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**ABSTRACT**

A review of fiscal and political trends in the late 1970's made it appear that support for education would slip measurably, but a resurgence of national interest in education in the early 1980's as a result of commission reports and nationwide studies has led to increased spending for major reforms. The pattern of support for reforms in other areas suggests that the public must be convinced that reforms are having an impact if their support is to continue. This need to convince the public can be translated into a need for effective means of measuring the results of the educational reform efforts. Among the methods that can be used for evaluating the success of reforms are (1) monitoring statewide and local performance indicators, (2) studying the overall financial impact of the reforms, (3) comparing the cost effectiveness of various programs with similar goals, (4) conducting evaluations of discrete programs, (5) assessing the degree of local implementation of state-mandated reforms, (6) examining the cumulative impact of broad reform packages, and (7) conducting research isolating cause and effect relationships. Such evaluations are extremely complex, but are critical to maintaining reform momentum. (PGD)

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# Institute for Research on Educational Finance and Governance

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SCHOOL OF EDUCATION STANFORD UNIVERSITY

Policy Paper No. 85-C3

## SUSTAINING STATE EDUCATION REFORM MOMENTUM: THE LINKAGE BETWEEN ASSESSMENT AND FINANCIAL SUPPORT

Michael W. Kirst

August 1985

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### Abstract

This paper analyzes the recent trends in state education finance with particular emphasis on the role of reform in overcoming negative systemic trends. The major thesis is that the recent increases in state funds can only be sustained if there is a favorable perception of recent reforms. The final section presents seven different approaches for thinking about assessing the recent state reforms. States need to conceptualize and execute some of these seven very quickly. Assessment is used here as a much broader concept than testing.

### The Emerging Context of the 1980s

Public school policymaking is embedded in a societal matrix of numerous forces. It is not possible to consider the future of our schools without examining the size and distribution of future populations, the future of the economy and its effect on money available for schools, and the political context within which decisions will be made. The public school system is a "dependent variable" of larger social and economic forces. These forces are sometimes cyclical in nature.<sup>1</sup> For example, in the late 1950s, launching Sputnik triggered a series of policies that directed resources toward the training of gifted students, especially in science. In the mid-1960s, President Johnson's War on Poverty produced counter-trend policies through the redirection of resources to the disadvantaged and the handicapped. In

the 1980s, the concern about the U.S. competitive economic position focussed public policy on academic standards and quality for all pupils.

Educational policies are also often determined by the actions of special interest groups external to the education system. California's Proposition 13 and other state spending caps, for example, resulted from taxpayer resentment against the property tax and inflation. Schools were affected deeply by an issue in which they were only an indirect target. Recently, special interest groups directly related to education have had a less powerful effect on the major directions of state education policy. Their policy influence has been muffled not only by broad social forces and taxpayer groups, but by external authorities who are more distantly connected with education policy such as governors, business leaders, and courts.

In 1979, Kirst and Garms made predictions about the demographic, fiscal, and political context of public education for 1980-1990. We predicted that education expenditures would keep up with inflation, but not result in considerable real growth.<sup>2</sup> This was a more pessimistic scenario than the prior 1970-1980 decade. Despite considerable discussion about declining enrollment and lower public approval ratings in the Gallup Poll, the 1970s produced a \$23 billion growth in total expenditures after inflation.

The ratio of pupils to instructional personnel fell from 29 to 1 to under 20 to 1 by the dawn of the 1980s. A continuation of this trend would result in a 12 to 1 ratio during the 1990s! State governments fueled this 1970-1980 expenditure growth by increasing their total education expenditure from \$16.6 billion to \$46.5 billion, an impressive 44.5 percent increase in

real terms. The state share rose from 37 percent to nearly 50 percent, while the local and federal shares declined. All of these positive fiscal trends occurred despite the "management of decline" being featured in professional education journals. School closings and enrollment decline were indeed painful, but hold-harmless fiscal distribution formulas cushioned the impact in most states. There was a continued trend toward state policy initiative and a narrowing of the discretionary decision zone of the local school authorities as states stressed an equity agenda for the handicapped and disadvantaged.

Looking ahead to the 1980s, Kirst and Garms were not optimistic that the 1970s expenditure growth could continue at the same pace. They discerned many negative societal trends, including:

Demography - enrollment would drop in the high schools, but more important was the rapid growth of older voters who tend to want lower property taxes. The number of voters with children in public schools would be about one in every five. The fastest growing school populations were immigrants who have a low political participation rate. All of these factors would depress local voter approval of property tax increases.

Energy Prices - oil prices began declining and this would hurt the Southern and Western states that rely on extraction taxes.

Public Alienation from Schools - the Gallup Polls demonstrated a growing dissatisfaction with school performance that might translate into less political support.

Growing Competition from Child Care Needs - the labor force participation rate for women with school age children had increased so rapidly that between 70 to 80 percent of the mothers would be working by 1990. Moreover, there was a rapid growth in divorced or single parent families.

Federal Budget Priorities - federal policy favored defense, social security, and health programs. Total expenditures were increasingly going to older people rather than children.

Kirst and Garms felt the state governments would be the engine for real growth in school spending. Federal budget deficits and priorities were moving away from education and the changing profile of local voters would inhibit local property tax increases.

### Public School Policy 1980-1985

In the early 1980s, the pessimistic view prevailed as education's real total revenues (after inflation) declined from 1980 to 1982. The U.S. suffered a recession that devastated many of its basic industries. But in 1983 the fiscal and political picture for education changed dramatically and unexpectedly. Education became the top priority in most states as a wave of concern about "academic excellence" swept the nation. The underlying negative trends highlighted in the prior section were overwhelmed by the public willingness to fund quality "reforms." Education was featured as a solution to economic stagnation and international competition. About 300 state commissions and many more local groups pushed for a new education agenda. Expenditures per pupil shot up about 9 percent in real terms in 1983 and kept increasing faster than inflation in 1984 and 1985.<sup>3</sup>

In my view, the crucial policy question for the next five years is whether this "reform momentum" will keep going. If it does, then education expenditures will exceed inflation and the underlying negative trends pushed to the background. If the public and key policymakers, however, perceive that education reform has failed or not been implemented, then a less optimistic future is likely. The public must not perceive that professional educators have subverted the aims of the reformers. Consequently, implementation

and assessment of these reforms should be a top priority for educational research and state policymakers. By 1986, the pace of new reforms will slow significantly as fewer states and LEAs enact new omnibus bills or interventions. Moreover, national economic growth is slowing dramatically, setting up tough competition for public funds. Researching the cost/effectiveness of the varied education reforms becomes urgent, because not all of them can be expanded or even maintained.

Education policy is now beyond the "alarmed discovery" and "crisis activity" phases of 1983-1984 of the issue-attention cycle. Other reforms like ecology and urban development have degenerated into the subsequent policy phases of "disillusionment with results" and then a "return to neglect."<sup>4</sup> The process of implementation, adaptation, refinement, and elimination of the state reforms has begun in earnest. For example, there is a widespread realization that teacher quality is crucial to increased academic attainment, but states are unsure how to blend screens and magnets to attract and retain high quality teachers. Consequently, states are trying all kinds of teacher quality interventions, including career ladders, minimum salaries, mini grants, sabbaticals, and forgivable loans, without a clear notion of which approaches are optimal. I doubt that many states can afford to fully fund all of the various schemes to improve the teaching profession.

Sustaining the reform momentum becomes even more urgent when one considers that national enrollments will grow by 2.1 million by 1990. Allan Odden estimates that it will take 5 percent annual real growth in total revenues merely to pay for this enrollment increase! He emphasizes that total revenue grew only 7 percent between 1980-1985 (per pupil revenues were up

18 percent because of the reform momentum, resiliency of the property tax, and state hold-harmless formulas that do not cut spending commensurate with pupil decline).<sup>5</sup> The reforms recommended by the National Commission on Educational Excellence would require about a 20 percent increase in per pupil expenditures. Only two out of eight reform states that Odden studied have approached this level of increase.<sup>6</sup> Since increases of this magnitude are unlikely, we must sort out which of the many state reforms should be expanded, eliminated, or left at their current funding level. This task will become more urgent if the President's tax reform bill passes that would end the deductibility of state and local taxes from federal income tax. This deduction elimination will make it harder to increase state and local taxes.

#### Evaluating Education Reform: An Urgent Priority

While the reform movement has been a major positive force for state education policy priority, politicians are clamoring for results. There are numerous unanswered questions. How does one assess omnibus bills like California's SB 813 with its 80 different "reforms"? Evaluators have focussed on program evaluation, but these state reform packages are not programs. They are a welter of specific state interventions aimed at curriculum and instruction where evaluation methodology is not well developed.

There are many urgent questions subsumed within these state omnibus reforms. What is the proper balance between state and local policy control? Will bottom-up commitment at the school site reinforce top-down state leadership and lead to a partnership toward the same goals? While most LEAs are increasing required academic courses, what will make all students motivated and interested in these courses? Are there some reforms like merit pay that

outrun our present technology? As science and math enrollments increase dramatically (about 20 percent between 1982-1984 in California high schools), who will teach these courses? What will happen to the dropout rate?

In 1985 the 50 states provide an unprecedented natural setting to answer these and other questions. The major policy issues of the next five years will focus on these state reform problems, successes, and unanswered questions. We need to involve scholars and practitioners from a variety of perspectives to help answer quickly numerous complex questions. Fortunately, there is such diversity in the state policy approaches and local contexts that we have a quasi-natural experiment across the nation. For example, some states have imposed a statewide career ladder model, while others have relied on locally generated differences in approaching career structures. An evaluation of all the policy issues raised in the 1983-1985 state reforms will be very expensive, but only a few states such as South Carolina, Florida, and Tennessee have earmarked significant money for in-depth analysis of the impact or success of these reforms. It is ironic that education has so much at stake on the public perception of these state reforms, but is devoting so few resources to assessing their outcomes.

#### Specific Evaluation Approaches for State Reform

There are several types and levels of evaluation required for the complex and multi-purpose state reform bills.

1. Performance indicators or statewide barometers of impact. Performance indicators are statewide numerical measures of trends in educational variables. In some cases these standardized state measures are supplemented by locally devised indicators that vary in definition and concept depending

on local conditions. These performance indicators pick up easily measured changes but can rarely penetrate behind the classroom door to include content taught, teacher morale, or the type of intellectual tasks students are learning. They are part of a statewide strategy, but if used alone tend to overemphasize what can be measured at the state level. Bill Honig in California has created statewide targets and individual school profiles for numerous uniform indicators, including changes in course-taking patterns, performance in the freshman year of college, tests, and dropouts. These state indicators are supplemented by locally devised indicators in such areas as school climate, time spent on writing, and homework that are not easily collected at the state level.

2. Overall studies of the financial impact of the reforms. Rather than cost out each reform carefully, states backed into the amount allocated to LEAs based on uncommitted state revenue. Often money was provided through the state's basic finance formula and not tied to specific reforms. Consequently, states need to know where the LEAs spent the increased money and if some reform components are over- or under-funded. For example, how much was needed to institute state required science classes, or create new approaches for local teacher evaluation? What areas of the curriculum gained more money (probably math and science), and which areas lost money (industrial arts and home economics are likely losers)? As reforms became part of collective bargaining, did they become more or less expensive than state planners expected? Did the local use of money vary according to the assessed value or prior spending level of the LEA?

In order for a reform to have any chance of impact, some new resources usually must be provided. Cost analysis will help answer this question, but will not tell us anything about results.

3. Cost/effectiveness analysis of various state interventions with the same specific objectives. Levin states the case of cost-effectiveness this way:

...it integrates the results of their costs in such a way that one can select the best educational result for any given costs, or that provide any given level of educational results for least cost. It is important to emphasize that both the cost and effectiveness aspects are important and must be integrated. Just as evaluators often consider only the effects of a particular alternative or intervention, administrators sometimes consider only costs. In both cases, the evaluation will be incomplete (p. 15).

Cost-effectiveness can provide important policy information, but it is limited to comparisons among programs with similar objectives. A possible example would be the use of loans, scholarships, or a higher minimum salary as a magnet to attract better quality beginning teachers.

4. Program evaluation. Some of the states created discrete programs that can be evaluated as discrete activities. Some examples would be: teacher career ladders, increases in high school counselors, or pre-school programs like Headstart. Programs that were implemented can be evaluated using the well-developed techniques of program evaluation that have assessed such programs as Title I of the federal Elementary and Secondary Education Act.<sup>8</sup> As a first step, program evaluation can research what components of a program were actually implemented. It can then move to include costs, outcomes, and processes. A comparison of several programs with very similar objectives would be called cost-effectiveness.

Program evaluation can not address well the interaction effects among several different state initiatives. Nor can it give us much insight on the aggregate and cumulative impact of omnibus state reform activities.

5. Impact of evaluation of several state interventions with the same general goal. As of 1985, it is premature to ask whether state reform is

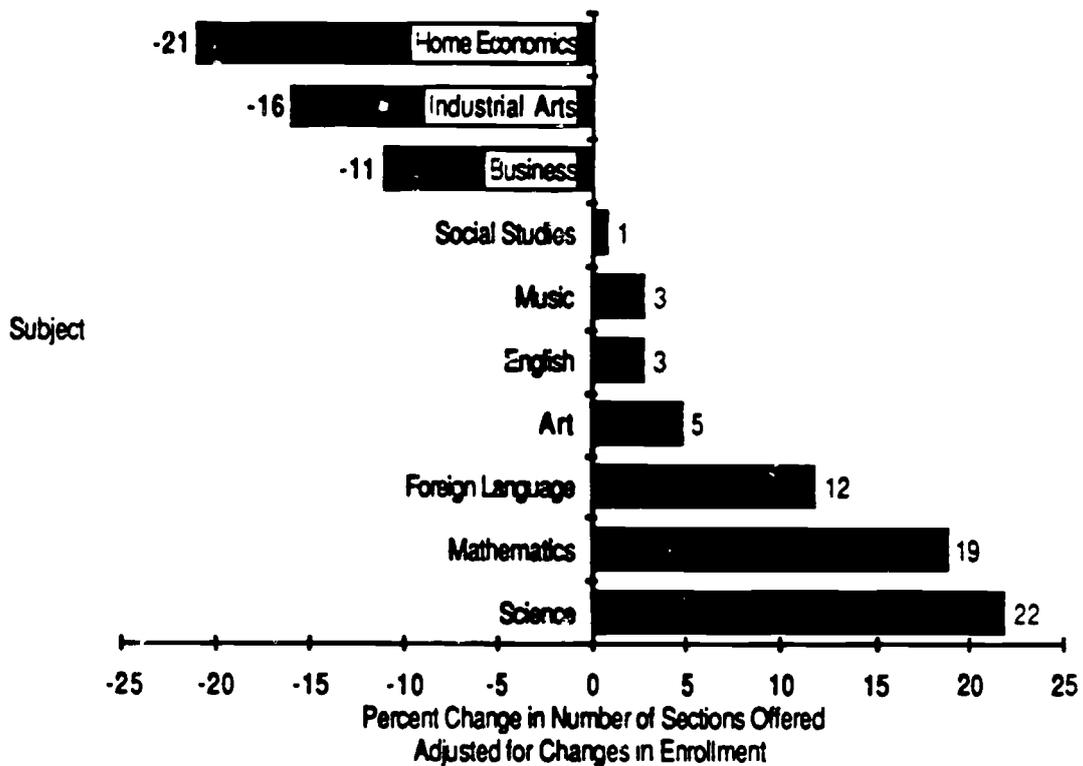
working in terms of student achievement. It is sensible, however, to explore whether or not a reform is implemented, and if so, whether this implementation is consistent with the broad objectives of state policymakers. Numerous state policies are directed toward a similar goal of increasing the "rigor" or "challenge" in the high school curriculum. The primary strategy is to increase student time in traditional academic subjects. Minimum state graduation standards, elevated college entrance requirements, model state curriculum, and the addition of science and math sections to statewide tests are some examples.

An example of this type of evaluation is a recent California study that examines changes in high school course offerings between 1982 and 1985. A sample of secondary schools was surveyed. Numbers of class sections in each departmental area were taken from teachers' master schedules. After adjustments for changes in enrollments, it is clear that substantially more sections of mathematics, science, and foreign language courses are being offered while courses in home economics, industrial arts, and business are decreasing (Figure 1). In science, the largest increase occurred in physical science offerings, apparently in response to the new graduation requirement of one year of physical science. All areas of mathematics displayed increases, but computer science showed the largest increase (+91 percent) followed by more advanced math courses such as calculus, analytic geometry, trigonometry, and geometry. Calculus and analytic geometry courses were offered with 33 percent greater frequency while general math courses increased by only 11 percent.

The same study showed an even more substantial increase in the number of advanced placement course offerings. Additions to courses which had been

Figure 1.

**Percent Change in Number of Course Sections Offered,  
Adjusted for Changes in Enrollment,  
1982-83 to 1984-85**



Source: Pam Grossman, Michael W. Kirst, Worku Negash, Jackie Schmidt-Posner, Study of Curricular Change in California Comprehensive High Schools: 1982-83 to 1984-85, Policy Paper No. PP85-7-4 (Berkeley: Policy Analysis for California Education, July 1985). Course sections were cross-checked with pupil course enrollment data derived from state reports.

offered in chemistry, physics, and European history) constituted, by 1984-85, a 34 percent increase. In addition, new advanced placement courses were offered in computer science, foreign languages, art history, and music. An obvious problem with these simple impact analyses is that there is no pretense or method to demonstrate cause and effect relationships. For instance, changes could be caused by local school board policies, state interventions, or other factors.<sup>9</sup> But if the direction of change is toward more academic course work, state policymakers will be interested, even without a precise analysis of the unique state role or of the content covered within these course titles.

6. Cumulative effects studies of the impact of all the reforms in state omnibus bills. The totality of all the initiatives in many states could not be conceptualized as a discrete program like Headstart or a "policy" like a civil rights mandate. Rather, reforms in South Carolina and Texas, for example, contain:

- o Broad, multiple targets. Reform packages seek to alter simultaneously several components of schools and district operations.

- o Lack of programmatic connections. Though varying across states, several of these reform efforts combine under a single statute many kinds of reform elements. Education reform is a set of minimally-related policies that will generate various forms of response at the local level.

Given the nature of these state reforms, Knapp and Stearns stress that the evaluator should study the local system, not the program. Specifically, they contend that school effects will:

derive from many small changes that cumulatively shift the climate for education, the perceived opportunities, the tenor of the curriculum. These shifts will be best detected by "taking the pulse" of the local educational system in ways that capture more than conventional indicators such as student test scores....

The many pieces of the reform agenda compete with a buzzing universe at the school and district levels for the attention of educators. Collectively, the reforms will have their greatest impact if they: first, capture the attention of a critical mass of educators (and their relevant local constituencies); second, provide positive incentives for committing further energy to education (by current staff, as well as by new recruits); and third, generate hope for, and supportive imagery of, schools among students, educators, and the public. Accordingly, evaluation research must document what is (and isn't) noticed at the local level, and determine the effects reform initiatives have on local motivation and morale (at the administrative, teacher, and student levels). In such reform movements the whole is greater, and far more important, than the parts. Those aspects of the local scene that reflect the whole--such as the commitment educators feel to reform goals--are consequently the most appropriate indicators of reform effects.

In short, local case studies and state level interviews would examine commitment of local actors to state reform objectives, adequacy of resources to support local efforts, and the implementation structure.

In doing this kind of evaluation, it is essential to differentiate initial from long-run impacts, and be cognizant of changes in local response over time. The initial effects will be on inputs and processes such as changes in course-taking patterns of students. Only after several years should we expect significant changes in standardized tests. This type of research is extremely complex, expensive, and takes a long time before even initial results are reported. It requires longitudinal, in-depth case studies of a sample of local schools within each state.

7. Research that isolates the cause and effect relationships. While 1-6 above will be very useful, state policymakers need to know whether there are identifiable cause-effect relationships between student achievement outcomes and interventions like curriculum alignment. This will be difficult and expensive. How can we separate out local policies from state policies if both are reinforcing each other? Moreover, some of the state policies

may conflict and contradict each other. For instance, magnets such as career ladders may attract better teachers, while state-mandated, test-driven curriculum standards repel them. Cause and effect research probably is best attempted in the latter stages of state assessment of reform. We should discover if a program has any impact or has even been implemented before undertaking sophisticated cause and effect studies. There is no sense in researching cause and effect if a program never attracted the attention of local educators.

Some experts contend that cause and effect or input/output studies are not very appropriate for state reforms.<sup>11</sup> The effects of social programs cannot be proven like a principle of physics. The best use of evaluation for omnibus state reforms would assess implementation in varied states and local schools. This implementation focus is crucial because what is delivered to children from state reforms varies greatly by setting (e.g. schools and classrooms). Moreover, implementation is a multi-stage developmental process whereby localities learn and adjust as they install reforms. State policymakers must keep in mind that the decisions made closest to children are the most important. Classroom teachers display enormous differences in how they react and adjust to external state reforms.

### Conclusion

Most of the states will have enacted the bulk of their reform efforts by January 1986. The ensuing years will be occupied with sifting and sorting impacts and promising approaches. Hopefully, state reform will not be judged by a single misleading indicator like SAT scores. But policymakers must have varied and specific evaluations in order to forestall such simplistic judgement. Almost no state has devoted the resources necessary to mount such complex evaluations. Yet, the reform momentum and future education funding are linked to public perceptions about the "success" of reform. Public disillusionment with this reform era could result in a renewed interest in public funding for private schools.

## FOOTNOTES

1. For an elaboration of this point and several other issues in this initial section, see Michael W. Kirst and Walter I. Garms, "The Political Environment of School Finance Policy in the 1980s," in James W. Guthrie (ed.), School Finance Policies and Practices (Cambridge: Ballinger, 1980), pp. 47-78.
2. Ibid, p. 65.
3. See Allan Odden, "Education Finance 1985: A Rising Tide or Steady Fiscal State," an address to the annual meeting of the American Education Finance Association, Phoenix, April 1985, p. 15.
4. Anthony Downs, "Up and Down with Ecology: The Issue Attention Cycle," The Public Interest, 1972, pp. 39-50, No. 29.
5. Odden, op. cit., p. 25.
6. See Allan Odden, "Financing Educational Excellence," Phi Delta Kappan, Vol. 65, No. 5, January 1984. The two states were South Carolina and Tennessee as cited in Odden's 1985 AEFA paper.
7. Henry M. Levin, Cost Effectiveness: A Primer (Beverly Hills: Sage, 1983), p. 15.
8. Lee Cronbach, et al., Toward Reform of Program Evaluation (San Francisco: Jossey Bass, 1980).
9. Study conducted by Policy Analysis for California Education by Pam Grossman, Michael Kirst, Jackie Posner, and Worku Negash, 1985.
10. Michael Knapp and Marian Stearns, "Improving System Wide Performance: Evaluation Research and the State Education Reform Movement," in J. Wholey, et al. (eds.), Organizational Excellence: Roles for Evaluators (Lexington, MA: Lexington Books, forthcoming). Entire cumulative effects section of this article based on above paper.
11. Milbrey W. McLaughlin, "Implementation Realities and Evaluation Design," (Stanford: IFG, Program Report No. 84-B1, 1984).