B

PAMELA J. KEATING, PhD

Pamela Keating received her doctorate from the University of Washington in 1981 where she is now Research Assistant Professor of Educational Leadership and Policy Studies. Her areas of teaching and research specialization include federal and state education policy, particularly focusing on issues of equity and access to knowledge, education reform, school choice, school finance, and sex equity, as well as international and comparative education.

Biographical Sketch for
Barbara S. Clements

Barbara S. Clements directs a federally funded project to promote the standardization, automation, and effective utilization of data about education. Project activities involve working with federal, state, local, and private education agency personnel, professional association representatives, Congressional staff, and representatives of higher education on issues related to programs and the collection of data about the programs. Under her direction, handbooks for the collection of student and staff data are being developed. Her project also oversees the development and implementation of a standard nationwide system for exchanging student records among the schools and universities. She serves on numerous task forces and resource groups for the Bureau of the Census, and the U.S. Department of Education's National Center for Education Statistics, Office of Special Education Programs, Office of Bilingual Education and Minority Languages Affairs, and Office of Vocational and Adult Education. She is a member of the National Education Goal 2 Resource Panel, and has recently been asked to chair a subgroup focusing on selecting the core data elements that should be maintained about students in order to monitor progress toward meeting the National Education Goals.

Prior to joining the CCSSO staff, Dr. Clements worked for three years on the development and administration of teacher assessment and evaluation instruments for the state education agency in Texas. Dr. Clements also worked for seven years as a member of a federally funded research team which identified the components of effective classroom management at the elementary and secondary school levels, and she played a major role in developing and conducting the training component of the series of studies. She is a co-author of two textbooks on effective classroom management. Since completing the research, she has conducted classroom management workshops for beginning and experienced teachers as well as staff developers all over the United States.

Dr. Clements has a B.S. in Education from the University of Texas at Austin, and is certified to teach secondary Spanish and Government. In addition, she has a M.A. in Foreign Language Education and a Ph.D. in Educational Psychology from the University of Texas at Austin. The focus of her doctoral work was on program evaluation and statistics, and her dissertation described differences in the classroom management skills of beginning and second year teachers.

Dr. Clements was selected for Who's Who in American Women. She is a member of the American Educational Research Association (AERA), the National Council for Measurement and Evaluation, and Phi Delta Kappa. She has made presentations on data quality and standardization at meetings of AERA, the American Statistical Association, and the National Forum for Education Statistics, as well as to state-wide data conferences in Louisiana, Alabama, Wyoming, and Minnesota.

Diane Massell is a Research Associate at the Consortium for Policy Research in Education (CPRE) located in New Brunswick, New Jersey. CPRE is a research and development consortium focusing on education policy and school finance; it involves faculty and researchers from Rutgers University, Harvard University, University of Wisconsin-Madison, Stanford University, Michigan State University, and the University of Southern California.

Her current research focuses upon developing professional and public consensus on curriculum standards, systemic policies in public education, and state and local policy impacts on the implementation of Project 2061. Diane's most recent publications include "Issues and Strategies in Systemic Reform" (with Susan Fuhrman; CPRE 1992), "Recent Trends in State Educational Reform: Assessment and Prospects" (with William A. Firestone, Sheila Rosenblum and Beth D. Bader; Teachers College Record Winter 1992), and she will soon be publishing "Achieving Consensus: Setting the Agenda for School Reform" in Governing Curriculum (Association for Supervision and Curriculum Development, forthcoming).

Diane conducted her graduate work in the School of Education at Stanford University in California.

Resolution on Core Data Elements for Administrative Record Systems

The National Education Goals Panel (NEGP) applauds the fact that at the national and state levels, comparable indicators have been developed (or are currently being developed) to measure progress toward the six National Education Goals. However, the NEGP notes that at the local level truly comparable indicators have not yet been developed. Such indicators, many of which can be obtained from local administrative record systems, can be a valuable tool both for monitoring local progress towards the Goals and in improving the quality of decisions about schools, classrooms, and students.

Therefore, the National Education Goals Panel makes the following specific recommendations:

1. That administrative record systems in education contain a minimum set of data elements with which to measure progress toward the six National Education Goals at the local level (see attached for a listing of the recommended set of elements).

2. That local school districts, assisted by the state and federal governments, as well as by regional, intrastate, and interstate organizations, voluntarily move toward incorporating *all* of the recommended elements into such record systems.

3. That the definitions of these elements be consistent with those currently being established by the National Center for Education Statistics and the Council of Chief State School Officers. Such definitions are expected to be finalized in the fall of 1993.

4. That, to the degree practicable and appropriate, administrative record system data be maintained in a longitudinal format with information updated as it becomes available in order to provide an historical record of all students.

5. That states be responsible for ensuring the comparability of record system data across their schools and school districts.

6. That data collection and storage be handled in strict compliance with state laws and the federal Education Rights and Privacy Act.

7. That the NEGP review this minimum set of recommended data elements periodically, taking into account emerging information technologies and data needs.

TABLE 1

Recommended Set of Data Elements and Corresponding Indicators for Monitoring Progress Toward the Goals

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K–12 RECORD SYSTEMS?
GOAL 1		
Number of Entering Students with Appropriate Immunizations	Type of Immunization, Date of Immunization, Status of Immunization	Yes
Developmental Well–Being of Students Entering Kindergarten in terms of Five Dimensions: Physical Well–Being; Social and Emotional Development; Language Usage; Approaches to Learning; Cognitive Development.	Developmental Observation and Documentation, Date of Developmental Observation and Documentation	No
Developmental Well–Being of Students Entering First Grade in terms of Five Dimensions: Physical Well–Being; Social and Emotional Development; Language Usage; Approaches to Learning; Cognitive Development.	Developmental Observation and Documentation, Date of Developmental Observation and Documentation	No
Number of Disadvantaged, Disabled, and Other Entering Students Who Participated in National Association for the Education of Young Children (NAEYC) Accredited Preschool Programs *(Measures Objective 1)*	Name of Preschool Program, Type of Preschool Program, Number of Years in Each Preschool Program, Disability Status, Poverty Status	No
Number of Entering Students with Low Birthweight	Birthweight	No

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
Number of Entering Students Whose Mothers Received Comprehensive Prenatal Care	Month of First Prenatal Care, Extent of Prenatal Care	No
Number of Students Who Received Routine Health Care Prior To Entering School	Date of last Routine Health Care	No
Number of Students Who Received Dental Care Prior to Entering School	Date of Last Dental Care	No
GOAL 2		
High School Graduation Rate	School Exit Date, Status upon Exit, Type of Credential Received, Cohort Year	Yes
High School Graduation Rate of Minorities and Non-Minorities *(Measures Objective 2)*	School Exit Date, Status upon Exit, Type of Credential Received, Cohort Year, Race/Ethnicity	Yes
Other High School Completer Rate	School Exit Date, Status upon Exit, Type of Credential Received, Cohort Year	Yes
Other High School Completer Rate of Minorities and Non-Minorities *(Measures Objective 2)*	School Exit Date, Status upon Exit, Type of Credential Received, Cohort Year, Race/Ethnicity	Yes
Dropout Rate	School Exit Date, Status upon Exit, Cohort Year	Yes

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
GOAL 3		
Number of Students Achieving National/International Standards by Subject	Name of Assessment, Assessment Score	No
Number of Minority and Non-Minority Students Achieving National/International Standards by Subject *(Measures Objective 1)*	Name of Assessment, Assessment Score, Race/Ethnicity	No
Number of Students Taking Advanced Placement Courses	Name of Advanced Placement Course Taken	Yes
Number of Students Taking Advanced Placement Tests	Name of Assessment	Yes
Number of Students by Score on Advanced Placement Tests	Name of Assessment, Assessment Score	Yes
Number of Students Participating in Volunteer or Community Service Activities	Type of Volunteer or Community Service Activities	Yes
Number and Extent of Students Participating in Volunteer or Community Service Activities	Hours per Week of Volunteer or Community Service	Yes
Number of Courses Taken in English, Math, etc.	Course Titles or Course Numbers	Yes
Number of Higher Level Courses Taken	Course Titles or Course Numbers	Yes
Number of Students Making High Grades by Subject	Course Titles or Course Numbers, Academic Grade Received	Yes
Number of Students Involved in Extracurricular Activities	Type of Extracurricular Activity	Yes

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
Number of Students Who are Competent in More than One Language	English Proficiency, Language Other Than English, Other Language Proficiency	Yes
Number of Students Registering to Vote at Age 18	Age, Registered to Vote	No
GOAL 4		
Number of Students Achieving National/International Standards in Math and Science	Name of Assessment, Assessment Score	No
Number of Students Taking Higher Level Courses in Math and Science	Course Titles or Course Numbers	Yes
Number of Students Taking Advanced Placement Courses	Name of Advanced Placement Course Taken	Yes
Number of Students Taking Advanced Placement Tests	Name of Assessment	Yes
Number of Students by Score on Advanced Placement Tests	Name of Assessment, Assessment Score	Yes
Number of Minutes Spent in Math and Science Courses	Course Title, Number of Minutes per Course	Yes
Number of Teachers Instructing Classes for Which They are Certified	Subject Matter Area, Level of Assignment, Type of Certification/License/Permit Held, Level Authorized by the Certificate, Teaching Fields or Areas Authorized	Yes
Number of Teachers by Subject by Credit Hours Earned	Subject Matter Area, Number of Credit Hours Earned or Courses Completed in Major Area	Yes

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
Number of Teachers by Years of Experience	Total Number of Years of Teaching Experience	Yes
Number of Minority and Female Students Completing Degrees in Math, Science, and Engineering *(Measures Objective 3)*	Type of Degree or Credential Awarded, Area of Specialization, Race/Ethnicity, Gender	No
GOAL 5		
Number of Minority Students Entering College *(Measures Objective 4)*	Postsecondary Institution Attended, Type of Postsecondary Institution Attended, Race/Ethnicity	No
Number of Minority Students Completing Degree Programs *(Measures Objective 4)*	Type of Postsecondary Institution, Type of Degree or Credential Awarded, Area of Specialization, Race/Ethnicity	No
Number of Students Scoring High on College Entrance or Placement Tests	Type of Entrance or Placement Test, Entrance or Placement Test Score	No
Number of Students Employed After Graduation	Employment Status	No
Number of Students Employed After Graduation by Type of Employment	Employment Status, Type of Employment, Name of Employer	No
Number of Students or Ex-Students Registered to Vote	Registered to Vote	No
GOAL 6		
Number of Offenses in School	Type of Offense Reported, Date of Offense Reported	Yes

C

Resolution on the Assessment of Citizenship

GOAL 3:   *By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.*

The National Education Goals Panel believes that three indicators should be used for assessing citizenship: knowledge of citizenship, community service, and voter registration of 18 to 20-year-olds. We further endorse the following 9 principles.

KNOWLEDGE OF CITIZENSHIP

1.   Knowledge of citizenship (an understanding of our political, legal and economic systems and the rights and duties of citizens) should be included in the state-by-state National Assessment of Educational Progress (NAEP) data collection activities, with information provided every three years at the 4th, 8th, and 12th grade levels.

2.   Support should be given for the development of standards for knowledge of citizenship commensurate with the standard-setting efforts in other academic subjects. Further, much as performance assessment in other academic subjects is being developed, so should performance standards for citizenship knowledge ultimately include an action component -- community service learning.

COMMUNITY SERVICE

3.   The Goal 3 objective -- "all students will be involved in activities that promote and demonstrate good citizenship, community service, and personal responsibility" -- should be operationally defined in terms of "service learning." Service learning authentically engages students in addressing unmet needs in their school and larger community, and advances learning and performance outcomes of specific subject areas, particularly, but not exclusively, citizenship. Citizenship values and understandings are learned in context of personal application through community service activities linked with a civics education or government program.

4. Service learning should be integrated, in a developmentally appropriate manner, into the curriculum. This means that service learning must include opportunities for structured discussion, reflection, and writing related to, or arising directly from, the service activity.

5. NAEP should include in its data collection supportive information for evidence of community service and the degree to which it is linked to the curriculum or just encouraged as a separate activity. This information should be collected, at a minimum, in years when NAEP includes a citizenship component.

6. In collaboration with the Commission on National and Community Service, or its successor, the K-12 grant programs from the various states funded under the National and Community Service Act should be analyzed for common indicators based on the most frequent sources of data. If necessary, these indicators should be supplemented to assure that they reflect quality indices of service learning in the civics, government, or other curriculum. The results of this effort would form the basis for the assessment of citizenship among the funded states, with evidence collected at the 4th, 8th, and 12th grades to parallel the academic subject assessments.

7. The Commission on National and Community Service, or its successor, is encouraged to make discretionary funding available to each participating state which has developed a data-collection system on community service as a condition of receiving funds.

VOTER REGISTRATION

8. NAEP should collect supportive data on voter registration and the extent to which it is linked to the curriculum or encouraged as a separate school-based activity. This information should be collected, at a minimum, in years when NAEP includes a citizenship component.

9. Governors are encouraged to identify how many 18-year-olds in their states are registered to vote.

D

FORMULATING CONTENT STANDARDS:
Case Studies and Implications for National Content Standards
(in Previous Major Standards-Related Projects in Education)

by Diane Massell (Rutgers) and Michael Kirst (Stanford)
Center for Policy Research in Education

Abstract

Diane Massell and Michael Kirst present case studies of the processes and outcomes of five major prior education standards-related projects attempting to define what students should know and be able to do. They identify key issues that past and current projects have to deal with and make recommendations regarding them to the National Education Goals Panel.

The case studies include: 1) recent standards-setting of the National Council on Teachers of Mathematics (NCTM); 2) a variety of NSF-sponsored science curricula in the 1950's and 1960's; the development of both 3) New York and 4) California's recent history/social studies frameworks, and 5) the current Advanced Placement Program.

The critical issues identified include:

1) the tension between achieving popular support and consensus for standards and exercising leadership to set them at high levels;

2) the barriers to consensus, including the relationship of subspecialties within a subject matter field, controversy in society on proposed topics of study, and the demand for speedy results;

3) the relationship of content, performance, and teaching standards;

4) the level of specificity needed for standards and their coordination with assessment;

5) the difficulty of developing subject matter standards that encourage interdisciplinary study and depth of study;

6) making provision for the revision of standards;

7) deciding who to involve in setting standards; and

8) the need to permit a variety of formats for standards set in different subject areas.

Formulating Content Standards: Case Studies and Implications for National Content Standards, by Diane Massell amd Michael Kirst, Center for Policy Research in Education (CPRE)

Sample issues and questions addressed in the analysis

1. How can the tension be balanced between setting high standards (leadership) and maintaining the popular support (consensus) necessary for implementation?

2. How can the need for timely and visible action be balanced with the time it takes to build consensus and ownership among the important stakeholders in a field?

3. How specific should standards be? ... to maintain support? ... to permit assessments aligned to the standards? ... to steer a course through controversial topics and permit the design of related curriculum materials? ... and teacher training programs? ... to maintain local control, diversity and flexibility in determining curricula? ... to give direction and vision without bogging down in detail?

4. How much consensus is necessary? Does every point of view have to be represented in each standards setting project? How, how many, and which practitioners need to be involved? How important is input from scholars and authorities in the subject matter? What role should parents, taxpayers, business, advocates and other laymen have in specifying the standards? How does one deal with political, ideologial and commercial interest groups?

5. What provision for revision of standards should be made now, at the beginning of the standards-setting process?

6. What provision should be made for interdisciplinary learning (across the subject matter areas)? ... and for applying what is learned to the kinds of real-life problems whose solution requires knowledge derived from several disciplines?

7. What is the relationship between content and performance standards? ... between performance standards and assessment? ... between content standards, curricula, and teaching standards? How would the work of the National Education Standards and Assessment Council (NESAC) relate to others concerned with teaching standards, delivery standards, and/or opportunity to learn standards?

Massell and Kirst conclude with nine recommendations to the National Education Goals Panel:

1) gather background on the nature of each of the subject-matter areas for which standards will be reviewed

2) consider ways to buffer projects from the press of interest-group politics;

3) determine whether to adjudicate (ie., "referee") between competing content issues in different subject areas or focus only on the process by which groups develop national standards;

4) extend the timelines for the development of national content standards;

5) don't require a common format for all standards;

6) seek expert advice about the optimal level of detail and specificity of content standards;

7) provide or encourage support for capacity-building efforts;

8) consider schedules for revising the content standards now;

9) consider mechanisms to "bridge" subject-matters and ensure interdisciplinary discussions.

SUPP MATERIAL

Consortium for Policy Research in Education

FORMULATING CONTENT STANDARDS:
Case Studies and Implications for National Content Standards
<u>a report prepared for the National Education Goals Panel</u>

by

Diane Massell, Rutgers University
Michael Kirst, Stanford University
Consortium for Policy Research in Education

Consortium for Policy Research in Education

FORMULATING CONTENT STANDARDS:
Case Studies and Implications for National Content Standards
a report prepared for the National Education Goals Panel

by

Diane Massell, Rutgers University
Michael Kirst, Stanford University
with the assistance of
Carolyn Kelley, Stanford University
Gary Yee, Stanford University
(April, 1993)

Only a decade ago it was taboo to use the word "standards"
or curriculum in the context of the federal government and
national-level policies. Since then, with the pioneering work of
the National Council of Teachers of Mathematics and state
departments of education like California, and the emergence of
the federal government as an active partner in reform, momentum
to set national education standards has become overwhelming.
Construction of national content standards has begun under
contracts let by the U.S. Department of Education, and President
Clinton has pledged to continue this effort. Discussions have
circulated about establishing a nationwide organization, the
National Education Standards and Assessments Council (NESAC) to
certify national curricular content standards, whose duties would
include reviewing the proposed national content standards. But
specifying these standards can galvanize opposition from many
sides of the professional, political, and social spectrums. All
the current efforts are using some form of consensus-building
process to set the standards of "what students should know and be

able to do". NESAC would need to decide how much consensus is enough -- for certainly any standard which moves beyond pure compromise and vague positions will continue to raise issues and debate -- and they would need to decide how much ongoing debate would undermine the effort. Similarly, NESAC would need to determine key features of the standards, like whether a similar format and structure should be used across all the different disciplinary standards, whether the content standards should make assertions about pedagogy, whether standards must stress certain prominent reform goals like crossing disciplines, and other elements.

This report is written in the spirit of beginning a dialogue with the National Education Goals Panel on these weighty matters, to help it consider criteria by which national content standards would be approved. Through a series of case studies of curricular standard setting in other contexts, both in the near and far past, we hope to illuminate the issues and concerns raised during these undertakings, and consider the lessons participants have taken away from their efforts. In this report, we have restrained from asserting our own judgments of "good or bad" agenda-setting processes or curriculum content products. Instead, we present the judgments of others--our respondents, and criticisms or praises contained in the literature. The time frame for this study did not permit us to develop a more rigorous design that would allow verification of some of these assertions through a thorough search of printed records or interviews with

all relevant respondents.

The case studies were chosen to vary on several dimensions, including subject-matter, time period, and type of curricular product. We also wanted to explore contrasting models of agenda-setting in the same discipline area. We examined:

a) the National Council of Teachers of Mathematics' (NCTM) recent efforts to set curriculum and professional standards in mathematics. NCTM was cited by Lamar Alexander as the guide for which all curriculum areas should follow. At the end of this case study is a brief statement on some of the "lessons learned" from the development of the "new mathematics" projects in the 1950s and 1960s;

b) the "new physics, chem, and biology" of the 1950s and 1960s;

c) the California Department of Education's 1986 history/history-social science curriculum framework and subsequent textbook adoption. This effort is contrasted with a brief review of New York's effort to generate advisory reports in history to guide their state department of education's development of curriculum guidelines; and

d) the College Board's Advanced Placement (AP) subject matter exams in fields such as science, social studies, and language arts. Universities provide college credit placement based on pupil scores on AP, so the AP test is a "high stakes" exam.

We hope this report will stimulate thinking and provide guidance to policy formation, but as mentioned we were unable to examine rigorously all the assertions that were made in these cases, and we do not want to promote any public misperceptions about the various organizations and efforts discussed here. So readers of this document should look for patterns in the assertions, and consider them in broad terms rather than in terms of a specific case.

Looking at the Development Process: One Way of Seeing

We began this study by developing a way of viewing the relevant factors that affect the development of content standards, based on Massell's other recent work on this topic (forthcoming). See Model I on the next page.
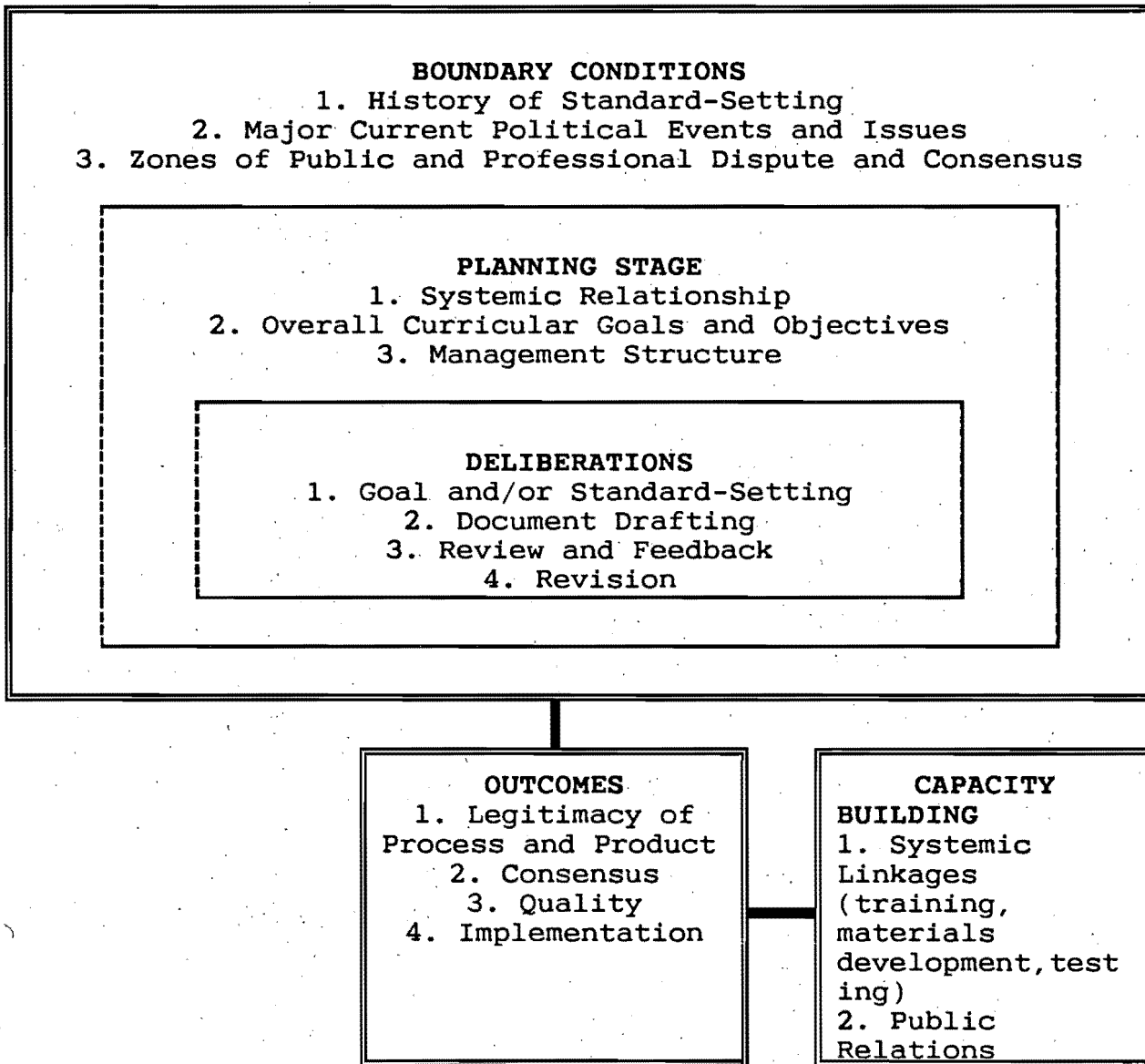
BOUNDARY CONDITIONS Boundary conditions refers to the complexities of the political, social and cultural environments that affect all aspects of the agenda-setting endeavor, most critically, its more general goals and philosophies. Among the many salient factors here are the historical legacies of earlier efforts to reform curricula, and the political climate pressing for change. Bitter disputes, lessons learned about the deliberative process, the analysis of the successes and failures of implementation and other issues help to shape and inform the current undertaking. For instance, most of the current efforts aim their standards at <u>all</u> students, in reaction to the curricular reforms of the 1950s and 1960s which focused on identifying and supporting a cadre of young academic elites who could contribute in the race against the Soviet Union.

Finally, the zones of preexisting public and professional consensus over a particular field effect the task, not only in terms of the project's overall goals and objectives but also in terms of the strategies it uses to build consensus[1]. (In some

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[1] Of course in some of the cases we review, consensus-building may not have been a primary concern. The project may have assumed that consensus would simply follow because of the people--e.g. experts--used. Jackson suggests this was the case with the National Science Foundation's 1950s reform efforts.

of the cases, however, consensus-building was not a primary

Model I
AGENDA-SETTING for
CONTENT STANDARDS

BOUNDARY CONDITIONS
1. History of Standard-Setting
2. Major Current Political Events and Issues
3. Zones of Public and Professional Dispute and Consensus

PLANNING STAGE
1. Systemic Relationship
2. Overall Curricular Goals and Objectives
3. Management Structure

DELIBERATIONS
1. Goal and/or Standard-Setting
2. Document Drafting
3. Review and Feedback
4. Revision

OUTCOMES	**CAPACITY BUILDING**
1. Legitimacy of Process and Product 2. Consensus 3. Quality 4. Implementation	1. Systemic Linkages (training, materials development,testing) 2. Public Relations

The dotted lines between each element illustrates the permeability and influence that one layer of the process has upon another.

concern.) It is important here to understand where the fault lines of the disputes lie. In addition to the substantive debates, it is important to gain a general understanding of the structure of the field--the associations, interest groups, and other organized elements which influence the dialogues and directions in a subject-matter area--and the power dynamic amongst these players.

PLANNING STAGE The intended relationship of the curriculum effort to other vertical and horizontal elements of the education policy system is another consideration, and one which distinguishes our cases. During the 1950s and 1960s, textbooks were viewed as the primary lever of change, and were the key focus of science and mathematics projects in that period. Some of the projects turned to training teachers, but essentially ignored other elements of the system, like testing, preservice training, and state and local contexts that effect curricular implementation, like the support and understanding of parents and district administrators who must promote and defend the new practices. Many recent curriculum reform efforts are much more mindful of these systemic linkages and the process factors that can impact the adoption and implementation of change at the local level. Many of the national projects do not intend to get involved in developing textbooks. Instead, they aim to craft a system of broad influence over publishers and the other interrelated components of education. New technical design principles are emerging. For instance, in curriculum guidance at

the state level, curriculum guidelines or frameworks should no longer elaborate lengthy lists of content and behavioral objectives. Instead, more configurational designs have been developed that provide conceptual maps of the knowledge field, scope and sequence, content and behavior grids, and general pedagogical and assessment strategies.

The management of the agenda-setting effort can, either intentionally or unintentionally, affect the outcomes of the process. Some of the salient aspects of management include: selection of participants, grouping, staffing, lines of formal and informal authority, rules of deliberation, and financial and technical resources. Here we will explicate only a few of these many aspects.

One of the most critical elements of deliberation is the issue of who participates. In general terms, participants in the deliberative process can be selected from two basic groups, 1) professionals (teachers and other pedagogical experts, subject-matter specialists, education administrators from different levels of the system), and 2) the lay public (parents, business and industry elites, elected government officials). An important quality is the extent to which participation is representative. Representation has two aspects: *scope* and *diversity*. Scope refers to the expansiveness of the representation; in other words, it refers to whether the "grassroots" of a particular group participated, or whether a group was represented by appointed or elected leaders. Diversity refers to the range of

different ideological, political or social groups involved. Some

of the most common and important divides, for example, are:

1) philosophical and theoretical debates over schooling in
general, or a disciplinary field in particular;
2) pedagogical debates, such as the disagreements over
whether the curriculum should cover more content, or less
content in greater depth;
3) political divisions based on geography, political
parties, interest groups, and the like;
4) societal groupings (ie., race, ethnicity);
5) different areas of the school system (elementary,
secondary, vocational, and higher education); or
6) different levels of the school system (classroom
teachers, district-level administrators like curriculum
supervisors, and state-level personnel).

The diversity of the groups involved, particularly at the goal

and standard setting or writing stage, has implications for the

quality of the discussion and the clarity of purpose in the

drafted documents. On one hand, diverse representation can

promote consensus, stimulate critical discussion, and lead to

serious consideration of alternative ideas. On the other hand,

it could also lead to a curriculum of compromise, without

conceptual clarity or leadership.

The way participants are grouped also can have an impact on

what ideas are considered and discussed. For example, if in the

development of science curricula participants are grouped

according to traditional fields (physics, chemistry, biology, et

cetera), then they might be more likely to argue the details of

these disciplines. Other grouping strategies include organizing

them by vocational or life skill goals; policy spheres

(assessment, teacher training, textbook and materials, et

cetera); and levels of the system (federal, state, local; higher

education, high school, middle school, elementary school).

Implicit or explicit <u>rules of deliberation</u> could affect the legitimacy of the process. Procedural rules include whether the group votes or must come to full agreement, how criticisms obtained during review and feedback are incorporated, how ideas are presented, and others. Rules also govern the relationships between various task forces set up to discuss different aspects of the curriculum.

DELIBERATIONS The deliberative process for setting standards roughly consists of four parts: 1) establishing goals and standards, 2) writing documents, and 3) obtaining review and feedback, and 4) revision. Creating consensus around content standards is iterative and involves continual interaction among these four elements. The way these steps are sequenced as well as how they are managed (who participates, et cetera) can impact the nature and quality of the outcomes.

The <u>deliberative platforms</u> that emerge during this process provide explicit models of problems, including how and why the problem arose, why it persists, what are its causes and its consequences (Walker 1990, p. 189). Some of the philosophical and technical issues that can arise include:

o Should the content be divided into separate school subjects, or should the curriculum be unified, integrated, or interdisciplinary?
o Should the same content be presented to all students or should content be tailored to particular students?
o Should the content reflect traditional academic disciplines? Should the standards also include content from other sources, such as the knowledge and skills required for everyday life or for particular occupations?
o In what sequential order should content be presented to students? Which subjects, units, topics, and concepts should be presented earlier and which later?
o How much content detail should the standards provide? Should the content be organized around theories and themes?
o How can we determine which content from the whole corpus of human knowledge is most important for students to learn?

Adapted from Walker 1990, p. 12

OUTCOMES The outcomes of these efforts extend beyond the quality of the product itself. Important as well is the perceived legitimacy of the process and the final curriculum product among stakeholder groups, the extent to which consensus was achieved, and evidence about the affect of the process and the product on implementation.

CAPACITY BUILDING Finally, the efforts to build capacity in the system once the curriculum has been formally adopted can have perhaps as much if not more impact on the levels of support, understanding and implementation than the agenda-setting process per se. These efforts include public relations campaigns, research, staff development and the like.

NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS,
with references to the "NEW MATHEMATICS"[2]
CASE STUDY
Diane Massell

I. BOUNDARY CONDITIONS

A. *History of Standard Setting*

The National Council of Teachers of Mathematics (NCTM) is a
grassroots professional association of 94,000 members, consisting
primarily of teachers and collegiate mathematics or mathematics
education professors. During the 1980s, NCTM undertook a
pioneering effort to produce curriculum standards in mathematics,
believing that "for too long we have abdicated this
responsibility to others, including legislators, administrators,
and textbook and test publishers."(Romberg 1988) Prior to
developing these standards, consensus was developed within the
mathematical sciences education community about the need for
reform and the direction of reform efforts. In 1980, NCTM
published *An Agenda for Action* which charted out a 10-year plan
for change. This resulted in the *Curriculum and Evaluation
Standards for School Mathematics* (1989), and the *Professional
Standards for Teaching Mathematics* (1991). Now, NCTM is about to
embark on expanded assessment standards.

When NCTM started its work, the idea of "standards" was an

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[2] Any comparison between NCTM and the "new math" raises the
alarm of key NCTM players. In a public relations sense, they are
keen to distance themselves from the perceived debacle of the
"new math". Nevertheless, much evidence suggests that both the
negative and positive "lessons" of the "new math" were a salient
factor in current decisions, and the contrast is illuminating.

anathema in government and foundation circles; the organization searched for but received almost no financial support. Since that time the energy that has been mobilized to create content standards at both state and federal levels, and among professional associations, is nothing short of remarkable. Colorado Governor Roy Romer, chair of the National Governors' Association and the National Council on Educational Standards and Testing, and former U.S. Secretary of Education Lamar Alexander repeatedly cite the NCTM standards as the premier example of what national education standards should look like, and state and local groups emphatically embrace NCTM. In addition, NCTM's strategy for setting the content agenda has become the touchstone for many of these other efforts.

The broad outlines of this strategy and (arguably) the substance of the NCTM standards departs from many of the "new mathematics" efforts funded by the National Science Foundation (NSF) in the late 1950s and early 1960s. While the multiple projects that comprised the "new mathematics" reflected a diverse range of pedagogues and goals, some general statements can be made. During that period of intense Cold War competition with the Soviet Union, the educational "problem" was defined in terms of the poor quality of the written curriculum and the subsequent failure to prepare a future generation of top-flight mathematicians, scientists and engineers. To develop state-of-the-art textbooks that would prepare students for college, NSF turned to widely acclaimed university scholars in the discipline

of mathematics; teachers had a much smaller role in the development process. Many, although not all, of these textbooks proceeded on the assumption that knowledge should be presented in a Socratic way (CBMS 1975). Many were theoretically inclined, focusing on teaching students the basic abstract structure of the discipline. While some of the projects called for interactions between mathematics and science, most did not seek interdisciplinary teaching and learning. The "new mathematics" projects could be likened to oil on the water of teaching practices and assumptions. Nor did many generate broad ownership and understanding or support for the new curriculum; it often was assumed that the expertise of the university faculty provided sufficient legitimacy to leverage widespread acceptance and use. The "new mathematics" reforms tried to uproot and replace the existing curricula and ways of teaching overnight (Carlson 1992).

The current NCTM reforms proceed on some very different assumptions. First of all, it called for a different type of mathematics to be taught to <u>all</u> students. It should include algebra, geometry, trigonometry, statistics, probability, discrete mathematics, and calculus, and should involve more that the manipulation of arithmetic routines (Romberg 1992a). The current reforms do not focus their energies on creating an elite cadre of young mathematicians but on providing the mathematics that "all students will need if they are to be productive citizens in the twenty-first century" (NCTM 1989). Their overall goals are to create 1) mathematically literate workers, 2)

lifelong learning, 3) opportunity for all, and 4) and an informed electorate. To accomplish this, NCTM does not set out to create new textbooks as their primary or sole aim, but curriculum standards that will provide the "criteria of excellence" by which textbooks and other parts of a mathematics curriculum (teacher training, new programs, etc.) can be developed and judged by others. The "problem" and potential solutions are defined much more broadly and systemically. They envision the need to bring about change in the entire system, and attempt to build support and capacity in more diverse and ongoing ways. By involving educators in drafting the standards, they aim to better "ground" them in classroom experience and knowledge. Furthermore, they undertook an extensive campaign to gain input and feedback from a broad array of professional and public groups during the development process, and did not assume that the new standards would be accepted because of the high status of the writers. The realized that a continuous stream of effort would be necessary to build ownership, understanding and support. In addition, the central pedagogical vision which drives the NCTM effort is different from the majority of "new mathematics" projects; it rests on developments in cognitive psychology. (The differences between behavioral and cognitive psychology will be elaborated in section IC below) Finally, in contrast to the "new mathematics" the NCTM standards call for interdisciplinary teaching and learning.

B. *Major Political Events and Issues*

The professional and political events which stimulated these new directions came from many sources. Perhaps the earliest professional impetus came from the Conference Board of the Mathematical Sciences' (CBMS) National Advisory Committee report in 1975, which evaluated the conditions of mathematics teaching K-12 and the "new mathematics" revolution. Among some of its more salient recommendations which we see reflected in the NCTM standards:

> o every child is entitled to the mathematical competencies necessary for daily living;
> o teachers should have the opportunity to select from among the growing array of alternative teaching styles and materials those that best meet the needs of their students; and
> o concrete experiences should be an integral part of the acquisition of abstract ideas. (CBMS pp 137-138).

The intellectual climate was also strongly influenced by the growing authority of cognitive psychology research on student learning, and examples of its use in European pedagogy, where students have received more applied, problem-solving instruction since the 1970s. In addition, rapid changes in technology made some areas of mathematics obsolete and expanded its use in other domains. By spring, 1983 NCTM had a task force looking into the development of a standards document.

NCTM's new directions were also stimulated by events which "framed an educational and political climate within which it was possible to delegitimize the minimal competency ideology of minimal expectations and minimal demands" (Bishop 1990). At the end of the 1970s the United States was in a serious recession, and economic competitions with Japan, Germany and other countries

were intensifying. In 1983, the National Commission on Excellence in Education published its influential report, *A Nation at Risk*, which called for higher standards in the academic core of schooling. One year later two separate conferences were held to explore new directions for the field. One conference was sponsored by the Conference Board of Mathematical Sciences and funded by the National Science Foundation, and another was jointly sponsored by NCTM and the University of Wisconsin and funded by the U.S. Department of Education. At these meetings, textbook publishers charged the mathematics community with being quick to criticize their materials but never communicating what, in fact, they wanted. Although the conferences were independently convened, the groups issued similar recommendations, one of which was to develop "a new content framework" (Romberg 1992a). With this background, and motivated as well by state-level legislative attempts in the early 1980s to prescribe curricula, NCTM chose to undertake this task.

It is important to note, in comparison to more recent efforts underway to set national content standards, the marked difference in the political context. Since NCTM's efforts were initiated before the federal government became so greatly vested in these enterprises, they did not face the kind of extraordinary scrutiny and political pressures and rapid timelines for completion that the new projects confront.

C. *Zones of Professional and Public Debate*

As the above illustrates, the mathematics education

community now operates in tandem on many issues. In most countries, mathematics education and mathematical sciences[3] do not see eye-to-eye; in the U.S., however, the collaboration has been remarkable (Bishop 1990). Here the different professional associations in mathematics work closely together and often share a common membership. Indeed, they actively promote community. In 1985 a collection of leaders from CBMS and NCTM approached the National Academy of Sciences to establish a coordinating board for all the professional groups; this resulted in the Mathematical Sciences Education Board (MSEB). MSEB helped to prepare the ground for the NCTM document with its 1989 report, *Everybody Counts.*[4]

The high levels of collegiality in the mathematics community

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[3] Mathematics education is the discipline dealing with the teaching and learning of the mathematical sciences. Individuals in mathematics education are involved in basic research on how mathematics is learned, ways in which curricular programs and materials might be developed and used, the inter-relationships between study in the mathematical sciences and other related fields, and the development and delivery of teacher education in the mathematical sciences. Mathematical science refers to the discipline of creation and extension of human understanding and application of mathematics. It is often characterized by the subdisciplines of algebra, geometry, analysis, topology, probability, statistics, operations research, etc. (Dossey 1993).

[4]Although pressure for change is high, little consensus has existed on what mathematics students ought to learn now, much less on what they will need for the future. Lack of national focus has created such disparities among standards that it is difficult to discuss curricula in meaningful and productive contexts. Teachers have received such mixed signals that even the best of them often do not know which choices to make in those few classes where they have some discretion over what to teach (1989).

results in part from its small size and regular communication and exchange. Robert Davis notes that when the "new mathematics" projects were developed in the 1950s and 1960s, the community had few organizations or even publication vehicles through which debates and discussions could be aired. Deeper schisms existed then. The many nodes of communication and dialogue which now dot the field were actively used by NCTM during the development of the standards.

But this collegiality also is determined in part by the nature of the mathematics discipline itself. Unlike social studies or even science, mathematics does not have a proliferation of highly distinct and competitive subdisciplines, and they have a common language which facilitates discussion across the different subject areas (geometry, algebra, etc). As a consequence, the general "less is more"[5] goal of current educational reforms is easier to achieve in mathematics than other areas, because you do not have groups competing to get coverage of their specific subdiscipline approaches and content emphases. (In mathematics, the rallying cry is "increased/ decreased emphasis" or "more and somewhat different for all", according to Thomas Romberg, Chair of the NCTM Commission that produced the *Curriculum Standards* document.)

One of the most remarked-upon outcomes of NCTM's efforts is the high degree of professional consensus surrounding the

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[5] The prevalent notion is that schools should shift their emphasis on "covering the material" and provide more solid, in-depth exploration of fewer topics.

Curriculum Standards. Many organizations and professional associations endorsed the effort prior to its publication, and its strategies for setting the standards agenda has been widely emulated. But serious disputes do exist; these debates tend to center on pedagogical strategies (when and how) rather than on the content of what is to be learned[6].

Perhaps the key dispute, and one from which many others issues of practice fall, stems from the debate between behaviorist and cognitive psychology. The *Curriculum Standards* presents a very clear pedagogical agenda which NCTM's *Professional Standards* elaborates and makes more explicit. This agenda draws heavily upon research developments in cognitive psychology, which propose that students learn best when active and engaged in constructing their own mathematical knowledge[7]. When tackling numerical, spatial, and data related concepts in

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[6] As we shall see, many mathematics educators argue that distinctions cannot be drawn between content and pedagogy. At least relative to other disciplines, certain objective constructs in mathematics--like geometric principles--appear taken for granted, but pedagogy--the way to teach those principles--is not.

[7] Romberg (1992c) refers to this as a distinction between absolutists and social constructivists.

> For an absolutist, "to know" means to identify the artifacts of the discipline (its record). For social constructivists, "to know" is "to do" mathematics..Each makes different assumptions about the learning process. If "knowing that" is stressed, the student is treated as a "piece of registering apparatus, which stores up information isolated from action and purpose" (Dewey 1916, 147). And if "knowing how" is emphasized, the student is seen as an active constructor of knowledge "operating in important ways on his environment" (Bourne 1966, 36). (Romberg 1992c, 751-752).

real life--a context--students develop a kind of mathematical reasoning, a distinct way of approaching problems. This pedagogical approach is seen as most conducive to teaching the higher-order thinking skills that reformers now prize. In contrast, behavioral psychology, which is the foundation for much contemporary practice, asserts a pedagogy that stresses skill development through the repeated practice of calculations that link to basic mathematical procedures and formulas. It emphasizes direct instruction (where the teacher is the focus of attention, and is engaged in telling students facts and ideas), memorization of mathematical rules and formulas, direct instruction, recitation, and repeated practice. Although this "back-to-basics" view is not widely supported by the inner circle of the mathematics community, it remains a predominant perspective among a sizeable number of practitioners (Davis 1984), and is frequently advocated by parents, school administrators, and some popular textbook publishers[8]. And the alternative approach advocated by NCTM raises fears. As expressed by Finn (1993): "Was it possible, I asked, that children taught according to NCTM standards might have all sorts of imaginative ideas about tackling a problem yet seldom get the

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[8]Seigfried Engelmann, a strong advocate of direct instruction, critiques the NCTM approach as having a lot in common with the "new math." As quoted in Finn (1993): "The manipulatives, the exposures, the acting-out, and the moral insistence on problem-solving has been a theme of math educators / since the mid-60's. The approach is actually one of the reasons kids currently don't know long division and are not proficient at paper-and-pencil work in math."

right answer to it because five times 11 was beyond their ken?" He continues by saying that what everyone yearns for is deft skills and reliable "math facts" combined with imagination and deep understanding, its unlikely given the current dearth of excellent teachers. The implication is that in these circumstances we must focus on skills.

Another important distinction is the <u>timing</u> of when higher-order thinking and problem-solving is introduced in the classroom. The basic skills argument is expressed by one mathematics teacher as follows:

> You have to crawl/walk before you can run. If formulas aren't memorized, there will be no basis for the mathematical reasoning. If there is no mechanistic answer finding, there will be no conjecturing, inventing, and problem solving. If you don't know a body of so-called isolated concepts and procedures, there won't be any connecting mathematics and its applications. Judicious use of old-fashioned rote memory and drill are as necessary today as they were in generations past (in Carlson 1992).

The position put forward by cognitive psychology, and the one which NCTM embraces, however, is that these elements (skills and concepts) can and do emerge during the process of problem-solving, and should proceed in tandem. As stated in the 1989 *Standards*:

> Two general principles have guided our descriptions [of expected student activities]: First, activities should grow out of problem situations; and second, learning occurs through active as well as passive involvement with mathematics. Traditional teaching emphases on practice in manipulating expressions and practicing algorithms as a precursor to solving problems ignore the fact that knowledge often emerges from the problems. This suggests that instead of the expectation that skill in computation should precede word problems, experience with problems helps develop the ability to compute." (p. 9)

This debate raises another, similar issue in the math community (and among parents and other members of the public): when and how to introduce new technologies, like computers and calculators, into the classroom. Behaviorist assumptions would lead to introducing these technologies, particularly calculators, only after students learn basic skills calculations and understand mathematical rules and formulas. This position resonates particularly well among the public, who opposed many of the "new mathematics" efforts because they attempted to introduce calculators at an early age. Others more sympathetic with a cognitive psychology position (like NCTM) would say that introducing the new technologies early on contribute to mathematical reasoning, and that overemphasis on memorization and drill and practice contributes to students lack of interest in mathematics.

While these are the primary pedagogical issues that the NCTM standards raised, I would like to address some ancillary criticisms that have been launched against them because they raise important issues for other standard setting efforts.

One set of critiques revolve around the design of the *Standards*. Alan Hoffmeister, in an article to be published in the *Journal of Remedial and Special Education*, charges that the NCTM standards provide insufficient detail and depth to guide program evaluation and selection appropriately. He argues that in their current format, educators tend to use them as a checklist but "[t]he knowledge that a math program is consistent with the NCTM

standards is not a complete and sufficient condition for program validation for any child," and particularly students at-risk. He refers to Carnine (1992) who described how a math program was rejected because it did not mention hands-on manipulatives, even though research on the program itself demonstrated its effectiveness in reaching both low and high achievers, producing higher level cognitive outcomes, and improving student attitudes towards math.

One problem that NCTM faces is over-generalization and misinterpretation; many people view its emphasis on active learning, its arguments for using multiple ways of communicating mathematical knowledge--including manipulatives--as a requirement for manipulatives. Deborah Lowenberg Ball, one of the team leaders on the *Professional Standards* document, writes:

> The use of manipulatives is not the centerpiece of this document's vision of mathematics teaching. Instead, the *Standards* hold that teachers should encourage the use of a wide range of "tools" for exploring, representing, and communicating mathematical ideas. "Tools" include concrete models and materials, graphs and pictures, calculators and computers, and nonstandard and conventional notation. Manipulatives--or concrete objects--are important but no more so than other vehicles in NCTM's vision of mathematics teaching and learning. Still, because the passion for manipulatives runs so deep in the current discourse, many people read the *Standards* as a treatise that puts manipulatives at the center of mathematics teaching. (Ball 1992a)

This problem highlights the issue of implementation for all the standards efforts; diverse interpretations will ensue. So how specifically detailed must the standards be? Must they be very precise? More realistically, no standards document will ever have sufficient detail to prevent this kind of misinterpretation.

A continuing dialogue once the standards are completed is probably the more reasonable scenario.

Another, similar, design concern for some educators (I've heard this from the special education community in particular) is NCTM's integration of content standards and pedagogy. They argue that while outcomes (e.g. the content to be learned) can be decided by social processes (dialogue and consensus), how teachers can best teach that content and how students best learn it raise empirical questions that must be answered by research. And they feel that the brand of pedagogy promoted by NCTM is insufficiently supported by research, and should not be so broadly advocated. They point out that the NCTM documents themselves call for further research to verify the accuracy of these methods[9]. However, Romberg has argued that the _Curriculum_

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[9] In an otherwise favorable review of the NCTM standards, Bishop (1990) writes:

> On the other hand, it is perhaps a little surprising that there is not much reference to the research literature concerning mathematics learning and teaching. There is no impression of the existence of a substantial body of research on which, for example, the proposals in _Standards_ are based. Recommendations and exhortations appear to be supported only by opinion--authoritative opinion, it is granted--but opinion nonetheless. It is, however, going to be necessary to mobilize _all_ the supportive forces if the reforms are to be realized, and I would anticipate a need for some detailed research to back-up to the prescriptive statements. Already the research community in mathematics education has sensed the need, but their involvement has come too late in the reform process to have much impact on the kinds of reforms being proposed. (Alan J. Bishop, "Mathematical Power to the People" in _Harvard Educational Review_(60)3, 1990: p. 366).but with how these aims have been interpreted by policymakers and practitioners.

Standards rested on "research and scholarly reflection on that research" (Romberg 1992b), and that the document did not contain references to the literature because its was not written for a research audience.

II. PLANNING STAGE

A. *Systemic Relationships*

Although the term "systemic reform" had not yet been coined when NCTM initiated its process, its activities were a precursor to (and currently a major supporter of) this kind of change strategy. Curriculum standards became viewed as a mechanism which could broadly influence the design and focus of instructional materials without promoting one specific textbooks.

NCTM's initiative early on planned efforts to reach many elements of the system through a long-term process of change. As John Dossey, the former president of NCTM during the period when curriculum standards were developed, says, one problem with the "new mathematics" projects was the harried political environment where the pressure was on to catch up with the Soviet Union. "They tried to make overnight changes. Here we're talking about a staged change, over a decade, perhaps, so that teachers are comfortable with it. The children are not expected to change overnight, but to change as they move through the system."(in Carlson 1992)

NCTM's multipronged effort began first with its 1989 curriculum and evaluation standards. These are intended to be a framework for curriculum development; the document does not

contain the traditional scope-and-sequence charts, or a listing of topics by specific grade level (see Curry and Temple 1992 for a description of traditional curriculum frameworks and guidelines). Instead they assume that many diverse paths can be used to reach the curricular content outcomes identified in the document. They intend the document to provide criteria against which textbook content could be evaluated. Towards this end, they developed "addenda" to the standards that identify exemplary instructional activities. To date they have created 23 such addenda, which take some of the standards in greater detail by, for instance, providing strands for high school algebra and geometry. (Some critics charge that these addenda actually comprise the kind of detailed curricular documents that NCTM claims it wanted to avoid.) Note that NCTM has not piloted specific curriculum projects. However, NSF is supporting several projects to develop curricular materials based on the *Curriculum Standards*.

B. *Organizational Structures*

In 1986, after failed attempts to secure outside funding[10], the board set aside $150,000 to design the strategy for developing the standards. The NCTM Executive Committee set up a Commission, like a standing Board of Review, to oversee the writing groups and report on their activities to the Board. One purpose for setting up this Commission was to provide an organizational buffer between the writing groups and the

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[10] They did have a small planning grant from AT&T.

political activities of the Board; as one respondent said, the Commission kept the Board from micromanaging the project. This enabled NCTM to "appoint people who could get the job done". Informally, then, the Commission's charge was to steer the project through the political waters, move it forward and see to it that implementation occurred. But they also provided substantive input. Formally its charge was to:

> 1. Create a coherent vision of what it means to be mathematically literate both in a world that relies on calculators and computers to carry out mathematical procedures and in a world where mathematics is rapidly growing and is extensively being applied in diverse fields.

> 2. Create a set of standards to guide the revision of the school mathematics curriculum and its associated evaluation toward this vision." (Introduction to *Standards*, p. 1)

The Board of Directors had final authority over document approval.

C. The Drafting Stage for Content Standards

1. <u>A Period of Intense Preparation</u> For a year and a half prior to convening the working groups, Thomas Romberg, who the Executive Committee selected to head up the writing projects and serve as overall editor, reviewed the literature and talked about how the standards document should be presented. (NCTM also hired a graduate assistant for him, who worked with him throughout the process). To assist the writing teams, they prepared a library of reference materials that included reform reports and background papers, research, state and international curriculum documents, and two summary papers which "outlined the perspectives and the tasks to which we were committed" (Romberg

1992a). Papers laid out in advance some of the ideas and issues that the working groups should consider, but did not determine the overall way they would structure the document.

2. <u>Writing Team Participants</u> To draft the document, NCTM set up four writing groups with 6 people each; one of these was identified as the writing group leader. The writing teams were divided as follows: K-4; 5-8; 9-12; and assessment standards. These groupings were chosen because, they said, mathematics has an implicit sequential structure; in K-4 children are addressing whole numbers, in 5-8 fractions, decimals, and prealgebra, 9-12 algebra, geometry. And, they said, these clusters made sense given current organizational structures in schools. Dossey appointed the team members; selections were based on reputation and role diversity. He identified a math educator to chair each committee, someone recognized as having a strong reputation but not necessarily a specialist in research or teacher education. They selected a classroom supervisor, another math educator with a research or teacher education specialty, someone with developmentally-appropriate knowledge of that particular level as well as understanding of the adjacent levels of education, and finally, a wild card--sometimes a devil's advocate, a good clear thinker to bring about hard debates, or to provide a balance if no one represented a certain element. The inclusion of more teachers and others close to the classroom was a strategy which distinguished the NCTM standards development from the "new mathematics". The latter's process is often viewed as top-down

and elitist, involving university faculty with expertise in the subject-area, but often with no developmental understanding. Teachers in the "new mathematics" projects were not integral to the formative development of the curriculum standards.

Although there was fairly broad agreement about what should be done, said Dossey, they needed direction. The deliberations of the writers were not constrained by strong rules or objectives, although Romberg had prepared a number of materials about the substantive issues preceding the team's meetings. In general, the working groups were told to focus on the "big ideas" and to provide, at most, 15 statements. From the beginning they were charged with issuing standards for _all_ students.

The sequence: In the summer of 1987 the teams were gathered together for two weeks at a single site to help bond them as a team. During the day the groups split out, and in the evening they met in plenary sessions to hammer out how it would all fit together, argue the issues. At times, the Commission provided input to the writing teams relative to the substance and form of the recommendations.

3. _Review and Feedback_ They circulated 60 copies of a draft document around the country with response deadline of 2 weeks; then the teams had another week to summarize the responses. The teams met another two weeks to summarize the responses and develop a second draft copy. This copy was then edited and served as the basis for a nationwide discussion of the standards during the 1987-88 school year. It was released in September,

1987, and discussed at eight regional meetings of the council, the NCTM's annual meeting, and regular and special meetings of the council's over 200 affiliated groups. In addition, it was mailed out to many of the Council's members and other individuals active in mathematics education policy settings asking for input. Through these efforts, their three journals, and other avenues, the NCTM sought to get their members', and other's, views on the general directions they were taking.

In 1988 the MSEB held fairly small focus group meetings of parents, school principals, school board members, business and industry leaders and others to respond to a synopses. (The distinct role groups met separately). MSEB wrote an internal report to NCTM and said, for example, that parents were comfortable with computers but not calculators. In this instance, NCTM's response was not to alter their call for calculators, but instead to address this as a challenge that they should take on by developing strategies to educate the public and win broader support during post-agenda setting stages. In the summer of 1988, the writing groups met again for three weeks to develop the final version of the standards. The work resulting from this effort was carefully edited and brought to the final form during the fall of 1988, with final NCTM Board of Directors approval taking place in September of that year. Throughout the fall of 1988, NCTM worked with different mathematical associations and other professional groups in education to have the Standards endorsed by them prior to their release in March,

1989.

D. The Drafting Stage for Professional Standards The writing
teams for the Professional Standards document was organized
differently. Rather than by grade level, 5 to 6 people were
chosen to be on teams organized by: 1) teaching; 2) teaching
evaluation; or 3) professional development.

According to the leader of one of the teams: "We were
selected with enough variation that there was disagreement.
Controversy among the group meant that we were already dealing
with some of the controversies which would arise in the field."
She notes that she had no role in NCTM before being asked to be a
team leader; she felt that it was probably because insiders would
not provide the needed controversy. However, because her
publications and research focused on other topics in teaching,
she believed that NCTM staff would not know in advance what her
position on the issues would be. She felt that the working
groups had strong authority to develop their own voice; NCTM's
Commission played a back role, and no one intervened. The team
had no formal rules for addressing disagreements, and no
disagreements were so strong that anyone left. They had outside
consultants come in to address different topics, such as teaching
to people of color and poor children. It is interesting to note
was that she said that the connections with the content standards
were more implicit, loosely applied.

The development of the *Professional Standards* took two
academic years. The first summer the teams met to develop a

draft. They organized a steering committee involving the team leaders plus an additional member from each group to oversee the drafts, and help with review and feedback during the academic year. The second summer they had paid reviewers chosen by the groups to look at the document as it evolved. MSEB did not hold focus group interviews to gain feedback for these standards as they did for the *Curriculum Standards*, because they felt that teaching standards related directly to the professional community itself, whereas content standards are highly linked to the external community.

III. DELIBERATIONS

A. The Issues

As mentioned earlier, the divisive issues in the mathematics revolve around pedagogical issues more than content, and the NCTM standards documents have stirred up their share of controversy in this regard. Much of that was discussed earlier in this chapter: the debates that have ensued over NCTM's emphasis on cognitive psychology, its approach to problem-solving and active learning and its approach to the introduction of technology in early grades. Some of the design issues of concern during deliberation targeted the thorny issue of detail and specificity. How specific should the content standards be? They considered writing grade-level standards, but decided that would be too dictatorial to the schools. Instead, they identified standards across grade level clusters (K-4; 5-8; and 9-12). Another issue was whether the standards should be differentiated for geographic

regions (urban, suburban and rural) or for students with diverse learning needs. The NCTM *Standards* did not do so.

B. *Indicators of success and implementation*

Iris Weiss did a small "quick and clean" study for them examining teachers' understanding of the standards. NCTM has a Standards Monitoring Committee that reviews how the standards are playing out in the field, and provides advice to the Executive Board. In addition, Exxon has funded a monitoring project involving 12 new schools for a period of three years.

In *The Road to Reform*, Iris Weiss reported the following regarding teachers' knowledge of the NCTM standards documents:

Curriculum and Evaluation Standards (in percent)			
	K-4	5-8	9-12
Well Aware	22	31	48
Somewhat Aware	33	35	40
Unaware	45	34	12
Professional Standards for Teaching Mathematics (in percent)			
	K-4	5-8	9-12
Well Aware	14	24	30
Somewhat Aware	36	35	45
Unaware	50	40	25

(Adapted from The Road to Reform 1992)

The data show that high school teachers were much more aware of the documents than elementary and to some degree middle school teachers. In a more recent teacher questionnaire to teachers in 400 schools (201 responded) identified as actively engaged in mathematics reform, 63.5 per cent said they had read the Curriculum Standards document, while 52.5 per cent said they had read the NCTM Professional Standards. (The most widely read document was the district's mathematics framework or curriculum guide, at 85.7 per cent.) The survey also explored the extent to which teachers claimed to employ practices linked to the reform ideas (National Center for Research in Mathematical Sciences Education 1992).

IV. CAPACITY BUILDING

A. Implementation Efforts

When the 1989 document was published, NCTM set up an internal Standards Coordinating Committee charged with the responsibility for making sure that the content, professional standards and other components were set into motion. I call these "capacity-building" activities, and they include:

1) addenda to the content standards. A series of 23 books which took some of the standards in greater depth (e.g. strands for algebra and geometry for high school; kindergarten strand, and the like). These books explain particular parts of the curricula;

2) a series of workshops called "Leading Mathematics into the 21st Century", in cooperation with the National Council of Supervisors of Mathematics. These workshops were funded by NSF. NCTM also hired a Wall Street public relations firm. Local teachers were identified as "point" contacts to answer questions that may arise locally. Dossey met with editorial boards of some major newspapers to explain the genesis and nature of the *Curriculum Standards* the present context and in regards to what they were and were not in an attempt to place them into contrast with the curricular recommendations and efforts of the "new mathematics" ear;

3) another set of workshops to support the teaching standards;

4) conferences for publishers and test developers once or twice a year;

5) a series of videos that pick up different parts of the content standards, such as number sense, algebra for everyone, and the

like;

6) a monitoring project to determine if the standards are being implemented, and the kinds of inroads NCTM is making in the classroom (the Exxon-sponsored project mentioned earlier);

7) mailed an executive summary of its content standards report to every principal, school board president and others;

8) MSEB-initiated statewide coalitions which connects math educators across the state and collects and disseminates information about successful programs, including those that engage parents.

B. *Affect on other policy spheres* NCTM presidents focused their attention on securing NSF funding for teacher training. Eisenhower funds, which were in danger of being zero-funded, were increased instead.

NCTM has had an enormous impact on state curriculum framework and guideline design; a Council of Chief State School Officers' (CCSSO) survey estimates that 41 states have revised their frameworks to conform to NCTM standards. These states include California, important because it can be very influential in the textbook market and it coordinates its frameworks with its textbook, tests, and other materials.

Textbook publishers, however, have been slow to respond, because, according to Dossey, schools are slow to respond. The fear is that if they move too quickly, they will repeat the failures of the 1960s where teachers were unprepared to teach the "new mathematics". The publishers want to make certain that

there will be a demand for the new materials. They are also concerned about how they can capture an active learning approach, cooperative learning strategies, and more investigative projects into both textbooks and tests.

To accommodate the new standards, the Educational Testing Service (ETS) is revising the SAT for spring 1994 to include calculators. Open-ended response items, emphasis on interpretation of data and applied mathematics are to come. They will also allow calculators, although not require them. In addition, PACKETS, a new mathematics assessment system, is a series of "math-rich newspapers" for teachers to use as classwork, homework, or tests.

Pacesetter (ETS and College Board) outlines the fourth year of a high school mathematics curriculum as outlined in NCTM standards. It outlines course content, "meaty" coordinated assessments that require students to apply their knowledge, and is coordinated with teacher development opportunities. Its modelled after the Advanced Placement program, but seeks to raise the academic achievement of a broader range of students.

V. CONCLUSIONS

NCTM is held up as the model for setting national content standards because of the remarkable degree of consensus it achieved. Indeed, much is to be lauded. Its remarkable review and feedback process engaged the entire community--not just professionals, but the public as well. This process allowed professionals to endorse the curriculum document before it was

released, blunting after-the-fact criticisms and giving them a high degree of legitimacy. In addition, the development process engaged practitioners--a sharp departure from past curriculum development practices.

But policymakers must be cautious about having the same expectations for other content areas; many now believe that if other content area projects pattern their agenda-setting after the NCTM approach, similar results will be attained. However, the mathematics community is in many ways distinct: its small size, overlapping membership, common discourse, noncompetitive disciplines, more readily constructed instructional sequencing, and the like. As we shall see, other areas like science and social studies confront much different communities, making their task more difficult. In addition, NCTM took more than three years to complete the task of setting content standards, and did so in a relatively calm political environment. Today's content standards projects confront a much more turbulent environment, with heightened expectations, demands for quick results (they are operating in a two year time frame), and greater stakes.

Other important issues can be gleaned from the debates that the NCTM standards stimulated. The kinds of divisions that arose over the *Curriculum Standards'* emphasis on cognitive psychology and active learning will emerge in other fields, although in slightly different forms. Some educators question its centrality in the document, given what they believe to be an insufficient research base. Many textbook publishers are both hesitant to

adopt the cognitive psychology approach, fearing that schools and teachers will not accept them, and also uncertain about how to embed this kind of methodology in a textbook.

Some educators also argue that teaching standards should be kept clearly distinct from content standards, and that the former should arise out of empirical research such as that sponsored by the National Diffusion Network (NDN). Special educators, in particular, have given voice to these issues. Similarly, they are concerned that people use the NCTM standards to guide program decisions and evaluation, saying that the standards are not in a form that will provide adequately specific and detailed guidance, and will be inappropriately used.

"NEW SCIENCE CURRICULUM OF THE 1950s and 1960s"
CASE STUDY
Gary Yee

The "new science curriculum" was a set of new science courses for secondary schools developed under the sponsorship of the National Defense Education Act and the then newly-formed National Science Foundation (1950) for national dissemination. The first federally-sponsored grant was awarded to Zacharias of M.I.T. in 1956 to develop a high school physics course. Subsequent courses were developed in Earth Sciences, Physical Science, Biology, Chemistry, Physics, and Engineering Concepts. The momentum for this curriculum was largely spent by the end of the 1970s, and adoption rates for the federally sponsored materials peaked in the early 1970s.

Programs which were developed include:

- The Secondary School Science Project (also known as Princeton Project, and by the course title: Time, Space, and Matter), 1962.

- The Earth Science Curriculum Project (ESCP), 1962.

- Introductory Physical Science (IPS), 1967.

- The Biological Sciences Curriculum Study (BSCS), 1959.

- Chemical Education Material Study (CHEM), 1959.

- Chemical Systems (CBA Chemistry), 1957.

- Physical Science Study Committee (PSSC), 1957.

- Project Physics, 1964.

- Engineering Concepts Curriculum Project (ECCP), 1967.

I. BOUNDARY CONDITIONS

History of Standard-Setting. Until the 1950s, school curriculum had traditionally been set by individual school systems in response to the perceived needs of local communities. The science curriculum in schools was established by criteria as diverse as student or teacher interest, popular topics covered in the magazines and newspapers, life problems for which scientific information might prove helpful, college requirements, legal requirements for health and safety, availability of textbooks, and standardized test questions. Science information (as opposed to scientific inquiry itself), especially related to technology, was emphasized, as such technological marvels as electrical appliances, internal combustion engines, and telephones became widely used. Traditional courses taught science through technological application, with bits and pieces of interesting, but unconnected information loosely structured into general science courses. There was little conceptual unity, and no conceptual bridges between units or disciplines. The federal government played little role in the setting of curriculum standards in science.

Major Political Events and Issues.

Changes in curriculum generally occur because of two broad categories of forces: significant economic or social unrest or crises, or significant changes in the knowledge base which the curriculum addressed. By the end of World War II, there developed both a need for more scientifically- and technically-

trained workers due to a shortage of scientists and technically trained workers, and the sense of economic and political competition from the Soviet Union.

University scientists were concerned that entering college students were ill-prepared for college science courses, because the science preparation they received in high school lacked rigor and any sense of scientific inquiry. In addition, with the increased pace of scientific discovery and advancement, much of the information that students had learned was already out-dated or irrelevant. The scientist's concern was to provide a motivating and relevant science background for college-bound students through rigorous science-like high school courses.

At the same time, the Soviet Union had produced significant scientific and technological achievements in a very short two decades, including nuclear capability. This concern about the Soviets provided the spark for a national discussion about the woeful state of American education, especially in mathematics and science, and the establishment of the National Science Foundation (1950). In 1954, summer institutes to upgrade scientific knowledge for high school teachers were established, and the first federal grant to develop a new physics curriculum was awarded in 1956. The concern for curriculum reform was exacerbated by the successful launch of Sputnik I in 1957.

It is significant that responsibility for the development of this curriculum was placed in the hands of scientists, not educators. The new goals for science teaching were drawn from

the respective theoretical scientific disciplines. The curriculum was designed to be as faithful as possible to the scientific discipline itself, and clearly the goal was to develop pre-professional background in science for college-bound students. Little attention was given to the general educational purposes or individual student interest that might be associated with science education.

Zones of Professional and Public Dispute and Consensus.

Because of the widespread disaffection with public education at that time, the increased complexity of each scientific discipline, and the urgency for action generated by the Cold War, there was considerable consensus that the task of curriculum development be undertaken by the top scientific institutes instead of by professional educators. Conflicts were thus primarily technical ones, based on differing technical approaches to the discipline being addressed.

Educators were seen as those who needed retraining, rather than as partners in the curriculum reform. In addition, the focus of attention on science and mathematics meant that those courses had more status and competed with "less important" courses in the humanities, social science, and vocational education. Finally, while there are commonalities among various science disciplines, the fact that specialists were called in to design the courses meant that there was less overlap among courses, and more specialization within each course.

There was general consensus in the beginning that academic

excellence and improved achievement were the primary goals of the curriculum reform. As a result, programs for gifted students, scholarships for the training of scientists, and summer workshops for science teachers were the initial strategies. However, as the mid-sixties arrived, there was increasing awareness that the emphasis on the college-bound may have made the science courses even less attractive to the 70% of the students who did not intend to attend college, and for those college-bound students not interested in a science-based major. As evidence is the peaking of numbers of science classes, nationally, in the early 70s. There was a sense that the curriculum reforms in science had left out significant numbers of students.

II. PLANNING STAGE

Systemic Relationships

Because the project developers all had links to research universities, there was a close tie between university courses, and the skills and content necessary to succeed in university science courses, and the curriculum being developed for high school students. In addition, the curriculum was discipline-based, so the relationship with other researchers within the discipline was strong.

However, there was little systemic connection with science instruction and education at the elementary level, little connection with traditional groups involved in educational staff development or leadership, no interest in working with textbook publishers, and little connection with traditional teacher

education and training departments at colleges and universities. Therefore, while the disciplinary relationships were very strong, the ones with the traditional educational establishment were very weak.

Overall Curricular Goals and Objectives

The underlying goal of the curriculum reform was to prepare students for science in college, and potential careers in science. The objective was to both update the content of the science courses, and to introduce students to the process of science as actually performed by scientists. The former required the reformers to consider carefully what constituted the essential content of each subject area, and the latter required the use of open-ended "discovery method" instructional strategies and extensive use of laboratory experiments and field studies. The objective was to provide students with the knowledge and the skills to further their understanding of the subject area beyond what was taught in the class. The content would be introduced sequentially, with simpler ideas introduced earlier, and more complex concepts reserved for the end of the course. Each unit would be connected to prior knowledge and skills. The goal was to re-cast high school courses from scratch, to make science classes like science laboratories, where students would use the concepts, structure, and operations essential to that field to make discoveries, not simply to report and confirm results.

> Competence in learning is not limited to being able to answer questions from an assignment or to work the problems of the laboratory. A student is expected to know more than an answer; this might include the restricted meaning of the

topic, its modification for different contexts, or its
expression in quantitative terms. To know something is to
have insight into its meaning in terms of the laws,
theories, or conceptual schemes of science. It is in this
way what is learned becomes useful for thinking and problem
solving. Another way of stating [it is this:] does he see
the relevance of the concepts, principles, and inquiries
constituting the discipline? Has he developed an intuitive
capacity allowing him to go beyond the subject matter
described as the course? Are his powers of reasoning those
that characterize the science he is studying? (Hurd, 1969;
p. 32)

Management Structure

There was concern about the federal influence on curriculum

usurping the traditional local authority over curriculum, so

multiple reform projects were sponsored by the National Science

Foundation (and others) in each discipline area, by different

predominately university-based teams. Most units were piloted in

schools, but most of the development work was done by

researchers, and practitioners provided little input in the

curriculum development. It is unclear how the participants were

selected, but it is assumed that practitioners would be selected

for their knowledge of and experience in teaching the subject

matter. Because the participants are grouped around traditional

fields of study, and the concern was to improve preparation for

college-bound students, it is assumed that any arguments would be

primarily around the details of those disciplines, rather than on

larger policy issues such as access, and school-wide

participation.

School systems were free to adopt any or none of the units

for their schools. Teacher training was minimal; the belief was

that teachers only lacked the materials. Limited training was

sometimes offered during summer institutes. Traditional training systems- local staff development offices and teacher colleges- were generally not involved. Most of the emphasis was on the high school level.

III. DELIBERATIONS

The process for setting standards generally followed the well-established guidelines for conducting scientific research. Major issues which arose included how to shift instruction away from information dispensing to theory building, from data collection to data analysis, from lecture to experimentation, from static to dynamic. There was concern over the vast amount of information, and its dynamic nature, which represented each of the fields, and whether to sample the field, as was done in the past, or to organize more in-depth units to facilitate concept attainment (the latter was chosen).

Goal and/or Standard-setting

The goals for the curriculum reform were largely set by the principal investigators for each project, normally a professor with status within the field. He organized an Advisory or Steering committee of professional scientists, with some input from educators. An experimental course was field-tested and evaluated, revised, and then published in final form by a textbook publisher. The standards were pre-defined by the content and skill prerequisites that the college courses into which the students successfully completing the high school class would be channeled. The goal is that these students would

develop the interest and skills necessary to become professional scientists in the future on the basis of success with actual scientific inquiry, rather than a potpourri of unrelated, but personally interesting, science tasks or experiments. Topics were limited to those which contributed to a student's understanding of the conceptual structure of discipline.

Because of the relatively narrow discipline-based focus of each project, there arose questions as to the disaggregation of science into narrow, unrelated knowledge and skills. High school students would have little assistance in integrating various disciplines and understanding core science concepts and processes. The emphasis on "pure" science also de-emphasized technology and day-to-day applications, which in general were of more interest to students. In addition, a larger concern was that the science-based emphasis in the development of the curriculum might preclude the discussion of significant social questions which may be raised as a result of scientific study, for example resource exploitation, ecology, nuclear weapons proliferation, etc.

The government sponsored several projects within each of the disciplines, and schools were able to select those they felt were most appropriate. However, there was little differentiation in the program to accommodate disadvantaged learners, and there were only limited attempts to develop special materials. Debate centered around whether the new models were too difficult for average or lower ability learners, or whether they were in fact

more appropriate, since they depended less on the rote learning and prior experiences necessary for traditional courses. Additionally, because the courses were for "college-bound," there was a self-selection process which occurred. Because all of the curriculum projects were developed within the scientific community, it was likely that most participants were white males. As the policy focus shifted in the mid-sixties away from academic excellence towards greater across-the-board equity and attention to disadvantaged students, there was concern that they didn't have the background skills and knowledge to handle the curriculum.

The projects shied away from new disciplinary alignments or subject areas, such as ecology and biophysics. In addition, there was a deliberate effort to move away from the traditional texts and courses of study, at least initially, and towards a laboratory and field experiment-based curriculum. There was a conviction that "new" instructional strategies needed to be employed in addition to the new content, and they had little regard for traditional science texts, courses or pedagogy. Because scientific rigor and preparation was the overall goal, there was little interest in making the new courses part of the general educational scheme, and little connection between the content and any other subject areas, save mathematics. There was little interest in the social context of the student or a general philosophy of education, save that which was essential to scientific inquiry. Acquisition of skills and knowledge for

daily living was considered a study of technology, not science.

The sequential order of units was critical to each of the projects. Units were presented in order of both content and skills complexity, in order to maximize use of the limited time allocation to science. Concepts were also evaluated for appropriate introduction at various grade levels: some concepts were initiated at the junior high school level. However, there was little articulation among the disciplines; there was weak intra-subject connection.

Courses were designed around units which taught the information and the skills needed to understand the discipline, and its dynamic nature, mainly through experiment and independent discovery. While the units were thoroughly field-tested, the more advanced ones depended upon prior knowledge and skills, and sought the development of skills in theory building and testing, not specific answers. Consequently, teachers themselves had to be very comfortable with ambiguous or unanticipated results, and knowledgeable within the subject area.

IV. OUTCOMES

Legitimacy of Process and Product

In each case, the new curriculum was a significant departure from the traditional curriculum. Jackson reports that over half of the school districts nation-wide utilized at least one federally-sponsored project, and forty percent used more than one. However, no single project gained widespread acceptance: only the Introductory Physical Science program, the least

demanding of the new curricula, was adopted by even 25 percent of secondary schools. Others had adoption rates of less than 15 percent. In contrast, the commercially produced standard chemistry text was used by half of the high school chemistry students. It should be noted that some of the content updates and shifts in emphasis to laboratory work were reflected in the revisions of those standard texts.

Three factors seem to have limited wider adoption. First, the new material was still being taught in the "old" way, even if the material required inquiry instructional methods. Many of the materials appeared to require structural reforms and changes in classroom and school-wide organization, as well as significant amounts of teacher training and staff preparation. Some of the organizational requirements of active discovery learning were too complex to be carried out in the traditional classroom with one teacher for thirty-five students. Equipment which broke down was seldom replaced. Teachers felt comfortable teaching the way they had been taught. It is important to note that traditional curriculum development systems, where educators were in control, were not utilized, so widespread support and participation did not appear to exist.

Second, there was a perception that the materials were too difficult for average students. Teachers were not convinced that disadvantaged students would be able to handle the course, and so often the new curriculum would be taught alongside a "less demanding" traditional course. In fact, many teachers, who were

teaching science only because there were insufficient numbers of teachers with science credentials, found the materials too difficult. The students themselves were reluctant to take the courses for fear that they would be too demanding, or that they were just for extremely gifted science-oriented students. The percentage of high school students enrolled in academic science course began to decline in the early 1970s.

Third, there was insufficient consideration of the competing demands and interests which fight for resources and time within a school. Additional time for science meant that time for other courses would have to be reduced. The inclusion of evolutionary theory and sexual reproduction in biology classes renewed controversy in the public eye. Textbook publishers continued to exert significant political and professional pressure on districts at curriculum selection time. The 1970s brought a public cry for "back to the basics" instruction and competency-based assessment, and the new science curriculum seemed "experimental" and too open-ended. And it was not clear that the new curriculum would produce the high scores on standardized tests, which still were the public measure of a school's quality.

V. CAPACITY BUILDING

Systemic Linkages

The systemic linkages were weak both among the various science disciplines, and between the projects and the rest of the stakeholders. For example, the courses were seldom part of the content of teacher training programs. Teachers of teachers were

not often utilized to disseminate and popularize the courses.
Instead, summer institutes staffed by scientists were often the
dissemination vehicle. Standardized testing programs were unable
to effectively mimic the process orientation of the projects.
The most significant linkages occurred in the adaptation of
traditional textbooks to the content presented by the courses.
Ongoing development and staff training ended with the end of the
federal funding, even though most materials were published by
traditional textbook publishing companies (These projects then
competed with the companies' traditional science textbooks!)

VI. CONCLUSION

While traditional texts and state curriculum frameworks have
been heavily influenced by the various curriculum projects, and
there is general agreement that the courses were well-designed to
teach scientific inquiry at a high level, it is unclear that they
achieved their intended purpose--the development of a larger
scientifically-trained manpower pool. In their effort to
maintain the quality and integrity of scientific inquiry, the
projects may have distanced themselves from the broader goals of
education. After the initial surge of interest, fewer students
took basic science classes and few classes utilized the materials
as designed. Science instruction began to be seen as "elitist"
and too difficult, and unattractive to students. The initial
purpose became too narrowly focused and did not view science
instruction as part of the broader reform of education, which
included the link of science with social science, with values

issues, and with the application and implications of science in everyday life.

This case highlighted a number of controversial norms that the 1960s groups advocated. For example, the 1960s reform groups operated under the following assumptions[2]:

1) Content standards must organize the content into a sequence of topics that will promise achievement of course objectives. One consideration is the vertical structure of K-12, and the other is based upon the concepts and inquiry processes peculiar to a specific science course. Concepts selected for teaching should be <u>authentic</u> and <u>viable</u> in terms of a specific scientific discipline like physics. Whether the concepts meet the personal and social needs of the students, or are popular with students and teachers, is not the first consideration.

2) Meaningful inquiry in science <u>requires</u> the student to participate in the kinds of inquiries characteristic of the scientific enterprise such as discovery and investigation.

3) Content of greatest value will provide the most explanations and have the widest generalizing power. This involves understanding the grand principles, the unifying ideas, and the abstract attributes of science (for example, chemical bonding and organic evolution.)

4) Teaching methods are <u>not</u> generalizable beyond the context of the discipline they represent.

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[2] The following is derived from various books written by Paul Hurd at Stanford University.

5) A relatively few significant concepts, taught in depth and in context until the student has some intuitive feeling for the topic, is preferable to subject matter "coverage."

6) Each curriculum item should be coordinated with a complete course package, tested and ready for classroom use (including text, lab manual, teacher's guide, tests, films, lab equipment, and lab experiments).

7) The courses must _not_ be overly sophisticated and too abstract for the typical high school student.

8) Content _should_ be modelled after pre-professional courses with a career orientation. They should serve to weed out the non-scientific mind rather than provide a general education for sciences. Consequently, 1960s "new science" was criticized for lack of apparent relevance to the "real world", and a lack of practical applications.

While there remains a need to improve the quality of science instruction for the development of a strong scientific manpower base, there is an equally important need to expand the base of students who think scientifically. From our experience with the development, design, and implementation of the new science curriculum of the 50's, we can ask several questions which may help in the design of the next generation of curriculum.

QUESTIONS TO ASK IN THE EVALUATION OF NEW SCIENCE CURRICULUM.

1. What is the view of science reflected in the curriculum?

    a. How are scientists involved in the development of the curriculum?
    b. How is science controversy handled by the curriculum?
    c. What is its view of the relationship between science

and technology?

d.   What is its view of the relationship between science and the social sciences and humanities?

e.   How is the subject matter coordinated with that of other science disciplines?

f.   How is scientific intuition treated?

g.   How are the needs for industrial and economic revitalization addressed?

2.   What is the curriculum's view of students?

a.   Who will the curriculum appeal to?

b.   How does that view of science limit or enhance its accessibility for traditionally under-represented groups of students?

c.   What are its beliefs about the way students learn?

d.   What attention is given to non-science-oriented students? to non-college bound students?

e.   Why will students be motivated to take these classes?

f.   How will students be encouraged to take these classes?

g.   How does it see that science fits into the overall context of a student's education?

h.   What does it see as science's contribution to a student's overall education?

3.   What is the curriculum's view of teachers and teaching?

a.   How are school teachers and learning theorists involved in the development of the materials?

b.   What instructional strategies and abilities are necessary in order to teach the curriculum?

c.   How will current teachers be trained in both the discipline and the instructional strategies? How will the training be sustained?

d.   How will the curriculum be disseminated?

e.   How will teachers and courses be linked with other science teachers and courses? How will their discipline-based knowledge be updated?

f.   Are science teachers scientists, or interpreters of science?

4.   What is the curriculum's impact on schooling?

a.   What changes are needed in the structure of the school in order for the curriculum to be successful?

b.   What is the relationship of the curriculum to the current materials being used by schools? How will science knowledge be updated?

c.   What are the strategies for recruiting and retaining more science teachers?

d.   What strategies will be employed to recruit and train teachers from non-traditional groups?

e. How will teacher pre-service training programs utilize the curriculum in the preparation of new science teachers?

f. How will the curriculum be systemically linked to other components of the education system- ie., assessment, textbooks, staff development?

CURRICULUM REFORM IN CALIFORNIA and NEW YORK:

A TALE OF HISTORY-SOCIAL SCIENCE AND SOCIAL STUDIES STANDARDS

CASE STUDY

Diane Massell

Social studies is a field which galvanizes extremely
passionate professional and public debate. "The multicultural
issue" is one of the most critical, although certainly not the
only, sources of dispute. This case study examines the attempts
of two states, California and New York, to set social studies
content standards during the latter part of the 1980s, and pays
particular attention to how the issue of multiculturalism played
out in these different efforts. In some respects the context for
curricular reform was similar across the two states. For
example, each state has been traditionally active in curriculum
policy, and both have large, diverse and powerful minority
communities. Yet despite these similarities, community response
on the multicultural issue differed remarkably, and in California
those responses changed character at various stages of the reform
process, which involved first the development of a new history-
social science framework, and then the state adoption of textbook
series based upon the framework criteria. Public and
professional controversy over the multicultural presentation in
the framework was relatively muted. When time came for the
public review and State Board adoption of a textbook series,
however, the public cried out vociferously on this issue. In New
York, by contrast, multicultural debates loomed large at the

outset of their curriculum reform process.

This case study explores these two states' efforts to see if we can identify key differences that might have contributed to these varied political results. However, I look at the California effort in much finer detail than New York (Section V) in part because New York is still in an early stage of developing its social studies curriculum standards and frameworks[3].

I. BACKGROUND TO THE CALIFORNIA CASE

A. *Overview*

When California began reviewing its history-social science framework in 1985, Bill Honig had only recently been elected superintendent of public instruction. He had won the election on a pledge to create a more rigorous, academic education for all children. Two years before the state legislature had enacted an omnibus education reform package which raised graduation requirements for all students. Curriculum frameworks were targeted as the primary policy mechanism for carrying out this promise. While they had been used by the state since 1972 to guide statewide textbook adoption, the older documents were perceived as little more than "good doorstops"--symbolic, vague statements with only a minor impact on the curriculum and instruction of classrooms. But the state decided that if the quality of these frameworks were improved they would have a

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[3] Most recently, the New York State Department has turned to the task of establishing social studies learning goals and outcomes which will later translate into curriculum frameworks.

powerful mechanism for change. Over time, the frameworks became key not only for coordinating textbook and instructional materials adoption, but also statewide testing, staff development and teacher certification, accountability, and more. Also over time the frameworks moved further and further away from a conventional state curriculum guide format, which offered lengthy lists of content and behavioral objectives (what some detractors call "isolated factoids"). Instead, the newer documents articulate a philosophy and rationale for the subject-matter field embedded in readable prose. They provide conceptual roadmaps to the field's "big ideas", with advice on pedagogy and other elements of instruction. The documents are supported with many additional documents for local district curriculum supervisors, teachers and parents.

Even prior to Honig's election as state superintendent, however, the broader political and cultural environment was preparing the way for new intellectual directions in the history-social science framework. The preceding framework, adopted in 1981, presaged the new document's emphasis on world history and culture, multicultural perspectives and interdisciplinary integration of different subject areas. Yet poor test results from 1983, as well as new state and national research in the field, gave fresh impetus to change once the framework came up for review in 1985. Students reportedly scored poorly in most subject-matter fields, but they were particularly weak in world history and geography, and an attitude component of the test also

showed low student interest in these disciplines. In addition, the state was concerned about the small amount of time teachers were spending on history and social sciences, and the quality of textbooks which watered-down content to provide inoffensive, politically neutral--and, many maintain, boring-- representations.

B. The Framework

In 1987 the State Board of Education adopted the History-Social Science framework developed under the aegis of the Curriculum Development and Supplemental Materials Commission. The new framework represented a dramatic departure from the dominant pattern of social studies curriculum in the United States, which can be traced directly to an influential 1916 report called *The Social Studies in Secondary Schools* (National Education Association 1916)[4]. Most conventional social studies curricula emphasize an "expanding environments" design, which is a set of concentric circles that begins with the child in the center and moves outward to the family, neighborhood, community, region, nation-state and world. In this design, history was practically pushed out of the primary grades by the 1940s in favor of content drawn from sociology, psychology, civics, and economics (Patrick 1992). Charlotte Crabtree, a member of the California framework team, and others argued that the research on child development and learning did not support the tenets of the

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[4] A 1991 survey by the Council of State Social Studies Specialists revealed only slight deviations from the long-standing curriculum pattern (Svengalis 1992).

expanding environments design (1989) and many newer social science efforts, starting with California, are rejecting it[5]. In its stead, California's framework poses what Crabtree calls a "Here, There, and Then" design, in which study focuses first on the young child's immediate world, extends next out in space to distant places, and then reaches back in time to connect the child in meaningful ways to times past and the long ago. History is returned to the elementary school curriculum, as well as geography, literature, and the arts from various historical periods and diverse cultures and places around the world.

In addition to these changes, the 1987 California framework calls for increasing the study of world and American history to three years each, giving special attention to the study of non-Western societies, restoring study about religion as a key factor in U.S. and world history, emphasizing history as a dramatic chronicle to be taught and "a story well told," adopting grade-to-grade sequencing, reintroducing literature in historical instruction, and making history and geography the unifying forces in the document.

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[5] Jerome Bruner, a distinguished cognitive psychologist, wrote:
> There is little beyond ideology to commend the Hanna [i.e., expanding environments] program and its endlessly bland versions. Whatever we know about memory, thought, passion, or any other worthy human process tells us that it is not the known and the settled but the unknown and the unsettled that provokes the use of mind, the awakening of consciousness...Starting kids off with the familiar and then going out to the unfamiliar is altogether in violation of this deep principle of thought and of narrative. (Bruner, quoted in Crabtree 19--)

The multiculturalism within the framework emerges from what some would call the pluralist perspective (an effort to portray the various facets of the multicultural debate follows in section C). In its own words, the framework:

> calls on teachers to recognize that the history of community, state, region, nation, and world must reflect the experiences of men and women and of different racial, religious, and ethnic groups. California has always been a state of many different cultural groups, just as the United States has always been a nation of many different cultural groups...The framework embodies the understanding that the national identity, the national heritage, and the national creed are pluralistic and that our national history is the complex story of many peoples and one nation, of *e pluribus unum*, and of an unfinished struggle to realize the ideals of the Declaration of Independence and the Constitution. (California Department of Education 1987: 5)

Elsewhere the framework calls for "respect for the human dignity of all people and understanding of different cultures and ways of life;" understanding the "special role of the United States in world history as a nation of immigrants"; and recognizing that "even as our people have become increasingly diverse, there is broad recognition that we are one people. Whatever our origins, we are all Americans." (California Department of Education 1987)

In October, 1990 the State Board of Education adopted the Houghton-Mifflin K-8 social studies textbook series and a Holt, Reinhardt and Winston grade 8 book based on the criteria contained in the framework.

C. *Major points of contention in the social studies field*

Social studies represents one of the most contentious subject-matter fields, in part because of its strong linkages to moral and ethical debates in our society and its

multidisciplinary nature. Here I discuss three of the major

points of contention in the field in general; later in the

document I will talk about how they did or did not play out in

California and New York.

1. Multiculturalism is one of the issues which most

galvanizes the broader public. The debate is hard to

characterize without being submerged in the polemics of opposing

camps, especially when there is range of opinion within the

different camps themselves. (Here I will not discuss the

position of those who argue against multicultural curricula

altogether. Among educators, at least, those who hold this view

are few and far between.) Multiculturalists divide over the

scope, purpose and method of multicultural instruction. While

labeling these positions is itself a contentious act, for the

sake of argument I will describe one as the "pluralist" model of

multiculturalism, and the other the "centric" model. The

following quotes illustrate some of the range of debate.

Centric Arguments

> The idea of "mainstream American" is nothing more than an
> additional myth meant to maintain Eurocentric hegemony.
> When Professor Ravitch speaks of mainstream, she does not
> have Spike Lee, Aretha Franklin, or John Coltrane in mind.
> Bluntly put, "mainstream" is a code word for "white."..We do
> not seek segments or modules in the classroom but rather the
> infusion of African American studies in every segment and in
> every module. The difference is between "incorporating the
> experiences" and "infusing the curriculum with an entirely
> new life." Asante, 1991: 269-70)

> The idea [of the California framework] was to see everyone
> in a single great narrative, but the narrative itself is
> faulty. What we have here is a difference in perspective,
> and you can't get any more fundamental than that. I'm less
> concerned about the common culture than about the survival

of African American children and African American culture.
(King, quoted in Kirp 1991: 22)

Pluralist Arguments

As a result of the political and social changes of recent
decades, cultural pluralism is now generally recognized as
an organizing principle of this society. In contrast to the
idea of the melting pot, which promised to erase ethnic and
group differences, children now learn that variety is the
spice of life. They learn that America has provided a haven
for many different groups and has allowed them to maintain
their cultural heritage or to assimilate, or--as is often
the case--to do both; the choice is theirs, not the state's.
They learn that cultural pluralism is one of the norms of a
free society; that differences among groups are a national
resource rather than a problem to be solved. Indeed, the
unique feature of the United States is that its common
culture has been formed by the interaction of its subsidiary
cultures. (Ravitch 1990: 3)

..educators must adhere to the principle of "E Pluribus
Unum." That is, they must maintain a balance between the
demands of the one--the nation of which we are common
citizens--and the many--the varied histories of the American
people. It is not necessary to denigrate either the one or
the many. Pluralism is a positive value, but it is also
important that we preserve a sense of an American community-
-a society and a culture to which we all belong. (Ravitch
1990: 17)

Professor Asante suggests that we disagree about our vision
of the future of the United States. He is right. I fear
that Afrocentrism intends to replace the discredited white
supremacy of he past with an equally disreputable theory of
African supremacy. The theory of white supremacy was wrong
and socially disastrous; so is the theory of black
supremacy. I fear that the theory of "multiple-centrisms"
will promote social fragmentation and ethnocentrism, rather
than racial understanding and amity. I think we will all
lose if we jettison the notion of the common goal and learn
to identify only with those people who look just like
ourselves. (Ravitch 1991: 276).

Those on the "centric" side of the debate often propose that any

effort to teach a common culture is itself an act of oppression

which obscures the position, role and contribution of different

minority groups. They argue that simply including more people in

America's story is cultural imperialism in a new guise. This hints at a central critique of the pluralist perspective--that it is disempowering, and that pluralist politics itself is a failure. Some, although not all, advocates argue that students gain self-esteem and do better academically when they see themselves represented in the curricula, and hear themselves represented through their own voices[6] (Price 1992).

2. <u>Disciplinary focus of social studies</u>. Social studies is a highly fragmented field drawing from multiple disciplines. It can include history, anthropology, sociology, psychology, economics, geography, or other subject-matter areas. Strong professional debates arise over which discipline (if any) should provide a unifying core for the social studies curricula in the schools, or indeed whether social studies has its own content and

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[6] This position is laid out in an article criticizing the pluralist multiculturalism of the California textbooks:
   Particularly for nonimmigrant or involuntary minorities (those whose forebears came here through slavery, conquest, or colonization), the impact of negative textbooks on their primary socialization can be devastating. As Vernon Broussard notes, "The children of minority and other depreciated groups...absorb an alienated perspective on the social world," which comes from "the official legitimators and definers of individual and social identities."
   Says Verónica de la Cruz, an Oakland student, "I, as a young Mexican-American, feel that the education system hides a lot from us. Many people are ashamed to say what their cultural background is, but that is only because all they have ever learned was European history."
   ..Many of us have observed that a reputedly "slow" student can both learn and create "raps" with a speed and imagination that would inspire Carl Sandburg or that a student who rarely contributes to class discussion and who cuts school nearly every day may be an inspired speaker in church or at a community meeting. Why? Because the voices silenced in the textbooks find their expression elsewhere. (Ellis and Epstein 1992, p. 164)

should avoid the more traditional disciplinary perspectives altogether. If decisions are made to give all the disciplines equal weight and representation, coverage within the constraints of time (the school day and year) becomes a concern, particularly if one has the goal of providing students with more opportunities to explore content in depth. Also, many educators argue that identifying one or two disciplines as the primary lenses provides students with a way of integrating the information they receive.

3. <u>Social issues.</u> Another key dispute in this field is the issue of how (or whether) social sciences should be structured to address controversial social issues, and whether social issues instead of disciplinary perspectives should frame the course of study. An issues-based social science curricula arose in response to the social upheavals of the late 1960s and 1970s. Then it did not seem as important to understand the "structure" of academic disciplines (a prevailing pedagogical philosophy) so much as the critical issues of the day. From this perspective, courses are judged according to their relevance and their potential to overcome racism, sexism, ethnocentrism, and national chauvinism, and would be organized around these or other critical issues. Another school argues that issues should be addressed, but that they should be addressed within the context of one or more disciplinary perspectives.

II. PLANNING STAGE

A. *Systemic Relationships*

The systemic connections between California's frameworks and

other educational policies have grown during the past decade. Before the current reform efforts, the frameworks were used by county steering committees to develop an outline for curriculum guides, and teachers were often completely unaware of them. State Department staff conceptualized the notion that frameworks should be central to the state's revitalization efforts. In Honig's first year the linkage between the frameworks and staff development and new teacher training became clear; the use of the frameworks for textbook selection was its historic function, and that continued. The frameworks are used for the development of the statewide California Assessment Program (CAP), and later still for evaluation and accountability purposes, staff development and teacher certification.

B. *Organizational Structures*

FRAMEWORKS

The California Curriculum Development and Supplemental Materials Commission (hereinafter referred to as the Curriculum Commission) is a permanent advisory body to the State Board of Education with jurisdiction over curriculum frameworks as well as state-adopted textbooks and instructional materials. Its members are appointed for four-year terms; they in turn appoint Curriculum Framework and Criteria committees to revise the documents when they come up for review every eight years[7]. The writing committee members serve for the length of time it takes

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[7] The cycle was very recently changed from seven to eight years.

to revise the framework for presentation to the Curriculum Commission.

While the State Board of Education holds final authority over the adoption of the frameworks, staffing arrangements give the Department significant influence over the process. In addition to providing staff for the framework committees, Honig, as superintendent, is the Executive Secretary of the Curriculum Commission. While this is not a voting position, it provides a formal role from which to exercise suasion and leadership. In addition to staffing, the Department plays an informal but often strong role in the selection of participants to the framework writing committees and the Curriculum Commission itself. Other informal efforts (like the political leadership that was frequently exercised by the superintendent and staff) gave the Department substantial authority over the agenda-setting process.

For the History-Social Science framework, the Department took the unusual (if not unprecedented) step of calling together a Blue Ribbon committee (teachers, curriculum specialists and academics in history, geography, and civics) prior to convening a framework committee. The Committee met for two days to brainstorm, and among other things they discussed the lack of time spent teaching history-social science in general and in primary schooling in particular; the problem with repeat survey courses which do not allow students to delve deeply into a topic; and how literature might be used to enrich the teaching of history. Unlike New York's advisory task forces (see below), the

Committee did not issue mandates for action or even any written document. Rather, the Committees function was largely exploratory.

C. The Drafting Stage

The State Board of Education appoints members to the framework committees based upon the suggestions of the Curriculum Commission. For the History-Social Science committee, they drew upon scholars in the field of history, geography, and education, as well as administrators, teachers and curriculum supervisors in social science and other fields. Two of these people had been on the Blue Ribbon committee, thus providing some continuity and means of conveying the discussions gained there. Organizationally this framework committee was grouped into grade-level clusters of kindergarten through third, fourth through eighth, and ninth through twelfth.

The committee met monthly for a year (California Department of Education 1987), although the revision process took two years altogether. After the field review (see below) the Curriculum Commission voted to accept the committee's recommendations, and then appointed a subcommittee[8] to prepare a final draft. The final draft synthesized, and in some cases elaborated upon, the original 300-page document, and included recommendations from the Curriculum Commission, input from the field review, and

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[8] Diane Ravitch, co-chair of the framework committee and at the time an adjunct professor of history at Teachers College, Columbia University and Charlotte Crabtree, a professor of education at the University of California, Los Angeles.

suggestions from the State Board of Education. (One area that they reportedly elaborated on was multiculturalism.) However, this redrafting caused a stir, particularly among members of the California Council for the Social Studies (CCSS) who felt that the committee at large should have had a hand in the rewriting[9].

Participants. The composition of these writing committees, as well as the Curriculum Commission itself, marked a departure from conventional selection practices and was a key component of California's strategy for creating cutting-edge documents. In general, members to state committees are appointed according to a matrix formula that ensures representation across political, geographic, racial and ethnic, and other geopolitical and social characteristics, as well as various vested interest groups. However, in California the view emerged that "if a committee was representative in the broadest sense, what you got was the status quo enshrined". While the Board continued to meet the various matrix criteria, the first concern was selecting people with the professional expertise and skills in both the content area and in pedagogy. Their choice of teachers and subject-matter professionals was "a powerful synergy which was unheard of at the time".

Respondents provided a somewhat mixed view of whether members to the History-Social Science or other committees were

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[9] Department officials argued that this was standard operating procedure for the Curriculum Commission. Whether that is true or not, this step generating long-lasting tensions.

selected based on their views on issues within a subject-matter field. While most often they did not know what outcome they wanted, or even where a person stood on a particular issue, the state knew roughly where it wanted the framework to be on the issue of multiculturalism[10]. Honig publicly discussed his concern that social studies under the 1981 framework had deteriorated into "ethnic studies" in which schools serving Hispanic children emphasized Mexican culture and heritage, while those in largely Black communities emphasized African American culture and schools in Asian American communities emphasized their culture and heritage. He was concerned that none studied any of the others, and students in schools that enrolled primarily Anglo students got "none of the above" (Written communication from 1987 history-social science framework member, 3/29/93). Consequently they did not deliberately choose someone for the framework committee whose ideas would be in direct opposition[11]. An opponent California's pluralist multiculturalism criticized the technique used for deciding minority representation on the committee, alleging that they appointed minorities based on their proportion in the teaching

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[10] However, another respondent, discussing other subject-matter frameworks, suggested that the state sometimes did have a strong notion of where they wanted a committee to go once the process was underway. The respondent noted that the state would sometimes provide consultants to help steer the committee in this direction, or might even reappoint committees and start anew.

[11] However, Joyce King, an advocate for a more "centric" kind of multiculturalism, was on the Curriculum Commission at the time, although she did not participate directly in the preparation of the framework in that role.

rather than in the student population.   In this way, one gets a much smaller number.

Review and Feedback. Sunshine laws in the state require that all meetings of the framework committees operate in public.   At the end of each meeting they allot time for public response; numerous visitors attended each meeting of the history-social science committee.   Informally, consultants and other reviewers respond to the frameworks during the drafting period; more formally, upon approval of the Curriculum Commission the draft framework is circulated to a professional network consisting primarily of teachers, university professors, and other education experts. Upon revision, the Curriculum Commission then holds two public hearings, and the State Board of Education holds one more.

With the History-Social Science framework the state decided, at the urging of the California Council for the Social Studies, to circulate twice the number of drafts than usual.   CCSS said more teachers needed to be involved because of the great number of changes that they were going to be asked to make.   And, according to one respondent, the state only held one public review session with teachers before adoption, rather than the series of sessions that was more typical.   Ultimately, however, the Commission did receive 1700 responses from individuals and organizations[12].   The changes they made to the draft centered on religion, multicultural content, the role of women, and emphases

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[12]   These were computerized, and periodically the responses (organized by questions or issues, with pro and con feedback) would be taken to the Commission for advice about revision.

in world history. Perhaps the most contentious area concerned the efforts of various groups to present the history of their original homelands or ethnic groups in positive or heroic terms (Written communication from 1987 history-social science framework member, 3/29/93).

TEXTBOOK ADOPTION

The State Board of Education appoints an Instructional Materials Evaluation Panel (IMEP), which in the history-social science case consisted of educators, historians and religious scholars, to review submitted textbooks based upon criteria noted in the framework. Materials are placed on display at 30 centers located throughout the state; the Curriculum Commission holds two public comment sessions, and the State Board of Education holds one more prior to adoption.

The nature of the 1987 History-Social Science framework was intimidating to textbook publishers. Because the framework called for the teaching of religion, departed from the traditional social studies design, and to a certain extent obviated survey textbooks covering the sweep of American history, publishers were concerned that the books would have no market beyond California. During the next 30 months, publishers went around the country to see if such a radically different series would sell. These kinds of concerns led the American Association of Textbook Publishers to lobby the state legislature to overturn statewide adoption altogether, a measure strongly and successfully fought by Honig (Kirp 1991). But in the end only 9

publishers submitted books, and only 1, Houghton-Mifflin, provided an entire K-8 series. (By contrast, 22 publishers had submitted during the previous adoption in 1983). Houghton-Mifflin, whose series was approved, had no previous history series and thus no investment to protect. In more recent years, the state has had continued difficulty encouraging publishers to submit textbooks that match the framework.

Two competing accounts of the state's motivation to adopt the textbook series circulate. According to one journalist who is generally very critical of the history-social science effort, the state was almost obliged to approve the submitted texts because the legitimacy of this particular framework and other framework innovations might be seen as unreasonable if the state repeatedly failed to secure publishers' cooperation (Waugh 1991). However, many participants in the process vigorously oppose this interpretation and assert that, on the contrary, the State Board of Education was under strong pressures _not_ to adopt any of the proposed books because of the vociferous opposition, and long-standing tensions with the Superintendent. They argue that the Board fulfilled its promise to publishers that if the materials aligned with the framework, they would adopt them. Because the materials largely met the standards set forth in the framework, then, they were approved by unanimous vote (Kirp 1991).

III. DELIBERATIONS

A. Major Issues

FRAMEWORK

Over the course of the California history-social science committee's deliberations, several key issues arose. Among them were:

1. <u>How to integrate the various disciplines</u>. Strong voices emerged both in favor of and against U.S. and world history as the central unifying perspectives for 6 of the 13 years of the framework. Reputedly one major association argued that social studies should act as the central focus. Consensus over the history proposal was reached, however, once courses in civics (American government), economics, and the social sciences were assured. In addition, consensus reportedly was secured by the potential of world history to build global understandings, and the devotion of the grades 10 and 11 curriculum to 19th and 20th century U.S. history and 20th century world history. These two years satisfied the "social issues" advocates because they allowed teachers to explore in depth major contemporary issues like human rights or racial, ethnic and religious conflicts.

2. <u>Depth.</u> While the committee agreed that providing students with more in-depth coverage of fewer topics was important and necessary, achieving this goal generated strong discussions, particularly across grade levels when determining what content to include at various levels and how to maintain connections. One strategy they used to address the depth issue was to emphasize different chronological periods in grades 5, 8 and 11. This approach runs counter to most survey courses which cover the sweep of U.S. history. While teachers initially were concerned

about the elimination of these survey courses, respondents suggested that teachers have now embraced the more narrow time focus because it allows them to go into greater depth and discuss critical issues with students. In fact the California Council for the Social Studies, with strong teacher membership, endorsed maintaining the 1987 history-social science framework for another cycle.

3. Conservatism/Innovation. One question constantly before the committee was how to responsibly innovate and lead the field and, at the same time, produce a framework with which teachers would feel comfortable. There was a strong temptation to stick to the status quo and what is familiar to teachers.

As noted in the description of the framework, many innovations were introduced. In part innovation was pushed through because of the leading-edge ideas nurtured by some of the participants on the panel[13], the leadership provided by State Department, Curriculum Commission and State Board of Education members which "protected" these innovative ideas, and managerial tactics to maneuver the document safely through some of the turbulent political waters.

4. Multiculturalism. Multiculturalism was an integral part of the 1987 curriculum framework. During the framework meetings,

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[13] For example, one of the "turning points" in the framework committee meetings came with the invitation to Charlotte Crabtree to attend a meeting and talk about child development and social studies in the early grades. Afterwards they invited her to become a full member. As a result of the effort she and others made, the framework adopted the innovative "Here, There and Then" design discussed earlier.

whether multiculturalism would be a central component was not an issue; rather, the issues that arose during the public hearings concerned historical interpretations and presentations of particular ethnic, religious, gender and other groups. Among the specific complaints that arose were whether: 1) Turkish control led to Armenian "genocide"; 2) the holocaust should be called a Polish-Christian holocaust as well as a Jewish one; 3) Israel should be described as a "democratic" state (Arab groups opposed this adjective); 4) all homosexual people should be identified; 5) deeper treatment should be given to Hispanic history in the West. To arbitrate these concerns, the Commission sent the disputed material to historians and asked them to decide if the concerns were valued. In this way the academy would legitimate or delegitimate the claim.

While these and other concerns were voiced during the Board's public hearings on the framework, relative to the textbook adoption process or the New York case the outcry was not vociferous. Indeed, the chair of the State Board of Education's open hearing estimated that 75% of the people were supportive of the framework.

TEXTBOOK ADOPTION

In contrast to the frameworks, the textbook adoption process led to much more vociferous and acrimonious debate over the issue of multiculturalism. The public hearings led to bitter outcries by Blacks, Asians, Native Americans and Hispanics who argued that the proposed textbooks were Eurocentric and biased, and

insufficiently covered the culture and history of different minority communities. Several respondents asserted that these communities had been contacted and mobilized by parallel groups in New York State, who had become inflamed about the issue during the advisory committee reports issued there (see below). Among other things, groups charged that multiculturalism had not been a top priority of the textbook selection committee in its decision to recommend the Houghton Mifflin books (Waugh 1991)[14]. Other procedures used by the State Board of Education were also criticized. For example, opponents of the textbooks accused the Board president of inappropriately lobbying for the Houghton Mifflin series, and of limiting public response to only one minute each[15] (Waugh 1991). However, other members of the minority community welcomed the new textbooks. For example, State Senator Diane Watson reportedly wrote a powerful letter of support for adoption to the Los Angeles Board of Education, and other minority leaders like Julian Nava and Cliff Trafzer testified in favor of adoption. The minority community is not

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[14]Using the 18 criteria for textbook selection listed in the framework (where, as one critic points out, narrative style was weighted more heavily than cultural diversity), the committee ranked the Houghton Mifflin books as 3 (on a scale of 1 to 5) for meeting state guidelines for cultural diversity. Three others were ranked higher on this point (Waugh 1991).

[15] At the textbook hearings, the Board President hosted a press conference with other state officials and Houghton Mifflin representatives. He reportedly "heaped official praise" on the series, and circulated handouts listing the higher number of references to ethnic minorities in these texts compared to existing ones.

one monolithic group with a single opinion on the multicultural issues.

At the Board hearing, the crowd was so big they had to relocate, and so rancorous that a police officer was summoned. Although acknowledged to be better than the previous texts, two urban districts (Oakland and Hayward) refused to adopt the books and are now struggling to find their own materials. Other urban districts like San Francisco adopted them on the condition that the district provide supplemental material that addresses minority concerns (In fact, they introduced these supplemental materials at the same time, so that the local board was voting on the entire package). The majority of districts in the state welcomed the textbooks (or, at least, felt they had no choice) because of their linkage to the framework (Reinhold 1991; see also Berenson 1992). The other systemic links--to statewide assessment and staff development--also probably added other incentives.

However, the "publishers were stunned by the bitterness of the protest that surrounded the process of public hearings and comment" (Reingold 1991), and despite their purchase by most California school districts and states like Arkansas and Virginia, they remain wary today. At the time, Honig's response to the outcry was:

> They do not like the idea of common democratic
> principles. It gets in the way of their left point of view
> that this country is corrupt. This country has been able to
> celebrate pluralism but keep some sense of the collective
> that holds us together. Everything is not race, gender or
> class. The whole world cannot be seen just through those

glasses.

Democracy has certain core ideas--freedom of speech, law, procedural rights, the way we deal with each other. If everything becomes hostile race and class warfare, we are going to lose this country. The issue is not multiculturalism. We agree with that. The question is, Are you also going to talk about the political and moral values that are essential for us to live together? (Reinhold 1991)

The dispute has left lingering doubts in certain segments of the minority community about the legitimacy of the framework adoption process. Commented Lew Butler, chairman of "California Tomorrow" (a group which represents minority communities):

...the state's adoption process may have been functionally appropriate in the days when Whites were the dominant majority. But it doesn't seem to be flexible enough to respond to today's "new majority" of ethnic minorities.
African Americans and Latinos and Asians are struggling to make the books responsive to their interests, and then they are correspondingly charged with being interested in only their own culture. The whole process has become adversarial. (Waugh 1991)

Furthermore, the teaching of religion has remained very controversial at the local level, and is far from settled.

In the end, an enduring problem for California is the refusal of publishers to submit additional textbooks that meet the guidelines. It raises a potent question for national standards: If the content standards are so innovative, and do not avoid important but potentially controversial topics, will materials developers respond?

IV. CAPACITY BUILDING

In general the state department of education sponsors awareness conferences in conjunction with county offices of education after frameworks are adopted. For History-Social Science they held 11 instead of the usual four; all were

oversubscribed (approximately 500-1000 people in attendance). In addition to the awareness conferences, the state has launched a number of efforts to promote staff development around the frameworks. Among other things, the State Department also issues many publications to support curriculum development based on the frameworks at the district level (such as grade level course models), provides pamphlets for teachers on supplemental literature that supports the framework as well as literature in different languages, issues booklets for parents, and develops model curriculum guides for grades 9-12.

V. COMPARISON: NEW YORK STATE SOCIAL STUDIES COMMITTEES

In November, 1987 New York's Commissioner Thomas Sobol appointed an advisory task force (the Task Force on Minorities: Equity and Excellence) to review all of the Department's curriculum and instructional materials "to see if they adequately reflect the pluralistic nature of our society, and to identify areas where changes or additions may be needed". The task force report, "A Curriculum of Inclusion" (July, 1989), unleashed extraordinary public debate over the multicultural issue. The task force wrote that minorities had "been the victims of an intellectual and educational oppression," and that their contributions had been systematically "marginalized" by a pro-European, pro-Western bias. They charged that the textbooks used in the schools[16] were filled with "hidden assumptions of white supremacy."

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[16] New York State does not adopt textbooks; these are local decisions.

In addition to stimulating a statewide debate on the issue, the "Inclusion" report was harshly denounced by historians like Arthur Schlesinger, Diane Ravitch and Kenneth Jackson as reverse racism. In fact, Schlesinger convened a group of historians to respond to the report and "prevent the abuse and corruption of history by ethnic groups." (Schlesinger 1992) The report also alienated curriculum specialists within the State Department of Education, and led one staff member to publicly criticize the report as groundless because it did not cite examples of bias in the existing social studies curriculum. This curriculum had been revised three years earlier to give Africa, South Asia, East Asia and Latin America the same weight as Europe in new global studies units in the 9th and 10th grades (Berger 1990). Several staff in the Department remained angry about this and Sobol's subsequent handling of the issues; in 1991 the head of the social studies bureau resigned out of frustration.

The outcry led Sobol to try to distance himself from the report by reminding the public that it was purely advisory, and agreeing that its tone was inflammatory. He recommended a continuing review of the K-12 history and social studies curriculum, and in July 1990 appointed another advisory panel (the New York State Social Studies Review and Development Committee) "to help design the structure and focus of new syllabi, assist in the selection of content and instructional materials, and serve as a knowledgeable resource for information, ideas, and suggestions."

Most observers agree that the 'inflammatory tone' of the first

report can be attributed to the composition of the task force. With the controversial Leonard Jeffries, Chair of the African-American Studies Department at the City University of New York, as a prominent consultant, the task force participants included 16 minorities in all, and only 1 white. A *New York Times* editorial charged that the task force was "dominated by political and education advocates, not curriculum experts" (1990), an observation confirmed by others--even the Commissioner himself.

Indeed, political concerns had motivated the agenda-setting process from the beginning. The task force was one of Sobol's first acts as Commissioner, having been appointed by the Board of Regents only a few months previously. His appointment was mired in controversy. The Black and Puerto Rican Caucus in the state legislature and others charged that Sobol's background from an affluent, suburban community (Westchester County) made him unsuitable to confront the problems of the state's urban schools and minority students. In fact, the Assembly Education Committee held up reappointment hearings for the Board of Regents to protest his selection. Sobol moved quickly to mitigate these concerns. He suggested that racism underlay the poor quality of many of the state's urban schools, and said that the system was composed of "two contrasting systems: one largely suburban, white, affluent, and successful, and the other largely urban, of color, poor and failing." The task force resulted[17]. While the "Inclusion" report

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[17] A newspaper article said: "He admits that he named the panel because his own appointment had been criticized by the Legislature's Black and Puerto Rican Caucus" (Berger 1990). This

was controversial, it is evident that his bold moves won the support of at least the Assembly Education chair, who had strongly opposed him.[18]

In appointing the second task force, Sobol pledged to the Board of Regents that any syllabus revision would be "thoughtful, scholarly and apolitical"--a direct response to the politicization of the issues brought about by the previous task force (New York Times' editorial 1990). While Sobol selected people from different sides of the ideological spectrum, tried to avoid the ideological "extremes", and included some of the sharpest critics of the "Inclusion" report, consensus over multiculturalism was not forthcoming.

When the report, "One Nation, Many Peoples: A Declaration of Cultural Interdependence", was issued by the Social Studies Review and Development Committee in June 1991, eight participants on the panel wrote separate dissents. Like their criticism of the "Inclusion" report, they felt that the new effort erred on the side of emphasizing ethnic identity[19]. Wrote Schlesinger: "The

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charge was confirmed by others.

[18]By early 1990 the chair said he was "really a fan of this guy. He has a sense of outrage. If he has to defend himself, it's against people who say he's done too much to bring equality to all of our schools." (Verhovek 1990)

[19]Some other proposals of "One Nation" that were controversial:
1. Even the youngest students should be taught to view history critically and to understand that there can be many ways of understanding historical events.
    Educators argued that a critical view of history for young children leads to relativism; they do not think young children

republic has survived and grown because it has maintained a balance between pluribus and unum. The report, it seems to me, is saturated with pluribus and neglectful of unum." He felt that the report "plays up the crimes and plays down the ideals" of European influence. Wrote Jackson: "It is politically and intellectually unwise for us to attack the traditions, customs and values which attracted immigrants to these shores in the first place. The people of the United States will recognize, even if this committee does not, that every viable nation has to have a common culture to survive in peace." (Quoted in Verhovek 1991). Paul Gagnon, who was invited to be on the task force but was unable to participate, said that the "One Nation" report only omitted the most extreme language of the first document (1992). Other committee members who supported the report countered that the consensus reached represented the strengths of diversity and the unity which could emerge (Verhovek 1991). Governor Cuomo entered the debate in July, 1991, over what he said were the perceptions of the report,[20] with a more moderate, accommodating position. He argued that the celebration of diversity depends on agreeing to common values and ideas, that we do not have to choose between the two. The freedom

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can grasp such conflicting information.
2. More time should be spent in studying everyday lives and traditions ("social history").

[20] "I mention "perceptions" because, indeed, many of the issues raised by the release of the Report reflect not clear policy statements in the Report, but nuanced interpretations and perceptions--some no doubt accurate, others perhaps strained--of the underlying goals and motivations of the Report." (Cuomo 1991, p. 3)

to be different is a core, unifying American value, &c. (Cuomo 1991). However, the tensions remained as high and sharp as they were after the "Inclusion" report was produced. And, in fact, one state department official predicts that the multicultural debate may reemerge once more when the Department issues its recommended learning outcomes and curriculum frameworks.[21]

VI. CONCLUSION

Why did New York's agenda-setting process stimulate such a high degree of political turbulence around multiculturalism? One must point to the initial motivation for reform: for the new Commissioner, the curriculum review was a way to leverage minority support so at the outset multiculturalism was _the_ primary issue. And, once the different communities had been galvanized by the "Inclusion" report, multiculturalism moved irreparably to the top of the "issue-attention" cycle and dominated discussions and public reaction to the second report as well. The two documents became ideological platforms serving the political exigencies of the moment. Furthermore, because these were advisory reports and not actual curriculum documents, neither were followed by a review and feedback process that could have served to create consensus.

The reverse side of these arguments is that in California, at least during framework development, multicultural issues did not ignite because they were not the main motivation for change.

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[21] As of this writing the Department was in the midst of writing learning outcomes which are reportedly at a fairly high level of generality. Curriculum frameworks based on these outcomes will follow.

Through review and feedback the state was able to address many of the objections to the multicultural strand of the framework (as well as other issues).

However, the California textbook adoption phase did generate strong controversy. In some measure this may have been a result of timing. The adoption phase occurred in the aftermath of New York's "Inclusion" report, and public attention throughout the nation had turned to explore the issue of multiculturalism. Groups in California were reputedly mobilized by parallel organizations in New York. Another reason why this phase was more controversial may have to do with the nature of textbooks. For one thing, they are much more detailed than frameworks, and can thus generate more opposition. The textbooks are also high stakes for publishers, the state, and local districts. Publishers have invested significant amounts of time and resources. The state wants books to be published that meet its standards and complete an essential piece of the systemic puzzle. For districts the textbooks are highly salient because they must spend 70 percent of their state textbook aid on adopted materials.[22] In addition, because local school boards decide on whether to use the state-adopted books or not, the process becomes highly politicized at the local level.

San Francisco was able to derail opposition to the Houghton Mifflin series by first putting together supplemental materials that addressed the specific needs of their own minority

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[22] While in California districts may put the money aside for future spending on other state-approved materials, they would then have to rely largely on out-dated books.

populations. This points out the importance of emphasizing that the textbooks, like the national standards, will not be everything to everybody, but will provide a common core of high standards which must be supplemented at the state and local levels.

The California case also demonstrates many other important lessons for national standards in this subject-area. One concerns the ability of the 1987 history-social science framework committee to introduce innovations that dramatically depart from the current status of the field. These innovations were enabled by the composition of the writing committee, which brought together leading-edge academics and practitioners and emphasized professional participation in all stages of the process. (Elsewhere, I have called this the professional elite model of participation. See Massell, forthcoming.) In addition to committee composition, the state employed a number of managerial strategies to protect the controversial positions and innovative stands taken within this framework. By turning to university scholars outside the process to legitimate or delegitimate the competing claim, the Curriculum Commission was able to adjudicate content disputes. While California, then, has created cutting edge frameworks, it has been less successful in generating support from a wide range of textbook publishers, and controversies continue at the local level regarding the teaching of religion. Thus even though innovation was successful, one must ask how "leading-edge" a document can be without losing some of the essential components of systemic reform. However, should systemic feasibility be

measured in the short or long-term?

ADVANCED PLACEMENT PROGRAM
CASE STUDY
Carolyn Kelley

The Advanced Placement (AP) Program, administered by the College Board, provides high school teachers with curriculum guidelines on 29 courses in 16 subject areas including Art, Biology, Chemistry, Computer Science, Economics, English, French, German, Government and Politics, History, Latin, Mathematics, Music, Physics, Psychology and Spanish. AP exams are administered in these subjects in the Spring of each year, and participating colleges grant credit and/or waive course requirements based on the results of these exams.

I. BOUNDARY CONDITIONS

A. *History of Standard-Setting*

The College Board established the Advanced Placement Program in the 1950s in response to concerns of the academic community about the educational progress of able students. At the time, some colleges had early admissions programs to accommodate advanced students. In 1953, two separate initiatives by faculty at elite colleges, universities, and high schools came to the same conclusion: that there should be some means of acknowledging college level work completed by students in high school. Beginning with faculty discussions at Kenyon College, a consortium of 12 cooperating colleges and 27 high schools established 11 college-level courses to be offered in these high schools beginning in September, 1953, with an exam administered in the following Spring.

In 1954, the College Board voted to administer the AP exams beginning in the spring of 1956. They asked that the Educational Testing Service be responsible for developing the exams. Significant and steady growth has occurred in the program since 1956. In that year, 104 high schools, 130 colleges, and 1229 candidates participated in the program. By 1985-86, participation had grown to 7201 high schools, 2125 colleges, and 231,378 candidates.

B. *Major Current Political Events and Issues*

The primary political issue surrounding the program revolves around determining what material should be included in the AP curriculum and exams. Because the purpose of the AP program is to provide college credit for high school coursework, the AP curriculum of necessity must be representative of the content of current college-level introductory courses. However, college-level introductory courses may not reflect the best of what the field has to offer.

As the program has grown to encompass more and more colleges and universities, the problem of responding quickly to changing conceptions has been exacerbated. Today, with over 2000 participating postsecondary institutions, the AP curriculum must reflect the diversity of the colleges it seeks to serve. As a result, the curriculum risks being reduced to the lowest common denominator of these institutions. Therefore, although the AP program is still known for its high and challenging standards, some people assert that it follows, rather than leads, curricular

innovation and reform. The College Board addresses this concern by ensuring that the AP curriculum and exams cover the topics that faculty at participating institutions consider essential, but also by introducing and encouraging the use of innovative curricula and instructional methods, and by providing for flexibility for individual teacher preferences. One notes, for example, that while most freshman courses in state universities are so large that few assignments deal with original sources, history AP exams always include a document-based essay. Also, half the questions in all AP examinations are free response essays, unlike most college courses.

C. *Zones of Public and Professional Dispute and Consensus*

Some recent examples of conflict and consensus in the AP program include determining content alternatives in history and the social sciences and the use of technology.

History and the Social Sciences. Recent tumultuous changes in Eastern Europe and the Soviet Union made much of the current curriculum in the comparative governments course out of date. Not only were descriptions of existing countries outdated, but the normal comparative divisions - among the first, second and third worlds, or among democratic, communist, and developing countries no longer seem to define the world we are evolving into. Unfortunately, the new world order, and political theories defining that order have not yet evolved, and the AP comparative government curriculum is left unsure of what direction to send its curriculum. The College Board has explored a number of

alternative directions, such as using paired comparisons of countries to highlight differences, but the program is limited in its ability to move to a new paradigm until textbooks have been written which use this new approach.

The Use of Technology. Use of technology in the AP curriculum, specifically the extent of use of graphing calculators, and what type of graphing calculators to allow in exams is an unsettled issue in the AP curriculum. In order to determine what type of graphing calculators to use (if any), the College Board surveyed all participating postsecondary institutions and all high schools to determine to what extent these calculators were currently used in college level courses as well as high school courses. The issue will be decided next year on the basis of "equity and fairness, validity, and psychometric questions."

II. PLANNING STAGE

A. Systemic Relationships

The AP Program maintains close ties with faculty of participating colleges and teaching staff. In addition, staff monitors activities of professional organizations and curriculum specialists to keep abreast of changes which may be occurring in the field. Program staff consider college faculty both the consumers of their product and the definers of what materials should be covered in their exams.

B. Overall Curricular Goals and Objectives

The AP curricula and exams differ from some other model

curricula in that the goal of the AP program is to replicate as closely as possible the curriculum that currently exists in participating colleges and universities, in order to give high school students college credit for this college-level work.

C. Management Structure

The College Board appoints an Academic Advisory Committee for each broad disciplinary area which oversees issues related to curriculum development. In addition, each subject area has an AP Development Committee, comprised of approximately six individuals who are appointed by and responsible to the College Board. Committee members are selected for their expertise in the field, including both subject-matter competence and knowledge about curriculum and instruction methods. Members are drawn from secondary schools and colleges, both public and private, with attention to representation from a variety of institution types, as well as racial and ethnic minorities, and men and women. All committee members teach the AP course or its college equivalent, and many have been AP readers or teaching consultants. Changes in the membership of the committees occur every year with rotation for the committee of one or two experienced members and the appointment of new members. Nominations are solicited from appropriate professional organizations and from members of the College Board regional staff who are in close contact with secondary and postsecondary schools.

Development Committee members are responsible for specifying exam content and ability level and assisting in writing and

reviewing test questions as well as descriptive literature for the examinations that is distributed to candidates, schools, and colleges. The descriptive literature outlines the broad areas to be covered in the AP course and exam, as well as recommends textbooks, other materials, and teaching methods for high school teachers to use.

In addition, the Development committees may be expected to act as a liaison between the College Board and members of their discipline in order that the concerns of faculty be represented, and that members of the discipline be kept informed about the programs and examinations of the College Board. Finally, these Development Committees may recommend research, validity studies, curriculum surveys, or other information-gathering activities that will aid in the improvement of exams and help institutions make better use of the exams. Most Development Committees hold three three-day meetings per year.

ETS test development specialists work closely with their respective Development Committee. Test development staff members are themselves subject matter specialists, and have typically worked as faculty members or high school teachers prior to joining the ETS staff.

The Chief Reader is a college professor who teaches courses similar to the one for which the AP course is intended to provide credit. The Chief Reader is responsible for scoring the free-response section of the particular AP examination. This involves selecting readers, developing scoring standards for

free-response questions, and overseeing the entire scoring process. The Chief Reade is appointed by ETS for a four-year term after serving for one year as Chief Reader designate.

III. DELIBERATIONS

A. *Goal and/or Standard-Setting*

The content and skills specifications for a given examination are related directly to the course description and provide the blueprint for the examination. The specifications for AP courses and examinations do not change radically from year to year, but evolve over time to ensure continuing appropriateness and relevance of the exam content.

B. *Document Drafting*

The AP Program surveys colleges and university departments in the process of developing an AP course and examination to align the AP course outline closely with what colleges teach. The surveys are repeated every four to five years.

C. *Review, Feedback, and Revision*

Committee decisions about revisions of Course Content are derived from surveys of college curricula, recommendations from appropriate professional organizations, and consultations with teachers currently teaching AP courses in secondary schools. Major changes in a course or examination are announced to schools at least two years before the change takes effect.

IV. OUTCOMES

A. *Legitimacy of Process and Product*

The AP program works hard to incorporate information and

materials currently being taught in introductory college-level courses. Development Committees meet annually to provide for incremental changes in curriculum rather than waiting until a crisis arises. There are frequent surveys of college course content, and exchanges among members of each subject matter field.

Colleges receive information on the grade received (scores of 1 through 5) for candidates who have taken the AP exam, and they may choose what to do with the results. Some colleges grant credit and/or course waivers for students receiving a three or above on the exam, others require a 4 or 5 in order to receive credit. This allows the college to determine what level of competency they require in order to honor AP coursework.

The AP program also does studies annually that examine program effectiveness. These include comparability studies in which college students registered in a course like the AP course take portions of or all of the AP examination; studies of AP student performance in college; and studies of construct validity and psychometric analysis. In general, these studies find that AP students do very well in college, and that a 5 on the AP exam reflects competency which exceeds that of A students in similar courses in college.

Consensus. Content validity is measured through surveys that are sent to colleges every four to five years to determine whether exams are representative of the curriculum that is taught within introductory courses for which advanced placement is

awarded. The colleges provide information about course content, texts, emphases, labs, and technology.

For AP examinations, criterion-related validity is measured through comparability studies, performance of AP students in college, and performance of AP students in sequent courses. These studies are conducted annually.

Quality. The primary quality criterion of the AP program is that the AP curriculum should reflect what is currently being taught in participating colleges and universities. Given this criterion, the AP program has very high quality. However, in striving for consensus across a broad range, the program does not seek to lead changes in curricular reforms, or to necessarily meet high standards of some college programs that would be considered outliers in the total distribution of programs. Two examples from AP science illustrate this issue.

According to officials at the College Board, "In all three sciences, the NSF has funded projects to stress concepts, restructure courses, and strengthen labs. The Program is following these deliberations with interest but must wait; our approach is to participate in reform but not to try to lead it. Meanwhile, the AP sciences are often seen as too concerned with detail, too traditional, offering 'cookbook labs.' AP reflects what exists in mainstream freshman courses; the courses can reject what is worst in the mainstream, but they must remain in the mainstream."

Similarly, "Both the Chemistry and Physics NSF projects have

spoken with favor about the "discovery method" in laboratories. While attractive, the AP committees believe that it is unlikely to be implemented except in small, selective colleges."

Implementation. In order to implement a new curricula, the College Board begins by surveying colleges and schools on their interest in the subject, and on what specific content colleges and high schools currently offer in this subject area. For example, the College Board is in the process of developing a statistics exam. The College Board appointed a statistics task force, made up of two high school teachers and eight college faculty members. The task force developed and administered a survey to participating AP institutions to determine whether a generic statistical course could be offered at the high school level, and whether colleges would be interested in granting credit for it. The survey included suggested content for the course developed from several college textbooks, and an outline of topics.

Survey results indicated that colleges would be interested in an AP statistics exam. The College Board will now proceed with appointment of a Development Committee and an ETS specialist to develop the curriculum and exam. The College Board will monitor the need for training in statistics among high school teachers, and implement the program in the next few years.

V. CAPACITY BUILDING

A. Systemic Linkages

Training. By including high school teachers in the

Development Committee process, and consulting with professional organizations, the AP program is very aware of limitations that may arise due to inadequate training of high school staff. In the past, the program has made provisions for training when the need arises. For example, when the computer science curriculum was developed, it became clear that most high school computer sciences courses taught BASIC, while program surveys indicated that Pascal was the language of choice in colleges. Before launching AP computer science, the Program offered several summer institutes and managed in about four years to retrain the teachers.

Materials. For each subject matter, Development Committees prepare a booklet describing the subject matter that needs to be covered in the AP course, including suggested textbooks, reference materials, and a course outline. The outline designates the percentage of time that the committee feels should be spent on each subject area. In addition, teachers receive sample questions which provide them with an idea of the format as well as the content of the exam questions. It is up to the teachers to obtain textbooks and materials for their class, and to determine the actual content of the AP course.

Development. The AP Program draws from the expertise of the faculty on their Development Committees, from the professional community, and from their own research to determine need for changes in the AP curriculum and exams.

Testing. By combining subject-matter expertise,

psychometric techniques, and analysis of test results, the Development Committee and the ETS testing specialist develop and refine AP exams.

Public Relations. The AP Program is very responsive to concerns expressed in the community. One of the responsibilities of the Development Committee is to act as a liaison between the College Board and the community to respond to concerns expressed.

VI. CONCLUDING COMMENTS

AP has been completely implemented and clearly meets implementation and capacity building criteria. In addition to the examinations, the program periodically identifies areas in which to provide teachers with the relevant training and support needed for the AP content. Many outcome measures demonstrate the strength of the program. For example, students' performance on the AP examinations is closely correlated with subsequent college performance. And by developing examinations which carefully and closely reflect college curricula, and providing tangible benefits and incentives for college-bound students (e.g. status and college credit), the College Board AP program has been able to gain the participation, support and trust of secondary and postsecondary institutions around the country.

The goal of the AP program is to develop courses and exams which provide high school students credit for college-level work. As a result, AP must stress what is currently taught rather than attempting to move rapidly to reflect new developments in a field. AP content standards are oriented to university course

syllabi, and they take an incremental approach to change. However, because the goal is to replicate college content rather than instructional method, AP is more readily able to lead innovation in teaching techniques than in curriculum content. For example, the program has introduced the use of essays across the curriculum, graphing calculators in calculus, computer science, case studies, and free response exam questions, even though these techniques are used only in a small proportion of participating colleges and universities. This, too, will be an issue for national content standards: how to balance the stability of constancy and the trust gained through consensus, with responding quickly to embrace new developments.

OBSERVATIONS FROM THE CASES and
IMPLICATIONS FOR NATIONAL CONTENT STANDARDS
Diane Massell

The case studies document the process and outcomes of previous efforts related to standards setting. Here I will summarize observations across these cases and other research on curriculum and standards, and draw implications for national content standards and the work of the proposed National Education Standards and Assessment Council (NESAC). The discussion here does not cover all the information and ideas in the case studies which deserve a careful reading.

I. ACHIEVING CONSENSUS AND LEADERSHIP

In its call for the development of national content standards and assessments, the National Education Goals Panel set forth two key criteria. The standards must be 1) "world-class", and 2) "public, realistic, and valued," a notion which has "far-reaching implications, not the least of which is reaching consensus on what it is that students should know and be able to do" (National Education Goals Report 1992: 270). The desire for "world-class" standards emerges out of the concern that U.S. students repeatedly lag behind their counterparts in other countries. "World-class" standards are leading-edge standards for ambitious goals of what students should know and be able to do. They contrast with the basic skills orientation that predominates in American schools today (Sykes and Plastrik 1992).

The Goals Panel's emphasis on consensus partially addresses one of the failures of previous reforms to change content which

neglected the social and political realities of implementation (McLaughlin 1991). Educators today are indeed keenly aware of the problems that result when notions of change are not widely shared (Carlson 1992). As we saw with the "new mathematics" and science projects sponsored by the National Science Foundation in the 1950s and 1960s, parents, teachers, community leaders, administrators, and others had only limited, if any, involvement in the development of the new curricula, were uninformed about the changes they were expected to make, and were ill-prepared to defend the reforms when challenges arose at the local level. By involving diverse professional and public groups in a consensus-building standards development process, a shared foundation of understanding may be built. In addition, this broad-based participation strategy may impart the content standards with the legitimacy that is vital to maneuvering through potentially treacherous political waters at the national, state and local levels.

But achieving leading-edge standards is frequently at odds with reaching broad consensus. The National Council of Teachers of Mathematics (NCTM) recognized this inherent tension:

> Twin needs propelled the development of NCTM's standards for school mathematics: the need to gain consensus and the need to promote change. On the one hand, if these standards were to stand as the banners of the community, then they had to reflect shared values and commitments. On the other hand, if change was desired, then these standards had to do more than reflect current practice. New ideas were needed, ideas that departed from extant assumptions and practices (Ball 1992: 2-3).

NCTM did, in fact, achieve a high degree of consensus around what many perceive to be leading-edge content standards. It embarked on

an extensive consensus building process which involved thousands of practitioners, academics and other professionals as well as members of the lay public in different stages of agenda-setting and capacity-building. While some disputes linger, the degree of acceptance they have achieved is what other standard-setting groups aim to emulate. Can they do so?

In this section I will explore the leadership/consensus conundrum. I will discuss the factors that make the NCTM case a special one and the challenges that confront current endeavors. Then I will look at strategies used to achieve the twin objectives of leadership and consensus.

Challenges to Leadership and Consensus

We have identified five challenges to establishing balance between leadership and consensus, although certainly others exist. They include: 1) the intellectual foundation for reform, 2) the particular lay-out of a subject-matter field, 3) the natural connection of a subject-matter field to ethical, moral, religious or social debates, 4) the initial motive behind the standard-setting effort, and 5) the current political environment.

1. **Intellectual foundation for reform.** In many respects, current content standards projects are operating in an environment with a remarkable level of agreement on the broad substance and direction of the reforms needed to create excellence. Across the subject-matter fields, for instance, we see a strong push for higher-order thinking and active models of learning; more interdisciplinary learning and understanding; more in-depth

coverage of a smaller set of topics rather than superficial coverage of more content (called interchangeably the "depth over breadth" or "less is more" goal); and more challenging content for <u>all</u> students (see Curry and Temple, 1992). But there are professional disagreements about how to operationalize these ideas in the context of the specific subject-matter areas. And while many educators support these broad objectives, a strong segment of the professional community (including many if not most practitioners) embraces more conventional, back-to-basics views of knowledge and learning, questions the research base on which the new goals reside, and are concerned about the effects the new efforts will have on at-risk students. The broader public also embraces a more conventional model of schooling based upon their own experiences. **<u>Thus the foundation for consensus on the intellectual goals of reform still is far from solid.</u>**

2. The lay-out of the subject-matter field. NCTM's success in merging consensus with leadership is due to some advantages which other subject-matter areas do not necessarily or naturally have. Our comparative case studies revealed that the disciplinary lay-out of a subject-matter area, and the linguistic or conceptual linkages that bridge its subspecialties, are extremely important factors in forging consensus. As a discipline mathematics is uniquely cohesive, without the highly distinct and competitive subgroups that characterize fields like the sciences (chemistry, physics, and biology) or social studies (history, economics, and geography). The different areas of specialization within mathematics, such as

geometry or calculus, share a common conceptual and linguistic frame which facilitates discussion and communication. And, since the mathematics community is comparably small, people are often members of the different organizations that do exist to represent different segments of the field. **Because of the nature of mathematics, professional debates tend to center on pedagogical issues--the when and how--rather than the "what" of "what students should know and be able to do."**

The sciences and social sciences, by contrast, are balkanized into different disciplines that often lack a common framework that can facilitate discussion and compromise. In the sciences, for instance, a physician does not employ the same theoretical tools or lenses that an earth scientist or astrophysicist does. The scientific community as a whole is quite large, and scientists belong to different professional associations. In some ways the field of social studies is even less clearly defined. It can include one or more of the following disciplines: economics, history, geography, anthropology, sociology, and social studies. **All of these disciplines compete for resources and time in the (limited) school calendar. For these reasons, the actual content that should be included in science or social studies standards is more contentious.**

3. Linkages to ethical, moral, religious and social debates. While reforms in mathematics have been known to touch off heated debate, defining valued content in the sciences and social sciences is sure to ignite public and professional passions over religion,

evolution, multiculturalism, and ethic historiography, to name a few. We saw in the California and New York social studies case how multicultural debate prevented consensus. Though California was able to achieve a curriculum framework which took a decisive position on the issue and set forth numerous innovations, implementation has been hampered (although not stalled) by the unwillingness of more than a handful of textbook publishers to submit materials that meet the guidelines, and by continuing religious debates at the local level. In some measure the way the agenda was formed--particularly who participated and when--had an impact upon the way the debate was framed and the subsequent controversies. However, when the controversy is high on the "issue-attention cycle" (Downs 1971), the level of public and professional debate is beyond the control of the standards-setting committees. Thus in California, when the history-social science framework was designed, multicultural issues were relatively low on the cycle; but when the textbooks were adopted, awareness had been heightened by the New York effort and other events.

4. Self-generated reform. In contrast to many current standard-setting endeavors, the NCTM effort was self-generated. Consensus development in current projects may be hampered by the externally-derived nature of the standard-setting enterprise. In the early 1980s, the mathematics community as a whole made the decision to undertake the task of setting content standards. When NCTM did not receive outside funds to assist their efforts, they used their own resources. Some of the more recent standards projects have been

undertaken by the leaders of various subject-matter associations without, necessarily, the wholehearted backing of their members. In other words, these communities are not starting with the kind of general support for the effort that mathematics had at the outset. This raises a question that NESAC will have to address at some point: What if the content standards developed under grants from the U.S. Department of Education are approved by NESAC, but not by the rank and file of the association or group which developed them? If there is a schism between the leadership of the association and its membership, or between the standards-developers and their constituencies, will NESAC approve them?

5. The political context of reform. _Finally, the prevailing political environment poses conditions which impacts the ability to reach consensus. The stakes are high in the current effort to set national content standards and assessments._ When NCTM was developing its curriculum standards, the national environment was relatively quiet; no grants were available, national assessments were not being planned, and the term "systemic reform" had not been coined. NCTM was able then to plan a slow, lengthy development process, with plenty of time for consensus building. Today, a lot of resources and political and professional viability is at stake for the subject-matter associations or groups attempting to broker consensus within their fields.

Standard-setting exercises require educators to make explicit the valued content and objectives of their disciplines and models of teaching and learning that often lay quietly implicit. In many

ways this provides an exciting opportunity for broad-ranging discussions that can yield clarity on the goals and purposes of education. **But airing these views in today's explicitly political and public context will shape the content outcomes in particular ways, and may prevent consensus.** For example, by requiring that these models be given concrete form, sometimes gray areas where two views coexisted or were compatible become sharpened for debate in the high stakes marketplace of public ideas, professional status, and dollars. The competition can lead to polemics and posturing which the standards groups and NESAC will have to carefully sort through.

Strategies for Balancing Consensus and Leadership

In the case studies, we found several techniques or strategies that standard-setters used to build consensus and establish cutting-edge positions. Usually the technique or strategy favors one dimension, like consensus, over leadership, or vice versa.

1. Vague, open-ended language. One of the most common techniques used to get agreement across diverse groups is vague, open-ended language that can be interpreted in multiple ways. Perhaps the most frequent criticism launched at textbooks is that they expunge from their material all provocative and controversial topics, producing "safe" but boring texts that will anger few but also excite few students to learn. **This approach equates consensus with the absence of controversy. If this general technique predominated in the setting of national content standards, it would be unlikely to change school teaching and learning. However, this technique**

<u>may sometimes be necessary if the standard-setting group</u> <u>ascertains that opposition would stall reform altogether, or if it</u> <u>is an area which the national group wants to leave to local</u> <u>discretion.</u>

2. **Representational equality.** In some of the highly fractured fields like science or social studies, it is appealing to patch a consensus together by including every discipline and every demand, equally, in the final standards document. This representational equality approach to consensus is premised on the dynamics of interest group politics, and the fairness of the document is judged in these terms. To paraphrase a participant in one national curriculum project (not discussed in this report), 'I would agree as long as the standards represented more of what *I* teach.' In fact the nature of our fragmented political system and the reign of interest group politics has always made it <u>easier to layer new</u> <u>requirements and courses on the old rather than parse out the</u> <u>inconsistencies to create a more uniform, cohesive school curricula</u> (Fuhrman forthcoming). As a consequence we have the "shopping mall high school" (Powell et al., 1985). In a recent book, Sizer discusses this:

> "There's too much in the curriculum now, too many
> courses, too many promises, too much stuff. We know
> that most of it is covered superficially, and we know
> how confused the kids are--those kids who bother to
> think about what we teach them." The teacher was
> referring to what the committee members had learned from
> "shadowing" individual students over the course of a
> day, an experience that had radicalized more than a few
> of them. At the end of trekking behind a student for
> seven periods, their behinds were sore, they had been
> bored by being talked at so much, they had witnessed the
> cumulative intellectual chaos of a typical sequence of

courses, French to physics to English to phys ed to mathematics, none planned with any reference to any of the others, and all before lunch. There was, most of them had agreed, no coherent sum to be totted up from these disparate parts (Sizer 199-).

In the more fragmented subject-matter fields the goal of achieving "depth over breadth" and intellectual coherence will pose great challenges. And the heated political environment, where so much more is at stake than was the case when NCTM conducted its early efforts, may contribute to less willingness to compromise ground.

3. **Survey approaches.** The survey approach used by The College Board's Advanced Placement program provides an alternative way to develop consensus in the content standards process. By <u>reflecting the standards embedded in college curricula, the AP program is able to produce a high quality effort without getting bogged down in disciplinary disputes. The survey approach imparts a kind of legitimacy to the process, because the standards reflect the actual, "average" curriculum</u>. For the AP program, reflecting the postsecondary curricula for high school student gives the program a certain cache. In this way it is able to buffer the program from potentially competing demands. However, the survey approach <u>also restricts the innovations its content standards can attempt</u>; in other words, by limiting itself to the curriculum that is, AP does not often move to what ought to be. (On the other hand, it has been able to provide more cutting-edge positions on pedagogy because these techniques are not

derived from surveys of college teaching methods.)

4. Time. A factor that seemed to be <u>a crucial precondition for developing consensus was simply time</u>. One of the keys to NCTM's success was a slow, lengthy development process which contained plenty of time to prepare the ground both before the drafting committees met, and afterwards for review and feedback and consensus building.

5. Review and Feedback. A broad review and feedback process is a critical component of any consensus-building strategy. We have mentioned the NCTM example, and the case studies describe other review and feedback processes. <u>In addition to spreading the sense of ownership for the outcomes, these efforts help to identify where some of the potential landmines are should the drafting committees decide not to revise the standards in the way the feedback directs. It thus provides valuable information for the capacity-building efforts that follow the adoption of the content standards.</u>

6. "Just Saying No." Reviews can also lead to some extraordinary pressures to compromise the integrity and leadership potential of the standards. In our cases we saw how NCTM and California used some institutional mechanisms to enable the writing groups to "just say no" to demands for change.

Internally, <u>the projects can create an organizational layer to buffer the writing committees from the high pressure demands.</u> NCTM created a committee above the standard-writing

groups to answer to the Board. We also saw in California how the State Board of Education, the Curriculum Commission, and the State Department of Education undertook various efforts to protect the history-social science framework from competing demands. <u>Depending on the composition and structure of NESAC, its certification process might enable the standards committees to take on some tough challenges. In other words, it might be able to leverage change that the standards groups, acting alone, may not be able to accomplish.</u>

A key element of California's strategy to craft high quality documents centered on a <u>careful selection process for participants</u> in the development of the framework. Departing from a more common tradition of selecting people to state committees based primarily on their representation of particular interests, they gave priority to people considered at the cutting edge of their discipline. Key staff members viewed the more conventional ways of staffing committees as a contributing factor in the representational equality approach to consensus and the use of vague, open-ended language. In California, the framework development process places <u>strong emphasis on involving education professionals-- classroom teachers, district curriculum specialists, and university academics from the disciplines and schools of education--in all stages of the process</u>, from setting content standards and drafting documents to review and feedback.

While the broader public does have access to all the meetings, compared to other state approaches to development, their participation is relatively modest.[23]

Determining Success

To exercise meaningful leadership, national standards must clearly chart a course through real debates and issues. On the other hand, the standards must balance this leadership with political and practical realities. **If the content standards move so far ahead of the field, or so far to one side of the controversial professional and public debates, the groups targeted for change may refuse to budge or key interest groups withdraw support for the projects.** Again in California textbook publishers have been reluctant to develop materials that meet its more innovative and controversial history-social science framework. While strong financial incentives may overcome this kind of obstacle, the larger question is whether opposition will be sustained at the local level and defeat the implementation of the standards. In other words, it is one thing to get all the policy constructs (like content standards and assessments) in place; it is quite another to change the multiple layers of government, interests and values.

Understanding when to "stand ground" and when to

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[23] In Vermont, for example, broad-based citizen forums were held on the front-end of development to determine public views about directions the curriculum should take, and are playing an integral role in reviewing the draft documents that were prepared (Massell forthcoming).

compromise is not simple. **There is no easy, single litmus test that will determine "how much consensus is enough", or when the standards meet "world-class" criteria.** If in every instance the test for NESAC approval were total consensus, the content standards would inevitably be meaningless. As Deborah Lowenberg Ball, a chair of one of NCTM's professional standards committees noted, if people were ruffled by the standards it was an indication that NCTM was providing leadership on some of the tough issues and not just reflecting the status quo or avoiding the problems (Ball 1992). And in any case, implementation research demonstrates that reform can happen even if the goals of change are not universally agreed to beforehand (McLaughlin 1991; Fuhrman et al.). In other words, it is human nature to resist change, and belief can follow practice.

To judge whether the standards meet the leadership criteria, NESAC will not be able to rely exclusively on empirical research, as some would argue. While the research base that NCTM drew upon gives some clear directions, it is largely suggestive. The foundation for change has not been definitively given by empirical evaluations of existing programs. At a recent meeting, standard-setting groups pointed out that no reforms would ever be offered in education if definitive research were the primary criteria

for change.[24]

To navigate these waters, <u>NESAC may want to develop</u> <u>histories, or topographical overviews, of the different</u> <u>subject-matter areas in which national content standards are</u> <u>being developed.</u> This overview might describe the contours of the field similar to the case studies prepared for this report. It is important for NESAC to understand the major points of debate and consensus, the powerful interests (including publishers, test developers and others who will ultimately operationalize the standards), and the unique challenges that the different groups confront. At the same time, it might be useful to develop a kind of Business Roundtable "gap analysis" with a portrait of the current state of practice in general and where the new standards might depart from it. In this way NESAC may gain a deeper knowledge of where consensus and leadership overlap or depart. This analysis might also be useful for developing capacity-building strategies after agenda-formation.

II. DESIGN ISSUES

One of the difficulties in the development of content standards centers on issues of design. These issues range from what the standards should look like in general, to the way the endeavor is structured. The following explores six general design issues that emerged in our case study reviews.

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[24] In fact many educators would argue that the empirical literature is never wholly objective. Instead, research itself is subject to discourse and consensus.

1. Flexible content standards. The term "standard" is typically being used today in the sense of a flag which reflects the valued goals around which a team or group can rally (see Romberg 1992 for the mathematics example). Groups are quick to argue that by establishing standards, they are not standardizing and enforcing the practices or materials which must be used to meet these valued outcomes (Sykes and Plastrik 1992). For example, one of the NCTM authors writes that the professional standards are to "direct, but not determine practice; to guide but not prescribe teaching" and that "no tight implications for practice" may be inferred. (Ball 1992: 2 and 7).

The notion of "flexible" standards is important in the United States context, where local control is highly prized, and where perceived losses of autonomy can lead to tense political battles regardless of the intellectual content of the reform. In this culture we have a bias favoring voluntary change strategies (Sykes and Plastrik 1992). Reflecting these values, the classic definition of systemic reform calls for pairing ambitious, coordinated policies with restructured governance. Smith and O'Day propose simultaneously "Increasing coherence in the system through centralized coordination and increasing professional discretion at the school site. Thus while schools have the ultimate responsibility to educate thoughtful, competent, and

responsible citizens, the state--representing the public--has the responsibility to define what 'thoughtful, competent, and responsible citizens' will mean in the coming decade and century (Smith and O'Day 1991: 254).

Education research literature demonstrates the value of flexibility. Implementation studies, for example, often emphasize the importance of adapting reform to fit local needs. Highly specific reforms and mandates may be at odds with these local needs. Cognitive science research suggests that students learn best when they can bring their own experiences into the classroom and thus, to a certain extent at least, participate in building their own curriculum. Research on teaching emphasizes the importance of teacher autonomy and decisionmaking to teacher empowerment and a dynamic school curriculum.

These elements combine into a powerful argument for creating content standards that are flexible and in certain ways open-ended. But when do content standards become so flexible that they no longer lead the field and cut through some of the contentious debates? The issue here is one of specificity. Another concern is that the content standards become so flexible that they do not provide sufficient guidance to national assessment developers. As Koretz et. al said, "This effort [a national debate on educational standards] must go beyond generally worded standards to include the development of curricula specific enough to guide

teaching and assessment. These must be the first steps; a syllabus-based examination system will have to wait until standards are established, because we cannot insure that students have a fair chance to learn what is tested until we have curricula in place." (Koretz et al 1992). Indeed, without a sufficient detail in the standards to guide the assessment effort, much power will remain in the latter's hands. This issue has recently come up with the designers of assessment tasks for the National Board for Professional Teaching Standards:

> By not creating standards at what we would call a fine-grained level..standard writers leave the critical work of operationalizing standards for exercises and judging to the assessment developers. We, not the standards committee..imagined the vignettes or examples of accomplished teaching, we attempted to ground the standards in research, and we think the standards committee should have been involved in the assessment effort to operationalize standards. (Pence and Petrosky 1992)

A certain level of detail in the content standard is necessary to guide the construction of performance standards, which will then guide test specifications, and finally the development of the tests themselves.

On the other side of the balance, however, lie content standards that are too highly specified. NSF-funded textbook development efforts of the 1950s and 1960s are now largely viewed as ineffective in stimulating widespread or deep, lasting change. Current standards developers are also moving away from older curriculum strategies which elaborate lengthy lists of "factoids" that courses should cover--lists which

can be easily ignored or plopped into the texts or syllabi without any consideration of the overall fit[25]. Newer curriculum guidelines are broader efforts which tend to provide a coherent rationale for change. Theoretically, at least, this rationale facilitates system-level change. As Archbald writes:

> Effective state leadership requires building a common definition of curriculum needs. A clear and compelling curriculum rationale increases the probability of coherent action within and among schools and districts by working toward a consensus on reform needs. Because change agents are likely to encounter a welter of

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[25] Curry and Temple describe traditional curriculum frameworks as follows:

"Frameworks created between the 1970s and the mid-1980s consist primarily of goal statements and objectives...and often address the nature, quality, or number of educational inputs, such as the quality of the teaching force, number of hours in class, and so on. They are most often a rigid, prescriptive taxonomy of subject matter objectives unconnected to most other components of the instructional system such as assessment, professional development, and instructional materials. Many of these traditional frameworks' contents range from comprehensive listings of goals and objectives to definitions of minimal academic achievement or basic skills, which are often disconnected from one another and presented for no higher or more complex purpose than skills development...

The preface is often followed by a description of minimum course content and a set of subject area process skills, frequently in the form of an outline..These frameworks are generally developed in a top-down mode. More often than not, they codify "more of the same" and reinforce the notion of the discipline as a "laundry" list of facts (Bartels 1992)...

Scope and sequence..is generally presented as a layered, linear, lockstep, sequentially developed outline of course content. It often encompasses so much material that it impedes students' in-depth investigation or understanding of the subject. Such frameworks tend to be "compartmentalized," focusing on student knowledge and skills in specific subject areas without regard for the overall interconnectedness of subfields of the discipline, and the thinking and reasoning skills that are so important and necessary in the real world." (Curry and Temple, 1992: 4-5)

competing notions of what curriculum reforms are needed, a clear and cogently expressed vision of needs and goals is essential to make curriculum deliberations productive and to promote "buy in"." (Archbald forthcoming; also cites Walker 1990).

2. **What should a content standard include?** At least three broad domains of standards can be identified: 1) content standards, which define "what students should know and be able to do," 2) performance standards, which define how much students should know and be able to do, and 3) teaching standards, which identify criteria for the best pedagogy to deliver what students should know and be able to do. **A major design issue is where--or indeed, whether, it is possible--to draw the boundaries of these three domains.** Many educators suggest that it is impossible to separate content from pedagogy. Joseph Schwab once wrote that "the means we use color and modify the ends we actually achieve through them. How we teach will determine what our students learn" (Schwab 1978, in Ball 1992b). Indeed, this assumption underlay NCTM's work. They wrote:

> Students' opportunities to learn mathematics are a function of the setting and the kinds of tasks and discourse in which they participate. What students learn--about particular concepts and procedures as well as about thinking mathematically--depends upon the ways in which they engage in mathematical activity in their classrooms. Their dispositions toward mathematics are also shaped by such experiences. Consequently, the goal of developing students' mathematical power requires careful attention to pedagogy as well as to curriculum. (NCTM 1989: p. 21).

Indeed, reviews of the initial draft of the *Curriculum Standards* called for NCTM to include more information about

pedagogy and practice. Having the content standards explicitly address pedagogical assumptions may provide needed guidance for the development of staff development and delivery standards as well.

And yet it is often politically attractive to forge some kind of distinction, albeit artificial, between the two. Had NCTM split content off from pedagogy, for instance, they might have avoided the disputes between educators holding divergent views of student learning (e.g. behavioral vs cognitive). Separating them also symbolically satisfies the belief that, while the state may set national goals and standards, teachers will be free to meet these goals as they best see fit (Porter, 1989; Schwille et al., 1983). And special educators are particularly concerned about the conflation of content and pedagogy, and many remain unconvinced that current pedagogy promoted as "cutting-edge" will serve at-risk populations well.

3. Congruence of the standards: multiple disciplines/ multiple formats? This raises an issue of congruence. Should all the standards share common features, or be issued in a common format? As it embarked on its endeavors, the National Board for Professional Teaching Standards set forth five propositions of good teaching which all the writing groups were to follow. The justification for this was in part to <u>assure continuity</u>

across the standards, and a kind of operational equity (Bradley, 1992). Common formats might make it easier for subsequent stages of activity, such as national test development. Common formats might also facilitate cross-disciplinary discussions.

However, evidence both from the National Board example and from our California studies suggest that the **idiosyncracies of different subject-matter areas call for different formats, at least to some extent**. Assessment developers working on the English/Language Arts effort of the National Board argued that the five propositions squeezed out pedagogical and content logics unique to that discipline (Pence and Petrosky 1992). For similar reasons, the California Department of Education abandoned its early efforts in the 1980s to issue standardized formats for all the curriculum frameworks.

4. Another kind of flexibility: revising the content standards. While it seems premature to talk about revising the standards since they are not yet developed, it is an important issue to consider at this stage lest these efforts become calcified in layers of policy and become unable to respond to knowledge advances in the particular fields. Since the standards are difficult to devise, and all the interlocking systemic components take time and significant resources to develop, there is a concern that updating and revising them will become very problematic.

California, like many states, reviews their curriculum frameworks on a staggered cycle, with a different subject area coming up for revision each year. Originally California had a seven-year cycle, and this was recently extended to eight. While on first glance that seems like a long time period, it is actually very short for those attempting to coordinate the different policy components and to practitioners in the field. The revision process itself averages approximately two years, and then publishers must be given sufficient time to respond. In addition, assessments, staff development, and other elements must be aligned. The difficulty of producing all these changes in a timely fashion led to frequent criticisms there that frameworks and assessments were ready before the curriculum materials. Furthermore, while a staggered schedule is intended to ease the burden on teachers, elementary teachers and district curriculua supervisors must address the whole range of subjects and thus reassess a key component of their curriculum _each_ year (Marsh and Odden 1991).

The challenge for NESAC and the National Education Goals Panel will be to set up a process that responds to changes in the field that maintains state-of-the-art knowledge, yet does not overwhelm the system's capacity for change.

5. Coordinating standards. A similar issue for the

National Education Goals Panel to consider is the impact of the national content standards "on the ground." While each content standards document may be viable on its own terms, and meet "depth over breadth goals", collectively the various standards may overwhelm the current capacity of the system to address them. Apart from the question of whether teachers have the knowledge and resources to teach to the standards, the constraints of the school calendar alone may provide a significant barrier to their implementation.

One possible response is to encourage more interdisciplinary linkages across the different subject-areas, and to encourage even more parsimonious standards. There are many ways to connect study across the disciplines. In general, interdisciplinary strategies can be classified as those that:

1) restructure knowledge by changing parts of the disciplines (Group for Research and Innovation 1975). This approach calls for fundamental rethinking and integration of different disciplines to achieve a new conceptual unity (Klein, 1985).

2) sustain disciplinary perspectives but call for interaction. These interactions can occur by bringing disciplinary perspectives to bear on problem-solving activities, broad themes, or current issues.

Given political and technological difficulties inherent in the former, the latter may be a more reasonable

expectation.

Another way to encourage interconnections across the disparate groups is to embed interdisciplinary links in the assessment development process. While this option might undercut some of the political tensions of the moment, it would be **less likely to encourage the kind of communication across the communities that count in implementation. Open dialogue can produce friction, but with an extended time frame we might see some important compromises reached.** It would probably be important that such a forum for cross-disciplinary discussions <u>not</u> be hosted by the Goals Panel or NESAC. The stakes are too high, and in such an environment the participants would be far less likely to concede on "turf." Perhaps the effort can draw upon some of the recent initiatives hosted by The College Board or the Education Commission of the States.

III. SUMMARY

The above indicates some critical issues that the proposed NESAC will have to consider as it goes about its task of approving standards and assessments. The following is a summary of the suggestions we ask the National Education Goal Panel to consider:

1. **Develop extensive case studies of the proposed national content standard subject-matter areas.** Each field poses unique challenges to the consensus/leadership conundrum, and NESAC should have a deep understanding of the terrain

of that area to help in forming decisions about approving content standards.

2. Consider ways that NESAC can leverage change and buffer the projects from the press of interest-group politics. Perhaps NESAC could encourage the groups to establish mechanisms which would enable the projects to merge the twin goals of consensus and leadership. Or, it might itself provide that buffer, although the political "cost" to NESAC must be carefully weighed.

3. A related, key question for NESAC is whether it should adjudicate between competing content issues, or whether its approval criteria should focus only on the process by which these groups develop their standards. If NESAC chose to adjudicate content issues, it might do this by setting up internally-based subject-matter councils (similar to the Subject-Matter Committees in California's Curriculum Commission), or an externally-based set of "referees." Again, this may encourage and facilitate leading-edge standards, but moving into this realm might be politically difficult. Should NESAC decide to focus on the potentially more neutral ground of defining process criteria[26] and avoid the content debates, they might end up approving standards which followed procedure but avoided taking leadership positions.

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[26] An example would be specifying the steps groups should take for review and feedback.

Another tactic might be to approve multiple content
standards in one subject-matter area. If NESAC approves
multiple standards, however, which one should guide the
construction of national assessments? If the assessments
cover more than one set, should the test items cover only
what is compatible across the different standards? This
strategy risks eliminating some of the more innovative,
cutting-edge standards.

4. Extend the timeline for national content standards
development. While I realize that the Goals Panel is
operating under constraints stemming from political
timelines, the cases suggest that time may be an important
precondition for consensus and compromise around demanding
standards. Perhaps the panel can consider ways to phase in
stages of the standard-setting process.

5. Be cautious about "standardizing" the standards into a
common format. While a common format may be desirable for
some reasons, it can constrain the writers and place the
standards into boxes that are unsuitable for different
content areas. Some common formatting, however, might
tackle the frequent question of whether the content
standards should only address what students should know and
be able to do, or also discuss assessment and pedagogy.
Similarly, it might address the issue of whether to create
one standard for all students, or standards with
differentiated levels of content for different students.

6. The level of detail and specificity of content standards should be explored with experts. The specificity issue raises many questions about the flexibility of the standard, its ability to lead, and its ability to provide substantial guidance to other components of systemic change, such as assessment. Perhaps a paper could be commissioned or a meeting could be held to explore this question.

7. Provide support for capacity-building efforts. Consensus-building does not end once the agenda is adopted. This stage of development is crucial not only for gaining broadened support and understanding, but also for implementation.

8. Consider schedules for revising the content standards now. While it may seem premature, revision schedules can be considered now to address complex questions of the stability needed for implementation and the development of systemic components, and the need for standards which are state-of-the-art.

9. Consider mechanisms which can "bridge" across different subject-matter areas for interdisciplinary discussions. This is important for many reasons. One is creating coherence across the subject-matter standards (not just within), and for helping to ensure that as a collective the standards are "doable" during the school day and year.

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The National Service Trust Act of 1993

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National service will be America at its best -- building community, offering opportunity, and rewarding responsibility. National service is a challenge for Americans from every background and every walk of life, and it values something far more than money. National service is nothing less than the American way to change America.

-- President Bill Clinton
Rutgers University
March 1, 1993

President Clinton's national service program will expand educational opportunity, reward individual responsibility, and build the American community by bringing citizens together to tackle common problems. The centerpiece of the initiative is a new program to offer educational awards to Americans who make a substantial commitment to service. In addition to this program, which builds on the youth corps and demonstration programs of the National and Community Service Act of 1990, the National Service Trust Act includes:

■ An overhaul of the student loan system. A variety of flexible repayment options will be made available to students -- including income-contingent repayment -- making it tougher to default but easier to take service jobs. At the same time, the phase-in of the direct lending program will save taxpayers and students billions of dollars and simplifying the complex system to make higher education more accessible.

■ Extension and improvement of programs in the National and Community Service Act of 1990 that enhance elementary and secondary education through community service in schools, support after-school and summer programs for school-age youth, and fund service programs on college campuses.

■ Extension and improvement of VISTA and the Older American Volunteer Programs authorized by the Domestic Volunteer Service Act.

■ Creation of a new Investment Fund for Quality and Innovation to support model service programs and activities designed to ensure the development of high quality national service programs.

1st July of Natl Service Bill

The National Service Trust Program

Types of Service

■   To qualify, service must directly benefit the community and address unmet educational, environmental, human, or public safety needs.

■   National priorities may be established to ensure that pressing needs are addressed.

■   Participants may not displace or duplicate the functions of existing workers.

Participants

Eligibility

■   Individuals may serve before, during, or after post-secondary education.

■   In general, participants may be age 17 or older. Youth corps participants may be ages 16 to 25.

■   Participants must be high school graduates or agree to achieve their GED prior to their completion of service.

Selection

■   Participants will be recruited and selected on a nondiscriminatory basis and without regard to political affiliation by local programs designated by states or the federal government.

■   A national or state recruitment system will help interested individuals locate placements in local programs. Information about available positions will be widely disseminated through high schools, colleges and other placement offices. A special leadership corps may be recruited, trained, and placed to assist in the development of new national service programs.

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Term of Service

■　　To earn an educational award, a participant must complete at least one year of full-time or two years of part-time service in a program designated by a state or the federal government. An individual may serve up to two terms and earn up to two educational awards.

Educational Awards

■　　Educational awards worth $6,500 will be provided for each term of service.

■　　Educational awards will be federally funded and deposited into a national service trust on behalf of all participants accepted into the program. Organizations and individuals may donate funds to support national service participants in the donor's community.

■　　Payments will be made directly to qualified post-secondary educational institutions, including two- and four-year colleges, training programs, and graduate or professional programs.

■　　In the case of participants with outstanding loan obligations for qualified educational activities, awards will be paid directly to lenders.

■　　Awards will not be taxable and must be used within five years of receipt.

Stipends

■　　Programs will set stipends within program guidelines. However, federal support will be limited to a match of 85 percent of an annual stipend equivalent to benefits received by VISTA volunteers. Programs may provide additional stipends up to twice this amount, with no federal match for the portion of the stipend in excess of the VISTA benefit.

■　　In the limited case of designated professional corps in areas of great need, such as teaching and public safety in underserved areas, participants may be paid a salary in excess of the guidelines and receive an educational award. However, no federal support will be available for a stipend.

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Health and Child Care

■   All participants without access to health insurance will receive health coverage. Federal dollars will pay up to 85 percent of the cost of these benefits.

■   Participants may receive child care assistance, if needed.

Programs

Goals

■   Programs must set measurable goals regarding the impact of the service on the community and on participants.

Eligibility

■   Programs eligible for national service designation include diverse community corps, youth corps, specialized service programs focusing on a specific community need, individual placement programs, campus-based service programs, programs that train and place service-learning coordinators in schools or team leaders in corps programs, intergenerational programs, national service entrepreneurship programs, and professional corps.

■   Programs may be run by non-profit organizations, institutions of higher education, local governments, school districts, states, or federal agencies.

■   Programs may not provide direct benefits to for-profit businesses, labor unions, or partisan political organizations, or involve participants in religious activities.

Selection

■   Selection criteria include quality (based on criteria developed in consultation with experts in the field), innovation, sustainability, and replicability of programs.

■   Past experience and management skills of program leadership, involvement of participants in leadership roles, and the extent to which the program builds on existing programs will also be taken into account.

■   Programs serving communities of need, including those designated as enterprise zones, community redevelopment areas, environmentally distressed areas, and

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communities adversely affected by decreased defense spending will also receive special consideration.

Funding

■   All participants will receive educational awards.

■   To develop programs, one-year planning grants will be available. To support national service participants, three-year renewable grants will be available for program demonstration, expansion, or replication.

■   Administrative costs will be limited to five percent of all grants other than planning grants.

■   Programs must pay 15 percent of the stipend and health care benefits in cash and 25 percent of other costs. The 25 percent match may be in cash or in kind from any source other than programs funded under the National and Community Service or Domestic Volunteer Service Acts.

■   Federal funds must supplement, not supplant, state and local dollars.

Corporation for National Service

Structure

■   The national service program will be administered by a new government corporation for national service, created by combining two existing independent federal agencies, the Commission on National and Community Service and ACTION.

■   The corporation will achieve streamlined operation through flexible personnel policies.

■   The corporation will be responsible for administering all programs authorized under the National and Community Service Act and Domestic Volunteer Service Act, including VISTA and the Older American Volunteer Programs. It will fund training and technical assistance, service clearinghouses and other activities.

■   The investment division of the corporation will administer the new trust program and programs currently administered by the Commission on National and Community Service.

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■ The operating division will administer programs currently run by the ACTION agency, including VISTA and the Older American Volunteer Programs.

Governance

■ The corporation will have an eleven-member volunteer Board of Directors appointed by the President and confirmed by the Senate. It will be bipartisan and include persons experienced in national service and experts in providing educational, environmental, human, or public safety service.

■ The first Board members will be appointed from the Board of Directors of the Commission on National and Community Service. Seven Cabinet secretaries will serve as non-voting ex-officio members.

■ The Board will develop the corporation's strategic plan, make grant decisions, review other policy and personnel decisions, receive and act on reports from the Inspector General, supervise evaluations, and advise the Chair on all issues.

■ A Chairperson of the Board and a Managing Director for each division will be full-time employees appointed by the President and confirmed by the Senate.

Oversight

■ An Inspector General will oversee programs to guard against fraud and abuse.

■ Programs must arrange for independent audits and evaluations, and may also be required to participate in national or state evaluations.

State Commissions

Structure

■ In order to receive a grant, each state must establish a commission on national service. The corporation will provide funding for the state commission.

■ Commissions will have seven to thirteen members appointed by the governors on a bipartisan basis from among the following: youth, educators, representatives of youth corps, older American volunteer programs, and other nonprofit service providers, labor, business, and experts in meeting particular unmet needs. Commissions will elect their own chair.

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■   State agency representatives may sit on the commissions as non-voting ex officio members.

■   A representative of the corporation will sit on each commission as a voting member and act as liaison between the commission and the corporation.

Duties

■   State commissions will be responsibile for selecting programs to be funded under the state formula allocation, and in any competitive grant states may request.

■   State commissions must also design strategic plans for service in the states, recruit participants, and disseminate information about service opportunities.

■   State commissions may also support clearinghouses, training and technical assistance, and other initiatives to support service. They may not operate national service programs, but may use a portion of funds to support programs run by state agencies.

Transition

■   For a period of one year, existing state agencies may assume the responsibility of the state commissions.

Allocation of Funds

■   States submitting approved plans will receive a minimum of fifty percent of funds available for the national service trust program -- a portion according to a population-based formula and the remainder on a competitive basis.

■   Up to fifty percent of funds may be allocated directly by the corporation. Programs eligible for priority consideration include national nonprofit organizations operating multiple programs or competitive grant programs, national service initiatives in more than one state and meeting priority needs, proposals to replicate successful programs in more than one state, and innovative national service programs.

STUDENT LOAN REFORM: OUTLINE OF THE PRO

April 15, 1993

OBJECTIVES

To reform and simplify student loans through direct federal lending
and the elimination of many middlemen in the current system.   To
provide all borrowers (guaranteed and direct loans) with flexible
repayment options, including income-based repayments, so that
student debt will not prevent them from taking lower paying service
jobs.

A second initiative next year will build upon these changes in
student loans to streamline and simplify all student aid programs.
This initiative will examine, among other things, setting an
overall federal aid maximum and rethinking how to finance
postsecondary vocational education and training.

IMPLEMENTATION OF DIRECT LOANS

o   **Timing**

By the end of FY 1997, federal capital will be used for all
new student loans. Phase-in will begin in FY 1994.

--   Costing is based on a planned phase-in path of 4 percent
of volume in direct lending by the end of FY 1994, 25
percent the second year, 60 percent the third year, and
full implementation by the end of FY 1997.   This path
would not be specified in statute.

o   **Loan Origination**

Some institutions will originate loans themselves; others will
use the services of alternative originators.

--   Criteria measuring the financial and administrative
capability of institutions to originate loans well will
be used to determine which institutions can originate
themselves and which should use alternative originators.
The basis for the criteria will be in statute; specific
criteria will be in regulations.

--   Institutions that meet the financial and administrative
criteria, but do not wish to originate loans themselves,
will also be able to use alternative originators.

--   The Secretary will select the schools to participate
during phase-in, mainly from applicants.   Most will
initially be competent lenders now in the Perkins

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program. In addition, ED will select other institutions that will use alternative origination services.

-- After the first year of experience, ED will develop more detailed criteria that measure administrative and financial capacity for participation as an originator.

Institutions will receive a small fee--about $10 to $15 per borrower--for loan origination. Alternative originators will be chosen by ED through a competitive bid process. Bidders may be state agencies, private lenders, and other organizations. The fee for institutions and originators will not be set in law.

-- The fee will be small because the additional costs are small and the benefits to institutions of direct lending are substantial. The fee will be based on the number of borrowers and scaled down for larger numbers of borrowers to adjust for economies of scale.

All originators will be held liable through financial sanctions (in law and regulations) for errors in the origination process.

o   **Loan Servicing**

Responsibility for servicing loans while students are in school and while they are in repayment will not rest with the postsecondary institutions. The Department of Education will contract with a number of organizations to perform servicing of direct loans. These organizations, which could include state agencies and private firms, will be chosen through a competitive process.

o   **Program Integrity**

The Department of Education will be responsible for monitoring and overseeing the student loan system as part of the its overall oversight of the federal student aid system. As in current law, some responsibility is shared with the States in the new state review process.

o   **Student Interest Rate**

Some of the savings from direct lending will be used to lower interest rates for students. At full implementation, we will lower student interest rates by about one-half of a percentage point. The bill provides authority to the Secretary to do this but he also has the latitude to modify the rate based on conditions at the time.

-- All other terms for borrowers--including loan limits,

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eligibility rules for loan subsidies, and number of loan programs--would remain the same during the phase-in period. Such changes could be included in the second initiative addressing all student aid programs.

o   **Data System**

Postsecondary institutions, alternative originators, servicers, and the Department of Education will share easily data on student loans throughout the nation. The Department will complete work on the national student loan data system. Such a system has been under development since 1989 and must be expanded to perform all the functions needed for direct loans. No new legislative authority is required.

FLEXIBLE REPAYMENT OPTIONS

Flexible repayments, including fixed repayments, graduated repayments, and income contingent repayments, will give borrowers the opportunity to choose lower paying jobs regardless of the level of debt incurred while in college. The Secretary will have the authority to require defaulters to repay through income contingency.

o   **Plan to Offer Flexible Repayments**

We can fulfill the President's commitment to offer flexible repayments to students in four steps (see attachment also). The Treasury Department agrees with this approach.

--   First, the Higher Education Amendments of 1992 provide some additional flexibility to students in choosing how to repay. The Department will develop and publish regulations to implement these additional repayment options by August 1993. The Department will also encourage lenders to offer income contingent repayment options to current borrowers.

--   The second step is to provide to the Secretary the authority to offer income contingent repayments to some borrowers using information from the IRS on borrowers' incomes. The legislation will amend the current disclosure provisions to allow IRS to provide this information to ED or its designated servicers.

--   Third, the Department will offer income contingent repayment to current borrowers if lenders do not. The Department will pay off current guaranteed loans thereby making them direct loans and will then offer borrowers the full range of flexible repayment options.

--   The fourth step is to determine the role of the IRS in

collecting student loans when direct loans and income contingency are fully implemented. The bill requires the Secretaries to develop this role through a joint plan, and to this will allow sufficient time to address all the issues and concerns regarding how such a system would be structured and how much it would cost.

o   **Design of Income Contingent System**

The income contingent system addresses the appropriate income measure, the percentage of income, capitalization of interest when payments are insufficient to cover interest, and length of repayment. The legislation will state that the Secretary will set the specific parameters of the income contingent system.

Income Measure. Total income is the best measure of ability to pay because it includes all sources of income for the family, not just earnings.

Percentage of Income. Use a straightforward system that requires borrowers to repay an appropriate percentage of discretionary income. Bill limits percentage to 10 percent of discretionary income.

Capitalization of Interest and Length of Repayment. Interest will accrue and be capitalized (with a possible limit on the total amount of capitalization) so that borrowers whose incomes grow in future years will repay when their incomes are sufficient. Borrowers with persistently low incomes will never fully repay. We will write off the remaining loan balance after some number of years, to be determined by the Secretary.

EASING THE TRANSITION FROM GUARANTEED STUDENT LOANS

Attached is a transition plan that addresses loan capital availability and guarantee agency operations.

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FLEXIBLE REPAYMENTS
FOR STUDENT LOANS

The President's commitment to provide students the
opportunity to take lower paying jobs and repay their loans
as a function of their income will be provided to all
borrowers. Statutory changes and a fast-track development
of regulations implementing statutory changes passed last
year will ensure that flexible repayment options are
available to borrowers as quickly as possible.

REPAYMENT PROVISIONS FOR CURRENT BORROWERS

o   Student borrowers may be eligible for loan deferments
     or forbearance if they have difficulty repaying.

     --Borrowers may defer repayment on their loans during
     specified periods, including unemployment and economic
     hardship. The federal government pays the interest for
     the borrower during authorized deferment periods.

     --Borrowers who do not qualify for a deferment but are
     otherwise unable to repay their loans may be granted
     forbearance. During forbearance, interest continues to
     accrue and is capitalized.

     --Authorized periods of forbearance and deferment (up
     to 3 years) are excluded from the 10-year statutory
     repayment period.

o   Lenders may offer borrowers graduated or income-
     sensitive repayment schedules.   We have encouraged
     lenders to offer alternative schedules to borrowers,
     but most lenders are not interested.

o   The new legislation will allow ED to refinance
     student loans for borrowers who wish to use more
     flexible repayment options if lenders do not offer
     the options. ED will then provide borrowers the
     full range of repayment options.

REPAYMENT PROVISIONS FOR NEW BORROWERS IN 1994

o   The 1992 Amendments to the Higher Education Act require
     lenders to offer borrowers fixed, graduated, and
     income-sensitive repayment options.

     --These options will be available to new student
     borrowers as of July 1, 1993 and to consolidation loan
     borrowers whose applications are received on or after
     January 1, 1993.   The income-sensitive repayments
     included here are limited to a maximum repayment period
     of 10 to 13 years and payments must cover at least interest.

--<u>Regulations</u> implementing these provisions will be published in the fall of 1993.

INCOME-CONTINGENT REPAYMENT SCHEDULES

o   The <u>new legislation</u> will provide a "menu" of flexible repayment options for direct loan borrowers, including an income contingent repayment option. As discussed above, the bill will also give ED the authority to refinance guaranteed loans for borrowers who wish to take advantage of the full range of new repayment options.

--This process calls for the Department to obtain borrowers' income information from the IRS for the development of the repayment schedule. Loans would be collected by servicers under contract to the federal government.

--The Secretaries of Education and Treasury will jointly develop a plan within a year detailing how we will use wage withholding and the IRS in the collection of student loans.

NATIONAL EDUCATION GOALS PANEL

April 14, 1993

TO: National Education Goals Panel

FROM: Wilmer S. Cody, Executive Director

SUBJECT: UPCOMING NATIONAL EDUCATION GOALS PANEL MEETING

MEETING DATE: Wednesday, April 21, 1993

Enclosed are materials for the next meeting of the National Education Goals Panel on **Wednesday, April 21, 1993 (10:30 a.m. – 3:45 p.m. CDT) in Lincoln, Nebraska.**

Please review carefully the locations and times for events listed in the full agenda enclosed in the front pocket of the Briefing Materials. Attendees in Nebraska will be able to interact by satellite hookup with participants in Washington, DC for the morning session. The Public Meeting will start at **10:30 a.m. CDT (11:30 a.m. EDT).**

Agenda items include the following:

● Resolution on Core Data Elements;

● Resolution on Citizenship Indicators; and

● Review of a report on Content Standards.

If you have any questions, please call me or Nancy Delasos at (202) 632-0952. I look forward to meeting with you on Wednesday.

DRAFT Outline of Goals 2000:   Educate America Act

Note: The following outline is based on conversations with U.S. Department of Education staff as of 4/12/93. The actual text of the bill has not been made available at this time. It is expected that the bill text will continue to change until it is introduced. The Administration hopes to have the bill introduced during the week of April 19th.

Title I:

Codify the National Education Goals and objectives. Add arts and foreign language to Goal 3.

Title II:

a) Codify the National Education Goals Panel.
   (add four state legislators to the existing Panel)

Duties of the panel include:

  • building a national consensus for education improvement;

  • reporting annually on progress made in achieving the national education goals; and

  • commenting on the quality of content standards before the standards are certified by the National Education Standards and Improvement Council.

b) Establish the National Education Standards and Improvement Council
   Appointed by the President, the 20-member council would include five
   professional educators; five public representatives (including state and
   local officials); five employers and/or higher education representatives;
   and five additional experts.

Duties of the Council include work in the areas of content standards, assessments, and opportunity-to-learn standards.

Contents Standards. Duties include:

- overseeing the development of voluntary content standards;

- certifying voluntary content standards;

- identifying additional subject areas in which content standards need to be developed;

- awarding demonstration grants to groups to develop model curriculum that would integrate the content standards from all of the subject areas; and

- certifying state content standards.

Assessments. Duties include:

- developing criteria for certifying assessments;

- certifying individual assessments solely on the basis that the material contained on the assessment reflects the material outlined in the content standards; and

- awarding demonstration grants to states and organizations to field test assessments.

Opportunity to Learn. Duties include:

developing a set of model opportunity to learn standards which would ensure that all students have a fair opportunity to learn.

The standards shall address the:

- quality and availability of curriculum;
- capability of teachers to provide quality instruction in each area;
- extent to which teachers and administrators have ready and continued access to best knowledge about teaching and learning;
- the extent to which curriculum, instructional practices, and assessment tools are linked content standards; and
- other standards deemed appropriate.

Other duties include developing appropriate indicators for each opportunity to learn standard developed by the Council. The Council also would assist the Secretary regarding the awarding of a grant to a consortium of individuals and organizations to develop voluntary national school delivery standards. The consortium would include the participation of Governors (except those serving on Panel), chief state school officers, teachers, principals, superintendents, state and local school board members, parents, state legislators (except those serving on the Panel), representatives of regional accrediting agencies, and representatives of civil rights groups.

Title III:

The bills state systemic reform provisions would authorize an effort to promote coherent and coordinated change in our system of education at the federal, state and local levels in order to achieve the national education goals.

In order to be eligible to draw down its allotment, a state would be required to develop a systemic reform plan to improve schools. The plan would be developed by a panel on which half of the members would be appointed by the Governor and half by the chief states school officer. In addition, the plan must reflect the support of the chair of the state board of education and the chairs of the relevant legislative committees in the legislature. Each plan shall provide for the development or adoption of opportunity to learn standards such as those developed by the Council above; outline a process for establishing content and performance standards for all children; describe changes in governance and leadership structures needed to reform the system; include comprehensive strategies to involve parental and community support and involvement in helping all students meet the standards; and shall ensure that all local educational agencies and schools are involved in developing and implementing the plan. A portion of the funds shall be made available to local education agencies.

Once developed by the panel, the plan shall be submitted to the state education agency for approval. The state education agency shall submit the plan to the Secretary for approval along with an explanation of any changes made to the plan by the state education agency. If any portion of the plan is not under the authority of the state educational agency, such as early childhood or postsecondary education issues, then the state educational agency shall obtain the Governors' approval.

The Secretary is authorized to waive some statutory and regulatory requirements to the extent that such requirements impede the ability of the states to carry out a reform plan.

The Secretary may provide technical assistance to states and local education agencies and conduct research on systemic reform efforts.

Total bill authorization: $420 million for Fiscal 1994 and such sums as may be necessary for each of the following five years.

4/13/93

NATIONAL EDUCATION GOALS PANEL

GOAL 2 TECHNICAL PLANNING SUBGROUP ON CORE DATA ELEMENTS

Report to the
National Education Goals Panel

April 21, 1993

93–03

NATIONAL EDUCATION GOALS PANEL MEMBERS

GOVERNORS

E. Benjamin Nelson, Nebraska, Chair

Carroll A. Campbell, Jr., South Carolina (Chair 1991–1992)
Evan Bayh, Indiana
Terry Branstad, Iowa
Arne Carlson, Minnesota
John Engler, Michigan
John McKernan, Jr., Maine
Roy Romer, Colorado (Chair 1990–1991)

MEMBERS OF THE ADMINISTRATION

Carol H. Rasco, Assistant to the President
for Domestic Policy
Richard W. Riley, Secretary of Education

MEMBERS OF CONGRESS

U.S. Senator Jeff Bingaman, New Mexico
U.S. Senator Thad Cochran, Mississippi
U.S. Representative Dale Kildee, Michigan
U.S. Representative William Goodling, Pennsylvania

NATIONAL EDUCATION GOALS PANEL

Goal 2 Technical Planning Subgroup on
Core Data Elements

Leader

Barbara Clements | Council of Chief State School Officers

Members

Linda Baker | Maryland State Department of Education

Paul Barton | Educational Testing Service

Matthew Cohen | Ohio Department of Education

Lou Danielson | Office of Special Education Programs, US Department of Education

Dennis Jones | National Center for Higher Education Management Systems

Glynn Ligon | Evaluation Software Publication

Lee Hoffman | National Center for Education Statistics

John Porter | Urban Education Alliance, Inc.

Ramsay Selden | Council of Chief State School Officers

Nick Zill | WESTAT, Inc.

Leadership Team Representatives

Andy Cunningham | Office of Governor Nelson, State of Nebraska

Phil Dunshee | Office of Governor Branstad, State of Iowa

Phil Smith | Washington, D.C. Office of Governor Branstad, State of Iowa

National Education Goals Panel Staff

Leslie Lawrence

Martin Orland

Core Data Elements for Monitoring Progress Toward the
National Education Goals

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APPENDICES

CORE DATA ELEMENTS FOR MONITORING PROGRESS TOWARD THE NATIONAL EDUCATION GOALS

INTRODUCTION

The Goal 2 Resource Panel described the need for a national student data reporting system for assessing students' completion of school. Four principles were stated:

- *The system should be able to track students across State or district boundaries, not just be independent record systems;*

- *The system "must respect the autonomy of, and be sensitive to, the different ways States and localities define high school completion credentials and standards for attaining them";*

- *The system must produce data that are timely, reliable, and valid;*

- *The data system must produce information that is useful at local, state, and national levels in establishing appropriate educational policy and practice.*

Such a system would provide more accurate and comprehensive information about school completion and dropout data than are currently available. More important, this system "would provide education service providers and policymakers at all levels with the vital information needed to both monitor the health of the educational enterprise and tailor student services to meet individual needs." (NEGP, March 26, 1992)

The Goal 2 Resource Group acknowledged that there are many national data available that address the Goals, but there is little standard information available at the local level to assist local and state policymakers in determining progress toward the Goals. They expressed interest in considering how existing record systems can be used to evaluate the nation's progress toward meeting all of the Goals by the year 2000 and what data elements should be included in each school/school district's records to provide the needed indicators of Goal attainment. Given the benefits of a longitudinal student record system for districts to continually monitor students' progress in school, and the benefits of such a system to districts, states, and the nation in assessing educational progress, the identification of a core set of data elements that all entities should maintain seemed critical.

In March 1993, the Goal 2 Technical Planning Subgroup on Core Data Elements was convened to focus on the issue of identifying information that could be obtained from local student data systems for use in monitoring local and state progress toward the National Education Goals. The members of this Subgroup included representatives from each of the six resource groups as well as from state and local education agencies. This report reflects the charge to that Subgroup:

> *To investigate and report on the feasibility of establishing a
> minimum set of terms and definitions that encompass the preschool
> years onward in order to measure progress toward the six National
> Education Goals. If feasible, the National Education Goals Panel
> will encourage the incorporation of these terms and definitions into
> new and ongoing student record systems so that progress toward
> achieving the National Education Goals can be regularly monitored
> at the local, state, and national levels. These terms will be adapted
> from the Student Data Handbook, under development by the
> National Center for Education Statistics (NCES) and the Council
> of Chief State School Officers (CCSSO), and other documents as
> deemed necessary.*

This document describes a set of indicators of goal outcomes and proposes a set of data elements and definitions that could be used to compute the indicators of progress toward the National Education Goals as well as serving the needs of local and state education agencies for effective school management. It is divided into three parts: (1) the process used in selecting the core data elements; (2) next steps; and (3) a list of the recommended indicators and accompanying data elements.

SELECTION OF CORE DATA ELEMENTS

The Subgroup began its deliberations discussing the importance of having individual student information and the problems associated with obtaining standard data at the local and state levels for use in assessing progress toward meeting the Goals. They noted that many state and local education agencies are looking to their administrative record systems to assist in determining progress. In many instances, however, these record systems have not been developed to meet these needs, so essential data elements are not available. In other instances, the data are present in the system, but the agencies are not set up to use the data for these purposes. In still other agencies, information about students and staff is maintained in paper files and filing cabinets, and access to specific data is limited.

State and local education agency staff are becoming convinced that there is no alternative but to standardize what and how data are collected and maintain the data in an automated record system. The issues concerning the provision of appropriate services to students are extremely complex, and there is a need for timely data to assist in the decision-making process. There is also a need to monitor progress of students and schools which requires that consistent data are collected from year to year. The nature of the current uncoordinated system of data collection promotes the collection of similar data in different ways, at different times, using different definitions. As a result, the current use of data in decision-making is suspect.

The development of automated student and staff record systems is not without controversy, however. People tend to equate automation with access. There are laws concerning access to student records, and particularly to sensitive information, however the laws are behind the times concerning automated records. While the Goals Panel has taken the position that the development of student recordkeeping systems is essential to assessing accomplishment of the Goals and that standard data should be available from the systems, it is up to the state and local jurisdictions to ensure that access, security and confidentiality concerns are addressed. The Subgroup noted that state and local laws/regulations and federal laws such as the 1974 Family Educational Rights and Privacy Act (FERPA) may need to be revised to reflect these changes in how individual records are maintained.

The identification of essential data elements to be maintained at the local level has traditionally been done by local decision makers, such as school district staff and school board members. (In some instances, software vendors have made de facto decisions by providing what they perceive to be the necessary data elements in an automated system purchased by the school district.) States have sometimes prescribed specific data to be collected based on state and federal reporting requirements. To date, no national effort has been made to identify what specific data elements should be maintained in all student record systems for effective school management, nor what definitions should be used to define the data elements, although there is a high level of interest in this area.

The Subgroup agreed that a logical and feasible first step in obtaining comparable data from school to school is to focus on the data needed to monitor progress toward the Goals. This information would then be incorporated into the broader discussion about what data are essential for the school management and reporting functions of student, staff, and school record systems. Before determining what are the essential data elements, the Subgroup agreed to the two following principles to guide the discussion.

- First and foremost, record systems must meet school and local education agency needs for managing the educational enterprise. This means that the system must provide information useful for making decisions about schools, staff, resources, and groups of students. In addition, however, the Subgroup believed that student record systems should provide essential information for making decisions about individual students. Whereas teachers should receive summary information about the students in their classes to use in planning instruction, individual student information may also prove useful in special situations. For example, if a student continually comes to school late, or bursts into tears off and on during the day, or falls asleep during a stimulating activity, there may be health or background information in the student's record that could help the teacher make adjustments to meet the student's individual needs.

● <u>Second, record systems should be developed to monitor the progress of both individual and groups of students</u>. This requires that data be maintained in a longitudinal format with updated information added as it becomes available. Many school systems update files by replacing information as it changes. This makes longitudinal analyses and individual monitoring impossible. For example, a child's English proficiency may change after receiving language assistance services. If the proficiency status is changed permanently on the student record (that is, there is no record that the student had once been classified limited English proficient), and the child later has trouble which could be due to lack of English language skills, school staff may not realize that additional language assistance services are needed. While replacement of data seems more efficient from a data processing viewpoint, it is not effective for working with individual students whose historical records could provide insight into the provision of appropriate services for the child.

To summarize the discussion about student record systems, the Subgroup stressed that student record systems must be designed to meet school management requirements as well as monitoring needs. This is best accomplished through the use of a longitudinal student database with updated information being added to, not replacing, existing data.

Using the *Student Data Handbook* draft and *A Guide to the Implementation of the SPEEDE/ExPRESS Electronic Transcript* (described in Appendix C) as resources, the Subgroup identified data elements that could be used to create indicators monitoring progress toward meeting the goal outcomes. While the original charge was to identify only student data elements, the Subgroup also identified data elements that could be obtained from other databases, most notably staff and school databases. The selection process involved consideration of the following issues:

Necessity – The Subgroup discussed all data elements that might be useful before deciding what were the most essential data elements to be collected on a universe basis.

Availability – Certain kinds of data are kept about all students, whether in paper files or in automated record systems. Other data elements are not generally collected.

Feasibility – The Subgroup considered whether data elements that are not generally available at this time could be collected in a consistent and reliable way, taking into consideration cost as well.

Level – Data elements which cover preschool children, school-age children, and postsecondary students were included.

As a result of the discussion, three sets of data elements were identified and defined. The first set represents data relevant to the Goals that are usually already collected in local record systems (although the definitions of these elements frequently vary from one locality to the next). Included in this set are data elements about background characteristics, coursework and activities, assessment, and school completion. The background characteristics can be used to identify the performance or outcomes of subgroups of students. There are also some data elements that can be obtained from staff and school databases about teacher quality and the school environment.

The second set of data elements contains information desirable for monitoring the Goals that do not generally exist in administrative records. These data elements are ones that could be collected reliably and consistently with some minimal effort, and would provide much richer detail about how well the Goals are being attained.

Elements from these first two sets constitute the Group's recommendations for data elements that should be incorporated over time into local administrative record systems for regularly monitoring progress on the national education Goals. They are listed by Goal and recommended indicator in Table 1 with data element definitions appearing in Appendix A.

A third set of data elements, appears in Appendix B. It consists of information that *could* be collected about individual students for use in doing research, for planning instruction, for monitoring student progress and as factors that could alert school staff to individual students' problems. These data are generally not currently included in individual student records. Some education agencies, however, may want to collect this information on individual students to assist in evaluating programs or meeting the needs of a unique population of children. The Subgroup decided that while these data elements could provide useful information both about individual and groups of students, they were not essential to monitoring the goals, nor were they necessarily best obtained from student record systems.

NEXT STEPS

The data elements contained in this report are not exhaustive, nor do they represent all of the data most desired for monitoring progress toward the Goals. The primary focus was on data elements maintained in student-level databases, although some consideration was given to data about teachers and schools. The discussion revealed several areas where additional data elements may be needed, such as in the area of standards attainment, school outcomes, and disciplined/safe school environments which are conducive to learning. Because data needs and capacities are continually changing, the "core data elements" included in this report should be considered an initial effort to identify a common set of data which should be maintained about all students, teachers, or schools. The National Education Goals Panel should review this minimum set of core data elements periodically, taking into account these changing data capacities and needs.

TABLE AND APPENDICES

The following Table is organized by Goal and contains three columns: Indicator, Data Element(s), and a description of whether or not the data element(s) currently exists in most K–12 record systems. It is the Subgroup's recommendation that local education agencies and other organizations move in the direction of incorporating those elements listed in Table 1 which do not currently exist in their record systems to ensure a more complete representation on their progress toward achieving the six Goals.

The indicators that have been listed in Table 1 correspond with many of those which are presented in the annual National Education Goals Report. In most cases, the indicators represent whole populations, such as the numbers of students who take Advanced Placement courses. In these cases, the Group believes that local officials should determine how such data should be disaggregated (for example by race, gender and student income level). However, in a few cases, where the Goal or objective itself specifies a particular population group (for instance Objective 3 under Goal 4 which states: "The number of U.S. undergraduates and graduate students, especially women and minorities, who complete degrees in mathematics, science, and engineering will increase significantly"), the Group specifically recommends the necessary demographic breakouts for monitoring progress.

Following the Table are the definitions of the data elements in Appendix A (recommended elements) and Appendix B (not recommended, but potentially useful). These definitions are consistent with those currently being established by the National Center for Education Statistics and the Council of Chief State School Officers. They are expected to be finalized in the Fall of 1993.

Appendix C describes related activities at the national level to standardize core education data elements in order to facilitate their processing and usefulness.

TABLE 1

Recommended Set of Data Elements and Corresponding Indicators for Monitoring Progress Toward the Goals

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
GOAL 1		
Number of Entering Students with Appropriate Immunizations	Type of Immunization, Date of Immunization, Status of Immunization	Yes
Developmental Well-Being of Students Entering Kindergarten in terms of Five Dimensions: Physical Well-Being; Social and Emotional Development; Language Usage; Approaches to Learning; Cognitive Development.	Developmental Observation and Documentation, Date of Developmental Observation and Documentation	No
Developmental Well-Being of Students Entering First Grade in terms of Five Dimensions: Physical Well-Being; Social and Emotional Development; Language Usage; Approaches to Learning; Cognitive Development.	Developmental Observation and Documentation, Date of Developmental Observation and Documentation	No

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
Number of Disadvantaged, Disabled, and Other Entering Students Who Participated in National Association for the Education of Young Children (NAEYC) Accredited Preschool Programs *(Measures Objective 1)*	Name of Preschool Program, Type of Preschool Program, Number of Years in Each Preschool Program, Disability Status, Poverty Status	No
Number of Entering Students with Low Birthweight	Birthweight	No
Number of Entering Students Whose Mothers Received Comprehensive Prenatal Care	Month of First Prenatal Care, Extent of Prenatal Care	No
Number of Students Who Received Routine Health Care Prior To Entering School	Date of last Routine Health Care	No
Number of Students Who Received Dental Care Prior to Entering School	Date of Last Dental Care	No
GOAL 2		
High School Graduation Rate	School Exit Date, Status upon Exit, Type of Credential Received, Cohort Year	Yes
High School Graduation Rate of Minorities and Non-Minorities *(Measures Objective 2)*	School Exit Date, Status upon Exit, Type of Credential Received, Cohort Year, Race/Ethnicity	Yes
Other High School Completer Rate	School Exit Date, Status upon Exit, Type of Credential Received, Cohort Year	Yes

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
Other High School Completer Rate of Minorities and Non-Minorities *(Measures Objective 2)*	School Exit Date, Status upon Exit, Type of Credential Received, Cohort Year, Race/Ethnicity	Yes
Dropout Rate	School Exit Date, Status upon Exit, Cohort Year	Yes
GOAL 3		
Number of Students Achieving National/International Standards by Subject	Name of Assessment, Assessment Score	No
Number of Minority and Non-Minority Students Achieving National/International Standards by Subject *(Measures Objective 1)*	Name of Assessment, Assessment Score, Race/Ethnicity	No
Number of Students Taking Advanced Placement Courses	Name of Advanced Placement Course Taken	Yes
Number of Students Taking Advanced Placement Tests	Name of Assessment	Yes
Number of Students by Score on Advanced Placement Tests	Name of Assessment, Assessment Score	Yes
Number of Students Participating in Volunteer or Community Service Activities	Type of Volunteer or Community Service Activities	Yes

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
Number and Extent of Students Participating in Volunteer or Community Service Activities	Hours per Week of Volunteer or Community Service	Yes
Number of Courses Taken in English, Math, etc.	Course Titles or Course Numbers	Yes
Number of Higher Level Courses Taken	Course Titles or Course Numbers	Yes
Number of Students Making High Grades by Subject	Course Titles or Course Numbers, Academic Grade Received	Yes
Number of Students Involved in Extracurricular Activities	Type of Extracurricular Activity	Yes
Number of Students Who are Competent in More than One Language	English Proficiency, Language Other Than English, Other Language Proficiency	Yes
Number of Students Registering to Vote at Age 18	Age, Registered to Vote	No
GOAL 4		
Number of Students Achieving National/International Standards in Math and Science	Name of Assessment, Assessment Score	No
Number of Students Taking Higher Level Courses in Math and Science	Course Titles or Course Numbers	Yes
Number of Students Taking Advanced Placement Courses	Name of Advanced Placement Course Taken	Yes

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
Number of Students Taking Advanced Placement Tests	Name of Assessment	Yes
Number of Students by Score on Advanced Placement Tests	Name of Assessment, Assessment Score	Yes
Number of Minutes Spent in Math and Science Courses	Course Title, Number of Minutes per Course	Yes
Number of Teachers Instructing Classes for Which They are Certified	Subject Matter Area, Level of Assignment, Type of Certification/License/Permit Held, Level Authorized by the Certificate, Teaching Fields or Areas Authorized	Yes
Number of Teachers by Subject by Credit Hours Earned	Subject Matter Area, Number of Credit Hours Earned or Courses Completed in Major Area	Yes
Number of Teachers by Years of Experience	Total Number of Years of Teaching Experience	Yes
Number of Minority and Female Students Completing Degrees in Math, Science, and Engineering *(Measures Objective 3)*	Type of Degree or Credential Awarded, Area of Specialization, Race/Ethnicity, Gender	No
GOAL 5		
Number of Minority Students Entering College *(Measures Objective 4)*	Postsecondary Institution Attended, Type of Postsecondary Institution Attended, Race/Ethnicity	No

INDICATOR	DATA ELEMENTS	EXISTENCE OF DATA ELEMENT(S) IN MOST K-12 RECORD SYSTEMS?
Number of Minority Students Completing Degree Programs *(Measures Objective 4)*	Type of Postsecondary Institution, Type of Degree or Credential Awarded, Area of Specialization, Race/Ethnicity	No
Number of Students Scoring High on College Entrance or Placement Tests	Type of Entrance or Placement Test, Entrance or Placement Test Score	No
Number of Students Employed After Graduation	Employment Status	No
Number of Students Employed After Graduation by Type of Employment	Employment Status, Type of Employment, Name of Employer	No
Number of Students or Ex-Students Registered to Vote	Registered to Vote	No
GOAL 6		
Number of Offenses in School	Type of Offense Reported, Date of Offense Reported	Yes

APPENDIX A

DEFINITIONS OF RECOMMENDED CORE DATA ELEMENTS

SET 1 – ELEMENTS CURRENTLY EXISTING IN MOST ADMINISTRATIVE
RECORD SYSTEMS

A. Student Data Elements

BACKGROUND CHARACTERISTICS

Sex – The student's gender (Female or Male).

Racial/Ethnic Group – The general racial or ethnic heritage with which the student most identifies. Categories include: American Indian or Alaskan Native, Asian or Pacific Islander, Hispanic, Black (not Hispanic), and White (not Hispanic).

Date of Birth – The day, month, and year on which the student was born. (Used to compute age.)

Country of Citizenship – The country in which the student maintains citizenship. (Used to identify persons with backgrounds that may lead to different outcomes.)

English Proficiency – The student's adeptness at English, assessed by reading (the ability to comprehend and interpret text), listening (the ability to understand a verbal expression of the language), writing (the ability to produce written text with content and format), and speaking (the ability to use oral language appropriately and effectively) skills. Categories include: fully English proficient, limited English proficient, and not English proficient. (Used to identify students with potential problems succeeding in U.S. schools.)

Home Language – The language and dialect routinely spoken in the student's home. This language/dialect may or may not be the student's primary/native language. (Also used to identify students with potential problems succeeding in U.S. schools.)

Language Other Than English – A language and/or dialect other than English in which the student has speaking, writing, reading, or comprehension skills. (Used to identify students who may have potential problems or students who have achieved fluency in more than one language.)

Other Language Proficiency – The student's adeptness in the language other than English. Categories include: proficient and limited proficient. (Used to identify students who may have potential problems or students who have achieved fluency in more than one language.)

Migrant Status – An indication that the child accompanies a parent whose primary employment is in one or more agricultural activities on a seasonal or other temporary basis and who establishes a temporary residence for the purposes of such employment. Categories include: yes or no. (Used to identify students who may have problems in school.)

Type of Primary Disability – The major or overriding disability condition that best describes the individual's impairment (i.e., the impairment that is most disabling). A student may be entitled to receive special education and related services when identified as having a disability. (Used to assess our success with students with special learning needs.)

Type of Immunization – The type of immunization received by the child.

Date of Immunization – The date on which the immunization was received.

Status of Immunization – The status of an immunization. (e.g., first inoculation, had the disease, religious exemption)

COURSE AND ACTIVITY INFORMATION

Course Title – In a departmentalized organization, the descriptive title by which a course is identified (E.g., English III, Algebra, Biology, Spanish II, Apprenticeship, Career Education); in a self-contained class, any portion of the instruction for which a grade is assigned or a report is made (e.g., reading, arithmetic, language arts). [This information can be used to compute the number of courses taken by subject, the number of higher level courses taken by subject, and the number of advanced placement courses taken.]

Course Number – An identification number or other symbolic designation assigned to a course for identification purposes. Standard course numbers may represent national, state or local coding systems. [This number can also be used to compute the number of courses taken by subject, the number of higher level courses taken by subject, and the number of advanced placement courses taken.]

Academic Grade Received – The letter or numerical grade awarded to a student as an indicator of his or her performance in a course and used, together with other information, to determine the student's grade point average.

Type of Volunteer and Community Service Activities – The type of activity in which service is provided within the school building/district or for the local community outside of the school building for experience not only as workers but also as citizens (e.g., peer tutoring, volunteer work in hospitals).

Hours per Week of Community Service – The number of hours per week the student participates in volunteer or community service activities.

Type of Extracurricular Activity – The type of activity not directly related to the curriculum that a student takes in which the student participates for his or her enjoyment. Extracurricular activities are managed and generally operated under the guidance of an adult or staff member, are not for credit or required for graduation, are conducted during other than school hours (or if partly during school hours, at times agreed upon by the participants and approved by school authorities), and with the possible exception of direct costs of any salaries and indirect costs of the use of school facilities, are self–sustaining as all other expenses are met by dues, admissions or other student fund–raising events. (Examples include Camp Fire Girls, Boy Scouts, Boys and Girls Clubs, YMCA, YWCA.)

COMPLETION INFORMATION

Cohort Year – The school year in which the student entered the baseline group used for computing completion rates, also known as first term of academic history.

School Exit Date – The date on which the student discontinued schooling.

Status upon Exit – The explanation as to why the student discontinued schooling.

> Graduation
> Completion of program (e.g., completion of IEP requirements)
> Dropped out (left school, not known to be continuing)
> Expelled
> Death
> Transfer to another educational program
> Transfer to home schooling

Type of Credential Received – A description of the type of credential received upon completion of an educational program (e.g., High School Diploma, Alternative High School Diploma, Certificate of Completion, Certificate of Attendance, General Education Development (GED) Credential, Bachelors Degree, Masters Degree, etc.).

SET 2 – ELEMENTS NOT CURRENTLY EXISTING IN MOST ADMINISTRATIVE RECORD SYSTEMS

READINESS INFORMATION

Name of Preschool Program – The name of a preschool program attended by the student. Examples include: Head Start, Even Start, Special Education.

Type of Preschool Program – A description of the type of preschool program in which the student participated. Categories include: Day Care/Custodial Care, Developmental/Instructional Program, or National Association for the Education of Young Children (NAEYC) Accredited Program. [If there is no entry in this data element, the assumption that no preschool program was received.]

Number of Years in Each Preschool Program – The number of years the child attended each preschool program described.

Developmental Observation and Documentation – A description of the child's performance on a developmental observation indicating the developmental well-being of a student entering kindergarten or first grade.

Date of the Developmental Observation and Documentation – The month and year on which the developmental observation and documentation was completed.

Birth weight – The weight of the child at birth in pounds or portions of pounds.

Month of First Prenatal Care – The number of the month during pregnancy during which the mother first had contact with a doctor or other medical personnel regarding the pregnancy.

Extent of Prenatal Care – The number of times the mother had contact with a doctor or other medical personnel during the pregnancy of this child.

Date of Last Routine Health Care – The date when the child last received routine health care from a doctor or other medical personnel.

Name of Routine Health Care Provider – The name, if any, of a person or clinic where the child receives routine health care from a doctor or other medical personnel.

Date of Last Dental Care – The date when the child last received dental care.

ASSESSMENT INFORMATION

Name of Assessment – A classification denoting the name of an assessment given to a student. This name may include information about the subject, version, form, or edition of the assessment assigned by the publisher. (Examples include portfolio assessments, criterion–referenced achievement tests, advanced placement tests, or other types of assessments.)

Assessment Score – A summary expression of the performance of a student on the assessment. [Used to ascertain if a student has attained a high level of proficiency commensurate with international, national, state or local standards.]

FOLLOW–UP INFORMATION

Employment Status – The degree of participation in the work force (e.g., in school, not employed, employed full–time, active military, employed part–time).

Type of Employment – The type of work or occupation in which the student was engaged after completion of high school.

Name of Employer – The name of the employer for whom the student worked upon completion of high school.

Postsecondary Institution Attended – The name of each institution in which the graduating student plans to enroll or a former student enrolled for post–school education training.

Type of Postsecondary Institution – A description of the type of school attended by the former student (e.g., 4–year college or university, 2–year college, technical institute, school of nursing, trade school).

Dates of Attendance – The inclusive dates of attendance at the postsecondary institution.

Type of Entrance or Placement Test – A description of the type of test given the student for entrance into a postsecondary institution or for placement into appropriate coursework.

Entrance or Placement Test Score – A summary expression of the performance of a student on the test.

Type of Degree or Credential Awarded – The type or name of degree or credential awarded a person upon completion of an educational program.

Area of Specialization – The major area studied at the postsecondary institution.

Registered to Vote – An indication that the person is registered to vote.

APPENDIX B

DATA ELEMENTS USEFUL FOR RESEARCH AND SCHOOL MANAGEMENT PURPOSES

FAMILY AND HOME INFORMATION

Name of Persons in Household – The name of persons sharing the dwelling in which the student lives. (Use to compute the number of persons living in the household.)

Relationship to Student – The nature of a person's relationship to the student. (Collected for all persons living in the same dwelling as the student) [e.g., mother, father, stepmother, aunt, brother, grandmother, husband]

Highest Level of Education Completed – The extent of formal instruction an individual has received. [Collected for primary caregivers]

Occupation – The nature of the principal work actually performed by an individual. [Collected for primary caregivers]

Employment Status – The degree of participation in the work force. [Collected for primary caregivers]

> Disabled, not looking for work
> Full-time
> Homemaker
> In school
> Part-time
> Unemployed, looking for work
> Unemployed, not looking for work
> Volunteer

Family Income – The total combined income of all members of the family during the past 12 months. This includes money from jobs, net income from business, farm or rent pensions, dividends, interest, social security payments and any other money income received by members of this family who are 15 years of age or older.

Family Public Assistance Status – The status of the student's household relative to whole or partial support by a welfare agency, whether local, state, federal, or private.

Aid for Dependent Children
Food stamps
Free or reduced price lunch
Women, infants and children programs
Other public assistance programs

Years Benefits Received – The total number of years the student's household has been receiving public assistance benefits.

Nature of Dwelling – An indication of the type of dwelling in which the student resides.

Boarding house
Cooperative house
Crisis shelter
Disaster shelter
Dormitory
Family home
Foster home
Institution
Prison or juvenile detention center
Rooming house
Transient shelter
No home

Ownership of Dwelling – An indication of who owns the dwelling in which the student lives.

Public housing
Public property
Owned property
Rental property
Subsidized housing
No home

Community Factor – An indication that a high percentage of students in poverty is living in a census track or zip code area.

Stability Factor – An indication that a student has lived in the school assignment area for a year.

Number of Moves in Last 5 Years – The number of times a student has changed home addresses within the last 5 years of his/her life.

APPENDIX C

RELATED ACTIVITIES

The Technical Planning Subgroup on long–term strategies for measuring progress toward Goal 2 recognized the need for a voluntary state/local student records system. They noted that the federal government should help state and local education agencies to design and implement a national system that meets the data needs of all levels. Decisions about what data are to be maintained in a student record system need to build on school level needs. In addition, districts need to consider what information needs to be aggregated or compared across schools. There are current national activities, described below, that can help local education agencies review their existing data collection systems and made them meet local, state and national standards.

The National Center for Education Statistics (NCES) is sponsoring several activities that will contribute to the development of a voluntary state and local student record system. In addition to providing opportunities for state and local education agency staff to meet to discuss and learn about progressive activities in this area, NCES has provided seed money to help state education agencies analyze ways to improve their data systems. In addition, NCES has appointed a task force on Automated Information Retrieval Systems (AIRS) to conceptualize ways of infusing automation into data maintenance of state and local education agencies.

Under contract to NCES, the Council of Chief State School Officers is working in two areas that relate to this topic. CCSSO is developing two handbooks containing terms and definitions of data elements that could be maintained in individual student or staff records systems. These handbooks contain a comprehensive list of data elements that could be useful for decision–making at the local level. The definition of each term represents a national assessment of "best practice" for the maintenance of data. Included in the handbooks are data elements required for federal reporting. While these handbooks should assist those state and local education agencies attempting to standardize the collection of data, they do not specify what data elements are essential to be maintained. As a result, it is up to the SEAs or LEAs to identify what are the most important data elements to be maintained according to state or local needs and requirements. The Student Data Handbook is scheduled to be completed by Fall 1993; the Staff Data Handbook will be completed in Fall 1994.

Another CCSSO activity is the development of a system for the electronic exchange of individual student records among school districts, state education agencies, and postsecondary institutions. The SPEEDE/ExPRESS (SPEEDE stands for Standardization of Postsecondary Education Electronic Data Exchange, and ExPRESS stands for Exchange of Permanent Records Electronically for Students and Schools) system represents collaborative efforts of elementary, secondary and postsecondary representatives to establish a standard format for coding student record information that can be transmitted electronically through a network or using other media such as magnetic tapes and diskettes. The standard formats and definitions developed for SPEEDE/ExPRESS are consistent with the definitions in the student data handbook under

development. But the data elements included in SPEEDE/ExPRESS represent only those considered essential for assisting receiving school districts or postsecondary institutions in making educational assessments and placement decisions for students. In other words, the SPEEDE/ExPRESS data elements represent the core data elements of a student transcript, which is a subset of the information maintained in the student record system.

These activities reflect the growing interest across the United States in automating data collection and standardizing the terminology used to collect and report data on education.

References

National Education Goals Panel, *Statewide Student Record Systems: Current Status and Future Trends*, (March 26, 1993, Washington, DC)

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NATIONAL EDUCATION GOALS PANEL

April 15, 1993

TO: National Education Goals Panel

FROM: Wilmer S. Cody, Executive Director

SUBJECT: Supplemental Materials

MEETING DATE: Wednesday, April 21, 1993

Enclosed is the draft report from the Consortium for Policy Research in Education, "Formulating Content Standards." Please add it to the back of the Briefing Book as part of the supplemental materials for the Working Session of the National Education Goals Panel on **Wednesday, April 21, 1993 (9:30 a.m. – 10:15 a.m. CDT).**

For purposes of discussion, please pay particular attention to the introduction, pages 2 – 4, and to the last chapter "Observations from the Cases and Implications for National Content Standards," pages 106 – 136.

If you have any questions, please call Emily Wurtz or Marty Orland at (202) 632-0952. I look forward to meeting with you on Wednesday.

Agenda Topics by Panel Meeting (tentative)
Revised 4/93

April 21

o   Core Definitions of Data Elements (Goal 2). Panel
    considers endorsement of core set of data elements for
    use in student records systems.

o   Citizenship (Goal 3). Panel considers endorsement of
    recommendations from the Technical Planning Group on
    Citizenship for new data collections and indicator
    development in the areas of civic knowledge, voter
    participation and community involvement/service
    learning.

o   Overview of Major Standard-setting Projects. Receipt
    and discussion of commissioned paper describing major
    education standards-setting efforts in this country,
    their impacts on curriculum and classroom instruction,
    and the implications of these findings for the work of
    the NESAC.

o   Special Topic- Education Technology and Achieving the
    National Goals. Discussion and demonstration of how
    linking teachers and students via computer networking
    can help achieve the national education goals.

June 15

o   1993 Reporting Issues. Panel considers endorsement of
    the framework and specific data reporting options for
    the 1993 Goals Report.

o   Collegiate Assessment (Goal 5). Panel considers
    endorsement of the recommendations of the Collegiate
    Assessment Task Force for establishing national
    collegiate assessment system.

o   Commission on Early Childhood Assessment (Goal 1).
    Panel considers endorsement of an oversight structure
    for an Early Childhood Assessment System.

o   Criteria for Standard-setting (Goals 3/4 and NESAC).
    Panel considers endorsement of criteria to be employed
    in adopting national content and performance standards.

o   Special Topic: State Approaches to Opportunity-to-
    Learn Standards. Discussion with officials from four
    states currently in the process of developing
    opportunity-to-learn standards.

o   <u>Disciplined Environment Conducive to Learning (Goal 6)</u>.
       Panel considers endorsement of a definition of
       "disciplined environment conducive to learning" to be
       used as a basis for monitoring progress in achieving
       Goal 6.

o   <u>Task Force Report on Building a National Education
       Technology Infrastructure</u>. Receipt and discussion of
       Task Force Report on creating a national education
       technology infrastructure that would link educators and
       students nationwide to rich and useful sources of
       information to facilitate classroom instruction and
       school administration.

o   <u>Special Topic - Special Populations and Achieving the
       National Goals</u>. Discussion of the implications of the
       national goals process for educating students with
       special educational needs (egs., Chapter 1, migrant,
       children with disabilities, Limited English
       Proficient).

National Commission on Early Childhood Assessment

Part I. There is established a National Commission on Early
Childhood Assessment (the "Commission").

Part II. Findings. The Congress finds that--
(1) the nation is attempting to reach and monitor the
progress of all children to meet national education goals;
(2) there is currently no assessment with which to assess
the full range of early learning and development of young
children that is suitable for monitoring progress towards
the first national education goal -- that all children start
school ready to learn;
(3) the use of existing readiness tests has had the
widespread unintended effect of inappropriately labeling,
stigmatizing, and tracking individual children;
(4) a sustained effort is needed to develop a sound and fair
assessment system that is developmentally appropriate,
scientifically sound, culturally sensitive, and accurately
reflects the competence and needs of young children.

III. Purpose. The purpose of the Commission is to--
(1) assist the nation in tracking progress towards the first
national education goal;
(2) oversee the development of an early childhood assessment
that advances a broad view of school readiness and expands
our knowledge of how to assess young children equitably; and
(3) ensure that such an early childhood assessment focuses
and improves policies and services to ensure that all
children do start school ready to learn.

IV. Appointment and Composition.--
(1) members of the Commission shall be appointed by the
National Education Goals Panel;
(2) the Panel shall appoint such members to the Commission
from among qualified individuals nominated by the public;
(3) the Panel shall ensure that the Commission is made up of
individuals with the qualifications necessary to carry out
the purposes of this section; and
(4) members shall serve for three year terms with no member
serving more than two consecutive terms.

V. Functions of the Commission.--
    The Commission shall:
        (1) serve as a standing advisory group to the (National Education Goals) Panel on the first national goal;
        (2) using the framework already established by the National Education Goals Panel, oversee the development, implementation (including on-going data collection and analysis), and evaluation of the national Early Childhood Assessment, by
            (a) creating clear guidelines as to the functions and uses of such an assessment system;
            (b) overseeing the program of research and development needed to create the knowledge and technology required to make such an assessment possible;
            (c) assuring that the development of the national assessment is based on the best thinking about what defines early learning and development and the best assessment technology available to provide the nation fair and valid information about the status of young children;
            (d) monitoring the field testing of such an assessment and approve its national use;
            (e) carrying out a sustained and intensive evaluation of the assessments and their use to ensure that they are achieving the intended results and being used for the purposes for which they were designed; and
            (f) institutionalizing the long term collection and appropriate use of data regarding the status of young children.

VI. Reports. -- The Commission shall prepare and submit a report regarding its work to the Panel and the Congress not later than one year after the date of its first meeting and in each succeeding year.

VII. Authorization of Appropriations. -- There are authorized to be appropriated to the Commission $1,000,000 for fiscal year 1994 and such sums for each of the fiscal years 1995 through 2000.

September 4, 1991

TO: THE NATIONAL EDUCATION GOALS PANEL

FROM: ERNEST BOYER, CONVENER
           THE RESOURCE GROUP ON SCHOOL READINESS

GOAL 1 RESOURCE GROUP

STATEMENT ON THE TECHNICAL PLANNING SUBGROUP'S REPORT

The Goal 1 Resource Group is pleased to submit to the National Education Goals Panel the final report of its Technical Planning Subgroup on the feasibility and viability of a national assessment of kindergarten students. We urge all who are concerned to read the full report for its careful consideration of the many difficult technical, educational, and ethical issues involved.

The Resource Group strongly endorses the Technical Planning Subgroup's report on the development of a system of assessment, which would provide comprehensive information about the status of the nation's children as they enter school. Rather than a single measure or index of "readiness," the technical report recommends an early childhood assessment designed to draw a profile of kindergarten children along several dimensions of early learning and development, from as many perspectives as possible. Through parent reports, teacher reports, performance portfolios, and a profile of children's skills, knowledge, and development, this assessment would describe five characteristics that enable children to take advantage of the opportunities and demands of formal schooling. As defined in the technical report, these characteristics include physical well-being and motor development; social and emotional development; approaches toward learning; language usage; and cognition and general knowledge.

The Technical Subgroup sees the development of this system of assessment as an opportunity not only to advance a truly holistic definition of school readiness, but also to expand knowledge about how to assess young children equitably, in ways that do not label, stigmatize, or classify them. Because the purpose of the early childhood assessment is to provide a national overview of young children's early learning and development, rather than an assessment of individual children or groups of children, the subgroup recommends that both children and assessment items be sampled. Further, given the complexity of the assessment tasks, the subgroup also suggests that data collection occur not annually, but every three years.

The Resource Group wishes, especially, to support the Subgroup's recommendation for the formation of a National Commission on Early Childhood Assessment to supervise the development and implementation of such an assessment, and later, to evaluate the assessment itself. Difficult technical issues will have to be addressed in order to ensure valid and reliable means of assessing the various dimensions of early learning and development of the nation's children, and it is of critical importance that the multidimensional approach to early childhood assessment be preserved. For this reason, the National Commission on Early Childhood Assessment should receive a long–term commitment, to ensure that the system of assessment, once in place continues to meet its objectives by providing high quality data to assist the nation as it strives to improve services and outcomes for young children. If the Panel decides to endorse an in–school assessment of young children, we urge that efforts to fund and staff the commission begin as soon as possible.

Finally, in regard to the larger task of reporting to the nation on Goal 1, there are other steps to be taken, too. It is important to recall that the Goal 1 Resource Group recommended monitoring children's early progress at three points in time. In addition to in–school assessment, we recommended the collection of information about children's health, home life, and preschool experience at the time of school entry, and also before they enter school. We wish to restate here our conviction that all-three are critically important, and we urge the National Education Goals Panel to request further examination of school–entry and before–school data, possibly as a task for the Resource Group itself.

National Commission on Early Childhood Assessment

In the context of the development requirements just enumerated and the policy issues addressed earlier, we recommend the establishment of an independent, National Commission on Early Childhood Assessment. The purpose of the National Commission on Early Childhood Assessment would be to initiate and supervise a program of development and to oversee the implementation of the Early Childhood Assessment delineated in this report. The Commission would be established along the lines of other similar independent oversight groups created by the National Academy of Sciences and the National Academy of Education. It should meet regularly, and should participate in the organization of a coherent, focused program leading to the development of integrated assessments of children's physical well-being and motor development, social and emotional development, approaches to learning, use of language, and cognitive skills and general knowledge. It is critical that the Commission be established as a long-term effort. The tasks involved in developing and overseeing the implementation of the Early Childhood Assessment will not yield to anything other than a long-term commitment, and we believe that the Commission should exercise oversight throughout this process.

Finally, the Commission should have the responsibility of evaluating the assessment itself by providing ongoing information and feedback regarding the extent to which the assessment system is meeting its own objectives. In short, the Commission should review the results of the Early Childhood Assessment, determine the validity of the data collected, obtain feedback from participants in the assessments, and release information to the field and to policy makers.

CONCLUSION

The task of developing and implementing the Early Childhood Assessment provides us with a new set of opportunities and responsibilities. The system of assessment that we propose is a new venture and it is put forth with an appreciation for the complexity of child development. We have a vision of an assessment that addresses the whole child in an integrated manner. However, we cannot adequately stress the importance of the multidimensional approach as the system moves through development to implementation. The Commission on Early Childhood Assessment will be responsible, in part, for preserving this multiple perspective. If we attempt this task with less than the comprehensive approach outlined here, the data will be impoverished and the picture we construct from the data will be distorted. A complete picture requires consideration of all dimensions of the growing child from as many perspectives as possible.

NEGP 1993 WORKPLAN BY TOPIC AREA – April 1993 Update

A.   GOAL 1:   SCHOOL READINESS

LEADERS: Senator Bingaman, Representative Goodling, Governor Carlson and Governor Nelson

PRINCIPAL NEGP STAFF LIAISON: Emily Wurtz

MAJOR ISSUES: Establishing an Early Childhood Commission; Refining further the definition of "readiness for school" and promoting its adoption by local communities.

WORKPLAN:

1) Establishing an Early Childhood Commission. The Goal 1 Resource Group met in Princeton on January 11. They agreed to develop a paper for NEGP consideration outlining alternative oversight structures for an Early Childhood Assessment Commission. The next meeting of the group is scheduled for **April 26** in Washington DC. Presentation of findings to the NEGP is scheduled for June 15. Both the workplan and schedule could be affected by legislation for an Early Childhood Assessment Commission proposed by Representative Goodling.

2) Elaborating on the five dimensions of readiness and promoting its adoption. A Technical Planning Group has been created for this purpose under the leadership of Dr. Lynn Kagan. The first draft of a document has been created and is currently undergoing internal review and critique. The next meeting of this Technical Planning Group is scheduled for tentatively scheduled for **May 19**. This group will also advise NEGP staff on indicators to profile in the 1993 Goals Report and will assist in outreach strategies for promoting the five readiness dimensions so that they become integral to local early childhood policies nationwide.

B.   GOAL 2:   SCHOOL COMPLETION

LEADERS: Governor Branstad and Governor Nelson

PRINCIPAL NEGP STAFF LIAISON: Leslie Lawrence

MAJOR ISSUES: Adopting a core set of definitions related to measures of dropouts, school completion and other Goals-related indicators as part of a voluntary student record system.

WORKPLAN:

The Goal 2 Technical Planning Subgroup on Core Data Elements has recommended a core set of data elements (defined in a standardized way) that can be incorporated on a voluntary basis into administrative record systems in education for monitoring progress on the national Goals. This work builds on ongoing activities of the National Center for Education Statistics and The Council of Chief State School Officers. At the April 21 meeting, the leader of this group, Barbara Clements of the Council of Chief State School Officers will present the group's report, and a Panel resolution endorsing the group's recommendations will be discussed.

C.   GOALS 3 & 4:   CHALLENGING SUBJECT MATTER AND CITIZENSHIP

LEADERS: Representative Kildee and Governors Bayh, Campbell and Carlson

PRINCIPAL NEGP STAFF LIAISON: Edward Fuentes

MAJOR ISSUES: Use of NAEP achievement levels to monitor progress, indicators for monitoring citizenship, expansion of NAEP by Congress, ESEA Chapter 1 re-authorization related to the Goals, standards and assessments.

WORKPLAN:

1) Measuring progress in student achievement. A new Technical Planning Group has been formed to recommend to the Panel how to report data in 1993 and the future for monitoring progress in Goals 3 and 4. Among the specific issues to be addressed is the alignment of the NAEP math assessment with the NCTM standards, the reporting of NAEP scores using the achievement levels developed by the National Assessment Governing Board (NAGB), and the potential for linking state NAEP scores with international data from the

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International Assessment of Educational Progress (IAEP). The first meeting of this group is scheduled for **April 29** in Washington DC. The Technical Planning Group will provide its recommendations to the NEGP at the June 15 Panel meeting.

2) Citizenship. The recommendations made by the Technical Planning Group on Citizenship last summer have been reviewed by Panel staff and the Working Group. A resolution on the subject has been drafted for potential Panel action at the April 21 NEGP meeting.

3) Relevant Federal Legislation. Staff and the Leadership Team will review relevant legislation in areas such as the future of Chapter 1 and NAEP. One or more Panel resolutions may be drafted for NEGP consideration later in the year.

D.   GOALS 3 & 4:   ESTABLISHING A NATIONAL EDUCATION STANDARDS AND ASSESSMENTS COUNCIL

LEADERS: Secretary Riley, Representative Goodling, Governor Campbell and Governor Romer

PRINCIPAL NEGP STAFF LIAISON: Wilmer Cody

MAJOR ISSUES: Legislative authorization, appointment of NESAC members, criteria for Panel adoption of national standards.

WORKPLAN:

A Technical Planning Group will be established to develop Goals Panel guidelines for adopting education standards and to consider their implications for assessment. Among the specific topics to be explored will be how these standards might be benchmarked to those of other nations, defining the consensus–building process that needs to be employed in creating the standards, and the general processes and guidelines that should be used for judging their adequacy. The Group is scheduled to present its findings at the June 15 NEGP meeting. Both the workplan and schedule could be affected by legislation establishing the NESAC. The intent is for this group's work to contribute directly and constructively to NESAC's initial work agenda.

E.   GOAL 5:   ADULT LITERACY/WORKFORCE SKILLS

LEADER: Senator Cochran, Presidential Assistant Rasco, Governor Engler and Governor Romer

PRINCIPAL NEGP STAFF LIAISON: Cindy Prince

MAJOR ISSUES: Panel response to the Resource Group recommendations on workplace literacy, development of multiple definitions of adult literacy for purposes of monitoring progress.

WORKPLAN:

A Resource Group meeting was held on March 22 The group was asked to help the Panel profile indicators of literacy from the new National Adult Literacy Survey in the 1993 Goals Report and advise the Panel on how to proceed with the recommendations of the Technical Planning Group recommendations on international workforce comparisons released last summer, and help to develop a conceptual definition of literacy and its key dimensions that can be used nationwide to assess progress and guide program development. Panel staff are working closely with the newly established National Institute for Literacy on potential joint initiatives in this area.

F.   GOAL 5:   COLLEGIATE ASSESSMENT

LEADER: Governor Bayh and Governor Carlson

PRINCIPAL NEGP STAFF LIAISON: Edward Fuentes

MAJOR ISSUES: Whether to pursue the creation of a national collegiate assessment system.

WORKPLAN:

A series of five national public hearings have been scheduled during April and May to review and critique the recommendations made last year by the Task Force on Collegiate Assessment for creating a new national collegiate assessment system. The comments will be analyzed and summarized for the Panel, with a report scheduled at the June 15 Panel meeting. Depending on the nature of the feedback, a resolution may be drafted for Panel consideration.

G.   GOAL 6:   DISCIPLINED ENVIRONMENT

> LEADERS: Governor McKernan and Presidential Assistant Rasco
>
> PRINCIPAL NEGP STAFF LIAISON: Leslie Lawrence
>
> MAJOR ISSUES: Develop new indicators for a "disciplined school environment."
>
> WORKPLAN:
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> At the Resource Group meeting of March 16 the following decisions were made; 1) to create a smaller working group to examine more closely the issue of defining "disciplined environments conducive to learning", and 2) for Panel staff to work closely with the National Center for Education Statistics (NCES) to develop strategies for improving the reliability of currently reported state data under this Goal area.

H.   REPORT ON THE FEDERAL ROLE RELATED TO EDUCATION FUNDING, PROGRAM FLEXIBILITY AND THE IMPACT OF FEDERAL MANDATES ON THE STATES.

> LEADERS: Secretary Riley, Senator Cochran, Representative Kildee, Governors Branstad, Engler and Nelson
>
> PRINCIPAL NEGP STAFF LIAISON: Edward Fuentes
>
> MAJOR ISSUES: What to include in the Report.
>
> WORKPLAN:
>
> NEGP staff are about to receive data from the Office of Management and Budget updating the financial information reported annually on the Federal contribution to achieving the Goals. A meeting will be scheduled within the next month of the Leadership Group staff and invited experts on the Federal role to plan what other information should be reported on this topic in the 1993 Report or in other NEGP publications.

I. ROLE OF EDUCATIONAL TECHNOLOGY IN ACHIEVING THE GOALS.

LEADER: Senator Bingaman and Governor McKernan

MAJOR ISSUES: Investigate how interactive communications networks can be established and used to improve the quality of teaching and learning.

PRINCIPAL NEGP STAFF LIAISON: Martin Orland

WORKPLAN:

A Task Force on Educational Technology, led by Dr. Dennis Gooler, has been established and met for the first time on April 8. Their charge is to develop a monograph for the Panel on the role of telecommunications networking in achieving the national Goals. The report is expected to outline a vision of how teaching and learning can be enhanced by employing these new technologies, identify outstanding issues that must be adequately addressed to realize this vision, develop a core set of general principles to guide the development of these systems, and determine whether more detailed national education technology standards are needed. The group is expected to make extensive use of the INTERNET to create, review and modify drafts of its Report. Report presentation to the NEGP is scheduled for the July 27 NEGP meeting.

ASSIGNMENTS BY PANELIST.

Governor Bayh -- Goals 3 & 4 (challenging subject matter ...), Goal 5 (collegiate)

Governor Branstad -- Goal 2, Federal Role

Governor Campbell -- Goals 3 & 4 (challenging subject matter ...), NESAC

Governor Carlson -- Goal 1, Goals 3 & 4 (challenging subject matter ...), Goal 5 (collegiate)

Governor Engler -- Goal 5 (adult literacy/workforce), Federal role

Governor McKernan -- Goal 6, Education technology

Governor Nelson -- Goal 1, Goal 2, Federal role

Governor Romer -- NESAC, Goal 5 (adult literacy/workforce)

Secretary Riley -- NESAC, Federal role

Presidential Assistant Rasco -- Goal 5 (adult literacy/workforce), Goal 6

Senator Bingaman -- Goal 1, education technology

Senator Cochran -- Goal 5 (adult literacy/workforce), Federal role

Representative Goodling -- Goal 1, NESAC

Representative Kildee -- Goals 3 & 4 (challenging subject matter ...), Federal role