They have not probed the classroom factors that affect learning. A new generation of studies designed for this specific purpose will be necessary if research is to play a constructive role in critical legal and policy debates. However, isolating the critical factors will likely not be easy through large-scale survey research techniques, in view of the complicated interactions involved.

Perhaps greater use could be made of the relatively untapped data sources in the assessments by NAEP, such as its comprehensive subject matter assessments and the questionnaires filled out by students, teachers, and school officials. For example, in the 1990 assessment of mathematics (previously referred to), the teachers of the students assessed were asked, "How well supplied are you by your school system with the instructional materials and other resources you need to teach your class?"

In Figure 8, states participating in the assessment of 8th grade mathematics are grouped by the percentage of students with teachers saying that they get only some or none of the instructional materials or resources they need. It can be seen that in general, the larger this percentage, the lower the average proficiency of students within the state.[2] In the case of gross expenditures per student, there was little relationship to average mathematics proficiency, in line with previous research. And there was only a relatively weak relationship between how much the state spent per student and whether the teachers had sufficient instructional materials.

[2]In statistical terms, the correlation is–.854, meaning that 72 percent (.854 squared) of the variation in proficiency is associated with the variation in these teacher reports of lack of instructional materials and resources. After controlling for the educational level of parents, the correlation is –.850, basically unchanged. When the states are weighted by the number of students in the state, the correlation is –.72.

NAEP provides a source of information on instructional conditions and achievement that should be more fully exploited. Resolving the issues of equality being debated in a growing number of states will require far greater illumination than is available from the efforts thus far.

Academic debate continues on the relationship of variations in educational resources to educational outcomes. One school finds no systematic relationship and argues that a more equitable distribution of resources will do little to advance educational achievement, and that the nation needs to get on with reform and restructuring. Another school believes that indeed, addressing this inequity is at least one key to improving education, and that such inequity should not be allowed to stand on the basis of values, if not on educational efficiency. The courts, of course, are addressing legal concepts of equity, not academic ones, nor general educational effectiveness.

There is, however, a reconciliation between these views; they are not mutually exclusive. The failure to find a relationship between school expenditures and student achievement indicates that how money is spent has to be taken into account. Achieving greater equity in the distribution of

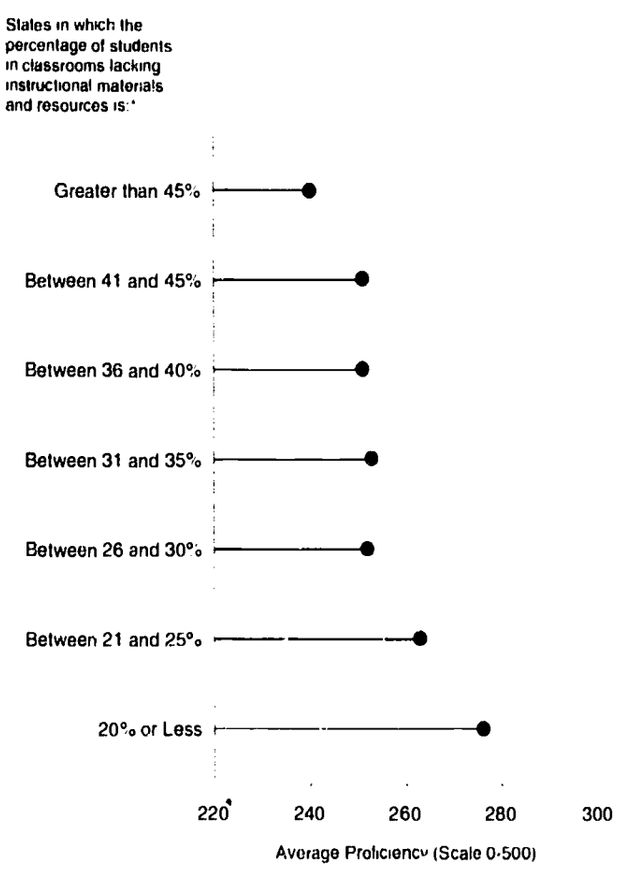
educational resources can go hand-in-hand with broad educational reform. The case of Kentucky, described in the next section, is an example of how both can be dealt with at the same time.

At some point, the distinction between resource differences and educational approaches begins to blur, since all approaches require resources. Educational policy is inevitably concerned *both* about the distribution of resources and viable approaches to educating students. The courts will continue to view the matter of equity in the context of state constitutional requirements, and legal concepts tracing back centuries. What the courts conclude about equity will often be different than what the public and its representatives decide to do in reshaping American education for the year 2000.

Figure 8

Relationship Between the Availability of Instructional Materials and Resources and NAEP Mathematics Proficiency, Grade 8, 1990

Students in Classrooms Lacking Instructional Materials and Resources Have Lower Average Mathematics Proficiency



*Percent of students whose teachers report that they get some or none of the instructional materials and resources they need. For the source and a list of states in each group, see Appendix Table 4.

TOWARD EQUALITY

During colonial times, education took place in private schools and attendance was generally limited to students whose parents could afford the tuition. This type of private education began in the New England colonies, where two schools had been established by 1635. In 1642 the Massachusetts "General Court," the state legislative body, decreed that "ye chosen men" should have the power to fine all parents and masters who were neglectful in "training up their children." This law proclaimed state authority over parents, but not over the operation of schools.

Five years later, the Massachusetts Law of 1647 required every town of 50 or more families to appoint a teacher. Every town of 100 or more families was further required to appoint a schoolmaster to give instruction in Latin grammar to prepare boys for college. Called the "New England pattern," this arrangement allowed the use of public funds for education.

Public recognition of the need for "common schools" developed during the early nineteenth century. At first, schools had been funded by tuition receipts and fees. As the free school movement gained momentum, however, and the number of students and schools grew, new ways to finance the schools were sought, including the use of state lotteries and land sales. Since a personal income tax was not a viable option during this period, most localities turned to what seemed to be the most feasible and equitable revenue source — a tax on real property.

The primary responsibility for schooling in the United States rests with state government; the federal constitution is silent about education, leaving it as an "implied power" of the states. As a result, state constitutions authorize their legislatures to maintain a system of "uniform" schools or provide a "thorough and efficient" system of education.

FINANCING THE SCHOOLS

While revenues for elementary and secondary education have long come from the local, state, and federal governments, their share of the education pie has changed over time (see Figure 9). State aid for education, the largest single line item in state budgets, has increased to nearly half of total education funding; local funding has decreased, and the federal share of education (which rose during the 50 years prior to 1980) has dwindled from a high of about 10 percent during the late 1970s to about 6 percent today.

The major role of state aid is to compensate for school districts' vastly differing abilities to pay for education, as often measured by property tax bases. In addition, state aid targets special populations, e.g., students with disabilities or in need of compensatory education.

Local revenues are the result of the wealth and tax effort of the community. This close relationship between wealth and revenues makes it possible for a rich school district to raise more revenue for education than a poor district, even though both are applying the same tax rate. State education aid is designed to overcome the disparities in revenues that are caused by variations in local wealth.

The federal government's role is small, overall, ranging from a low of about 3 percent of total education revenues in New Hampshire in 1988 to a little over 13 percent in Hawaii. But while the federal government has been cutting back on domestic programs since the 1970s, its role is strategic because it assures services for disabled, poor, and educationally disadvantaged students.

The result of this school finance system is that, in spite of high tax rates, taxpayers in poor school districts cannot generate sufficient revenue for an adequate school system, or one that matches their more fortunate neighbors. For the last 20 years, courtrooms across the

country have been dealing with this situation. The next section of this report briefly describes the two waves of school finance litigation that have swept the nation, and the resulting state responses.

THE FIRST WAVE

In 1967, John Serrano, a father in a Los Angeles-area school district, complained to the principal of his son's school about the quality of services available. The principal told him that the school district simply could not afford more or better instruction and counseled the father to move to one of the wealthier nearby districts. The senior Serrano viewed this advice, no matter how well intentioned, as worthless; he was not able to move. Instead, he joined with others and brought suit against state officials. This suit, *Serrano v. Priest*, questioned the constitutionality of the manner in which California financed its schools.

In this landmark case, the Supreme Court of California found that the state school finance system depended on the property tax base of each district. Vast differences in this wealth created huge disparities in the revenues available to individual districts and in their education expenditures. The court found that these gross funding disparities violated the state constitutional guarantees of equal protection.

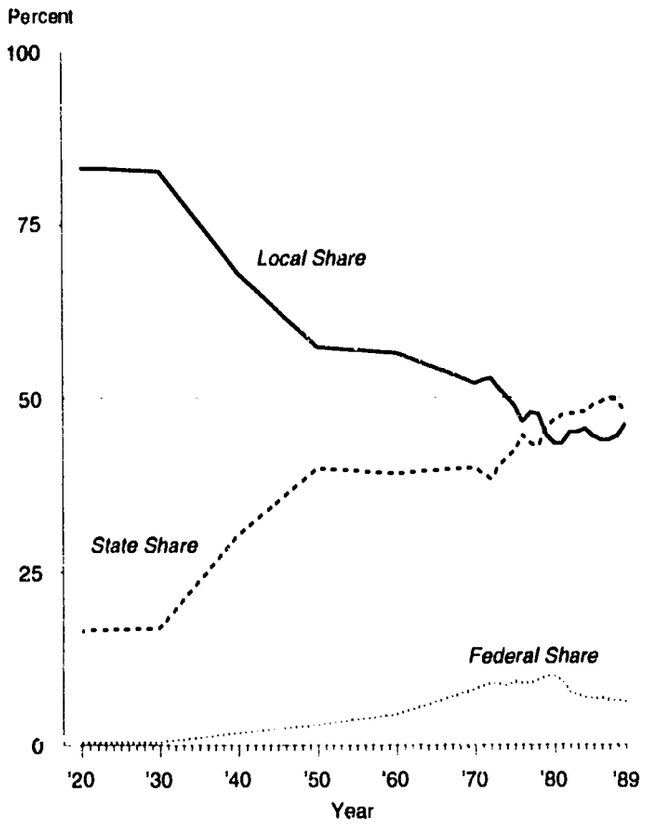
Since *Serrano*, 26 other states have had school finance court decisions. The constitutionality of the systems was upheld in 14 states; in 13 states the school finance systems were declared unconstitutional (see Figure 10 and the Table on the next page). The success of plaintiffs in the state courts was not necessarily related to the type or magnitude of expenditure and wealth disparities presented in the litigation. Rather, outcomes depended largely upon the level of scrutiny a state court applied to its school finance system, and how it interpreted the state's education clause.

Generally, when courts applied a "strict scrutiny" standard of review,[3] the school finance system was struck down. When courts applied a "rational basis" standard,[4] the school finance system was generally upheld. Courts differed in their determinations when the challenge was based on the state's education clause, even when the language of the clause was strikingly similar.

This first wave of school finance cases focused primarily on disparities in educational expenditures across districts in a state, and on the relationship between the revenue and wealth of school districts. Suits in New York (*Levittown v. Nyquist*) and Maryland (*Somerset County Board of Education v. Hornbeck*), however, introduced the unique educational and fiscal needs of urban areas into school finance litigation (although the

Figure 9

Trends in Public Elementary and Secondary School Revenue Sources, 1920-1989



Source: "The Condition of Education, 1991, Volume 1: Elementary and Secondary Education," National Center for Education Statistics, June 1991, p.227.

[3] Courts will subject a state's actions to "strict scrutiny" if the plaintiffs' claim involves either a group being treated differently (a suspect classification) such as race, or fundamental rights or interests such as speech, religion, or voting. Under this standard, a compelling state interest must be served for the legislation to pass constitutional muster. In school finance cases, the court must determine that education is a fundamental right before it will apply a "strict scrutiny" standard.

[4] If education is determined not to be a fundamental right, courts traditionally apply a "rational means" test. Under this test, challenged legislation will be upheld if it furthers a "legitimate" state interest, bears a rational relationship to the ends for which it was established, and does not make arbitrary or invidious distinctions between classes of persons.

courts did not decide in favor of the plaintiffs).

Lawyers for the cities in these states alleged that by measuring the ability of school districts to support education only in terms of property wealth per pupil, traditional state aid systems worked to the detriment of large urban school systems which were, for the most part, above average in property wealth. They argued that equalization aid formulas failed to take into account four "overburdens"—education, municipal services, cost, and absenteeism[5] — that further constrained the ability of urban districts to fund their schools. The brief for the interveners in *Levittown v. Nyquist* summed up the objections of the urban districts in one sentence: "While the public education fiscal burden of the large urban districts is by far the greatest in the state, the levels of state education assistance they receive are almost the lowest."

THE STATES RESPOND

Prodded by actual or threatened lawsuits, over 35 states enacted new or revised education aid programs between 1971 and 1985. This wave of legislation had several effects on education finance. First, as seen earlier in Figure 9, the state share of education funding increased to nearly 50 percent. Second, average per pupil expenditures, adjusted for inflation, grew 43 percent. Third, many states revised their school finance systems in ways that more equitably distributed money between property-poor and property-wealthy districts. Fourth, states also developed better programs to meet the special educational needs of students.

By 1985, all states funded services to students with physical and mental disabilities, 16 states provided direct aid for compensatory education programs or to districts with large numbers of poor children, and 12 states funded bilingual education programs.

These reform laws had a limited impact on the fiscal equity of school funding systems, however. In spite of greater equalization aid and more categorical aid, inequities in the funding of education persisted. Using multiple equity measures and data from 49 states, Schwartz and Moskowitz (1988) reported little change in spending equity within states between the 1976-77 and 1984-85 school years. They found, however, that state revenues had some moderating effect on inequality and that federal revenues had a similar, but smaller, impact. More detailed studies of individual states showed that, in most cases, early equity gains were eroded in the late 1970s and early 1980s.

These studies highlighted factors that threatened the equity of school finance reforms over time: differential growth in local tax bases; the ability and willingness of wealthy school districts to maintain high levels of tax effort and the reluctance of most states to "cap" the spending of such school districts; the cushion of save-harmless clauses (mechanisms that protect districts from reductions in aid); disequalizing categorical aid programs; and the growing educational needs of poor urban and rural communities.

State Court Decisions in School Finance Cases

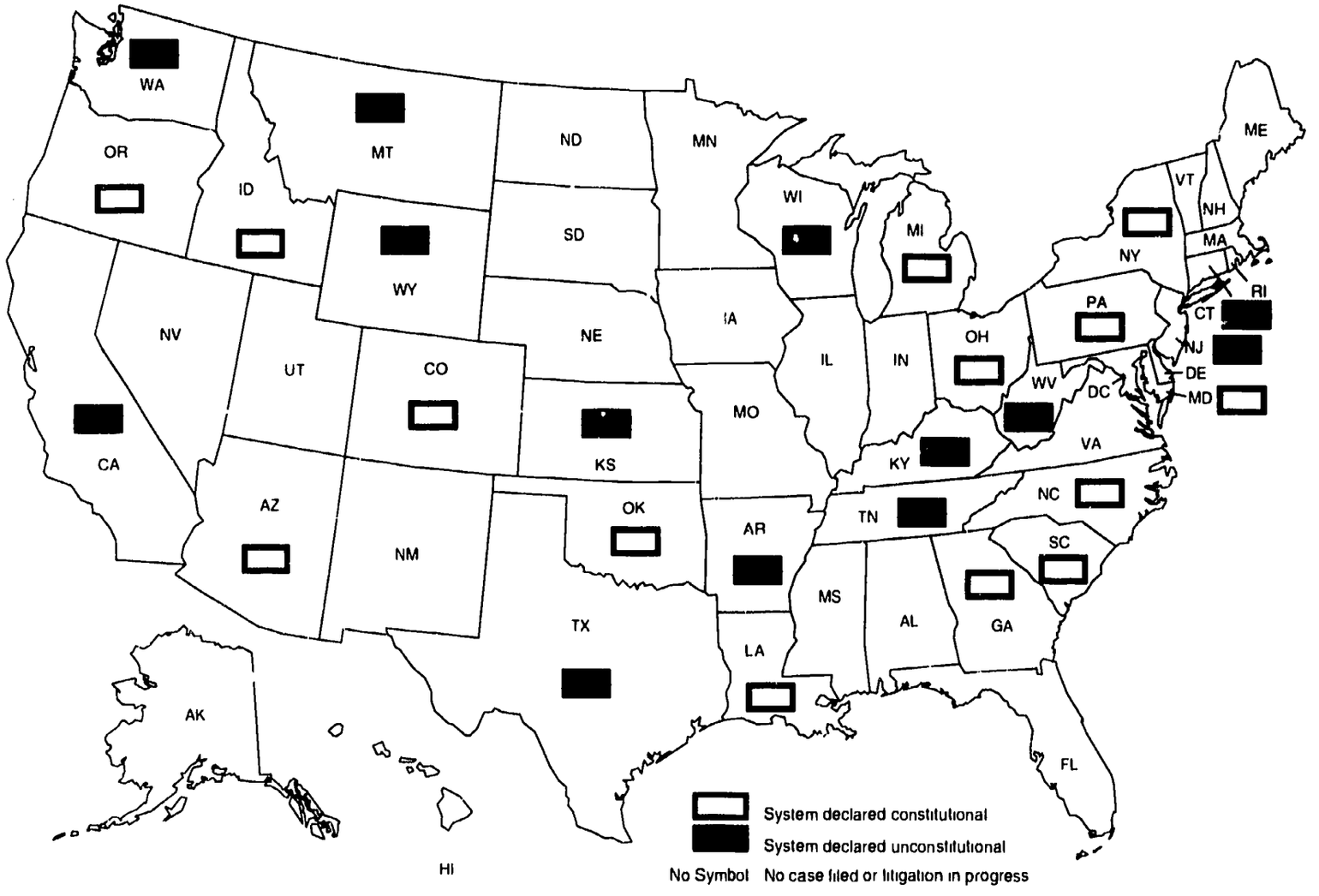
State Courts Declared School Finance Formulas Constitutional		State Courts Declared School Finance Formulas Unconstitutional	
First Wave		**First Wave**	
State	**Year(s)**	**State**	**Year(s)**
Arizona	1973	California	1971, 1976
Michigan	1973	New Jersey	1973
Idaho	1975	Kansas	1976
Oregon	1979	Wisconsin	1976
Pennsylvania	1979, 1987	Connecticut	1977
Ohio	1979	Washington	1978
Georgia	1981	West Virginia	1979, 1988
Colorado	1982	Wyoming	1980
New York	1982, 1987	Arkansas	1983
Maryland	1983		
Second Wave		**Second Wave**	
Oklahoma	1987	Montana	1989
North Carolina	1987	Kentucky	1989
Louisiana	1988	Texas	1989
South Carolina	1988	New Jersey	1990
		Tennessee	1991

Source: Franklin et. al. (1990)

[5] *Education overburden* reflects the higher costs that urban school systems face to educate large numbers of students with special educational needs, such as educational and economic disadvantages, limited English proficiency, and physical and mental disabilities. *Municipal services overburden* reflects the fact that the high needs of urban populations for police, fire, sanitation, and welfare services impose a massive drain on the tax dollars of urban districts, leaving less of each tax dollar for education than in suburban and rural districts. The urban tax dollar also buys fewer educational services than the same dollar in suburban and rural areas because operating costs for education are unavoidably higher in cities than in other areas *(cost overburden)*. The use of attendance rather than enrollment counts in state aid formulas further penalizes large city districts because of the higher absenteeism rates of urban pupils *(absenteeism overburden)*.

Figure 10

State School Finance Court Decisions



Source Franklin, D L et al "The Constitutionality of the K-12 Funding System in Illinois. Volume II 1990 Supplement " MacArthur/Spencer Series Number 15 Normal, IL: Center for the Study of Educational Finance, Illinois State University, 1990.

THE SECOND WAVE

Judicial and legislative activity in school finance slowed considerably in the second half of the 1980s. In the wake of *A Nation at Risk* (1983) and other national reports on the condition of education in the United States, policymakers directed their attention toward efficiency, excellence, and choice in education and away from issues of equity in educational opportunity.

During the mid-1980s, states strengthened high school graduation standards, raised teacher training and certification requirements, upgraded curriculum standards, and expanded student competency testing. States focused more attention on educational outcomes such as achievement than on educational resources.

The year 1989 marked a resurgence of interest and activity in school finance. After four little-noted defeats in school finance system court cases in 1987 and 1988 (Oklahoma, North Carolina, Louisiana, and South Carolina), plaintiffs succeeded in overturning school finance systems in Montana (*Helena School District v. State of Montana*), Kentucky (*Rose v. The Council for Better Education*), and Texas (*Edgewood v. Kirby*). In the next year, the New Jersey Supreme Court declared the state's 1975 school finance reform law unconstitutional as applied to the 30 poorest urban school districts (*Abbott v. Burke*). Tennessee followed in 1991. New funding formulas were enacted in four states, as well as in Nebraska, Oklahoma, and Louisiana. New school finance suits also were filed in 21 states.[6]

The fundamental legal issues did not change between the first and second waves of litigation. Plaintiffs in the five successful court suits asserted that wealth-based disparities in education expenditures resulted in unequal educational opportunities for students from property-poor districts. The courts based their decisions on the states' education and/or equal protection clauses, and each decision reflected the unique legal, educational, political, and social context of the state.

These decisions, however, represented a departure from the past in several ways. They focused on disparities in actual programs offered, as well as wealth and expenditure disparities; expanded definitions of what state constitutions require of education systems; moved toward requiring the equalization of expenditures, and away from an equalization of the ability to raise education revenues; emphasized the needs of educationally disadvantaged children; and, in Kentucky, called for a total restructuring of the education governance, as well as finance, system.

With litigation still ongoing in 21 states it is hard to predict where it will all take us by the year 2000. But after a period of quiescence, school finance reform is back with a fury in a considerable number of states. However, the states are not all moving in lockstep, and courts in a substantial number of states have given finance systems a clean bill of health, at least from the standpoint of compliance with state constitutions. Meanwhile, forces moving many states toward inequity still operate, and the net effect of new laws pulling one way, and strong forces pulling another, is hard to predict.

[6]The 21 states are Alabama, Alaska, Florida, Idaho, Illinois, Indiana, Kansas, Massachusetts, Minnesota, Missouri, New Hampshire, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Virginia, and Washington.

THREE STATES

As the decade of the 1990s opens, states may be justifiably nervous about the possibility of further litigation. Three states where systems recently have been overturned are described here in more detail. While the decision in Texas was fairly traditional, the Kentucky decision raises the possibility that school finance litigation can bring the entire structure of the education system under scrutiny. The New Jersey case demonstrates that it is possible to focus a decision on the way a school finance system affects particular school districts, not all districts.

TEXAS

Edgewood v. Kirby (1989) summarized the extensive disparities in wealth, expenditures, and programs found across Texas' 1,057 school districts and three million school children. The state Supreme Court justices imposed a judicial standard of equity known as "fiscal neutrality," requiring that school district revenues be "substantially equal" at similar levels of district tax effort. In 1985-86, the 300,000 students in the wealthiest districts had eight times the property wealth of the 300,000 students in the poorest communities. The disparity in property wealth between the Edgewood Independent School District and the neighboring district of Alamo Heights was typical: $39,000 per pupil in Edgewood, compared to $570,000 in Alamo Heights.

As the state's minimum foundation aid formula did not cover even the state-mandated minimum requirements, districts relied heavily on local revenues to support their education programs. The court found that expenditures ranged from $2,000 to $19,000 per pupil; the poorest districts spent, on average, $2,000 per pupil less than the wealthiest districts in spite of higher tax rates.

The court determined that education expenditures have a "real and meaningful impact on the educational opportunity offered...student[s]." At the time of the trial, one-third of the state's school districts did not meet the state-mandated standards for class size. One poor school district, San Elizario I.S.D., offered no pre-kindergarten program; no foreign language, chemistry, physics, or calculus courses; no college preparatory or honors program; and virtually no extracurricular activities such as band, debate, or football. In spite of one of the most extensive state-funded preschool programs in the country, a number of the poorest school districts in Texas cannot afford to participate.

The court set May 1990 as the deadline for the legislature to establish a new state funding system, threatening to close the state's schools if an acceptable plan were not developed. When the legislature developed its new funding plan, however, it was immediately challenged, and a state trial court agreed that the new plan did not meet the court mandate. On April 11, 1991, the state legislature finally passed a plan that was accepted by the court, but is extremely controversial.

Under the new system, dubbed the "Robin Hood" plan, school districts with high property values will shift money to districts with low property values within regional taxing districts created along county lines. Each of the new tax districts will have a minimum property tax rate. Revenues will be distributed equally throughout the school systems within the taxing district.

As a result of this plan, a new, or at least more visible, opponent to school finance reform has arisen in Texas — wealthy school districts, which until now largely stayed out of court battles between state officials and poor districts. Districts in the richest parts of the state, which stand to lose millions of dollars while their residents are charged higher taxes, contend that the new law is unconstitutional because it amounts to a statewide property tax and imposes levies without prior voter approval.

Moreover, rich districts warn the equity plan will undermine the state's top schools — the plan, they contend, emphasizes equity at the expense of excellence and accountability.

The activism by the richer districts represents an important shift in the school finance debate, which has been dominated by the poor districts that won two unanimous rulings from the state Supreme Court.

KENTUCKY[*]

A famous Kentuckian and writer during the 1920s, when "hundreds of Kentucky farmers had better barns in which to stable mules, bulls, and sows than school rooms for their children," Jesse Stuart dreamed of a day when Kentucky children would no longer have to "grow up like uncultivated plants." As the 1980s drew to a close, however, Kentucky was often regarded as one of the worst school systems in the nation; a state at or near the bottom in indicators like spending, graduation rates, and literacy. Management problems, nepotism, and tax fraud were thought to be widespread among districts.

In 1986, the wealthiest district in Kentucky spent $4,361 per pupil, while the poorest district spent $1,767 per pupil, producing a wide gap in the quality of facilities and programs. Court records showed that poor schools held classes in inferior buildings and were unable to provide students with an advanced curriculum. While many rural districts in the eastern part of the state could not even afford textbooks or books for their libraries, wealthier districts were purchasing computers for their classrooms. These inequities were reflected in differences in achievement test scores and graduation rates.

On November 20, 1985, a lawsuit called *Rose v. Council for Better Education, Inc.* was filed in Circuit Court. The plaintiffs were the Council for Better Education, Inc., seven local school boards, and 22 public school students suing on behalf of themselves and the class of all school children in similarly poor school districts. The plaintiffs alleged that the state's "statutory structure for funding public schools" was inadequate, inequitable, and in violation of the state constitutional provision requiring "an efficient system of common schools throughout the state."

They also complained that students from poor districts had been denied due process and equal protection under both the United States and Kentucky constitutions. Plaintiffs sought a declaratory judgment and a court order "commanding the General Assembly to increase the funding for public schools in an amount sufficient to provide an equitable and adequate funding program for all school children."

On June 8, 1989, the Kentucky Supreme Court declared the entire school system unconstitutional. The court directed the General Assembly to go back to the drawing board and create a new system that provided adequate and equal educational opportunities for all of the state's students. The state legislature complied with the court's mandate by enacting the Kentucky Education Reform Act of 1990, financed by a tax increase. This new reform law radically reshaped the curriculum, governance, and finance of Kentucky's schools.

Some of the features of the reform are rewards and sanctions tied to school performance, school-based management and decision making, pre-school programs for at-risk children, and a state-wide performance assessment program. The law also provides a guaranteed level of per pupil funding and a method for raising poor districts to the spending level of wealthier districts.

According to recent accounts in the education press, over the course of the last year or so, many Kentucky schools have raised local tax rates and received a corresponding increase in state aid; initiated pre-school programs for poor four-year-olds and extended-day tutorial programs; and launched planning and site-based decision making, ungraded primary classrooms, and community service centers.

Finally, despite a mammoth increase in state taxes, Kentuckians appear to have weathered both the current recession and the last round of elections without any signs of the sort of tax revolt seen in many other states. The cost of the education program has also been a secondary topic in this year's gubernatorial primaries, and acceptance of education reform continues to be reflected in statewide polling. Kentucky appears to be recovering from what the trial court judge referred to as the state's "extreme case of educational malnutrition."

NEW JERSEY

When the Supreme Court declared New Jersey's school finance system unconstitutional on June 5, 1990, it was the eighth time in 20 years that the state's highest court ruled on school finance litigation. That decision, *Abbott*

[*]Much of the factual material about Kentucky is drawn from an excellent case study. See Ronald G. Dove, Jr., *Acorns in a Mountain Pool: The Role of Litigation, Law, and Lawyers in Kentucky Education Reform*, Lexington, KY: Prichard Committee for Academic Excellence, 1991.

v. Burke (Abbott II), was the first school finance case in the country, however, to:

- rule on the constitutionality of an education finance law specifically designed to respond to a prior court decision
- address the unique educational and fiscal needs of children living in poor urban areas
- require a state to assure that poor urban districts have more money to spend on education than wealthy suburban districts

It all began in early 1970 when the cities of Jersey City, Paterson, Plainfield, and East Orange joined Jersey City student Kenneth Robinson and his parents in a challenge to the constitutionality of the state's school finance system. That decision, *Robinson v. Cahill* (1973), used expenditure disparities that were due to variations both in school district property wealth and in tax rates as the basis for overturning the state's school finance system.

The resulting 1975 state reform law (The Public School Education Act of 1975), funded with a new state income tax, saw the state share in education expenditures rise from 28 to 40 percent and expenditure disparities lessen. A decade later, however, disparities had worsened, even when inflation was taken into account. In six years, disparities in per pupil property wealth doubled from 5.5 to 1 to 11 to 1. Expenditure disparities, in real dollars, grew from $900 to $2,122 per pupil between high and low spending districts.[8]

In 1981, the Education Law Center filed a complaint in New Jersey Superior Court on behalf of 20 children attending public schools in Camden, East Orange, Irvington, and Jersey City. They claimed that the state education finance system caused significant expenditure and program disparities between poor urban and wealthy suburban districts, leaving poor urban districts unable to meet the educational needs of their students. They also argued that the state system violated the "thorough and efficient" and equal protection clauses of the state constitution and the law against discrimination.

After nine years of parrying in legal and administrative forums, the New Jersey Supreme Court ruled in 1990 that the state aid system was unconstitutional as applied to poorer urban districts because the education delivered was neither thorough nor efficient. The justices found that:

Under the present system...the poorer the district and the greater it's need, the less the money available, and the worse the education... Education has failed there, *for* both the student and the state.

The New Jersey high court's ruling zeroes in on both the plight of poor urban children and the obligation of the state to educate them:

The cities have deteriorated and their [the students'] lives are often bleak. They live in a culture where schools, studying, and homework are secondary. Their test scores, their dropout rate, their attendance at college, all indicate a severe failure of education. While education is largely absent from their lives, we get some idea of what is present from the crime rate, disease rate, drug addiction rate, teenage pregnancy rate, and the unemployment rate. Without an effective education they are likely to remain enveloped in this environment.

All the money that supports education is public money, local money no less than state money. It is authorized and controlled, in terms of source, amount, distribution, and use, by the State. The students of Newark and Trenton are no less citizens than their friends in Millburn and Princeton. They are entitled to be treated equally, to begin at the same starting line.

To meet the requirements the court set, the Quality Education Act of 1990 (QEA I) was signed into law on July 3, 1990 allocating an additional $1.1 billion to the state's public schools, with much of the money going to the poorest urban districts, called "special needs" districts. Before the 1991-92 school year had started, however, intense political maneuvering in response to voter anger over increases in the sales and income taxes resulted in a new legislative program (QEA II) that drained about $360 million from the school aid fund and redirected the funds to municipal property tax relief. In addition, strict spending caps were imposed on school districts. This means that 30 percent, or $229 million, of the $775 million left for "new" school aid cannot be spent on education, but must be used to lower local school taxes.

As a result, the attorney for the plaintiffs in *Abbott* is now contending that the new law (QEA II) has actually widened the spending gap between urban and suburban school districts and is unconstitutional. After 20 years of legal wrangling over the educational rights of poor urban children, New Jersey is back in court.

[8]The measure used was district average expenditures at the 5th and 95th percentile.

SUMMARY AND CONCLUSION

After the Puritans built their houses, provided for their livelihood, and created places to worship, they longed "to advance Learning and perpetuate it to Posterity." In 1642 the Bay Colony decreed free public education in every town of 100 families. Writing in 1846, Horace Mann said:

> **The institution of a free-school system on so broad a basis, and of such ample proportions appears still more remarkable when we consider the period in the world's history at which it was originated, and the fewness and poverty of the people by whom it was maintained.**

By fits and starts this first effort at free schools grew to become a universal system of public education. For centuries the "people by whom it was maintained" remained the inhabitants of such towns, and later, cities. The local inhabitants taxed whatever wealth they had, and as their wealth (and their "longing" for learning) varied, so did the amount they spent on these free schools. The economic position of the family determined the economic circumstances of the child, and the combined economic circumstances of the families of a local community determined the school economy of the student.

In about 1930 the local share of expenditures for elementary and secondary education, which was still 83 percent, began to fall as the states, then the federal government, began to pick up a larger share of the tab. The U.S. Constitution left the provision of education as an implied power of the states, and states were quick to make their responsibilities explicit in their constitutions. For decades, the nation moved along quite comfortably with a system largely operated and financed locally, but with the formal power and responsibility residing clearly with the state. The disparities in the wealth of communities (and their commitment to education) continued to be reflected in disparities in the financing of their education systems.

The degree of inequality in our system of education spread through our national awareness in the mid-1960s. What became known as the Coleman Report, *Equality of Educational Opportunity*, mandated by act of Congress, riveted attention on differences in educational achievement. That same year, Arthur Wise asked in an article referring to the federal constitution, "Is the denial of equal education constitutional?" Other reports and analyses followed.

Born a few years later was a realization that perhaps the provisions in *state* constitutions required that resources for education be provided *equitably* within a state.

The court case that focused attention on in-state inequalities was *Serrano v. Priest*. It began when John Serrano, whose son attended school in a Los Angeles school district, complained to the school principal about the quality of services available. He was told the district could not afford better, and to get what he wanted he would have to move to a wealthier district. Instead, Mr. Serrano took the state to court, questioning the constitutionality of the manner in which California financed its schools. In 1971, the Supreme Court of California found that the gross school funding disparities based on the wealth of a school district violated the state constitutional guarantees of equal protection.

After that case, a wave of school finance rulings washed through the courts. From 1971 through 1983, nine state financing systems were declared unconstitutional by state courts. These rulings focused primarily on disparities in educational expenditures across districts, and on the relationships between the revenue for schools and the wealth of school districts. In New York and Maryland, however, consideration of the unique needs of schools in urban areas entered the fray.

Prompted by these rulings and prodded by litigation winding its way through court systems, over 35 states enacted

new or revised education aid programs between 1971 and 1985. The state share of education funding leaped forward again, and average expenditures increased as well. Funding systems were revised in many states to more equitably distribute money among property-poor and property-wealthy districts. Programs were developed to meet the special education needs of some students.

However, despite these actions, researchers reported little change between 1976-77 and 1984-85 in fiscal equity within the states. Early gains in the 1970s were eroded by differential growth in local tax bases, wealthy districts continuing to spend more, growing needs in poor urban and rural areas, and other factors that offset earlier state action.

A new wave of activity began in 1989. Since that time, plaintiffs succeeded in overturning school finance systems in Montana (1989), Kentucky (1989), Texas (1989), New Jersey (again in 1990), and Tennessee (1991).

This report briefly describes the proceedings in New Jersey, Kentucky, and Texas. The decision in Texas was fairly traditional, but the remedy has turned the wealthy districts against the new system. The Kentucky decision resulted in the state revamping the entire educational system, and New Jersey addressed the unique situation of children attending school in poor urban areas. As this is written, litigation is proceeding in 21 states.

How unequal are our students' educations now, as we enter the last decade of the century?

- Average expenditures per student range from almost $8,500 in New Jersey down to $2,720 in Utah. After adjusting for cost-of-living differences, they range from just under $7,000 in New York to just under $3,000 in Utah.
- States vary both in their wealth and their willingness to spend on education. Wyoming spends almost 8 percent of its personal income on education and New Hampshire 3 percent. The ranking of the states changes considerably when the degree of effort is taken into account. New Jersey, second on an absolute basis, drops to about the middle on this relative basis. Utah rises from last to the top tier.

Disparities are also considerable within states, and this degree of disparity also varies widely. In New York, the high spending school districts spend 162 percent more than the low spending ones, contrasted with Maryland where the high spending districts spend just 24 percent more. In the middle range (Oklahoma, Kansas, and Maine) the high districts spend half again as much as the low ones.

Down at the level of the school building and the classroom, what are the results of such differences?

- In Alabama — schools with bad plumbing, no science laboratories, no art rooms, or no music rooms
- In New Jersey — one high school with seven science laboratories, and another with few true science classrooms at all
- In Montana — schools with substandard facilities, outdated equipment, and outdated textbooks
- In Pennsylvania — the lowest spending school districts have the higher student teacher ratios, the lower average teacher salaries, and teachers with the least teaching experience
- In the nation — less adequate instructional materials in schools where students are poor than in schools where students are wealthier.

While it is clear that the quantity of educational resources varies, and that there are "rich schools and poor schools," as in the title of a 1960s book by Arthur Wise, the educational research community has not been successful in determining the extent to which resource differences affect educational outcomes. Not having expensive, large-scale studies especially designed to identify the variables that make a difference, they have used data in studies carried out for other purposes.

Eric A. Hanushek recently identified and summarized 187 such studies, dealing with teacher-pupil ratios, teacher qualifications and experience, teacher salaries, expenditures per pupil, and facilities. He concluded that two decades of research had not uncovered a systematic relationship between those factors and student achievement.

Other researchers point out, however, that these studies do not clearly establish that resource variations are unimportant. While academics debate the direction and importance of the relationships between school resources and student achievement, one state court judge, Steven L. Lefelt, rendered this judgment:

> **I FIND that the existing education research is relatively primitive and does not reveal very much about student learning and therefore does not compel the rejection of input equalization or input comparisons between and among districts.**

For more specific information about the educational resources that

actually reach the classroom, we looked at data from the 1990 state-by-state assessment of 8th grade mathematics by NAEP. The teachers of these 8th grade students were asked how well supplied they were by their school system "with the instructional materials and other resources" they needed to teach their classes.

There was considerable variation among the states in whether the teachers got what they needed. Comparing these data on the adequacy of classroom teaching resources with average mathematics proficiency reveals a striking and systematic relationship. As teacher perceptions of the inadequacy of these resources increased, proficiency scores decreased (see Figure 8 on p. 10).

If we are to get closer to understanding the relationship between educational resources and educational outcomes, we must improve how we identify the resources that actually reach the front lines of instruction. The use of assessments such as NAEP may help, particularly now that they are being administered at the state level.

The issue of inequality in providing public education and inequity in its financing has, for at least two decades, been framed as a legal issue debated and decided in state courthouses. But the question of the degree of equality and equity the nation wants in its school system goes beyond the interpretation of state constitutions written long ago. It is a policy issue for executive and legislative branches as well, at all levels of government.

Resource disparities and inequities on the one hand and educational reform and restructuring on the other, are considered by some to be competing alternatives, or unrelated to each other. They can be dealt with simultaneously, however; Kentucky is an example of this approach.

So far, the national education reform movement has not directly addressed the issue of the wide disparities in resources applied to educating America's children and youth. The President and the nation's governors have, however, set the objective that

The academic performance of elementary and secondary students will increase significantly in every quartile, and the distribution of minority students in each level will more closely reflect the student population as a whole.

Will it be harder to achieve that goal if the nation does not address existing disparities, such as whether instructional materials and resources are available to teachers? Is there a danger that some plans for greater equalization of resources can affect goals to improve performance at the top?

For the year 2000, will a student be considered an educational citizen of just a school taxing district, or of a whole state, or a nation? Is the location of one's home to be the deciding factor in the degree to which society provides opportunity to develop ability? What are our concepts of equity and equality in education as we head towards the next century?

Can we succeed in being world class in our educational attainments while remaining so provincial in our financial commitment to schooling?

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APPENDIX TABLE 1
State Expenditure and Effort Disparities

State	Expenditure Per Pupil 1989-90[1]	Cost Index[2]	Cost Adjusted Expenditure Per Pupil 1989-90[3]	Intrastate Disparity Ratio 1986-87[4]	Expenditure Per Pupil as a Percent of Personal Income, 1988[5]
Alabama	$3,314	0.919	$3,606	1.5	3.8%
Alaska	7,252	NA	NA	1.9	6.7
Arizona	4,151	1.008	4,118	2.0	3.7
Arkansas	3,272	0.909	3,600	1.6	3.7
California	4,645	1.059	4,386	1.7	3.3
Colorado	4,580	0.998	4,589	1.6	4.1
Connecticut	7,876	1.258	6,261	1.6	3.8
Delaware	5,858	1.032	5,676	1.2	3.9
Florida	5,051	0.973	5,191	1.4	3.3
Georgia	4,468	0.941	4,748	2.1	4.0
Hawaii	4,623	NA	NA	NA	3.4
Idaho	3,195	0.913	3,499	1.6	4.4
Illinois	4,787	0.974	4,915	2.0	3.4
Indiana	4,114	0.929	4,428	2.1	3.9
Iowa	4,642	0.936	4,959	1.3	4.5
Kansas	4,850	0.917	5,289	1.8	4.1
Kentucky	3,793	0.921	4,118	1.7	4.2
Louisiana	3,836	0.934	4,107	1.5	4.2
Maine	5,546	0.920	6,028	1.5	4.8
Maryland	5,857	1.108	5,286	1.2	3.5
Massachusetts	6,172	1.218	5,067	2.1	3.4
Michigan	5,049	0.954	5,292	2.3	4.3
Minnesota	5,025	0.956	5,256	1.9	4.2
Mississippi	3,119	0.903	3,454	1.7	4.5
Missouri	4,226	0.929	4,549	2.3	3.3
Montana	4,465	0.911	4,901	NA	5.7
Nebraska	3,874	0.929	4,170	1.6	3.8
Nevada	4,439	0.981	4,525	1.2	3.1
New Hampshire	5,099	1.079	4,726	1.6	2.9
New Jersey	8,439	1.258	6,708	1.9	4.1
New Mexico	4,136	0.929	4,452	1.6	4.9
New York	7,917	1.132	6,994	2.6	4.6
North Carolina	4,373	0.936	4,672	1.4	4.1
North Dakota	3,567	0.922	3,869	1.3	4.5
Ohio	5,195	0.958	5,423	2.8	3.8
Oklahoma	3,439	0.925	3,718	1.8	4.0
Oregon	5,047	0.942	5,358	1.5	4.8
Pennsylvania	6,111	1.013	6,033	2.4	3.9
Rhode Island	6,425	1.068	6,016	1.3	4.0
South Carolina	3,731	0.926	4,039	1.4	4.3
South Dakota	3,732	0.916	4,074	1.3	4.2
Tennessee	3,518	0.931	3,779	1.8	3.5
Texas	4,056	0.941	4,310	2.8	4.5
Utah	2,720	0.929	2,928	1.5	4.7
Vermont	5,418	0.939	5,770	1.4	4.8
Virginia	5,149	0.971	5,303	2.0	3.8
Washington	4,590	0.970	4,732	1.6	3.8
West Virginia	4,510	0.919	4,908	1.3	5.4
Wisconsin	5,703	0.954	5,978	1.7	4.5
Wyoming	5,376	0.934	5,756	1.7	7.8
U.S.	**4,952**	**1.000**	**4,952**	**NA**	**3.9**

[1]Total current expenditures for public elementary and secondary day schools per pupil in average daily attendance. From National Education Association, *Estimates of School Statistics*, 1990-91. According to the NEA, current expenditure per pupil is the most frequently used indicator for examinations of public school spending, in which states are compared with one another on school expenditures. As with other state-level measures, this measure suffers from the shortcomings inherent in a statewide average. Current expenditures includes amounts paid for general control, instructional service, operation, maintenance, fixed charges, and other school services at all levels of administration — state, intermediate, and local. Current expenditures comprise all governmental contributions to the retirement fund and expenditures for school services, including attendance, health services, transportation, the net cost of food services, and other school services. This figure does not include payments for capital outlay or debt service.

[2]F. Howard Nelson, "An Interstate Cost-of-Living Index," *Educational Evaluation and Policy Analysis*, Spring, 1991, 13, 1, 103-111. Indices unavailable for Hawaii and Alaska.

[3]Column 1 divided by column 2.

[4]The intrastate disparity ratio is the average per pupil expenditure of the ten highest spending districts in the state divided by the average per pupil expenditure of the ten lowest spending districts in the state. Data are presented for unified districts only. Hawaii and Montana have no unified districts. Because of a small number of districts, only the highest and lowest spending five districts are used in Nevada, Rhode Island, and Wyoming. From Wayne Riddle, *Expenditures in Public School Districts. Why Do They Differ?*, Congressional Research Service, July 5, 1990. Riddle's data are based on Census Bureau information (except for Vermont) and the pupil data are simply total fall enrollment, without adjustment for attendance rates or "high cost" pupils. Districts with enrollments below 500 and special purpose districts (intermediate districts, districts serving only handicapped or vocational education students, etc.) were excluded.

[5]Estimated current expenditures for public elementary and secondary schools in 1987-88 as a percent of personal income in 1988. From National Education Association, *Rankings of the States, 1990*

APPENDIX TABLE 2
Teachers' Reports on the Availability of Resources

Which of the following statements best characterizes your situation with respect to getting instructional materials and other resources you use to teach your class?

Percent of Students in School Who Are Poor (Orshansky Index)	Percent of Students Whose Teacher Responded:							
	I Get All		I Get Most		I Get Some		I Get None	
0%	24.9%	(5.7)	58.8%	(6.7)	16.4%	(4.7)	0.0%	(0.0)
1 - 4	12.1	(3.9)	62.6	(5.5)	25.4	(6.1)	0.0	(0.0)
5 - 9	17.5	(5.1)	54.1	(6.3)	27.5	(5.4)	0.9	(0.9)
10 - 19	14.1	(2.8)	53.3	(3.9)	32.0	(4.2)	0.6	(0.4)
20 - 29	10.5	(3.1)	56.5	(6.4)	33.1	(5.9)	0.0	(0.0)
30 +	11.6	(3.5)	29.7	(8.2)	57.1	(8.4)	1.5	(1.6)

Source: Teacher questionnaire from the 1988 NAEP Reading Assessment, Grade 4, unpublished.
Note: Standard errors are presented in parentheses.

APPENDIX TABLE 3
Teachers' Reports on the Availability of Resources

How well supplied are you by your school system with the instructional materials and other resources you need to teach your class?

	Percent of Students Whose Teacher Responded: "I Get Some or None of the Resources I Need."	
Grade 4	38%	(2.0)
Advantaged Urban	15	(4.5)
Disadvantaged Urban	48	(5.2)
Extreme Rural	44	(6.9)
Other	39	(2.8)
Grade 8	28	(2.8)
Advantaged Urban	10	(4.2)
Disadvantaged Urban	40	(7.6)
Extreme Rural	31	(8.6)
Other	29	(3.7)

Source: Ina V. S. Mullis et al. *The State of Mathematics Achievement: NAEP's 1990 Assessment of the Nation and the Trial Assessment of the States.* Educational Testing Service, June 1991. Prepared under contract with the National Center for Education Statistics.
Note: Standard errors are presented in parentheses.

APPENDIX TABLE 4
Teachers' Reports on The Availability of Resources and Average NAEP Proficiency

How well supplied are you by your school system with the instructional materials and other resources you need to teach your class?

States Where the Percent of Students Whose Teachers Respond That They Get Some or None of the Instructional Materials and Resources They Need Is:	Average NAEP Math Proficiency of Group of States
More than 45% Guam • Virgin Islands • District of Columbia • Louisiana	241 (1.5)
41 - 45% West Virginia • Hawaii • Arkansas	252 (0.9)
36 - 40% Idaho • New Mexico • North Carolina • Georgia	252 (1.2)
31 - 35% North Dakota • New York • Ohio • California • Michigan • Oklahoma • Delaware • Rhode Island • Florida • Virginia • Alabama • Arizona • Kentucky	254 (1.0)
26 - 30% Texas • Indiana • Pennsylvania • Illinois	253 (1.5)
21 - 25% Oregon • Wisconsin • Colorado • New Hampshire • Connecticut • Minnesota • Nebraska • New Jersey • Maryland • Montana	264 (1.0)
20% and under Wyoming • Iowa	277 (3.2)

Source: Ina V. S. Mullis, et al. *The State of Mathematics Achievement. NAEP's 1990 Assessment of the Nation and the Trial Assessment of the States.* Educational Testing Service. June 1991. Prepared under contract with the National Center for Education Statistics. Table is based on an aggregation of data from Table 13.21.
Note: Standard errors are provided in parentheses.

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