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**AUTHOR** 

Jordan, K. Forbis

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### ABSTRACT

Recommendations of five reports for improving American public elementary and secondary education are listed in a format enabling comparisons to be made with respect to 11 major categories and numerous subcategories. Included are recommendations of the reports from the National Commission on Excellence in Education, the Twentieth Century Fund, the Education Commission of the States, the National Science Board, and the Carnegie Foundation for the Advancement of Teaching. The 12 major categories include curriculum; programs for special populations, college entrance requirements, performance standards for students, teachers, leadership and management, fiscal support, federal role, implementation plan, business/education partnerships, and sponsorship and membership of the groups producing the reports. (RH)

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# COMPARISON OF RECOMMENDATIONS FROM SELECTED EDUCATION REFORM REPORTS

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COMPARISON OF RECOMMENDATIONS FROM SSLECTED EDUCATION REFORM REPORTS

Recommendations for improving American Public elementary and secondary education have received much attention since the release of the riport from the Secretary of Education's National Commission on Excellence in Education. Additional impetus to this discussion has been added by reports from the Twentieth Century Fund, the Education Commission of the States, the National Science Board, and the Carnegie Foundation for the Advancement of Teaching.

Each report has been sponsored by a different organization and appears to have a slightly different orientation. For example, the principal audience for the Excellence Commission's report would appear to be the general public, and the recommendations are Primarily for Secondary schools. The report from the Twentieth Century Fund focuses more on the concerns about education in urban areas, and the recommendations principally call for Federal actions. The report from the Education Commission of the States was issued by the "Task Force on Education for Economic Growth." The recommendations have a broader focus and are addressed jointly to businesses, labor, and the professions. The National Science Board's Commission on Precollege Mathematics and Science Education was charged with providing recommendations for improving the quality of high school mathematics and science programs. Rather than being based on new field studies or a detailed analysis of a research data base, these four reports have tended to rely upon available research data and expert testimony in arriving at their recommendations. This tend may does not characterize the study of the American high school conducted by the Carnegie Foundation for the Advancement CRS-2

of Teaching. This report utilized data from the studies by Jimes Coleman and John Goodlad referred to below. The Carnegie report's recommendations centered on high school programs, requirements, and teachers.

These five reports have been selected for comparison because of the comprehensiveness of their recommendations and the implications of the recommendations for public policy. Even though these completed reports appear to be directed toward both elementary and secondary schools, most of the recommendations relate to secondary schools. Little attention has been given to changes that may be needed in elementary schools so that they can provide the types of educational experiences needed by students if they are to succeed in the "new" high schools.

Other studies either have been completed or are underway. James Coleman's ongoing study, "High School and Beyond," focuses on educational processes and outcomes and includes a sample of \$8,000 students from 1,000 public and private high schools. John Goodlad's "A Study.of Schooling" is based on extensive site visits and longitudinal data from 1,000 elassrooms. Theodore Sizer is completing "A Study of digh Schools" for the National Association of Secondary Schools; this study involves extensive observations gained from 65 high schools. The College Entrance Examination Board's Saucational Equality Project has recently completed a study of the needed academic preparation for college in terms of what students need to know and be able to do in order to succeed in postsecondary education. Mortimer Adler also has completed work on the "Phideia Proposal" that calls for a dramatic revision of the high school curriculum with greater attention being given to academic rigor and substance.

These five reports will be followed by others over the next several months. (See CRS Isaue Brief 83106 for updated information.) On the following pages, recommendations from the reports have been grouped and compared by broad topic.



### Comparison of recommendations from selected education reports $^{^{\prime\prime}}$

·	The Marional Commission on Excellence in Education	Twentieth Century Fund Task Force	ECS* Task Force on Education tor Economic Growth	National Science Board Precollège Commission	Carnegie Foundation American High School Study
CURRICULLY	Significantly more time should be devoted to learning the "new basics"English, mathematits, sciente, social studies, and computer sciences, and for the college-bound a freeze landous programs should be provided to advante students' personal, educational, and occupational goals, such as the fine and performing arts and vocational education.  Elementary schools should provide a sound base in English language development and writing, computational and probleming, computational and probleming, foreign language, and the arts.  Foteign languages should be started in the elementary study.	The Federal Covernment should clearly state that the most important objettive of elementary and secondary education in the United States is the development of literacy in the English language	The school turniculum should be strentthened. States and communities should identify skills they expect the sthools to impart. The academic experience should be more intense and note produttive. Courses not only in mathematics and science, but also in all disciplines, must be enlivened and improved. The goal should be both richer substante and greater motivational power—elimination of "soft" non-essential courses, more enthusiastic involvement of students in learning, encouragement of mastery of skills beyond the hasics.c.g., problem-solving, analysis, interpretation, and persuastve writing.  Educators, business and labor leaders, and other interested parties should clearly identify the skills that the schools are expected to impart to students for effective employment and citizenship.	Schools should return to the basits of reading, writing, and arithmetic, but also should add the "new basica" of communication and higher problem-solving skills, scientific and technological literacy, and compiter literacy.  Educational objectives should focus on mathematics, science, and technology for all students.  New curricula should incorporate practical issues that will require the collection of data, communication of results, and formulation and testing of solutions. The goal would be to improve use and understanding of calculation and mathematical analysis, sharpen communication skills, develop problem-solving skills, impart scientific knowledge, develop a respect for science and mathematics, and stimulate interest in science, mathematics, and technical careers.	Eath school should have clearly established goals that focus on the mastery of language, preparation for work and further education, and community service. In addition to English, social studies, science, and mathematics, the high school tore should include foreign languages. The arts, non-western etudies, technology, meaning of work, and importance of health, in the last two years of high school, students should enrol! in a cluster of electives and explore career options.  In elementary schools, the focus should be on communications skills. All high sthool students should couplete a basic English course with an emphasis on writing, with enrollments tim ted to 20 students and no mote than two suth classes in the teacher's regular foad. The high school cole should stress the spoken word. Teathets should use a variety of teaching styles and encourage studeot participation.
High School Graduation Requirements	All stalents seeking a tiploma should be required to complete (a) 4 years of English; (b) 3 years of mathematics. (c) 3 years of scionce. (d) 3 years of scionce. (d) 3 years of scionce. (e) inehalf year of computer science.	No comparable plavisum	No comparable provision	High achool students should complete at least (1) 3 years of mathematics, the luding one year of algebra; (2) 3 years of science and tectinology, including 1 semester of computer science.  Steps should be taken to phase in requirements of four years of science and four years of science and four years of mathematics.	Required courses in the student's core program should be increased from 1/2 to 2/3 of the total units for high school graduation. The core would include (a) 3 units of finglish, (b) 2 units of foreign language; (c) 2 5 units of history, (d) 1 unit of ctuies; (e) 2 units of science, (f) 2 units of mathematics, (g) 1/2 unit of technology; (h) 1/2 unit of health, (i) 1/2 unit seminar on work; and (j) 1/2 unit seminar on work; and (j) 1/2 unit seminar underbendent suctal issue project that draws upon their high school experiences.



	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Cornegie Foundation
High School Graduation (cont'd.)	For the college-bound, 2 years of foreign language in high school are strongly recommended.				A "new Carnegie unit" service requirement involving school or community volunteer work should be added.
Course Content	(Detailed implementing recom- mendations are included for each subject area.)	No comparable provision , ,	(A list of "Basic Skills and Competencies for Productive Employment" is contained in the Appendix.)	Objectives are listed for mathe- matics, science, and technology education at both the elemen- tary and secondary levels.	Details are provided concerning the content emphasis of the core curriculum.
Proficiency in a Second Language	For the college-bound, two years of a foreign language in high school are strongly recommended.	Every American public school student should have the oppor- tunity to acquire proficiency in a second language.	No comparable provision	No comparable Provision	Foreign languages are considered to be a vital element in the core. curriculum.
Time	Significantly more time should be devoted to learning the "new basics."	No comparable provision	Every State should increase the duration and intensity of acs- demic learning time. Students	School districts should explore lengthening the school year as a means of raising teacher pay.	flexibly to permit larger blocks of
•	School districts and State legislatures should strongly consider 7-hour school days, as well as a 200- to 220-day school year.		should be intruduced earlier to such critical subjects as science. Schools should examine each school year, especially the twelfth grade, to ensure that time is not wasted.	School time should be filled with putphseful and substantive content, and interruptions should be minimal. In grades K-6, 60 minutes per day should be spent on mathematics, and	Greater use should be made of off-campus learning sites and part-time professionals. Large high schools (over 2.000 strdents) should be organized into smaller units, i.e schools within a school.
	Time available for learning should be expanded through better classroom management and organization of the school day.		Both States and localities should consider lengthening the school year and the school day by extending teachers' contracts.	30 minutes on science. A full year of mathematics and of science and technology should be required in grades 7 and 8.	
	Additional instructional time should be found to meet the needs of slow learners, the gifted, and others who need more instructional diversity than can be provided in the conventional school day and year.		Learning time should be increased by establishing a wider lange of learning opportunities beyond the normal school day and year.	To provide more time for the study of mathematics. Science, and technology, the t-hool day, week, and/or year must be substantially lengthened.	
Text books and instruc- tional Materials	Textbooks and tools of tenra- ing and teaching should be upgraded and updated to assure more rigorous content and to reflect current applications of technology, the best schol- arship, and research findings.  Punds should be made available to develop texts for the disad- vantaged, learning disabled, and gifted and talented.	No comparable provision	No comparable provision	Secondary school students should be provided with course outlines. Textbooks and curriculum materials should be sufficient and up-to-date.  Public and private support for educational television programs on science should be increased, and time should be provided by commercial stations as well as cable and local television stations.	Less reliance should be placed on textbooks and more on primary source materials.  Technology, especially computers, should not be purchased until the district has a utilization plan and is confident that adequate soft—ware is available. Computer resources should be related to instructional objectives, and emphasis should be placed on the social importance of computers.



	Excellence Commission	Twentieth Century fund	ECS Economic Growth	National Science Board	Carnegie Foundation
Textbook Adoption	In adopting textbooks, States and localities should evaluate texts on the basis of their capacity to present rigorous and challenging material clearly and require publishers to furnish data on effectiveness.	No comparable provision	No comparable provision	No comparable provision	States should ease their control over textbook selection and transfer more authority to the local level, with teachers having a far greater voice in selecting texts and materials.
Oudance	No comparable provision	No comparable provision	ປັດ comparable ຈະເຶ້ນເຮເດຕ		Guidance and counseling programs should be expanded, and referral services developed with community agencies.
llasevýtk <sup>3</sup>	Students in high schools should be assigned homework.	No comparable provision	States and local school districts should establish firm, explicit, and demanding requirements concerning homework.	Specific homework should be required regularly of all students, and the work should be suitably evaluated by a teacher.	No comparable provision
Effective Study and Work Skills	Effective study and work skills should be introduced in the early grades and continued throughout the student's schooling.	No comparable Provision	Na compatable provision	Problem-solving skills should be developed so that students may relate concepts and facts to practical situations.	No comparable provision
PROGRAMS FOR SPECIAL POPULATIONS	The Federal Government, in cooperation with States and localities, should help meet the needs of key groups of students such as the Rifted and talented, socioeconomically disadvantaged, minority and language minority students, and the handicapped,	Federal efforts to Provide special education programs for the poor and the handicapped should be continued.  Federal programs for the disadvantaged and limited English speaking should be maintained.	Participation of young women and minorities should be increased in courses where they are under-represented.  Academically gifted students should be identified and challenged.  Handicapped children should be specifically included in programs for education and economic growth.	?rograms should be developed to identify and climinate barriers to full educational opportunity fer-all youth. Schools should offer appropriate sequences of courses for students at various levels of ibility.	Special arrangements and special pre- grams should be provided for gifted students. Programs should be develop- ed to accelerate these students. Federal funds for the education of the disadvantaged should be increased so that all eligible students may participate.
Special Fellowships for Academies	No comparable provision	Special Federal fellowships should be awarded to students to encourage the creation of small, individualized programs sty by certified teachers due that as amalizacale academies	No comparable provision	Federal funds should be used to establish 1,000 exemplary elementary and 1,000 exemplary secondary schools.	With Federal support, a network of residential math and science academies should be established over the nation.
COLLEGE . ENTRANCE REQUIREMENTS	four-year colleges and univer- sities should raise their ad- mission standards in line with the recommended requirements for high school graduation.	No comparable provision	Colleges and universities abould raise their entrance requirements.	Steps should be taken to phase in college entrance requirements of four years of srience and four years of mathematics.	Each State should establish a School-College Coordination finel to define minimum academic requirements needed for the transition from school to public higher education.



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· ·	Excellence Commission	Twentieth Century Find	ECS Economic Growth	National Science Board	Carneste Soundation
PERFORMANCE STANDARDS FOR STIDENTS	Grades should be reliable indicators of a students' readiness for further study.	No comparable provision	States and school systems should establish requirements concerning distipline, grades, and other matters.	No comparable provision-5	Expectations should be high, etandaeds clear, evaluation face, and atudents held accountable
Standbedized Tests	Standardized tests should be administered af major transition point? from one level of schooling to another and particularly from high school to college or work. The purpose would be to certify credentials identify the need for remedial work, and identify opportunities for enrichment.	No comparable provision	affective programs should be re- tablished to monitor student pro- gress through periodic testing of general achievement and specific skills. The testing program should be linked to a carefully designed program of comediation and contichent for students who ared special help.	Normel achievement groups's should be used to assess student and reacher performance	A new student Achievement and Assistant feet (SAAT) would be developed. The achievement portion would be itnied to the cree cure, culom and the advisement pointion would be designed in this statents make better informed chatces.
Student Progess	Placement and grouping of stu- dents, as well as promotion and graduation policies, should be guided by the academic Progless of students and their instruc- tional needs, rather than by rigid adherence to age.	No comparable ptovision	Student progress should be measured by tests of general achteves ment and specific skills with promotion based on mastery, not age.  States and local districts should establish firm, explicit, and demanding requirements concerning student grades.	Social peomotions (i.e., based on chronological age and phys-total size) should be curtailed	The English Proficiency of all students should be assessed her fore students enter high school. Remedial processes should be provided for those who are defined
Student Absences and Failures	Attendance policies with clear, incentives and sanctions should be used, to reduce the amount of time lost through student absenteeism. And tardiness.	No comparable provision	States, school systems, princt- pals, teachers, and parents should work to reduce student absences and school failures. Efforts to deal with absenteeism and drop- outs should include revitalizing course materials and making edu- cational schedules flexible enough to accommodate students with special Problems.	A clear attendance policy with manetions should be adopted.	erito comparchite provincion-
Discipline	The burden on teachers to maintain disctpline should be re- duced by developing and enforc- ting firm and fair conduct rodes, and by considering alternative cooms, programs, and schools for disruptive students.		States and local school districts should establish firm, explicit. And demanding requirements concerning student discipline.	Schools and school districts should adopt rtgorous discipline policies that reflect the discipline truct's goals and expectations Rules should be applied consistently and impartially, and State laws modified to permit effective discipline in the schools.	
TEACHERS :	Teacher preparation should be improved, and teaching should be made a more reverding profession.	A major Federal initiative should be undertaken that emphasizes the critical importance of quality teachers in America's schools.	should improve methods for recruiting, training and paying 'teachers',	Programs should be started to improve knowledge and skills of in-service teachers, and States should take steps to rates the quality of new teachers	Working conditions for teachers should be improved, teaching loads reduced, intercoptions and extendiates unimized, preparation improved, and planning time of 60 unimizes per day provided



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	Excellence Commission	Twentieth Century Fund	ECS Economic Crowth	National Science Board	Carnegie Foundation
Tes her Preparation	Persons preparing to teach should be required to meet high aducational atandards, and to demonstrate competence in academic disciplines.  Master teachers should be involved in designing teacher preparation programs.  Resources should be used to solve the problem of a shortage of mathematics and science teachers.	Ho comparable provision	Every State and local school district, with the fullest participation of teachers, should drastically improve methods of training teachers.  States, singly or in cooperation with one another, should establish better pre-service and inservice education programs for teachers.	States should require teachers to have computer skills.  Liberal arts colleges should assume a greater role in training elementary and secondary mathematics and science teachers.  The use of science museums in tracher training programs should be encouraged.	Efforts should be made to recruit outstanding students into teaching. High schools should establish cadet teacher programs.  Prospective teachers should be chosen on the basis of gardes and recommendations and should complete a core of common learnings parallel to the proposed core curriculum. Their program should be for five years with the fifth year consisting of a professional education core curriculum and field expertences.
Teochor Caetici- eation	Efforts should be made to have qualified persons with academic training in mathematics and science eligible to teach. Other areas of critical need, such as English, must also be addressed.	No comparable orovision	Teacher certification processes should be changed to make it possible for qualifited "outsiders" to serve in the schools.	Elementary teachers should have a comprehensive liberal arts education, and secondary teachers a major in their teaching area, with both having a limited number of effective education courses and an internship.	Credentialing should be based on recommendations and a written examination submitted to a Board of Examiners, the majority of whom are senior teachers. Staffing should be supplemented with lecturers, ectirees, and joint appointments with industry.
Masrer Te ac ler a	School boards, administrators, and teachers should perate. to develop career laders for teachers that distinguish among the beginning instructor, the experienced teacher, and the master teacher.	A national Masters Teacher Program should be established, funded by the Federal Govern- ment, that recognizes and rewayds teaching excellence.	States should create career ladders for teachers.	State and local governments should provide opportunities for high quality teachers to move up in salary and status without leaving the classroom.	After credentialing, teachers should have the opportunity to pursue a career path, moving from associate teacher to senior teacher.
Test her Education (Sa. utions	Colleges and universities should be judged on the performance of their graduates.	No comparable provision	Each State should substantially restructure and renew its teacher training curriculum, and should upgrade the academic quality of the teacher training curriculum so that entering teachers will meet higher standards.	Institutions should establish higher admission, curriculum, and graduation standards for future trachers.	Admission to teacher training programs ahould be based on cumulative grade point averages and recommendations from two professors who have taught the atudents in a required academic course.
Teacher Salariem or Granta	Teacher salaries should be increased and made profession-ally competitive and market sensiti e  School boards should adopt ar 1 month contract for teachers  Teacher salaries should be performance based.	Haster teachers would be awarded a grant of \$40,000 per year for a period of 5 years.  An incentive approach should be adopted to provide awards to teachers of exceptional acrit, awards should be nunerous enough to attract national attention and substantial enough to keep the master	Every State and local school district, with the fullest participation i teachers, should desstically improve methods for paying teachers.  Financtal incentives for teachers should be keyed to differing responsibilities and to filling critical needs in certain subject areas.	Schools should explore means of adjusting pay in order to compete for and retain teachers in shortage areas. Stipends should be provided for summer institutes and other activities. Working conditions, salary levels, comparability, length of school day/week/year, tenure provisions, and promotion procedures should be reviewed as aspects of toacher pay.	and merit increases should be provided.



	Excellence Commission	Twentieth Contury Fund	ECS Sconomic Growth	· National Science Board	Carnegie Foundation
Teacher Per formance	Salary, promotion, tenure, and retention decisions should be tied to an effective evaluation system that includes peer review so that superior teachers may be rewarded, average ones may be encouraged, and poor ones may be either improved or terminated.  Master teachers should be involved in supervising teachers during their probationary years.	The master teacher proposal is designed to "pave the way for reconsideration of merit based personnel systems."	Boards of education and higher education officials should cooperate with teachers and administrators on ways to measure the effectiveness of teachers and reward outstanding performance.  Procedures should be tightened for deciding which teachers to retain and dismiss.	Teachers should be objectively evaluated relative to salary, advancement, and retention of current position.  Greater use should be made of special teachers qualified in the subject matter, and supervision provided as necessary.	Evaluation of teacher performance should be largely controlled by teachers judged to be outstand-ing in the classroom.  A two-week professional development term should be added to the school year, with compensation.
Recognition of Teachers	No comparable provision	No comparable provision	States, communities, the media, and businesses should devise new ways to honor teachers.	Excellent teachers should be recognized through mublicity and financial awards.	Every school district should develop programs for recognizing outstanding trachers.
Loans/Grants for Prospec- tive Teachers	Incentives, such as grants and loans, should be made avail— able to attract outstanding students into the teaching profession.	A scholarship program should be used to augment the supply of teache s in mathematics and science as well as in foreign languages.	Scholarships and other financial incentives should be used to attract the most able people into teaching.	No comparable provision	Colleges and universities should aid the top 5 percent who plan to teach. Federal funds should support a prospec- tive teacher acholarship program.
Leadership and Management	Citi.ens across the Mation should hold educators and elected officials responsible for providing the leaderahip necessary to achieve these reforms.	The executive and legislative branches of the Federal Gov- criment should emphasize the need for better schools and a better education for all young Americans.	Schools should use effective management techniques.	Administrative support should be provided for necessary equip- ment and materials, and class sizes should be reasonable and manageable.	No comparable Provision
Principals	Principals and superintendents must play a crucial role in developing school and community support for reforms.  Administrative burdens and related intrusions on the teacher should be reduced to d to the time available for teching and learning.	No comparable provision	Principals should be in charge of educational programs. Pay should be related to responsibilities and effectiveness. States should set higher atandards for recruiting, training, and monitoring the performance of principals.	Administrators should support better distipline, higher attendance, fewer classroom interruptions, higher expectations, wore equipment and materials, and reasonable class sizes.	Principals should complete all requirements of a teacher and serve for two years as an administrative intern.  Principals should have more control over budgets and staffing, and also be Provided with a school improvement fund for staff and program development.
School Boards	School boards must consciously develop leadership skills at the school and district levels if the reforms are to be schieved.	No comparable provision	No comparable provision	School words should work with national and State groups to develop goals and plans for implementing computer-managed instruction and technology by 1995.	Parents should become more involved in school board elections, and school boards should meet with representatives at least once a year.



	Excellence Commission	Twentieth Century Fund	6CS Economic Growth	National Science Board	Carnegie Foundation
Educatora, ; Parents, and Citizens	The Commission calls upon edu- cators, parents, and citizens at all levels to assist in bringing about the reforms proposed in this report.	No comparable provision	No comparable provision++	No comparable provision	Citizen participation in schools should be increased, and advisory councils and volunteer programs should be formed in all schools.
FISCAL SUPPORT	Citizens should Provide the fiscal support and stability required to bring about the reforms.	The Federal Government must continue to help meet the special needs of poor and minority students while taking the lead in meeting the general and overwhelming need for educational quality.	Schools should make the best possible use of resources. More funds are needed from all sources for selective investments is efforts that promote quality.	should bear most of the expense	Utitizens, local school boards. State agencies and legislatures, and the Federal government must work together to help bring excellence to the Nation's public schools.
Føderal Governmen t	(See "PROGRAMS FOR SPECIAL POPULATIONS.")	Categorial programs required by the Federal Government should be funded through the Federal Treasury.  The Federal Government should fund the Master Teachers Program.  The Federal Government has a responsibility to help overcome the unevenness of State efforts to fund education.  School districts with substantian unbers of immigrant children should receive Federal impact air Federal funds now used for bilingual education should be used to teach non-English speaking children how to speak, read, and write English.		Federal funds should support (a) museum education activities in mathematics, science, and technology; and (b) a network of exemplary schools in mathematics, science, and technology, with 1,000 exemplary elementary and 1,000 similar secondary schools.  The National Science Foundation should fund summer and inservice teacher training programs in mathematics, science, and technology, and also fund teacher training programs using information technologies.  Federal support should continue funding for science television broadcasts.	Federal funds for the education of the disadvantaged should be increased to a level that vill provide programs for all elixible students.  Federal funds should be used to establish (a) ten Technology Resource Centers on university campuses; (b) resional networks to provide computerized library services to schools; (c) a National Film Library to secure and make available ouistanding films and television programs; (d) a national retwork of residential science and mathematics academies; (e) a National Teacher's Service scholarship program; and (f) a expanded national survey to cover all high schools.  A Federal school building and equipment loan fund should be started to update laboratories and rehabilitate schools.
States and Localities	State and local school offi- cials, including school board members, governors, and legis- lators have the primary re- sponsibility for financing and governing schools, and incor- porating these reforms into educational policies and fiscal planning.		Stotes and localities have the chief responsibility for supporting the schools and making educational policy. States should continue efforts to secure more equitable distribution of educational resources. More human, financial, and institutional resources should be invested in education.	Each State should appoint a representative Governors' Council to develop and monitor educational goals and make recommendations for improving education. Each State should develop at least one regional resource center for mathematics and science leachers. The Linear would encourage participation by business, educators, and government, and include assistance in technology instruction.	The overliding tesponsibility of States is to establish Reneral Standards and provide fiscal sumport. State adocation laws should be revised to eliminate confusing and inappropriate rules and regulations.



	Excellence Commission	Twentieth Century Fund	ECS Economic Growth	National Science Board	Carnezie Foundation
FFDE RAL ROLE	The Federal Government's role includes several functions of national consequence that States and localities are unlikely to be able to meet: protecting the constitutional and eivil rights of students and personnel; collecting data, statistics, and general information about education; supporting teacher training in these areas of shortage or key national needs; and providing student financial assistance and research and graduate training. Assistance should be provided with a minimum of administrative burden and intrusiveness.  The Federal Government has the primary responsibility to identify the national interest in education and also to help fund and support efforts to protect and promote that interest.	The executive and legislative branches of the Federal Government are called upon to emphasize the need for better schools and a better education for young Americans.  The Federal Government should promote and support proficiency in English for all children in the public schools, but especially for those who do not speak English, or have only a limited command of English.  Federal attention and assistance should go to conomically depressed iocalities with concentrations of immigrant and/or impoverished groups as well as those that already are making strong efforts to improve their educational Performance. The Federal Government should emphasize programs to develop basic scientific literacy among all citizens and programs to provide advanced training in mathematics and science for secondary school students.  (Also, see "TEACHERS" above.)		The Ptesident should appoint a National Education Council consisting of representatives from a cross-section of national interests. This group would identify national educational goals and assessment mechanisms for every State, school district, and school; and monitor and report annually on the status of American education and its progress toward the Soals.  The Federal Government has a unique role in ensuring access to equal educational opportunity in its broadest sense. The National Science Foundation should develop and evaluate technology courses and programs.  The National Science Foundation should establish a council to tak the leadership role in curriculum evaluation and development for mathematics, science, and technology. Widely dispersed dissentiation centers should test the new curriculum.	
Federal Research Efforts	(See "FEDERAL ROLE" above.)	Federal sup-ort should be pro- vided for specific tegearch activities such as basic data, educational performance, eval- ustion of Federal education programs, and fundamental re- search into learning processes.	No comperable provision	Federal f ads should be used to conduct reacearch on teaching and learning at the basic and classroom levels, with partieular attention to the integration of educational technology into the educational process.	The Department of Education should expand its survey of high school students to include a sampling of graduates from all high schools at four year intervals to learn about post-high school placement and experiences.



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£	cellence Commission	Twentieth Century Pand	ECS Economic Growth	National Science Board	Caencgie Foundation !
IMPLEMENTA- TION PLAN	(See "LEADERSHIP AND HANAGEMENT.")	No comparable provision	Each State should develop and implement a plan for improving education in grades K-12. Each governor should appoint a broadly inclusive task force on education for economic growth. This task force should develop an implementation plan (or the State.	Local school bhards should foster public/private partnerships to facilitate constructive change. Businesses should be invited to to participate in cooperative programe that involve r. resharing indicontributions of equipment.	Each college or university should form a comprehensive partnership with one or more secondary schools.  To expand learning opportunities, schools should establish connections with libraries, anseums, art galleries, colleges, and industrial laboratories.
			Each local achool district also should develop its own implemen- tation plan.	Programs and opportunities should be provided for students to see science and technology in actual operation in plants. Public and private employers should furnish some summer or year-round employment for mathematics, science, and technology teachers.	
BUS INESS/ EDUCATION PARTNERSHIPS	Bo comparable provision	No comparable provision	partnerships for improving education should be formed with participation by businesses, labor, and the professions. Public officials, higher education officials, and school officials should ostablish their own partnerships.	Schools should draw on indus- try, universities, and public agencies as sources of teach- ing assistance.	Businesses and schools should estabalish programs to aid high-risk students as well as the gifted. Funds should be provided for recognition of outstanding trachers, staff development, and improvement of school facilities.
SPONSOR	Secretary of Education and the Department of Education.	Twentieth Century Fund, an in- dependent research foundation that undertakes policy studies of economic, political, and social institutions and issues.	Education Commission of the States with financial Support from corporations, philanthropic foundations, and organizations.	The National Science Board Commission on Peccollege Education in Mathematics, Science, and Technology. The Board is the policy-making body for the National Science Foundation.	Carnegie Foundation for the Advance- ment of Teaching and the Atlantic Richfield Phundation.
Немвелянір	Eighteen members, with 6 from higher education and 4 from elementary and secondary education.	Twelve members, with 10 from higner education.	Forty-one members, including 14 business leaders and 13 governors.		Various groups were involved in the field studies and preparation of the report. The principal group was the National High Sthool Panel consisting of 28 members, 9 of whom were from higher education, and 11 of whom represented clementary and secondary education.
				·	X. Porbis Joedan Senior Specialist in Education Office of Senior Specialists September 23, 1983

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ERIC 2