State Policy and the Control of Curriculum Decisions

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HOW much do state policymakers have to say about what is taught in school? What is left for teachers to decide and how much does this residual differ from state to state? Using elementary school: mathematics as the context, these questions are pursued in a comparative study of seven states. The policies of interest are ones which are likely to influence teacher content decisions about (a) how much time to devote to mathematics, (b) what topics to teach, (c) who will be taught which topics, (d) when and how long each topic will be taught, and (e) how well topics are to be learned. Teacher decisions in these five areas together determine much of each child's opportunity to learn.

In discussing the relation between these teacher decisions and state policy, we refer to zones of tolerance. This term distinguishes between areas in which teachers are most free to exercise professional discretion and areas in which they are not so free. In William Boyd's discussion of curriculum policymaking, the term zone of tolerance denotes the limits set by community values and norms.1 In contrast, we are interested in zones of tolerance set by

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used to construct a 50-state profile of specified policies. Second, in a 20-state subsample, a state department person responsible for mathematics education was interviewed. The data on these 20 states were used to make final selections.

California, Florida, and New York were selected for having a variety of seemingly strong policies. These three states were consistently nominated by our expert informants and have been frequent objects of attention in the earlier literature. South Carolina was chosen for currently evolving policies of recent origin. Ohio and Indiana were selected because they appeared to have relatively weak policies with much responsibility delegated to districts. Michigan was included as yet a third weak policy state and one which would help us understand the state context within which our other studies of teacher content decisions have been conducted.

For states selected, we assembled as complete a set of documents on their relevant policies as possible. To cover the areas in which state prescriptions might influence what teachers teach in elementary school mathematics, eight types of policy were investigated: objectives, achievement testing, student placement, textbook adoption, allocation of instructional time, school evaluation or accreditation, assurance or improvement of teacher qualifications, and promotion of specific topics. To obtain documents, we called responsible staff in each state department of education, starting with the person we had talked to earlier and asking for a particularly knowledgeable person in each area. On average, eight persons were called per state.

An important caveat to consider is that, in analyzing strength of policies, we are limited to the documents collected and interviews conducted. Our analysis describes intended policies, not implemented ones.

HOW STATES DIFFERED

In this section we discuss what is distinctive about each state. Given limitations on space, the various types of policy and sources of strength are dealt with selectively to show how the states differed in the guidance they gave to teachers. Primary sources upon which the empirically-based discussion rests are not listed; a more complete set of references may be obtained from the first author.

At the time the states were studied, New York and South Carolina were the most direct control states in that they specified what was to be taught in elementary school mathematics. Florida and California had also assumed a good deal of direct responsibility but explicitly delegated additional responsibility to the districts. In Ohio and Indiana nearly all the responsibility for specifying control was delegated to the districts. They were the more
indirect control states. Michigan made little attempt to specify what was to be taught or to demand that districts do so.

New York: A State of Tradition and Innovation

Policy for the State of New York is the responsibility of the 200-year-old Board of Regents and their Commissioner of Education. The Regents and the commissioner have enjoyed broad legal responsibility and high prestige. Given this history, it is not surprising that New York has been a state with relatively strong and centralized curriculum policies. To provide direction in mathematics, the state education department in 1981 had a 7-person bureau specializing in this subject.

In New York, content policies were addressed directly to schools and teachers; unlike all the other states studied except Michigan, New York had little to say to districts on how they should make their own policies. More than any state studied, New York used its formidable power and authority to bring about the teaching of new topics. In this sense the New York State policies have been more of a constraint on the autonomy of teachers than policies in other states which ask teachers to teach what most teachers would teach anyway.

This tendency can be illustrated by New York State efforts to promote basic concepts in probability and statistics. This effort got underway in 1974 when ten New York State districts were recruited for a state-sponsored and National Science Foundation (NSF) funded pilot project to teach probability. At the end of the three-year project, one of the district project directors went to work on revision of the New York State syllabus for elementary school mathematics. The new syllabus was finally published in the spring of 1980 after having been reviewed by mathematics teachers, revised, field tested in more than 40 districts, and again revised. In short, the process gave the new topics a measure of social authority through the well-documented involvement of school personnel in the development of the new syllabus. In the new syllabus, probability and statistics stood as one of the five major strands which told teachers what to teach at what grade level.

It should, however, be noted that New York had no state textbook adoption to ensure that the syllabus topics were in fact covered in the instructional materials used by teachers and students. Nor was there any attempt to regulate the time allocated to these topics. Recommended time allocations did exist for the total time to be devoted to mathematics at each grade level, but even these time recommendations were not stressed by the State Education Department.

To monitor achievement of topics in the syllabus, state-developed Pupil Evaluation Program (PEP) tests were given to all students in the third and sixth grades. But the PEP tests were not the only policy component to give testing its authority and power in New York State. The traditional Regents examinations and the more recent Regents Competency Tests (RCT) also played a major role. The Regents Competency Testing program, instituted in 1978, mandated tests in reading, writing, and mathematics which had to be passed by all students before they could graduate from high school. The RCT and the elementary school PEP tests had potentially powerful consequences in that students who fell below certain points on these exams had to be given special remediation. The school was required to notify the parents of such students in writing of the test results and the plan for remediation. In the case of the PEP this cycle of testing and remediation, according to official documents, prepared students for the RCT. In addition, funds for compensatory education programs were allocated to districts on the basis of the percent of students with low PEP scores in a designated base-line year.

For high school students, the traditional Regents examinations have been a part of state policy since the nineteenth century. While these college-oriented examinations may have had little effect on what has been taught in elementary school, they did serve to provide the state with authority to mandate tests and set graduation requirements in terms of those tests.

Thus, in New York the state looms as a potent source of curriculum authority and power. New York State's tradition of specifying topics to be taught and standards for achievement establish relatively well-defined zones of tolerance. Whether these zones are desirable for all teachers and all students and whether teachers stay within or stray from these zones is a question, however, for which this study provides no direct evidence.

South Carolina: Prescriptive of Content, Cautious about Standards

As of 1981 South Carolina had gone as far as any state in our study in telling teachers what to teach but had done less than Florida or New York in setting standards that students must meet. Although the state had a number of policies potentially affecting elementary school mathematics (such as textbook adoption, school accreditation, teacher testing), the main source of prescriptions at the time of our study was the Basic Skills Assessment Program (BSAP). This program originated in a 1978 legislative act that directed the State Board of Education to establish statewide objectives and standards in reading, writing, and mathematics. This law was detailed, spelling out aspects of policy which in other states like New York would be dealt with in regulations, not statutory law. Thus, the implicit appeal to legal
authority was great. BSAP testing was mandated for grades 1, 2, 3, 6, 8, and 11. The law specified who would be tested and who might be exempted; it demanded field-testing of tests and in-service training for test administrators; it called for criterion-referenced tests and told how these tests were to be reported. The act even established an independent special project with its own director and administrator to oversee implementation.

The law stated that the main purpose of the test was "diagnosis of student deficiencies" to "aid in determining instruction needed by the student in achieving the minimum state-wide standard established for each respective grade." According to official interpretation, the Basic Skills Objectives did not constitute a complete program. Yet, unlike Florida, districts were not required to develop additional or complementary objectives. One year after the BSAP law was passed, every elementary school teacher in the state received a copy of the BSAP objectives. Two years later the same distribution was given to appropriate sections of Teaching and Testing our Basic Skills, a state published manual with suggested teaching strategies and measurement advice for each objective. Widespread dissemination was thus assured.

Appeal to social authority has also been an important aspect of BSAP as it has for similar policies in other states. Participation by South Carolina educators in the development of objectives was noted in every BSAP document used for school or public information. Such documents have referred to involvement and advice sought from approximately 18,000 public school teachers and hundreds of lay citizens.

Provisions to enforce standards of learning were not so much in evidence. All BSAP communications emphasized the nonpunitive nature of the program. South Carolina had no state policies on promotion or retention. In contrast to Florida and New York, the BSAP position on student placement was to caution against premature use of tests for graduation or promotion. Remediation was required, however, whenever tests revealed student deficiencies.

Another source of prescription was the Defined Minimum Program (DMP), first implemented in 1975. It provided a comprehensive school evaluation and accreditation program but was not tied directly to the more recent BSAP prescriptions. Its direct link with teacher content decisions was in its time requirements. Students in grades 1–3 were required to receive mathematics for a minimum of 225 minutes per week for 36 weeks, and 250 minutes per week in grades 4–6. Compliance was monitored through an annual school evaluation in which each staff member answered a questionnaire item which asked the number of minutes per week spent teaching each subject.

In turn, to obtain accreditation each district has had to apply annually submitting school evaluation reports showing compliance with the state's DMP. South Carolina schools have also regularly undergone two types of evaluation. One was a short visit to every school for several hours every other year by state department personnel. The other, initiated in 1981–82, consisted of more extensive on-site visits by state department staff to identify deficiencies that the school must correct and recommendations that the school may or may not choose to implement. Thus, some provision for legal power existed.

In South Carolina, as in most other textbook adoption states, the state has designated a number of textbooks (twelve regular or remedial series in 1981) from which districts may choose; the state did not require a single adoption for any district, school, or even classroom. However, there was still some press for uniformity and compliance with state content prescriptions. When the state reviewed mathematics textbooks in 1981, every publisher's representative reportedly correlated his or her series with the state's BSAP objectives; the adoption committee's report commented on the thoroughness with which these objectives were addressed.

To improve teacher qualifications, the state's main approach before 1982 was mandatory in-service. In addition to a basic mandate of five in-service days required for state aid, in-service was also emphasized in the BSAP and the DMP. However, these in-service policies were not prescriptive of content and there was no great involvement of the State Department of Education in subject-matter-oriented in-service. On July 1, 1982, a comprehensive new program for teacher training, certification, initial employment, and evaluation was scheduled to go into effect, but in 1981–82 neither this new program nor the pre-existing in-service policy had done much to narrow the zone of tolerance for South Carolina teachers.

**Florida: Mandatory Prescription at State and District Level**

Florida in 1973 passed a law requiring school-based management. This law responded to criticism of the increasingly centralized state and district control of public education. According to a later state committee, this 1973 legislation reflected the belief that decisions about public schools were being made too far from those people responsible for teaching children—teachers—and too far from those affected by schools—students.

Paradoxically, by 1981 Florida, of all the states in our study, provided the greatest direction to teacher content practices in elementary school mathematics. Each of an unprecedented string of accountability laws passed in the 1970s, on the one hand, created district committees to review state
proposals and, on the other hand, required districts to develop their own policies that went beyond state minimums (for example, district objectives, pupil progression plans, testing programs, and graduation requirements). Thus, in Florida teacher content practices were addressed directly by the state but also indirectly through mandates for districts to develop their own policies. State standards were prescribed as the lower limit of accountability.

Consistency was an important attribute of Florida policies. By law, to graduate from high school, Florida students had to pass two test hurdles: They had to demonstrate mastery of the eleventh grade state minimum performance standards and pass a second state test (first known as the functional literacy test and later given the more innocuous title of State Student Assessment Test, Part II). The latter test covered 15 skills in mathematics (for example, "determine equivalent amounts of up to $100, using coins and paper currency"). Other interrelated accountability measures were put into effect, including a comprehensive and hierarchically organized package of minimum performance standards for each grade; statewide assessment tests in grades 3, 5, 8, and 11; a required diagnostic-prescriptive approach to mathematics in grades K–3; compensatory education programs for students who did not satisfy the requirements for a regular high school diploma; teacher certification examinations; and approval of teacher preparation institutions tied to candidates’ performance on the required certification examinations. The state also endorsed and disseminated instructional guides, developed by various agencies, to provide not only specific enabling objectives for each state-prescribed skill but also other pedagogical suggestions for teaching these skills.

The public reporting of assessment scores by subject-matter and grade level within schools is indicative of the potential power of Florida policies as compared with more cautious approaches in California and Michigan. "The State Commissioner of Education openly encouraged competition among individual schools to improve test scores.

These tests were not only backed by the appeal to the legal authority of legislation and the social power implicit in the encouragement of school level competition; the state department could also argue that the content validity of the tests had been confirmed by representative teachers, administrators, and parents in each of Florida’s 67 districts. Contracts for test development further extended this appeal to expert authority and social support since the contracted item writers had to have experience in both test construction and as an elementary or secondary teacher.

Assessment scores were closely linked to other policies. State policy called upon teachers to consider state standards in promotion from third, fifth, eighth, and eleventh grades. Legislation authorized the state department of education to conduct building level audits when scores were low on statewide assessment tests. However, although each school audit lasted about two weeks, the audit policy was not accompanied by sanctions strong enough to give it much power.

The stress on promotion, retention, and, in grades 1–3, differentiated placement was another distinctive feature of the Florida laws. According to 1979 legislation establishing the Primary Education Program, the district had to develop an instructional plan to meet the individual needs of each student in grades K–3, identify a measure by which mastery would be determined for those students who failed the statewide third-grade test, retain at least one year in grade those students who did not show mastery, and maintain records to show, when audited, that these criteria were followed. By state policy parents had no say in promotion from third grade.

In contrast to the above policies, state textbook adoption in Florida was not linked to other accountability measures and put little restriction on teacher choice in mathematics. In 1981 the state offered a choice of nine different mathematics series, all from widely known national publishers.

California: Prescriptions Without Challenge to Local Authority

California has been described by Tyll Van Geel and Arthur Block as a very directive state in matters of curriculum policy. Yet we found that at least in mathematics policy it had shown much deference to local authorities. For example, the thrust of the state syllabus (the 1975 California Mathematics Framework) was to maintain the core curriculum, not to promote innovation. Although the Framework called for change in the areas of metrics and problem solving, then-superintendent Wilson Riles declared that it reflected "the concerns of teachers rather than those of mathematicians." The Framework was thus a rejection of the expert authority of mathematicians and an appeal to the mixed traditional and expert authority of the classroom teacher.

Similarly, the tests in the California Assessment Program (CAP) were justified partly on the basis that they reflected what already was taught. In 1981 the program required mathematics testing in grades 1, 3, 6, and 12. The aim was program evaluation, not individual assessment; scores were not meaningful at the individual level. After review of the specifications for the sixth-grade test in 200 randomly selected districts, some topics were deleted when a substantial number of districts responded that those skills should not be measured.

In California various sources of authority and power—legal, expert, social, and perhaps traditional—have supported the administration of tests.
Yet if one asks whether district curricula should teach the content of these tests, the answer has been less clear. The tests have been based in part on the state's curriculum framework, and districts have been actively encouraged to teach content specified in the framework. However, schools have been specifically prohibited by law from teaching to the test.

Even for the Proficiency Assessment Program (PAP), which has had to do with whether or not students graduate from high school, local districts have been mandated to develop their own standards. The key provisions of this indirect policy were: (a) establishment of minimal standards for reading comprehension, writing, and computation; (b) assessment at least once during grades 4–6, once in 7–9, and twice in 10–11; (c) insistence that students must pass the standards in each of the three areas; (d) continuation of instruction until the student has been given numerous opportunities to achieve mastery; and (e) denial of high school diplomas to students who do not meet the proficiency standards. The requirement for districts to set standards for computation was in some sense a restriction on content, but as with the CAP this constraint was very much in line with what was already being taught. Moreover, the state's role in the setting of standards and procedures for PAP was strictly limited to technical assistance. The State Department was precluded by law from monitoring local procedures regarding proficiency assessment.

In California textbook adoption did not appear quite as weak relative to other policies as it did in other states. To be sure, the state did give districts a wide range of textbook publishers from which to choose—eleven in 1981. But, in the criteria for textbook evaluation, content figured prominently and the state content emphases on problem-solving and metrics were given special attention.

Thus, although California had similar types of policy to New York—objectives, testing, required remediation, and graduation requirements—the authority base for these policies seems very different. Whereas in New York, policies for the most part relied on the state's own authority and power, both legal and traditional, almost ignoring the district as an agent of policy formulation, in California the state was more deferential to teachers and districts.

Indiana and Ohio: Zones of Tolerance for Districts, Not Teachers

Indiana's content policies in 1981 hardly addressed the teacher at all. The state imposed requirements on school districts without directly telling teachers what to do. The chief policy to embody this orientation was the Comprehensive Assessment and Program Planning System (CAPPS, later renamed the Educational Improvement Program) initiated in 1978. Person interviewees insisted that the CAPPS should not be cast as an attempt to specify curriculum. Instead, it required school districts to evaluate and plan their own curriculum.

The CAPPS process included the following steps: (a) formation of a local subject-matter advisory committee (including teachers, administrators, parents, and community members); (b) analysis of present programs by professional staff and review of goals and objectives by advisory committee; (c) assessment of student performance in grades 3, 6, 8, or 10 (or some comparable sequence); (d) development by teachers of appropriate instruction with inservice if necessary; (e) re-evaluation of pupil progress; (f) a system for reporting to parents; and (g) district reports to the state on both program planning and student progress. In its charge to districts, this policy thus provided a basis for giving legal, expert, and social authority to district policies.

Although reported as one of the many states with minimal competency testing programs, Indiana had not actually mandated a testing program. Instead, each school district was required to develop a method of evaluation that could consist of any appropriate strategy, from teacher observations to norm-referenced tests. Available data on use of reading tests indicated that 97 percent of the districts used published criterion or norm-referenced tests in 1978–79.

In spite of its emphasis on school district initiative and autonomy, Indiana has had a state curriculum guide (the Mathematics Guidelines, originally published in 1969 and revised in 1977). These minimum competency guidelines, however, have not been viewed as prescriptive, but rather as a stimulus to development of local policies. Indiana also has had state textbook adoptions, with up to seven books in each subject taught, as well as a recommended minimum time allocation (15 percent of the time in grades 1–6 for mathematics and science). But as in New York, no particular effort was made to disseminate this time recommendation, much less enforce it. The state has been still less prescriptive in dealing with student placement. For students not meeting locally determined CAPPS standards, some locally defined effort was mandated. These might include special classes, tutors, individualization, summer school—whatever the district decided was appropriate.

In Ohio, the State Board of Education has had statutory authority to prescribe minimum standards for all elementary and secondary schools—public and private. According to the Revised Code of Ohio, these standards...
should provide for such matters as curriculum, certification of teachers, instructional materials, admission, promotion, and graduation of students. The Minimum Standards for Ohio Elementary Schools (1970 revision, still in effect in 1981) required each district to adopt a statement of philosophy and purposes for its elementary schools.

School districts were not, however, told what topics to teach in elementary school mathematics (or other areas for that matter). The closest thing to state mathematics objectives was a page and a half in the interpretation part of the Minimum Standards document. Moreover, this document stated that the objectives were intended to be suggestive rather than prescriptive. State mandates for instructional time were similarly nonexistent. For example, a table suggested there "might" be 40 minutes of mathematics per day in grades 4–6. In 1981, Ohio also had no state assessment for mathematics or any other subject. One was started in the mid–1970s, but died for lack of appropriations. The state required districts to use standardized tests but without saying what tests shall be used, what subjects tested, how frequently, or for what students. Nor were there any guidelines or suggestions on setting standards of achievement.

Ohio has not had a textbook adoption policy; in fact, the State Department staff followed an unwritten policy of not recommending specific mathematics textbooks for local adoption. Ohio's policies on student placement were, for the most part, equally tolerant of local diversity. While districts were required to have a written promotion policy, the state provided no guidance on what that policy should be. Districts were also required to provide for "continuous sequential progress" for the purpose of "diagnosing and meeting the needs of each pupil."

In short, Ohio did not prescribe what topics should be taught to what students, when and for how long, and to what standards of achievement. When the state did consider more prescriptive policies, such as grade-to-grade promotion standards and state minimum competencies, such policies were rejected. When the state developed a pair of minimal competency handbooks, school districts were given, not the minimal competencies themselves, but rather a step-by-step process for building a local competency program. It was the task of the districts, not the state, to set zones of tolerance for teachers.

Though Ohio's policies were notably permissive and avoided virtually all hint of direct control, the state's authority and power were put indirectly to the service of local district policies through school evaluation measures. Not only was legal authority inherent in the state's requirements, but also power in the threat of sanctions existed for districts not in compliance. When conducting site visit evaluations (reaching each school about every seven years), the state used a form which listed minimum standards for elementary schools along with boxes for checking compliance, qualified compliance, or noncompliance. Violations were to be reported to the local school board and, in principle, could lead to loss of the school's charter from the state. Required annual reports likewise directed principals to state what they were doing to study at least one phase of the school's program in depth each year and all phases over a five-year period—all within the framework provided by the minimum standards.

In 1981–82 the state appeared to be embarking on major new policy initiatives. These initiatives, however, promised to stay within the prevailing philosophy.

Michigan: A Surprisingly Wide Zone of Tolerance

The Michigan state assessment was one of the earlier and more publicized state testing initiatives. Michigan thereby gained an inaccurate reputation for strong state curriculum policies. In 1981 the Michigan Educational Assessment Program was still the state's only major policy to focus directly on content prescription. Its history demonstrates that it was not, relative to other state testing programs, a very powerful policy.

When the State Department of Education started to develop objectives for mathematics in the early 1970s, its efforts were criticized as too narrow by the executive committee of the Michigan Council of Teachers of Mathematics (MCTM). The MCTM, invited by the state superintendent to make improvements, worked with classroom teachers, mathematics educators, and mathematicians to produce the first official mathematics objectives in 1973. These minimal objectives were not a complete program nor was there any language requiring that all districts teach these objectives, much less that all students attain them. Thus, whatever force the objectives possessed came from their use in the Michigan Education Assessment Program (MEAP). In 1980–81 about 150 of the state's 600 K–9 objectives were being tested in the MEAP.

The strength of this combined objective and testing policy has been limited, certainly in comparison with California, Florida, New York, or South Carolina. The legislation creating the MEAP did not dictate that school districts use the results of the testing in any specific way. In fact, the 1980–81 assessment handbook sent to all districts stated explicitly that use of the state's recommendations was in the hands of the local staff. The state gave little power to the program. What little power the tests did have was, in the main, the consequence of newspaper coverage comparing scores among districts.
The State Department offered only modest, positive incentives in the form of inservice and materials to help teachers teach the content covered on the tests. Lacking power, the State Department appealed primarily to social, expert, and legal authority. Brochures typically grounded the assessment in the authoritative acts of the Michigan legislature. The MEAP handbook also noted that the tests were written by Michigan educators and field-tested on a statewide sample of students and that the tests had been developed with the help of the Michigan Council of Teachers of Mathematics.

Michigan had no textbook policies affecting mathematics content (with the exception of some metric requirements for which there was virtually no enforcement). The state did not formally specify time to be spent on mathematics or any other subject. Nor did the state have any policies on student placement other than those connected with certain categorical programs, such as compensatory education. The state’s stance on teacher qualifications was, in the manner of most American states, to delegate responsibility to colleges and universities with approved teacher education programs. The state’s certification requirements were very general, doing nothing to prescribe what teachers should teach. The state did not have a policy requiring school evaluation or accreditation, although criteria that could be used in such an evaluation were under development at the time of our study.

In short, Michigan had created a wide zone of tolerance which placed great trust in school districts and individual teachers, a trust communicated at the state level by the use of teacher organizations to establish expert authority. The state’s philosophy was well expressed in the opening of a state-published Teacher Resource Guide for Metric Education:

The individual classroom teacher is the real decision-maker for the curriculum. Decisions involving the selection of lessons, their sequencing and adaptation to individual learners, the materials available, the time allowance and the host of other factors must be considered by the teacher as daily instruction is planned. These guidelines do not specify a complete lesson series for all teachers everywhere.

It was a surprise—even to us within the state—that Michigan, in putting so few mandatory curriculum requirements on districts and teachers, has left a zone of tolerance broader than that of Florida, New York, South Carolina, California, Indiana, and Ohio.

HOW POLICIES DIFFER

Objectives, Syllabi, Curriculum Guides

State policies may either attempt to control teachers directly by telling them what to teach, to whom, and so on, or these policies may exert indirect control by requiring districts to develop their own district-level policies. Some statement of the objectives of mathematics instruction (whether it is called a syllabus, curriculum guide, or whatever) is a necessary but not sufficient instrument of direct content control. States which specify the content of elementary school mathematics in some detail aspire to at least a minimum of direct control. States with no such objectives (such as Ohio) can exercise at most indirect control.

Yet even in states with objectives, policies differ markedly in their potential for affecting teacher practices. Indiana objectives were purportedly not prescriptive. Michigan objectives have consisted of minimal competencies which were but partial guidelines and within which much district and teacher variation has been permitted—sometimes even encouraged. California objectives, though more comprehensive, carefully stayed within what most teachers would consider typical content. New York’s objectives contained more innovative content. In only one area did all seven states try to go beyond what is typical—metric measurement—and this was largely in response to federal leadership.

Objectives by themselves have little strength, and no state has relied on objectives alone. Without means for implementation or enforcement, objectives may have authority but little or no power. The authority of objectives tends to be primarily expert or traditional. Traditional authority is relied upon for typical content, as in California, whereas expert authority is emphasized more in the prescription of nontypical content. The process of translating expert into social authority can be seen in the NSF probability project and syllabus tryout procedures in New York.

In short, objectives delineate some of the boundaries of a zone of tolerance, but they do little to impose these boundaries on teachers. To strengthen the boundaries, links with other policies are required.

Student Testing Policies

Testing is the display case of state curriculum policy; the boundaries set by testing are generally the most visible aspects of the zone of tolerance. Testing is also nearly universal among states and districts. All the states in our sample have required some sort of student assessment in elementary school (although Ohio and Indiana had no statewide tests). Three of the states (California, Florida, and South Carolina) had more than one such state-mandated program.

In spite of the near universality of testing, the seven states differed greatly in their test policies. First, the states had different ways of specifying the content to be tested. In the indirect control state of Ohio, the state merely mandated that districts use nationally published tests. In Florida, districts
were actively involved in the development of statewide tests and were given further legal obligations for designing their own district tests. In South Carolina, the state required use of its own test and specified that a particular norm-referenced test be used as well. In California, although the state took responsibility for identifying the content of statewide tests, it also made a serious attempt to tailor the content to what districts were already doing. In New York, the state assumed the entire responsibility and based the tests solely on the state syllabus.

Second, states differed in what was said about teachers teaching the content of the test. Michigan, for example, did not clearly establish the responsibility of each district to teach the content covered by the MEAP. And in California teachers were prohibited from direct preparation for the California Assessment Program.

Third, states differed still further, as we have seen, in the links between testing and other policies, such as required remediation and school evaluation.

Finally, the states also varied greatly in the potential strength of their testing policies. New York was high in authority and power over the process of testing itself. This counterbalanced the lack of traditional authority for the content to be tested, such as probability and statistics. In Michigan, by comparison, authority was limited and power non-existent.

**Student Placement Policies**

Promotion, mandatory remediation, and graduation requirements are potentially policies of high power, that is, they entail big penalties for students who do not make the grade and added pressure for teachers who are forced to deal with failing students. The limited use of such policies is an acknowledgment of their great potential for control—a potential that can arouse considerable opposition. Thus, placement policies, even in the four most direct control states (California, Florida, New York, and South Carolina) were circumscribed in various ways.

In Michigan, state tests were not used for promotion, graduation, or required remediation. Likewise in South Carolina, an otherwise strong state, this type of testing policy was avoided or at least put off. While New York required remediation and high school graduation testing, in California high school graduation testing was handled by the indirect and less threatening means of delegation to the districts.

Grade promotion is an example of a policy that lacks traditional authority at the state level. Only in Florida was there a state grade promotion policy, and even that policy was limited to third grade and circumscribed in various other ways (as in retention limited to one year without parental permission).

**Textbook Policies**

Textbook policies are potentially major sources of state influence on what teachers teach. If teachers were required to teach from certain textbooks and if the content of those textbooks were standardized at the state level, then textbooks would no doubt have considerable influence. None of our seven states took such a hard line.

Of the seven states, Florida, California, South Carolina, and Indiana had state textbook adoption. New York, in spite of generally strong state policies, had no textbook adoption policy and hardly acknowledged the existence of textbooks in its other policies. Michigan and Ohio had some requirements pertaining to textbooks, but these had virtually no content significance.

Adoption states gave districts a choice among commonly used textbooks and these textbooks, as our earlier research has shown, differ substantially in the topics covered. Thus, in elementary school mathematics at the present time, the influence of state textbook adoptions appears to be slight. Moreover, textbooks have provided little guidance in other areas of content decision-making, such as allocation of time and grouping.

It should be noted that textbooks might vary still more if there were no state adoptions. We do not know, for example, how much state decisions about the importance of metric measurement have led to the present extensive use of metric measurement in elementary school mathematics textbooks. We could better understand the magnitude of state influence if there were some states which demanded a predominance of metric measurement in their textbooks and other states which called for mostly customary measurement.

**Time Allocation Policies**

Time allocation is a neglected area of policy. Although South Carolina, Indiana, Ohio, and New York had recommended or mandated time allocations for elementary school mathematics, no state in our study gave much attention to these policies. This lack of policy is surprising given the emphasis on time in recent research on teaching. At the topic level, time allocations were not addressed in the policies of any of the states studied. Yet states might very well have promoted, for example, metric measurement through mandated amounts of time on this topic.

**Teacher Qualification Policies**

Teacher testing policies were the subject of much publicity, even in 1981, but they had little effect on the zones of tolerance at that time. They were too new and generally applied only to prospective teachers. None of the states in
our study dared challenge practicing teachers so directly as to test their knowledge of mathematics and mathematics teaching.

Other teacher qualification policies, such as inservice and certification, were generally non-prescriptive with regard to mathematics content. In their lack of emphasis on developing mathematics competence among teachers, they may by default have had a great influence on what has been taught and, more importantly, not taught.

CONCLUSION

In this paper an analytic framework has been developed for the examination of state policy. This framework consists of three classifications with which we began the study and two additional distinctions that emerged as important in the course of our research. The three a priori classifications are (a) the different types of teacher content decisions (how much time, what topics, and so on), (b) the different types of curriculum or instructional policy (such as objectives, tests, textbooks), and (c) indicators of the potential strength of these policies. The two additional distinctions have to do with the difference between direct and indirect control and the extent to which policy challenges current practice. Table 1 summarizes how policies and states differ on the dimensions of strength and direct versus indirect control.

Our analysis has illustrated the value of this formulation in several ways. First, the distinctions brought to this analysis help contrast what states have done with what might be done. From this perspective, variation among the states studied in what was actually done was slight. No state guaranteed teachers complete autonomy in the making of content decisions. Each of the states took measures to direct or control teacher content decisions. At the other extreme, no state tried to dictate exactly what teachers should do about selecting topics, allocating time, sequencing content, grouping students, and setting standards. Moreover, in the development of any one policy, the possibilities for strengthening that policy through greater prescriptiveness, consistency, authority, and power were far from exhausted.

Second, variation among states in content policy was considerable, especially when compared with the uninformed but still widespread notion that educational governance in the fifty states has been more or less uniform. In particular, the approach to policy formulation in states attempting direct control was qualitatively different from states attempting indirect control. Insofar as they have specified what to teach and to what standards, New York, South Carolina, Florida, and California were more like the centralized national school systems of Europe than the American states which, above all, stress district prerogatives in making these decisions.

Even among the four states that sought some direct control, we find important differences. One is in the emphasis on different types of content decisions. South Carolina emphasized control of topic selection while remaining wary of setting strong pupil progression standards that teachers and students would have to meet. Florida, by contrast, was more willing to set such standards. Still another difference concerns the state's willingness to challenge prevalent practice. California concentrated on finding out what districts and teachers already tended to do and then adopted policies to realize those intentions. Examples of states willing to go against the status quo include New York in topic selection and Florida in standards setting.

| Table 1 |
| Profiles of State Policy Zones of Tolerance for Elementary School Mathematics |

<table>
<thead>
<tr>
<th>Type of Policy</th>
<th>New York</th>
<th>South Carolina</th>
<th>Florida</th>
<th>California</th>
<th>Indiana</th>
<th>Ohio</th>
<th>Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Policy</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mixed Direct and Indirect Policy</strong></td>
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<td></td>
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<tr>
<td><strong>Indirect Policy</strong></td>
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<tr>
<td><strong>Least Control</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objectives, Syllabi, Curriculum Guides</td>
<td>D</td>
<td>D</td>
<td>D,i</td>
<td>d,I</td>
<td>d,I</td>
<td>i</td>
<td>d</td>
</tr>
<tr>
<td>Student Testing</td>
<td>D</td>
<td>D</td>
<td>D,i</td>
<td>d,I</td>
<td>I</td>
<td>i</td>
<td>d</td>
</tr>
<tr>
<td>Student Placement</td>
<td>D</td>
<td>d</td>
<td>D,i</td>
<td>I</td>
<td>i</td>
<td>i</td>
<td>i</td>
</tr>
<tr>
<td>Textbooks</td>
<td>d</td>
<td>d</td>
<td>D,i</td>
<td>I</td>
<td>i</td>
<td>i</td>
<td>i</td>
</tr>
<tr>
<td>Time Allocation</td>
<td>d</td>
<td>D</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
</tr>
</tbody>
</table>

NOTE: This chart summarizes our assessment of the strength of state policies, relative to the other states studied, as follows:

- D = relatively strong direct control policies
- d = relatively weak direct control policies
- I = relatively strong indirect control policies
- i = relatively weak indirect control policies
- Blank cell = no significant curriculum control policy

Note that, since the judgments made are relative to the states studied, some policies rated relatively strong (e.g., textbook, student placement) are relatively weak compared to what they might be.
Third, our formulation provides a basis for identifying similarities both between states and, within states, among different types of policy. Like Frederick Wirt, we find that "while there is nothing approaching uniformity among states in these data, neither is it the case that each state is different from the others." Characteristics common to the indirect control states of Indiana and Ohio, for example, are more important than their differences. Moreover, in Ohio the state has shown exceptional consistency in pursuing this approach in all areas of policy, even to the extent of rejecting its first attempt at state assessment.

Finally, our formulation serves as a source of hypotheses about the effects of different policies. While this paper has not investigated the implementation or effects of policy, it has suggested many effects that the policies might have. Would teachers in a particular state change their content decisions if policies were instituted in areas not presently emphasized (for example, time allocations)? Where do district curriculum policies have the most impact—in states seeking direct control or in those seeking indirect control? Is student achievement in some sense better under one style of control than under the other? What are the effects of policies which call for new content as opposed to those which attempt to make more effective what teachers normally intend to teach? Are state-promoted topics in probability and statistics, for example, more often taught in New York—where state policy introduced new curriculum—than in California—where state policy reflected existing curriculum content?

Answering these empirical questions is important since teacher content decisions determine much of student opportunities to learn, especially in subjects largely learned in school (such as mathematics). However, answering these questions is not sufficient to decide whether the potential for greater control is good or bad. To make conclusions about the worth and danger of greater control, one must have wise political judgment and well-grounded values in addition to knowledge of empirical research. What empirical research can do is to give the various parties to this debate a better understanding of the policies that aim to influence what teachers do.

NOTES

An earlier version of this paper was presented at the annual meeting of the American Educational Research Association in Montreal, April 1983. More extensive citations of primary sources can be found in the corresponding technical report by the same authors and with the same title. This report is available from the Institute for Research on Teaching, Michigan State University (Research Series No. 1973) by the same authors and with the same title. This report is available from the Institute for Research on Teaching, Michigan State University (Research Series No. 1973). Both the present paper and the technical report are a synthesis of the following state case studies individually authored by members of the Content Determinants Group at the Institute for Research on Teaching, Michigan State University: California (Robert Foden), Florida (Donald Freeman), Indiana (Susan Irwin), Michigan (William Schmidt), New York (John Schiwile), Ohio (Andrew Porter), and South Carolina (Linda Alford). We appreciate the criticisms and suggestions made by our colleague Diana Pullin and by members of the Institute for Research on Teaching advisory panel.


5. Jerome Murphy argues for research on those states that have hardly ever been studied: Jerome Murphy, The State Role in Education: Past Research and Future Directions (program report no. 80–312) (Stanford, Cal.: Institute for Research on Educational Finance and Governance, Stanford University, 1980), pp. 8–9. We considered this argument, but still chose California, Florida, and New York since we wanted to be able to compare our results with the results of other studies.

6. These documents included, for example, legislation, regulations, memoranda explaining policies to districts, reports on state testing, reports on textbook selection, evaluations of state policies, newspaper coverage, and other types of print material too numerous to mention. We have catalogued the following numbers of documents for each state: California, 84; Florida, 166; Indiana, 10; Ohio, 102; New York, 62; Ohio, 49; and South Carolina, 55. Space limitations preclude listing all these references in this article.

7. Van Geel and Block, Authority to Control the School Curriculum, pp. 86–99.

8. See, for example, Phippo, Analysis of State Minimum Competency Testing Programs, pp. 38–39 and passim.


10. Donald Freeman, Teri Kuhs, Andrew Porter, Robert Foden, William Schmidt, and John Schiwile, "Do Textbooks and Tests Define a National Curriculum in

