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How State Education Reform Can Improve Secondary Schools

Allan R. Odden
David D. Marsh

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PART I: STUDY FINDINGS

With the assistance of:

Lyle Allison, Greg Bender, John Bowles, Patricia R. Brown, John Evans, James Guthrie, Eric Hartwig, Gerald Hayward, Michael Kirst, Julia Koppich, Donna LeCzel, Michael McQuary, Betty Merchant, Jill Pearson, Marge Plecki, Gloria Roelen, and René Verdin

Allan R. Odden is an associate professor of education at the University of Southern California and director of the Southern California PACE Center.

David D. Marsh is an associate professor of education at the University of Southern California.

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This paper presents an overview of study findings. A subsequent report, PART II: TECHNICAL APPENDICES, available in 1988, will include research instruments, supporting data, and the like.

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Allan R. Odden and David D. Marsh
University of Southern California
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Policy Analysis for California Education

Policy Analysis for California Education, PACE, is a university-based research center focusing on issues of state educational policy and practice. PACE is located in the Schools of Education at the University of California, Berkeley and Stanford University. It is funded by the William and Flora Hewlett Foundation and directed jointly by James W. Guthrie and Michael W. Kirst. PACE operates satellite centers in Sacramento and Southern California. These are directed by Gerald C. Hayward (Sacramento) and Allan R. Odden (University of Southern California).

PACE efforts center on five tasks: (1) collecting and distributing objective information about the conditions of education in California, (2) analyzing state educational policy issues and the policy environment, (3) evaluating school reforms and state educational practices, (4) providing technical support to policy makers, and (5) facilitating discussion of educational issues.

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How State Education Reform Can Improve Secondary Schools

In 1983 California enacted a comprehensive bill containing dozens of education reform provisions (Senate Bill 813). The scope of the proposed changes had no previous parallel. The bill's many ideas for school improvement, if implemented, potentially could alter the curriculum and instructional practices of virtually every school in the state. However, despite the bill's sweeping scope, and the large accompanying revenue increases, it included neither a proven effective reform philosophy nor a cohesive school change strategy. At the most fundamental level, Senate Bill 813 represented a return to conventional wisdom, a set of aspirations intended to restore California's education system to a former level of achievement and academic rigor.

Many of Senate Bill 813's provisions could be linked logically to school improvement. Nevertheless, a question remained as to whether districts could implement them in a systematic manner. Also, little was known about the interactive effects of such a large number of reform ideas being enacted simultaneously. Could local school districts and schools cope with this level of complexity? In short, after all the excitement of enactment, could local districts weld together Senate Bill 813's disparate provisions into a coherent and forceful set of tools for school improvement?

Purpose of the Study

The purpose of this study was to understand how selected California schools reacted to state school improvement inducements and mandates. Specifically, the study assessed whether or not reform components contained in Senate Bill 813 could contribute to school improvement, and, if so, how?

What the Study Was Not

Before describing the study and its findings, it is important to clarify what the study did not do. Education is important in California. Literally billions of dollars, millions of students, and thousands of employees are directly involved. The long-run condition of the state and the well-being of its citizens depend on school quality. Every responsible person wants California's schools to be more effective. Thus, the financial and political investment in school reforms is intense. Some would like to declare Senate Bill 813 a great success in order to justify added state resources for public schools. Others would like to

declare Senate Bill 813 a failure and, thereby, deny education added revenues or argue for another reform strategy altogether.

At least from these perspectives, both parties will be disappointed in this study. Its purpose was not to judge the overall effectiveness of Senate Bill 813. True enough, students' average statewide test scores have risen since Senate Bill 813's enactment. But that is insufficient evidence by itself to claim victory for school reform. Assessing the effectiveness statewide of a comprehensive school change plan would have required resources far in excess of those spent on this study and a quite different research strategy. Appraising outcomes and judging whether or not they were caused by Senate Bill 813 would have meant the use of a large sample of schools selected to be representative of the awesome size and diversity of California. Half that sample would have had to have received a reform "treatment" while attempting to hold the other half of the sample relatively constant on important dimensions. Only in an experimental design such as this could there be a reasonable control for outside or competing explanations for school change. Such experiments are difficult to conduct in education generally and impossible in this instance.[1] In contrast, this study utilized a purposive, rather than representative, sample of 17 secondary schools known to be in the process of becoming academically more rigorous. Important lessons were learned as a result. However, based solely on the selection of schools, results are not meant to be representative of school experiences statewide. "Sample" in this case refers only to the 17 secondary schools specially selected for this study.

Did Senate Bill 813 bring about school reform in California? Is the state receiving its money's worth in terms of added school productivity? What components of Senate Bill 813 make the biggest difference? These questions cannot be answered by the research reported here. Moreover, it may be that given the relatively short period of time during which Senate Bill 813 has been in effect and the complexity of the interactions involved in the reform provisions, few definitive differences would yet be detectable, regardless of the research design employed.

However, to assert that there are research questions and important policy concerns unaddressed by this study, to invoke caveats, should not tarnish the important research findings the study provides. This analytic endeavor resulted in several major findings all of which are significant to policy makers. Before explaining these findings, however, it is necessary to describe the research procedures used.

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[1] A quasi-experimental time series design might also have been appropriate, but that was not possible either. This study, though not assessing effectiveness, attempted to compensate for the absence of longitudinal data by using retrospective interviews where appropriate.

Research Design

A sample of 17 secondary schools was selected–12 high schools and 5 middle or junior high schools–in order to understand if a number of state-level education reform features could be implemented locally and shaped into effective instruments for enhancing the productivity of schools.[2] To fulfill these purposes, it was important to identify schools that were likely undergoing change. If the schools were in transition, then questions could be posed about "why?" Did Senate Bill 813 have any influence on the changes or were the new procedures attributable to some other cause or causes?

Two steps were taken to locate a sample of changing schools. The first was to ask informed individuals at all levels throughout the state. The question posed was: "Do you know any secondary schools which either have made or are in the process of making the transition to becoming academically more rigorous?" Step two involved examining data provided by the State Department of Education in order to identify secondary schools in which there had occurred large shifts in student enrollments into more rigorous academic courses. Senate Bill 813 had as one of its major objectives increasing academic learning. If the sample schools were characterized by an increased flow of students into academic classes, then the school was at least headed in the direction intended by state reform.

These referrals, in conjunction with state course enrollment information, facilitated construction of a statewide pool of candidate schools from which 17, contained in 10 school districts, were finally selected. In some districts, a senior and a junior high school were included in the sample. Attention was paid to districts, as well as individual schools, because of a presupposition that school board policies and central office management activites would prove to be one important component of school change. Junior high schools and middle schools were selected in order to encompass the range of secondary schooling.

The selection process produced schools that reflected the geographic and urban-rural diversity of the state. Further, the 17 schools reflected the cultural and ethnic diversity of secondary students in California. So while the study selected a purposive sample in terms of response to reform, the sample also had statewide characteristics that represented the state's geographic and demographic diversity. Nevertheless, when the term "sample" is used in this report, it is not meant to imply that outcomes are generalizable to the state as a whole, as they would be under a "representative sample" concept. The hope was that if effective school implementation processes emerged, then the process variables could help guide both district and state leaders in structuring effective reform in other schools across the state.

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[2] The research questions are found in the Appendix.

Research teams studied specific districts and schools. Each team collected data at several different times during the 1986-87 school year, spending a total of at least 11 days in the field for each school. Three mechanisms were used to gather data. Each research team collected documents and other data reflecting school and district activity. Each team interviewed dozens of individuals at the district and school levels. Last, each team observed the interactions of education professionals among each other and with students at both the district and school levels. These documents, interviews, and observations were carefully coded and analyzed.

Major Findings

The major study findings are listed below and each is subsequently described in greater detail.

Finding #1: Virtually all schools studied implemented key Senate Bill 813 education provisions in a manner consistent with state purposes.

- In all of the sample districts, SB 813's increased high school graduation requirements were implemented. In many locations, this was already underway at the time SB 813 was enacted.

- Senate Bill 813's required model curriculum standards have been included in district guidelines at two-thirds of the high schools in the study sample and incorporated into actual subjects in half the schools.

- The combination of additional funds provided by SB 813 and new curriculum standards resulted in the selection and purchase of new, more rigorous texts in a majority of sample schools.

- The California Assessment Program (CAP) is receiving greater attention and use in most of the sample schools. It is used to assess educational progress, to pinpoint problem areas, and to modify curricula.

- All sample schools implemented the longer school day and year–this having been started in many districts before the passage of SB 813.

- All sample schools implemented the 10th grade counseling program.

Finding #2: Senate Bill 813 reform provisions can be effective when woven into a cohesive school change strategy at the local level.

- The study's sample schools show that local education leaders can weave the fragmented components of SB 813 and related state initiatives into a cohesive program of local school change that, when implemented effectively, can improve schools.

- In many sample districts, both commitment to major reform and many concrete efforts to bring it about were underway through local initiation before SB 813. However, research teams concluded that SB 813's legislative force and fiscal resources were crucially important, and without them, many local reform efforts might have foundered.

- In sample schools and districts, SB 813 raised teachers' and administrators' commitment and efforts to improve the quality of education. In these schools generally, SB 813's combination of rigorous new standards and added resources produced a renewed determination to upgrade education.

- Most sample districts and schools placed renewed emphasis on curriculum and instruction issues, education's core activities.

- Districts tended to centralize curriculum and instruction improvement and to move beyond formal state curriculum program implementation into broader curriculum upgrading.

- Districts developed districtwide K-12 curriculum scopes and sequences that aligned curriculum objectives with new textbooks, state model curiculum standards, local tests, and state CAP tests.

- New academic courses represented substantive academic rigor and not relabeled or watered-down versions of old courses.

- Many schools developed new emphases in reading and writing across curriculum content areas, and required more mathematics and science for the average student.

- Most schools implemented programs designed to improve student CAP test scores.

- Most districts implemented staff development programs to strengthen teachers' instructional strategies.

- Sample districts did not view SB 813 as onerous or requiring unreasonable paperwork.

Finding #3: Successful local reform implementation exhibits several key themes.

- District leadership was important both in initiating local reform action and in supporting, over several years, full reform implementation.

- District leaders transformed disparate SB 813 elements into integrated district reform visions that retained the state's academic and intellectually demanding orientation and tailored them appropriately to local priorities.

- Schools added to this district vision a school focus on an improved learning environment, including heightened concern for all students and teacher collegiality.

- Teacher and site administrator participation in designing specific implementation activities balanced top-down district and state reform implementation. School and district "teaming" in ongoing reform implementation helped integrate school and district visions and activities.

- Staff development combined with follow-up assistance in schools and classrooms produced the most improvements in teachers' and administrators' professional expertise.

Finding #4: Attention to both the substance of curriculum and instruction and the process of school change are associated with higher test scores and better learning conditions for students.

- Student CAP scores in the sample schools increased more than the statewide average. Further, CAP scores rose for all students, those at the bottom, those in the middle, and those at the top.

- Senate Bill 813 changes in particular and the broader reform effort in general had more influence on sample high schools than sample middle schools probably because SB 813's provisions are directed more specifically at the high school.

- Students in the sample schools are now subject to more rigorous and academically oriented educational expectations.

- Administrative expertise and practice in the sample schools improved. Administrators were more able to design and implement a strengthened program of instruction, manage a reform process, and supervise instruction.

- Teachers sense of professional efficacy increased.

- Sample schools improved as institutions. They had clearer plans and stronger norms of teacher collegiality.

Finding #5: Students with special learning needs–the poor, remedial, limited-English-speaking, and at risk of dropping out–received increased services, but the services were of a type that produced insufficient levels of academic achievement in the past. Sample schools lacked sufficient strategies for mounting more effective interventions for at-risk students.

Finding #6: Sample schools desired to engage in more complex school improvement, including a curriculum focused on problem solving and higher order skills, but were searching for more effective strategies and assistance to do so.

State agencies also played a major role in improving these schools, but with the caveat that state initiatives interacted with local efforts that often were launched prior to SB 813. "SB 813 didn't cause the reform, " said one local superintendent, "but it sure helped." In the view of many local respondents, the state (1) increased the momentum and continuity of local reform; (2) provided critical technical assistance to districts and schools; (3) monitored and reinforced successful performance; and (4) provided useful direction and materials such as increased high school graduation requirements, new CAP tests, the mentor teacher program, model curriculum standards, and the new state curriculum frameworks.

Implementation of SB 813 Policies and Programs

The study examined the local implementation of several key SB 813 policies and additional state initiatives. This section summarizes and synthesizes study findings about how the following policies and programs fitted together and operated in local districts:

- increased high school graduation requirements
- model curriculum standards
- textbook selection criteria
- new state CAP tests, especially the 8th grade CAP
- mentor teacher program
- certification for teacher evaluators
- additional staff development for teachers and administrators
- 10th grade counseling program
- California's school improvement program
- homework policy
- longer days and years
- quality indicators

Increased High School Graduation, CSU, and UC Entrance Requirements

Effective in the 1986-87 school year, SB 813 mandated new statewide requirements for graduation from high school. The State Board of Education developed even more rigorous standards, though they only bore the weight of recommendations, not mandates. These entrance requirements are given below. Numbers refer to years.

	SB 813 Requirements	State Board Recommendations	CSU Required 1988	UC Required 1988
English	3	4	4	4
Math	2	3	3	3
Algebra	-	(1)		
Geometry	-	(1)		
Science	2	2	1	1
Physical	(1)	(1)		
Life	(1)	(1)		
Social Studies	3	3	(this may be taken as one year of	
World Civ.	(1)	(1)	U.S. History or .5 year U.S. History	
U.S. Hist.	(1)	(1)	and .5 year Civics or American Govt.)	
Ethics	-	(.5)		
Am. Gov.	(1)	-		
Economics	-	(.5)		
Foreign Lang.	1 (or Fine Arts)	2 (in same language)	2	2
Fine Arts				
Computer Studies	-	(.5)		
Physical Ed.	2			
Electives			3	4

Note: Subsequent legislation has mandated 0.5 year of economics for high school graduation.

Study Findings–Graduation Requirements

- All sample districts increased high school graduation requirements to the SB 813 minimums.
- Most sample districts increased high school graduation requirements in anticipation of the SB 813 mandates. The effective dates of increased requirements often fell immediately prior to SB 813 timelines.
- English and mathematics requirements in sample districts generally fall above SB 813 mandates, but slightly below state board recommendations.

Model Curriculum Standards

To assist local school districts in upgrading course content, SB 813 required the State Department of Education to develop model curriculum standards for the mandated graduated requirements. School districts were required to compare their local curriculum to the model standards at least once every three years. The model curriculum standards were intended to serve as a model, not a mandate. The standards have been designed to allow boards as much flexibility as possible in making comparisons, and in implementing strategies and details. The content that should be covered by the time students have completed, for example, three years of English, is clear in general terms but can be accomplished in a variety of ways. Model curriculum standards have been developed for grades 9-12 in the following subject matter areas:

- English and Language Arts
- Foreign Language
- History and Social Science
- Mathematics
- Science
- Visual and Performing Arts

Study Findings–Model Curriculum Standards

- Model curriculum standards were compared, as required by SB 813, to district curriculum guides in 11 of 12 high schools and four of five junior schools.
- The content of model curriculum standards in most subjects has been included in *district* guidelines at eight out of 12 sample high schools.
- When incorporated in the curriculum guides, model curriculum standards have resulted in a stronger emphasis on higher order thinking skills,writing, and reading across content areas.
- The impact of model curriculum standards on changes in course content in the classroom has been low.
- Only six of 12 sample high schools claimed to have incorporated model curriculum standards into the subjects as actually taught in the school.
- Model curriculum standards have had minor impacts on curriculum change at the junior high or middle school levels.
- Teachers frequently stated that model curriculum standards are difficult to implement; they include too many topical subjects and are difficult for some groups of students.
- Model curriculum standards appear to be an effective beginning step to major curriculum reform. Model curriculum standards are stimulating districts to strengthen and deepen curricula and accelerate the pace of instruction. The new standards are operating at the district level. Such is not always the case for the new curriculum in classrooms.

Changes in Textbooks Adopted

California high schools, grades 9-12, adopt textbooks based on their own district policies. Textbook selection for a given subject occurs every six years. During the year of the study, texts were being selected for science, social studies, English as a Second Language (ESL), English, and economics.

Junior and middle schools must select texts from a state adopted list when purchasing them with state textbook funds. Recently, the state began to require publishers to cover content in greater substantive depth, to include higher level skills as well as basic content and knowledge skills, and to cover in an objective manner some controversial topics.

Study Findings–Text Selection

- Almost all sample schools select texts by using teams of teachers, administrators, and central office personnel. Once these teams develop a list of texts, individual teachers frequently suggest which books from this list should be purchased.
- Alignment of texts with district curriculum and tests is effective at both the junior and senior high school levels in the study sample.
- Nine of 12 sample high schools and all junior highs write curriculum before selecting texts. One high school selects texts prior to writing curriculum.
- Sample districts are aware of the need to upgrade texts, so there have been changes regarding better texts, more difficult texts, and the inclusion of higher order thinking skills.
- Texts, along with model curriculum standards and tests, are a key link to curriculum changes.
- Teachers in sample schools are using new texts in their courses.

CAP and Other New Tests

Statewide testing of all California 3rd, 6th, and 12th graders has been conducted since 1973. The California Assessment Program (CAP) provides achievement information on school and district levels, not for individual students. This testing program uses questions specifically designed to match California's school curriculum. The 8th grade test includes reading, mathematics, writing, science, and social studies. Currently, only reading, mathematics, and written language are assessed in the 3rd, 6th, and 12th grade tests. Future tests for these grades also will include writing samples, as well as science, history-social science, and critical thinking across all content areas. The current 12th grade reading and mathematics tests have recently been revised, are now more aligned with model curriculum guides, and will be administered in December 1987.

Study Findings–Tests

- CAP reading scores rose in all sample high schools and in four out of five sample junior high schools; CAP mathematics scores rose in 10 of 12 high schools and in four out of five junior high schools. Average CAP score gains in both reading and mathematics rose above statewide average increases for both the high schools and the junior high schools.
- Statewide testing strongly influenced curriculum change in sample schools.
- All sample schools were sensitive to the importance of CAP tests to school and district public image.
- CAP drove sample school curriculum changes by emphasizing higher order thinking skills, writing, and science.
- Most sample junior and senior high school personnel were aware of the new 8th grade CAP, with its emphasis on problem-solving application and higher-level thinking skills. Most were also aware of the new 8th grade direct writing assessment. Most high school personnel were aware that the 12th grade CAP will change drastically in December 1987 when the new version will be given.
- Eight of 12 sample high schools and all five junior high schools specified that the CAP had a high or medium influence on their school "vision."
- Some degree of testing review is conducted for students at eight of 12 sample high schools and two junior highs. Schools are becoming more sophisticated about tests. Students are being taught how to take tests, tests are being integrated into the curriculum, specific test content review often is provided, and schools are striving to increase students' test scores.

Mentor Teacher Program

The California Mentor Teacher Program provides state-funded stipends for up to five percent of classroom teachers in California. In order to qualify for a stipend, a candidate must be a credentialed, permanent classroom teacher, have recent teaching experience, and have demonstrated exemplary teaching ability.

A selection committee, composed of a majority of classroom teachers, nominates candidates for mentor positions. Candidates are selected by the school board from those nominated. Mentors receive a $4,000 stipend above their regular salary for performing any of the following duties, as determined by the district:

- Provide assistance and guidance to new teachers (a mentor's primary function)
- Provide assistance and guidance to more experienced teachers
- Provide curriculum development

The only restrictions placed on mentors are that they must spend at least 60 percent of their time "in direct instruction of students" and they may not formally evaluate other teachers.

Districts are provided funds for other support costs associated with the program. In the 1983-84 and 1984-85 school years, districts received $2,000 per mentor to cover these costs.

Study Findings–Mentor Teacher Program

- Mentor selection processes varied in sample districts and schools but generally included application, interview, and observation.
- Mentor programs were affected by labor issues, and the necessity to bargain terms and conditions delayed or altered implementation in some sample schools.
- "Mentor" designations at times influenced teacher collaboration negatively rather than extending peer interaction.
- Mentors were used primarily for curriculum development and secondarily to provide assistance to both new and experienced teachers.
- Assistance provided to teachers was on a voluntary basis.
- Generally, mentor deployment had not been heavily coordinated with local school reform or change efforts promoted by the state.
- Administrative support and direction at both sample districts and schools appears to be a factor in mentor success and use. Although districts provided little training and assistance to their mentors, when it was provided, it was generally in the area of clinical teaching and helped improve mentor activities.
- Reliance upon mentors by staff was low, in part due to lack of clarity regarding roles. Administrative knowledge and support of mentors seemed to increase visibility and usage.
- The $2,000 per mentor administrative stipend was frequently employed to provide release time for mentors, money for mentors to attend conferences and workshops, and to purchase materials and supplies.

Certification of Teacher Evaluators and New Teacher Evaluation Systems

SB 813 required teacher evaluators to be certified in a set of newly identified competencies. In order for school districts to receive school apportionments from the State School Fund, on or before 12/1/84, they had to adopt regulations establishing the certification of personnel assigned to evaluate teachers. Teacher evaluators needed to demonstrate competence in instructional methodologies and evaluation for the teachers they were assigned to evaluate. Personnel were to be competent in the following areas:

- Instructional leadership–the ability of an administrator to provide educational as well as managerial direction
- Curriculum knowledge of the content, structure, scope, and sequence of what students are being taught
- Instruction–knowledge of how students are taught, including multiple teaching methodologies to reflect multiple learning styles
- Assessment–what students are learning, the ability to use data to establish performance standards and make program decisions
- School climate–the ability to create and sustain supportive and appropriate learning environments for students and school staffs
- Staff development–knowledge of and commitment to assessing and providing staff development tied to district curriculum, instructional priorities, and teacher needs
- Supervision–knowledge of and ability to supervise teachers through observation conferencing, and staff development, as well as professional responsibilities to evaluate teaching performance.
- Evaluation and documentation–ability to use state laws, district policies, contract provisions and appropriate supervision techniques to recognize superior performance and to correct poor performance.

In addition, administrators needed to know district procedures for diagnosing student needs, how the instructional program met those needs, and how assessment data were used to support revisions in instruction. An effective teacher evaluation system is built upon local needs and services, and the administrator should have a strong ability to motivate staff and supervise instruction, as well as evaluate teaching performance.

Study Findings–Certification for Teacher Evaluators

- Fifteen of the 17 sample schools trained all administrators in teacher evaluation. One indicated that new principals were trained as they came on board, implying that all were trained.
- Ten of the 17 schools offered medium-intensity training, which might include an initial training session with an annual review. Two schools had low-intensity, "one shot" training. The four instances of high-intensity training offered follow-up and, in some cases, observation and peer coaching of the evaluation process.
- In five cases, training was provided by the district alone; one was provided by outside consultants alone, and 10 were provided by a combination of district resources and outside consultants. There appeared to be no relationship between the intensity and delivery system of the training.
- Fourteen sample schools specified the use of a clinical supervision model.
- Eight of the 17 schools reported some type of follow-up activity for the training. Nine did not mention follow-up.
- Fourteen of the schools indicated that the principals were supervising in the manner in which they were trained; three were not.
- Five senior high schools and five junior high schools indicated that their method of teacher evaluation was not new since SB 813. Most of these schools stated they had been satisfied with the quality of their teacher evaluations for some time.
- Seven schools indicated that the districts had done the training and that was all. Three reported that the reform was a major impetus for launching an administrative training program. Seven stated that reform had had no impact in that they had a good evaluation system for some time.

Other Local Staff Development for Teachers and Administrators

The study also gathered information on other local staff development activities. Senate Bill 813 mandated that teachers hired after September 1985 receive 150 hours of staff development every five years.

Study Findings–Staff Development for Teachers

- There is a widespread base of training in clinical teaching and clinical supervision on which future staff development activities can build. Staff development focused on improving instruction, and administrator supervision of instruction has become standard procedure in many sample schools. This base of staff development could be "exploited" as more content and grade-specific staff development focuses on implementing the model curriculum standards, the new state frameworks, and CAP tests.
- Staff development generally took the form of formal inservice training.
- The most common themes in sample schools for staff development were clinical teaching, curriculum content, general pedagogy, and classroom management.
- Participation in staff development activities that promoted district-wide pedagogical and clinical teaching activities was most often mandatory. Participation in additional staff development activities was often voluntary.
- When they existed, mentors were frequently used as part of the district's staff development program.
- There was greater use of district or local trainers as compared with reliance on outside consultants.
- County offices appeared to be only infrequently utilized as a resource.
- Follow-up coaching was limited.
- The extent to which new instruction techniques explained in staff development are actually used in the classroom is unclear.

Study Findings–Staff Development for Administrators

- All principals and most administrators received some type of staff training.
- Of the 17 sample sites, five had mandatory training, eight had a combination of mandatory and voluntary training provided. Seven sites used a combination of district and outside consultants for training.
- Fourteen sites indicated that training was done by the district; at four sites this was the only training provided. Seven sites used a combination of district and outside consultants for training.
- Nine sample sites were using administrative training centers as part of their training program. Three sites were using county resources.
- At the junior highs, the method of training was equally provided through meetings, conferences, and inservice training sessions. At the high schools, all three methods were also used, but meetings, both formal and informal, were relied upon more heavily.
- The intensity of administrative staff development was analyzed by researchers as follows: seven showed low intensity, five medium, and four high. The other sites did not provide sufficient information to gauge the intensity of the training.
- Six sites indicated that follow-up coaching was provided to administrators.
- Sixteen of the 17 sample sites indicated that clinical supervision was at least one, often the only, purpose of administrative training. This policy is linked tightly to teacher evaluations. Ten provided training in curriculum and instruction. Other popular topics were effective schools, district reform goals, and leadership.

School Improvement Program

California's School Improvement Program provides aproximately $85 per student to schools in the program to develop and implement a school site-defined education improvement program. A School Improvement Program Quality Review is conducted every three years to evaluate each school's program. Until recently, the review was conducted by State Department of Education monitors, and it emphasized program services for special-needs students. In 1983-84, the program quality review guides were changed and the program quality review function was decentralized to the local level. Now, program quality review focuses on the quality of a school curriculum program and the degree to which categorical services for special student populations reinforce the core, curriculum program. These changes specify in more detail the substance of local School Improvement programs and signal that School Improvement can be used as a program for implementing curriculum change in response to education reform mandates. Further,

consortia of *local* educators now conduct program quality reviews, thus removing the state from the local review process.

Study Findings–School Improvement Program

- A majority of schools in this study did not receive School Improvement funds.
- Three sample high schools participating in the School Improvement program indicated a high influence of the program on reform.
- School participating in the School Improvement Program had a process for engaging in efforts to improve the school and knew how to develop a long-term plan, and SB 813 gave them a more focused direction.
- The two schools using Achievement Council assistance reported a high impact on the school's reform efforts, in general ways similar to a school improvement program.
- The focus of School Improvement at the high schools was generally on staff development, computers, and raising the quality of education for minority populations.
- The focus of School Improvement at the junior high schools was on staff development and raising test scores.

Homework Policies

SB 813 required each district to develop a homework policy.

Study Findings–Homework Policy

- Seven districts had developed a homework policy. In addition, three high schools and two junior highs also had individual site policies.
- There has been little or no effect in sample schools of the homework policy related to school reform efforts.
- It appears difficult for districts or sites to enforce homework policies.
- Homework practices seem to be a classroom teacher responsibility, difficult to affect by district policy.
- There was a general sense that the amount of homework being assigned by teachers had increased in the past four years, but more as a result of a new national atmosphere of "academic orientation" and not because of new district homework policies.

Tenth Grade Counseling

SB 813 provided a program for districts to establish a comprehensive program of counseling for pupils reaching the age of 16, or for pupils prior to the end of the 10th grade, whichever occurs first. The counseling program must review a pupil's academic progress and educational options and design an academic program that would lead to high school graduation. Districts were eligible to receive $20 per 10th grade pupil for counseling services provided in 1983-84 and in 1984-85 for services which supplemented, but did not supplant, existing services.

Study Findings–Tenth Grade Counseling

- A 10th grade counseling program was implemented in all 12 sample high schools.
- The focus of counseling is college preparation, dropout prevention, and high school course planning to ensure graduation.
- Parents are involved in the counseling provided at most of the sample high schools.
- Counselor-student ratios varied from 1:71 to 1:440.
- Four sample schools extended the program to the 9th grade, and one received permission to implement the program in 8th grade.
- No pattern was found in the manner in which the counseling money was used.
- Students are generally counseled once a year; one school was providing counseling twice a year.
- This policy was fully implemented in all sample schools; however, the quality of the program is mixed.

Longer School Day and Longer School Year Incentives

In 1984-85, districts operating school for at least 180 days were entitled to an additional $35 per unit of average daily attendance (ADA), exclusive of adult ADA and summer school ADA. Thereafter, districts needed to maintain the 180 day instructional year in order to retain the financial bonus.

Based upon the number of instructional minutes offered in 1982-83 and instructional minutes offered in 1983-84, districts received a bonus of $20 per ADA in

grades K-8 and $40 per ADA in grades 9-12 for each of three years if they increased the number of instructional minutes one third of the distance per year toward, or met and maintained, the following goals:

- 36,000 annual minutes in Kindergarten
- 50,000 annual minutes in grades 1-3, inclusive
- 54,400 annual minutes in grades 4-8, inclusive
- 64,800 annual minutes in grades 9-12, inclusive

Schools had several options for increasing the school day or year. Some examples include:

- adding a homeroom where none previously existed
- increasing the passing time between class periods
- increasing the minutes of each period
- increasing the number of school days in the year.

Study Findings–Longer School Day and Longer School Year

- Several sample schools had begun the process of lengthening the day prior to SB 813.
- Where there were previous cutbacks in the day and year, the lengthening resulted in major effects at the school level.
- The biggest change seems to be the addition of a 6th period and more days in a year.
- Some sample schools increased the day beyond the minimum required. the cases in which entire additional periods were added.
- The impact of the longer day and year on school reform was at best modest, except for the cases in which entire additional class periods were added.
- Most schools stressed the advantage of the extra money they received by complying with the minimum school day and year requirements.

Quality Indicators

The first phase of the state's "quality indicators" accountability program was to identify the measures against which educational progress will be judged and to establish goals for statewide improvement. A comprehensive set of accountability measures was developed which include the following *state quality indicators*:

- increased enrollment in mathematics, English, science, history and social studies, foreign language, and fine arts
- improved statewide CAP test scores
- reduced dropout rates and increased student attendance rates
- increased performance of the college-bound student on the SAT and AP exams and College Board achievement tests

Statewide targets for improvement through 1990 were established for each quality indicator. The accountability program also asked districts and schools to establish their own local targets and improvement strategies to help meet the state goals. Such *local quality indicators* could draw on a larger body of evidence and address:

- strength of the school's curriculum, describing what is being taught and how well students are learning what they are being taught
- amount and quality of writing assignments completed by students
- amount and quality of homework assignments completed by students
- number and types of books read by students
- support the school receives from the community and parents
- awards and recognition received by the school, its teachers, and students
- nature and quality of support the school provides students with special needs
- participation by students in extracurricular activities

Study Findings–Quality Indicators

- Eight sample high schools and four junior highs had developed *local quality indicators*. Of these schools, the influence of these indicators on reform varied: high (4), medium (4), low (3), none (1).
- The impact of the *state's quality indicators* on school reform varied: high (3), medium (6), low (4), none (4). There was a substantive impact in all but one high school and in all but one junior high school, including increased attention to test scores, AP courses, and dropouts.

Implementation Phases

Districts in the study tended to initiate and implement educational reform in a series of phases. The first phase was the immediate concern of the SB 813 legislation–more rigorous high school graduation requirements and a longer school day and year. The second phase can be characterized as re-establishing an "academic orientation" in secondary

schools and included upgraded curriculum standards, new and better textbooks, new and more difficult tests, mentor teachers, more administrator supervision of instruction, and expanded school accountability through the use of so-called "quality indicators." The more recent third phase focuses on revised curriculum and instruction that emphasizes thinking and problem-solving skills, inquiry-oriented history and geography, more mathematics and science, and integration of writing assignments across content areas. This third phase has been incorporated into California's new 8th grade CAP test and several recent state curriculum frameworks; it will be included in the state's revised 12th and 6th grade CAP tests.

For the first two reform phases, the major SB 813 policies and programs were at an advanced stage of implementation in nearly all schools studied. Sample districts increased high school graduation requirements and upgraded curriculum standards. While schools in the study were selected because they had increased student enrollments in academic courses, the study confirmed that these courses were not "watered down" or relabeled versions of old courses. Instead, they represented legitimate academic content–a substantively more demanding curriculum. Districts also lengthened the school day and year, purchased new and better textbooks, administered new and more difficult state tests, created a cadre of mentor teachers, raised teacher salaries, and expanded accountability by developing Quality Indicators, all during the past four years. These actions constituted the core of the education reform in California.

Improving the Curriculum and Enhancing Instruction

The state, through SB 813 model curriculum standards, state curriculum frameworks, and CAP tests, helped sample districts clarify and coordinate curriculum elements such as goals, texts and other instructional materials, instructional strategies, and tests of student progress. This is often called "curriculum alignment," and the elements constitute the technical core of a school's curriculum and instruction program.

Sample schools and districts did more than simply implement SB 813 curriculum initiatives. They used them as a springboard to engage in comprehensive curriculum upgrading. New district K-12 curriculum "scopes and sequences" were created, new academic courses were developed particularly in mathematics and science for the average student, new cross-content emphases were begun such as reading and writing across the curriculum and new interest emerged for thinking and problem solving skills.

One of the most powerful state influences on the technical core of sample schools was the CAP testing program. State CAP tests were driving local curriculum change. While the older versions of CAP produced a curriculum focused on basic skills, the new CAP tests, especially at the 8th grade level, are promoting a curriculum with more subjects

and greater attention to problem solving and other higher level thinking skills. Moreover, there were many positive examples of how the CAP test was helping districts and sites make curriculum improvements and stimulate reconsideration of local curriculum in light of the focus of the state tests, especially the new 8th grade CAP.

The study found that the sample school systems were actively involved in a wide array of staff development activities, some spawned by SB 813 and others locally initiated. Workshops of short duration with limited or nonexistent follow-up coaching typified most staff development. Moreover, staff development often had an inconsistent relationship to the overall reform direction, although many districts had plans to strengthen this role for staff development. The study also found considerable local awareness in sample districts about generic (i.e., clinical teaching) versus content-specific teaching strategies, and the districts' disposition now was to build upon the generic base and move into more content-specific training in order to help implement the goals of the new state curriculum frameworks.

While mentor teacher programs were formally operational in most sample districts, many were only loosely linked to the overall school reform efforts and usually provided services to volunteers, few of whom were experienced teachers. Many sample districts, however, had plans to shift mentor roles towards greater integration with overall reform implementation, and mentors appeared to welcome this change.

Critical Factors for Improving Schools: The Local Implementation Process

Successful local education reform implementation had several important themes in sample districts. First, district leaders transformed the state technical core of curriculum and instructional elements into integrated, district visions of reform. District leaders used the state curriculum and instructional elements because they believed that these represented important and substantively sound content. They also assumed ownership of the reform process because they had themselves initiated similar, though limited, actions before SB 813. Further, district leaders tailored the state reform to local needs and priorities without destroying its essence. The content of the resulting local vision was a more integrated, substantively rigorous, technical core of curriculum and instruction than districts had prior to 1983, and included a greater academic orientation than previously had been the case. District leadership, in other words, was important. District leaders established the reform vision for the sample districts.

The second theme is that the new district academically oriented and intellectually demanding curriculum was balanced at the site by a complementary school vision that often emphasized an intense concern for students' self-esteem, teacher collegiality, and

overall social responsibility. The school vision often matched the demographic characteristics of local school environments and made the more academically demanding district program possible to implement. This finding fits with the strong role of school climate displayed in other effective secondary school research.

The third theme is that the reform tended to be *initiated* in a top-down manner, characterized by increased district centralization of curriculum development and textbook selection yet coupled with extensive site-level teacher and administrator participation in implementation. Districts and schools seemed to be "teaming" in reform development and implementation. New and instructionally oriented superintendents and principals played key roles in reform initiation in most districts and schools. Department chairs also played key roles and were becoming more critical to implementation at the site level. Moreover, it was important that the district leadership role not just be "upfront" in proposing the directions for the reform, but continue throughout the entire implementation process in the form of continuing coordination, leadership, pressure, and monitoring.

The final overall theme is that successful state reform implementation in sample schools hinged on a closely aligned vision between the district and schools, and between teachers and administrators in schools. Higher gain schools, according to ratings of the case researchers, were in districts in which the district reform vision was clear and consistent, where district leaders were both highly committed to educational reform (especially to improving basic skills), strong in communicating this commitment to schools, and where schools were moving in the same direction and with the same substantive agenda as the district.

All sample schools, except one junior high school, conducted an effective local implementation process. Every school in the study used some form of "cross-role teaming". Cross-role teams typically were groups that included teachers, department chairs, and site and central office administrators, and were charged with designing and coordinating the implementation process. Cross-role teams blended top-down initiation of the reform direction with bottom-up participation in developing and implementing specific implementation activities and helped produce a closely aligned vision and agenda among teachers, administrators, schools, and districts.

Administrators and teachers in sample schools received initial training to carry out reforms and undertake curriculum development activities. When coupled with administrator leadership, commitment, monitoring and pressure to implement, these initial trainings and corresponding curriculum development activities were sufficient to implement the early phase of revitalizing an academically oriented curriculum.

More substantial changes in curriculum and instruction, beyond the two above-mentioned stages, took increased and continuous amounts of assistance. For site administrators, this assistance often focused on clinical supervision, teacher evaluation, and

classroom management strategies. For teachers, this assistance often focused on clinical teaching, classroom management, and general pedagogy. For most sites, however, the quality and extent of assistance was sufficient neither to change dramatically classroom teaching skills nor to support the implementation of the even more demanding curriculum reforms that include thinking, problem solving, communication skills, and cooperative learning.

Student, Personnel, and School Outcomes

In addition to assessing the status of SB 813 policies in 17 secondary schools, study findings include several outcomes for students, teachers, administrators, and schools as organizations; analyses of key variables in effective local implementation processes; and the linkage of special-needs student programs to reform implementation. A number of the outcomes are based on ratings by case researchers, and represent their judgments about the impact and effects of SB 813.

Schools in the sample made substantial gains between 1983-84 and 1986-87 in student achievement, as measured by CAP score gains. Moreover, schools also made gains in school climate, administrator practice, teacher practice, and nontest-score related student variables according to researchers' ratings. Moreover, individual schools made sizeable gains in all of these areas. CAP gains, for example, did not occur at the expense of other outcomes. Further, test score gains were not caused by favorable student or school demographic characteristics.

CAP scores for schools in the sample rose faster than scores statewide, especially in reading. For the sample generally, student 8th and 12th grade CAP test scores increased between 1983-84 and 1986-87. In these high schools, reading gains were double the statewide average. In addition, test scores rose across the range of all students in these schools. There was an increase in students scoring above quartiles 1, 2, and 3 over these three years, which means that students at all levels improved their performance. It was not only the highest performing students who improved their scores; students across the spectrum improved their performance.

School "climate" in the schools studied improved substantially. Based on researcher ratings, school climate improved across several dimensions, including shared sense of a new school vision, level of collegiality in the schools, amount of teacher discussion about curriculum and instruction, and a norm of continuous improvement. SB 813 contributed positively to all these changes. Based on additional researcher ratings designed to gauge either a positive or negative impact of SB 813, the reform bill's contribution was most positive for the norm of continuous improvement.

Administrative expertise and practice also improved as a result of these schools' education improvement efforts according to researcher ratings. Administrators were better able to design district and school goals, manage a new curriculum program, orchestrate its implementation, and engage in clinical supervision of instruction. The most striking result for teachers in the sample schools was their large increase in sense of professional efficacy.

Finally, while CAP scores increased, other student outcomes also improved, but at a somewhat lesser rate. Student performance on both standardized tests and local proficiency tests improved. On the other hand, dropout rates also increased, although marginally.

Special Student Populations

A particularly important finding was that special-needs students were not overlooked in reform implementation. Though not specifically addressed by SB 813, the needs of special student populations are being addressed by schools and districts. Indeed, the trend seemed to be an increase in both the degree of services and the types of approaches used to provide these services. In addition, nearly all program goals were to move students into the mainstream. Put differently, the goals were not to track and retain students in remedial or special programs. While there was variation in accomplishing these goals, the goals were to remedy academic deficiencies in order to equip students to function successfully in a regular curriculum program. Students still may be at-risk, but they are receiving programs and services and are not being ignored.

While the curriculum in most special-needs programs was aligned with the regular, core curriculum of the school, and had increased substantively in academic rigor, it was still somewhat less rigorous and demanding than the regular program. Special program services also tended to focus on basic skills of reading and mathematics, and usually did not include alternative pedagogical approaches to teaching higher level thinking skills. At the same time, the movement towards English as a Second Language (ESL), structured immersion, and sheltered English in the limited-English-proficient (LEP) student programs fits with a general political trend to emphasize the teaching of English, although the traditional bilingual education programs have had teaching English as a primary goal. Regardless of the genuine concern that was evident for students who need additional help, the services provided to them were rather traditional, providing little additional advantages for these students.

Toward a More Complex Reform Agenda

Secondary schools in the study easily and quickly changed old course offerings and implemented more traditional, academic courses. This seemed to be the nature of the initial response to SB 813 and other reform stimuli. These changes required few new instructional strategies for teachers, although they did require staff development which was provided to all teachers and administrators and was linked directly to these first-phase reform goals. Secondary school teachers preferred to teach more academic courses than "general track" courses or even many of the electives. They had been trained to teach academic courses, and they did not need additional training or help to begin teaching more of them. The study found wide progress in sample schools on these types of improvements.

However, it was much more difficult for schools to change the nature of teaching strategies or to change the general nature of the curriculum, such as proposed in California's (and the National Council of Teachers of Mathematics and Science) new mathematics and science curriculum frameworks. It was even more difficult to inject a greater degree of emphasis into the curriculum in areas such as thinking, problem solving, and communication skills. These new practices entail substantial change on the part of teachers and require sophisticated training programs to develop such new pedagogical expertise. The study found less progress on these dimensions of improvement.

Thus, the study found that SB 813 helped several schools and districts to restore their curriculum to traditional notions of academic excellence. The study also found these schools poised to implement a substantially strengthened curriculum program with an emphasis on analytic thinking and problem solving skills, but the study also found few articulated and consistent strategies for doing so.

Some districts had plans for expanding the curriculum and instruction focus to these issues and had begun district-school conversations about an appropriate implementation process. Other districts already had incorporated these new directions into detailed curriculum guides and had begun new staff development efforts for teachers. None of the districts had extensive or intensive staff training or new curriculum materials in place. Several districts, however, have been preparing department chairs and teachers to facilitate implementation of these new directions.

Policy Implications and Suggestions

One implication pertains to the relationship between early state initiatives and subsequent local efforts to improve secondary schools. The study found that state

improvement efforts in curriculum and instruction, such as included in SB 813, can interact with local initiative to improve secondary schools. Local implementation processes are critical to the success of such improvements, and a common local implementation process is successful across schools that differ ethnically, geographically, and demographically.[3] Thus, one clear policy implication is that the state should disseminate information about effective local change processes and encourage, if not stimulate, other districts and schools to develop such processes.

Key structural elements of such a local improvement process should include:

1. A district and school vision that focuses on rigorous curriculum content and effective teaching strategies.

2. A district team, consisting of district staff, site administrators, and teachers, that plans and coordinates the overall implementation activities.

3. A district implementation plan for coordinating and linking the elements (curriculum objectives, texts and instructional materials, teaching strategies, and texts) of the technical core of curriculum and instruction, and that includes an interrelated set of implementation activities over a multiple year time frame.

4. Strategically targeted staff development, linked to the curriculum content and pedagogical skills teacher need to teach the curriculum, relying heavily on mentor teachers to implement, and that provides significantly more on-going and follow-through assistance than simply initial training.

5. District monitoring of student, teacher, and site administrator performance, of faithful program implementation, and of the consistency of school emphases with district substantive directions.

6. A school team of site administrators, department chairs, and teachers that plans and coordinates the specific school implementation activities. This team either should be the school's "curriculum council" or should be tightly connected to such a council or to the prinicpal's cabinet.

7. Assistance to teachers to put the curriculum and instructional strategies into skilled classroom practice.

Another policy implication concerns the role of staff development in education reform. The study found that teachers' instructional strategies had improved but not that

[3] The study found that implementation processes were different for schools in the largest, urban districts, primarily because these districts had several factors, such as desegregation mandates, other than the state's initiatives in SB 813 dictating the use of their time and resources. At the same time, initiatives in most of the urban districts studied also targeted core curriculum and instruction for improvement.

much. While districts have provided considerable initial staff development and training, follow-through efforts and assistance in implementing the new curriculum and pedagogy in classrooms have been provided only sporadically. Research shows that this follow-through assistance is critical to substantial classroom impact.

Our impression was that many teachers needed additional subject matter and pedagogical expertise to implement a new curriculum that both changes substantively the content in mathematics, science, social studies, and language arts, and emphasizes numeric reasoning, critical thinking, written communication, problem solving, cooperative learning, and peer tutoring. If this view is correct, staff development–indeed, massive human resources development–would be needed to enhance the classroom impact of current and future reform efforts. As the curriculum focus becomes more substantive, and indeed becomes more intertwined with technology, this heavy emphasis on staff development and training should not be a surprise. Moreover, staff development must be tied to other implementation strategies.

One possible staff development policy option is to expand and focus the Mentor Teacher program. The scope of needed staff development could justify creation of either greater numbers of mentors or more mentor time devoted to reform focused staff development. Mentor activities, moreover, could be focused more directly on new district and state efforts to implement a restructured curriculum designed to develop deeper content knowledge and thinking and problem solving skills.

Finally, the study documented a genuine concern for students who need extra help in mastering the regular curriculum program, and who likely will need even additional help to master a curriculum that emphasizes thinking and problem solving skills. The study also found that while services to these students had increased in sample schools, the services themselves were rather traditional and of the type that had produced insufficient achievement in the past. Thus, it follows that California will need to fund the development of new instructional approaches for providing extra services to low-achieving, limited-English-proficient, low-income, and at-risk-of dropping-out students that produce larger effects. This new thrust could include funds for research to develop new programs, regulation waiving for local schools to experiment with new approaches, or some combination of the two. The fact is that education excellence, so far, has not left at-risk students unnoticed, but the education system's strategies for dealing with at-risk students need strengthening. The will is there, but new ways are needed to make these programs more effective.

Appendix

Research Questions

1. How have key SB 813 policies been implemented in secondary schools?

2. What are the key local factors associated with successful implementation of the goals of SB 813?

3. What elements of SB 813 (or other state policies) are strongly and positively linked to the key local factors, what elements hinder successful local reform, and what elements are unmentioned or unnoticed?

4. How have California's education reforms affected: (a) the curriculum in secondary schools; (b) the content knowledge and instructional skills of teachers; (c) the curricular and instructional leadership skills of administrators; (d) the structure, climate, and nature of schools as organizations and places in which to teach and learn; and (e) the knowledge and performance of students?

5. How have schools used resources–fiscal and other–to implement education reform? (This component of the study was funded separately by the California Policy Seminar and the results are reported in a separate document.)

6. How have special student populations–the low achiever, the poor, the limited-English-Proficient (LEP), and the at-risk of dropping out–been treated in local reform, and quality improvement implementation?

7. What do the study results suggest for modifications and additions to state policies? Which elements of SB 813 or other state policy should be strengthened, which reduced, and what new programs might be needed?