DOCUMENT RESUME

ED 340 097 EA 023 439

AUTHOR Clune, William H.
TITLE Systemic Educational Policy. Education Issues.
INSTITUTION Wisconsin Univ., Madison. Robert M. LaFollette Inst. of Public Affairs.
PUB DATE Jul 91
NOTE 19p.
AVAILABLE FROM Robert M. La Follette Institute of Public Affairs, The University of Wisconsin-Madison, 1225 Observatory Drive, Madison, WI 53706.
PUB TYPE Viewpoints (Opinion/Position Papers, Essays, etc.) (120)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Centralization; Change Strategies; *Educational Objectives; *Educational Policy; Elementary Secondary Education; *Organizational Change; *Policy Formation; Public Schools; *Statewide Planning
IDENTIFIERS *Wisconsin

ABSTRACT

Issues in systemic educational policy are discussed in this paper, with a focus on improving student achievement. First, the limitations of the current educational policy as a means to improve student achievement are described, and a conceptual framework for systemic educational policy is presented. The advantages and disadvantages of centralized instructional guidance are discussed next, followed by descriptions of systemic policy models from South Carolina, California, Connecticut, New York State, and the City of Chicago, The next part examines the roles of decentralization and choice initiatives, and concludes with thoughts about the interplay between centralized policy and school level innovation in a systemic reform strategy. One figure is included. (24 references) (LMI)

Education Issues

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Published by the
Wisconsin Center for Educational Policy
a center of the
Robert M. La Follette Institute of Public Affairs,
University of Wisconsin–Madison.

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July, 1991

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Systemic Educational Policy

William H. Clune

The idea behind systemic educational policy is that the current policy goal of substantial increases in student achievement will require a major shift in a large number of educational policies. The term *systemic* is intended to suggest "many policies pointed toward student achievement."

Historically, educational policies have not been effectively aimed at achievement and have not been coordinated (pointed in the same direction). On the other hand, educational policy is beginning to respond to the pressure for increased student achievement with a variety of more systemic approaches. The purpose of this paper is to describe the historical problems with educational policy, propose a conceptual framework for describing systemic policy (which will allow us to recognize it when we see it), discuss the advantages and disadvantages of centralized instructional guidance, give examples of systemic educational policy from several states and Chicago, discuss the role of decentralization and choice within systemic policy, and conclude with some thoughts about the interplay of centralized policy and school level innovation in a systemic reform strategy.

Limits of Current Educational Policy as a Means of Increasing Student Achievement

Traditional educational policy is incapable of producing major gains in student achievement. This is the fundamental reason for all the contemporary interest in educational reform. Consider these problems:

- Educational reform and rhetoric have been more or less continuous for some time, but student test scores have remained relatively stable (Linn and Dunbar 1990). On the other hand, some favorable developments in achievement (for example, the recent narrowing of the black/white gap in mathematics and reading achievement) may be due to isolated examples of a systemic approach (O'Day and Smith 1990).

- Twenty-five years of research have shown that many educational practices are unrelated to achievement. For example, research suggests that the factors which absorb most increases in educational funding—slight increases in teacher salaries

and small decreases in class size—are not likely to increase student achievement (Codden and Pleus, forthcoming). But more targeted approaches may be effective (e.g., salary increases for beginning teachers plus effective recruitment programs in schools with high teacher turnover and carefully designed tutorial remediation in third grade reading) (Murnane et al., forthcoming; Madden et al. 1991).

- Many of today's goals for education will require massive, coordinated change in educational practice and delivery systems. For example, new approaches in mathematics and science will require changes in teachers' knowledge, attitudes, and training, as well as in teaching method, student testing, and parents' attitudes (Fennema, Carpenter and Peterson 1989; Guthrie 1990; National Council of Teachers of Mathematics 1989).

- Educational policy is typically extremely fragmented and ineffective, producing a great volume of uncoordinated mandates, programs, and projects that provide no coherent direction, increase the complexity of educational governance and practice, and consume a lot of resources. The United States produces the largest quantity of educational policy in the world, and the least effective (Cohen 1990).

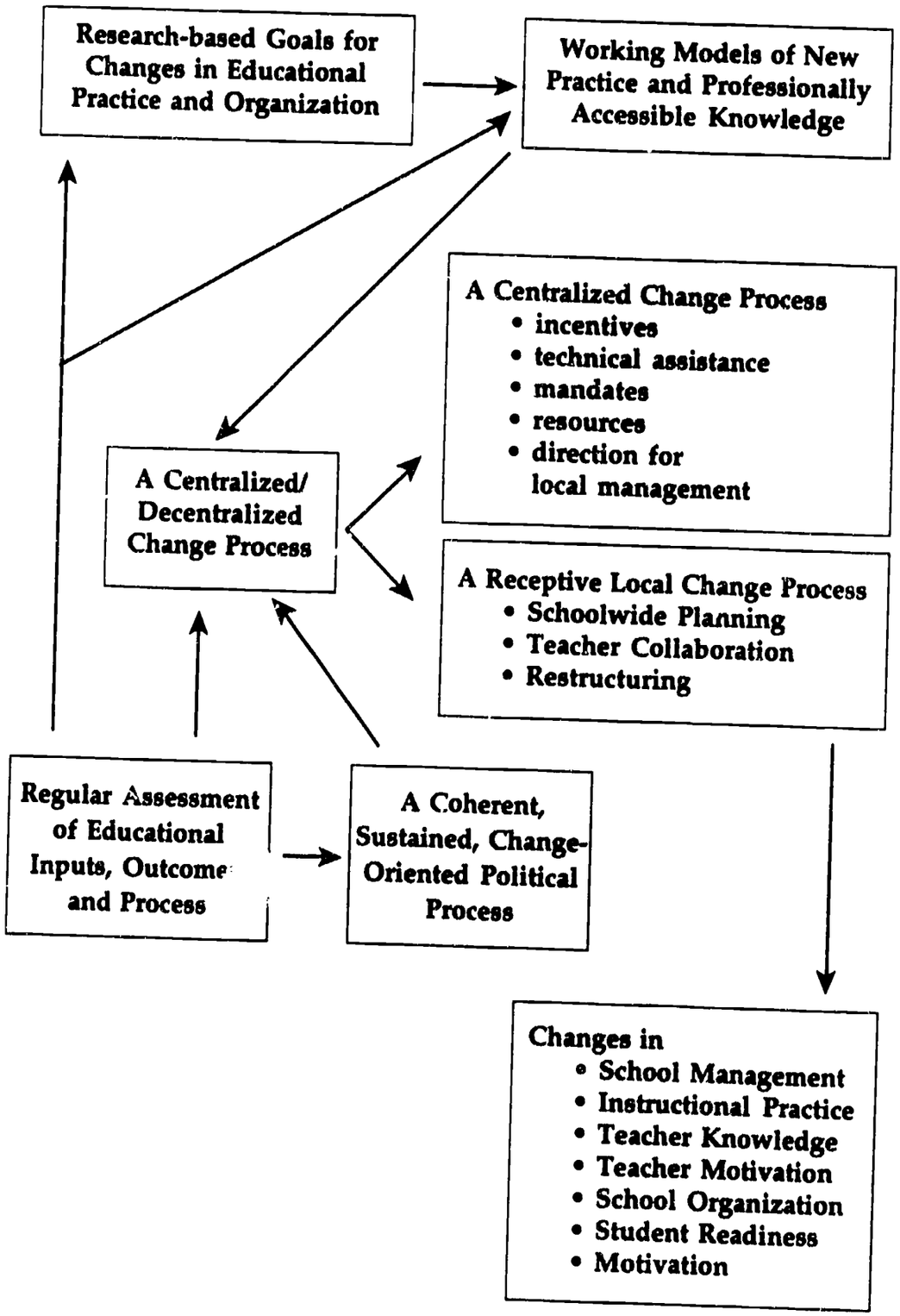
- Education for the urban poor has reached such a state of crisis that well designed and coordinated supplementary educational and social services will be required as the foundation for the regular academic program. Yet social and educational policies aimed at poor school-age children are presently fragmented and poorly coordinated (Kirst 1991).

A Conceptual Framework for Systemic Educational Policy

A conceptual framework for systemic educational policy is given in Figure 1. Systemic policy has five characteristics:

(1) **Research-based goals for changes in educational practice and organization.** The importance of educational research is underestimated because much research is not useful, and much useful research shows that many educational practices are ineffective. But research findings about effective practices are gradually accumulating, and these tend to be quickly seized upon by a policy system which is hungry

Figure 1
A Schematic Representation of
Systemic Educational Policy



for solutions. Finding out how to increase educational achievement is a difficult task for everyone, including policy makers and practitioners; good research is needed to establish new directions.

Summarizing the useful findings of educational research is difficult. Some types of influence are very deep and pervasive; for example, decades of research by cognitive scientists on the nature of reading and mathematical reasoning (which then work their way into curriculum and student testing).

Specific practices identified by research as promising include higher curriculum content, targeted tutorials for accelerated remediation in elementary school, upgraded and supplemental instruction in high school academics, new vocational courses with high academic content, school/business partnerships, easier transition from secondary to post-secondary school, meaningful report cards, schools in the effective schools model (e.g., with active instructional leadership), and preschool and children's services, such as nutrition and health care.

One could characterize the items on this list as embodying one of four kinds of coherence: coherence of the curriculum, coherence of the educational experience and its consequences for the individual child, coherence between the entire life of the child and the school experience, and coherence in school organization. A fifth might be added—Japanese teachers create a coherent educational experience within the classroom (Stigler and Stevenson 1991); as we will see, producing this kind of coherence then requires coherent—or systematic—educational policy.

(2) **Working models of new practice and professionally accessible knowledge.** Change requires more than good ideas for new directions. It requires a real understanding on the part of teachers and other people in schools about how to implement the change. In the case of new mathematics, for example, curriculum frameworks might be supplemented with new instructional materials, new forms of student testing, and groups of teachers who can teach other teachers how to engage in active teaching of the new material.

(3) **A centralized/decentralized change process.** Systemic change requires a change delivery system which usually includes both centralized and decentralized aspects. A centralized dimension is needed because schools and teachers often lack the capacity to conceive and implement innovations on their own. Even the centralized process must acquire decentralized aspects, however. The state government may set goals centrally (as with curriculum frameworks) but an effective delivery system is likely also to require something like a network of consultants—teachers trained in the new curriculum con-

tent, effective schools management teams, and so on. This central system plus outreach then must be matched by some kind of active change process within schools and among teachers. A teacher who attends a workshop on a new approach to mathematics will not change math instruction in the school unless the workshop process is replicated among the rest of the math teachers in the school (Clune 1990a).

(4) **Regular assessment of educational inputs, outcomes, and process.** Methodologically valid and reliable measures of student achievement and other educational outcomes (e.g., graduation, college entrance, job skills and placement) are the cornerstone of systemic educational policy. The most important reason for indicators of educational outcomes is our substantial and continuing ignorance about the determinants of student achievement (Clune 1990b). If we knew exactly what to do to increase achievement, we might dispense with student assessments and concentrate on educational practice. But the exact effectiveness of most proposed reforms and the best way to implement them are uncertain. The effectiveness of reform in different states, school districts, and schools is also very hard to judge. For example, when school report cards are implemented, a common experience is that some schools with previously top-notch reputations do not look very good on "value added" criteria across grades.

The design of a first class system of student assessments is extremely important and should be given careful attention, with input from experts and teachers. Student assessments used for educational planning should have five basic characteristics: *representativeness* (achieved through a census approach of testing every child, or random sampling); *measurement of periodic gain* (comparisons of different schools are otherwise ambiguous); *correspondence to ambitious curriculum goals* (corresponding to what is taught in schools but also pushing the curriculum higher); *availability of data by administrative unit* (ability to measure gains by the whole state, district, and school); and some *measures of corresponding educational inputs and process* related to achievement (e.g., student characteristics and course offerings).

Contrary to some recommendation, the indicator system probably should not be high-stakes (including strong rewards and punishments). Because of uncertainty about desirable educational practice, and the enormous diversity of the system, responses to problems identified by the indicators should be open-ended and flexible.

(5) **A coherent, sustained, change-oriented political process.** The analysis of systemic change to this point paints a picture of a change process working over a period of time to produce new practices among teachers and within schools. But the political process creating and

supporting this type of change must have qualities of coherence and durability not usually found in American educational policy. At least three dangers must be avoided: 1) the tendency to discontinue change efforts during periods of budgetary difficulty; 2) the tendency to dissipate and fragment coherent change through a continuing stream of disjointed reforms, programs, and projects; and 3) loss of momentum through inertia and lack of leadership. Avoiding these dangers requires a political process with at least two attributes: 1) public consensus and a powerful, supportive political coalition; and 2) a set of legislative and executive institutions for maintaining the reforms and preventing policy disruptions.

The Logic of Systemic Instructional Guidance

Many of the changes in educational practice needed to improve student achievement do not directly involve curriculum and instruction. For example, achievement gains could be expected from better social services, safer schools, a heightened sense of community, greater parental involvement, a reduction in absenteeism and the drop-out rate, and stronger external incentives for high achievement, such as links to college and employment opportunities.

Nevertheless, there is a strong push in systemic educational policy toward what can be called "systemic instructional guidance"—an effort by the state to coordinate curriculum frameworks, student assessments, teacher training, and school change around a powerful, coherent vision of curriculum content (Smith and O'Day 1990).

There are several reasons for this effort. First, curriculum in the United States is quite weak; upgrading curriculum content has a powerful influence on student achievement; curriculum reform does not require massive new resources, since the instructional time is already available; and spontaneous, widespread curriculum reform at the school level is unlikely.

Second, in theory, upgrading the curriculum allows the system to achieve a higher degree of coherence and a lower level of fragmentation because of the focus on the entire educational experience of students. The authors of the Science Project 2061, for example, decided that science instruction in the United States could not be saved by tinkering and adding new material but could be greatly improved and focused through the substitution of an entirely new curriculum (Rutherford and Ahlgren 1990).

Third, the coordination of curriculum standards, student assessments, and teacher preparation requirements provides an opportunity, not otherwise readily available, for policy makers to send a clear, consistent message to schools about the nature of their educational

mission. Such a strong message from the policy environment encourages schools to develop a corresponding, clear educational mission of their own. Clear goals and high academic expectations are two characteristics of effective schools. Since the elements of instructional guidance usually exist for independent reasons (e.g., student testing for accountability), coordinating them reduces policy dissonance and provides a potentially powerful tool for upgrading curriculum.

Whatever the justifications for systemic instructional guidance, note that to be effective, it must conform to the basic structure outlined in Figure 1, including a centralized/decentralized change process. Curriculum frameworks will have little effect in the absence of a process to push new forms of practice into the schools.

Potential problems with instructional guidance also should be recognized. The two most commonly discussed problems are stifling of ambitions and innovative curricula in local schools and the stifling of teacher initiative and responsibility through excessive prescriptiveness and control. Solving these problems is not necessarily easy. For example, many Ivy-League-oriented fast-track private schools in New York do not participate in the justly acclaimed New York State Regents examinations, because they believe that their own curricula are much better than the Regents'. Perhaps even a high-end standard curriculum is a resource mainly for weaker schools; clearly, special attention should be given in such a standardized system to the curriculum for lower achieving students (for example, building a high-quality entry-level math course for high schools, rather than emphasizing college prep, as does the Regents').

The solutions usually recommended to avoid problems with instructional guidance are to adopt instructional guidance only when there is a consensus or common core of learning goals and to use long-range learning goals rather than detailed regulation of the scope and sequence of each course. The recent trend toward "performance assessment" (e.g., math problem solving and written essays vs. multiple choice) may help solve the problems of instructional guidance by requiring a high degree of activity and autonomy on the part of both teachers and students, by adapting easily to ambitious curriculum goals, and by corresponding closely to the actual learning goals of most teachers.

State and Local Models of Systemic Educational Policy

My purpose in this section is to indicate, very briefly, how the policies of a number of "lead" states and Chicago fit the model of systemic instructional policy described here, and also how the model helps identify gaps and flaws in those policies.

South Carolina has a simple and effective design for systemic educational policy (Peterson, forthcoming). A strong political movement at both the grass roots and elite levels created a reform bill and corresponding joint legislative committee. Various common educational goals were adopted: gains in standardized achievement tests, more course taking in academic subjects, higher graduation and college entrance rates, lower teacher absenteeism, higher teacher satisfaction, and so on. Progress on the goals is reported for the state, districts, and schools. Limited incentives and regulatory waivers are offered for progress at the school level. Schools needing improvement are assisted by consulting teams from the state. Coherence in the whole effort is provided by public adoption and reporting on a variety of educational goals which are adjusted over time. Political institutions protect funding for the reforms, and the public remains supportive of improvement (as opposed to maintenance of the status quo). To this point, South Carolina has not adopted instructional guidance at the state level, and thus, implicitly promotes the goals embedded in standardized achievement tests, which perhaps can be best characterized as "the basics" (except for the emphasis also given to higher enrollments in advanced academic courses).

Historically, California's reforms have been coordinated by powerful legislative leadership and the State Superintendent (recently, Bill Honig). Curriculum frameworks and a statewide student assessment provide educational goals. Change is encouraged through a complex state management system, including networks of and workshops for teachers, state-sponsored school improvement related to the goals, and training for district superintendents and principals. California has adopted instructional guidance at the state level, but adoption of the state goals is technically voluntary. Publication of student gains provides some pressure, but the enthusiasm of people in the management system probably is at least an equal force for change. The political base for reform in California is not nearly as strong as South Carolina's with the result that the reforms have been more disrupted by political and budgetary difficulty (e.g., disputes between the Superintendent and Governor, funding gaps for the statewide assessment).

Connecticut is a state that uses student testing to lead reform. Statewide mastery tests of basic skills have been gradually introduced and upgraded (Connecticut State Board of Education 1987). Scores are reported by school. A well publicized set of teacher entrance exams is not coordinated with content of the student assessments. The most recent and highly publicized wave of performance testing is still in the pilot stage, but also marks a move toward a state role in choosing instructional materials. So-called *prompts* (standardized, open-ended problems) are being developed in math and science. The process for

developing the prompts is highly decentralized. Teachers and state government workers design prompts, which are then evaluated on the basis of pilots in the classroom. Thus, Connecticut is moving from a system of statewide assessments with little additional incentives for instructional change toward a more complete system of instructional guidance which includes, in addition to the prompts, a system for gradual training of teachers. Politically, Connecticut gets leadership from the Superintendent's office but, in some ways, operates on a political shoestring, with public support for current activities used as the political capital for continued reform. Thus, as with California, the political durability of the reforms during budgetary difficulties is questionable.

New York is the one state in the country where systemic instructional guidance is fully institutionalized (Tyree, in press). New York has been doing things for decades that some other states are just now trying to begin from scratch, but New York gets less attention because it has an old system. At the high school level, New York has a complete system of instructional materials and student examinations (the Regents exams and Regents competency exams). In a position exactly opposite of its neighbor, Connecticut, New York exercises extensive control over curriculum but does not publish test scores by school. New York also attaches high student stakes to some of its tests (e.g., course credit and the Regents diploma). New York also has been gradually introducing mastery exams at the lower grade levels. Centralized and decentralized change are provided in New York in at least two ways: a so-called turnkey system for gradually training teachers in the new curriculum materials once they are officially adopted, plus decentralized piloting of new curriculum materials and test items. Politically, New York relies, for stability, on the highly autonomous Board of Regents, with its independent constitutional powers, as well as the set of institutions within the Department of Education built around the state curriculum and testing enterprise. For example, since the state is always developing and piloting new materials for tests, it can rely on this established role and need not compete for new resources.

The school reform in Chicago approached systemic reform from the bottom up. Many people equate the Chicago reform with the well publicized school councils. The school councils are important elements of decentralization, as discussed below, but Chicago actually has a complete centralized/decentralized change process (Moore, 1990). A central agency keeps track of indicators of student performance. And the reform coalition which sponsored the reform remains extremely active in evaluating its success, making adjustments, and protecting the reforms from political and legal disruption.

Questions About Decentralization in a Systemic Framework

Decentralization of authority is a necessary part of a systemic approach to educational policy. But fundamental questions remain to be answered before we understand how decentralization can improve student achievement. Policy makers should be aware of the primitive state of our understanding of this topic and avoid rushing toward solutions based on ill-defined philosophies or fuzzy analogies to decentralization in business organizations. I will address two important questions here.

One question is how to structure effective minimum control, or how to achieve what has been described as the goal of "simultaneous loose/tight coupling" (Peters and Waterman 1982). Principals and teachers doing complex tasks have a lot of information that is unavailable to their supervisors. One goal is to give them the freedom to use this information productively; another is to prevent them from concealing information and diverting organizational effort from its proper goals. For example, on the side of the need for greater discretion, only teachers are in a position to understand the complexities of the learning process in each child and classroom. On the side of the need for greater supervision, newly elected school councils in Chicago discovered large amounts of instructional down-time in many schools (e.g., the whole month of September used in homerooms and many classrooms without any teachers for substantial lengths of time). Apparently, in the absence of parental control, principals had the incentive to conceal educational problems from their supervisors in the bureaucracy rather than ask for help in solving them. A second kind of control which is probably necessary is regular monitoring of student achievement, because parents are not in a good position to observe progress relative to social norms, and school personnel may not want to admit they lack the means or the will to produce rapid gains in achievement.

The second question is how to structure teacher discretion. A common dream in education has been completely individualized education regardless of age or grade chronology, yielding the most rapid possible gains for each student, but this imposes too much complexity; the economics of age-graded classrooms are very powerful. Rapid achievement gains in age-graded classrooms require at least two things currently lacking in American education. First, curriculum must be structured to expect significant new learning each year; for example, new material currently accounts, on average, for only about ten per cent of material presented in elementary school mathematics each year (Porter 1989). Second, teachers must know how to get rapid gains from age groups. Japanese teachers, for example, keep the level

of mathematics instruction high, focused, and accessible for heterogeneous groups of students; the Japanese model also involves effective teacher training and collaboration.

In other words, the issue of decentralization appears to be simpler than we sometimes picture it. On the one hand, we need selective, targeted organizational watchdogs, such as statewide student assessments and carefully designed parental control. On the other hand, instead of the unstructured free-for-all in local planning and discretion often associated with school-based management, we need exactly the opposite: a strong structure which allows teacher discretion to be exercised in the most productive manner. Systemic instructional guidance offers a possible vehicle for this kind of structure.

School Choice: Useful Component or Complete Alternative?

Some proponents of choice in education believe that parental choice, by itself, would improve student achievement by producing coherence of mission and a sense of community at the school level (Chubb and Moe 1990). But unregulated choice seems to lack a mechanism to change practice. Choice might well create some benefits from increased parental involvement, but simple choice seems to lack nearly all the elements of systemic change. Missing elements include 1) a set of ambitious common learning objectives; 2) mechanisms to evaluate innovations and ratify those that are successful; 3) a means of training teachers and disseminating successful practices; and 4) a political process and coalition that would protect the change effort over time.

Furthermore, perhaps the easiest way politically to implement choice on a large scale—the political path of least resistance—would be to let people choose their schoolmates, thereby encouraging severe stratification of enrollments by race and class, and ultimately reducing political and financial support for public education (as wealthier parents resorted to supplementary contributions). Thus, a logical approach to choice is to encourage experimentation targeted specifically to low-income students, and to locate choice within a larger context of systemic educational reform.

Conclusion: Policy Coherence and Exemplary School-Level Success

Many aspects of systemic educational policy described in this paper might not seem to be very coherent, for example, the complexities of a centralized/decentralized change process adjusting to varia-

tions in local school context. But coherence in the change process is required to keep innovation on track, while coherence in the political process is required to protect the reforms over time. Coherence of educational objectives would be useful as a way to develop common indicators of success, realize time savings from streamlined curriculum objectives, and provide a metric for coordinating otherwise independent elements of the system (e.g., teacher training).

But the success of systemic educational policy also depends on demonstrable success at the school level with, for example, a few urban schools demonstrating large achievement gains for typical urban students (see, for example, the results reported for a Houston elementary school in the Accelerated Schools Project, 1991). President Bush's America 2000 strategy (1991) has the advantage of trying to encourage school innovations, but with the apparent disadvantage of few institutions supporting systemic change.

What is the ultimate potential of systemic educational policy? Given inevitable variability in the change process and local school capacity, the most that could be expected from well-designed systemic educational policy would be modest annual gains in average achievement, with rapid gains in especially successful schools. Though less than an immediate educational revolution, these are goals well worth pursuing.

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