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ABSTRACT
        This is an integrated report on 28 ongoing projects
that were set up to study and improve American high schools on a
large scale. The activities include establishment of a national data
base on high school students; a study of new standards for college
admission; administrators' reports on what works in urban schools;
intensive studies of single schools; and new proposals for a general
education curriculum. The report (1) describes projects' central
concerns, anticipated outcomes, and methodologies; (2) summarizes
existing knowledge about secondary education and the extent to which
the projects may enhance knowledge about high school students'
characteristics, program offerings, teaching methods, institutional
determinants of effective education, school-community relationships,
and school improvement; and (3) identifies possibilities for school
improvement through changes in program content, staff performance,
school climate, school-community relationship, and institutional
factors. The report furthermore points out significant issues that
are not addressed by the different projects' approaches for reform.
(Author/MJL)

The Study and Improvement of American High Schools:
A Portrait of Work in Progress

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I.   Introduction

While thousands of teachers and administrators work daily to improve their own particular schools, about 30 projects have been launched within the last few years to study and to improve American high schools on a larger scale. These diverse efforts include establishing a national data base on 58,000 high school students, a study of new standards for college admission, administrators' reports on what works in urban schools, intensive studies of single schools, and new proposals for a general education curriculum. When The Johnson Foundation, The College Board, the Kettering Foundation, and the U.S. Department of Education chose to convene a conference of more than two dozen project directors, they suggested that conference dialogue could be facilitated by a background paper summarizing the projects' work.

Waves of concern for the mission of American high schools emerge periodically in U.S. history and in the recent past through several commission reports issued in the 1970's. They emphasized the need to diversify learning experiences for high school students and to expand learning environments beyond school. In contrast, several current projects focus on building common learnings for all students and strengthening culture within the school itself. Without presenting here a historical perspective (some of the projects will include historical analysis), we should, nevertheless, be sensitive to the particular historical-cultural issues expressed in current studies of and arguments for educational change (Passow, 1975; Van Til, 1976; Butts, 1978, 1980; Boston, 1982).

This paper draws an interpretive portrait of work in progress, one that accentuates commonalities as well as differences among the projects, that characterizes advances in knowledge about secondary education as well as areas of ignorance or neglect, and that places this work, much of it unfinished, within a perspective broader than that represented by any individual project. We shall not comment in detail on individual projects or critique them one-by-one, but refer to them as illustrations or parts of a composite collection of work. We proceed in three sections: first we describe projects' central concerns, anticipated outcomes and methodologies. Second, we attempt (perhaps too boldly) to summarize existing knowledge about secondary education and the extent to which the projects may enhance knowledge on six fundamental topics. Finally, we offer a general perspective on high school improvement by identifying critical choices related to five areas of change and pointing out significant issues that seem neglected by the projects' approaches to reform.

The projects included for analysis were identified by the sponsoring organizations of the conference, drawing to some extent on previous surveys by EDC (1981), Sleeter (1982), and Riffel and Schneider (1982). Although several projects do not focus on high schools, they were included in the conference and this analysis, because of their relevance to deliberations on learning in high schools.

The projects all address issues in secondary education, but their work is difficult to synthesize or even to analyze on an individual basis. Their aims are diverse, even possibly contradictory in some instances. Most have not issued final reports and many are in early or

mid-point stages of development. Of twelve projects that have issued

concluding documents, five describe disparate school improvement

efforts, focusing on unique qualities of individual schools rather than

central tendencies or common findings. These conditions, along with

limits of time and space, preclude detailed commentary on individual

projects. Instead, most of this manuscript (Sections III and IV) offers

our own analysis of critical issues in the field, based in part on our

sense of emerging results from the projects, but also upon a much

broader literature to which the projects contribute. We speak in

ignorance of at least fourteen reports yet to appear, but hope that our

observations will inform their preparation.

II. Description of the Projects

Through four charts and a map we represent the projects' central

concerns, intended outcomes, methodologies and geographical location of

their work. In order to create a composite portrait we simplify

projects' activity into categories they may not choose, and we make

rough judgments of classification that obscure the complexity of each

project. A project's own literature, and summaries compiled by The

Johnson Foundation, EDC (1981), Sleeter (1982), and

Educational Leadership (May 1982), offer more complete descriptions. We

refer to projects by name on the charts, but for brevity in the text, we

use abbreviations indicated on the Project Guide insert.

A. Project Focus

Descriptive/Prescriptive. In summarizing the focus of project

activity on Chart 1, we ask first about the extent to which the project

aims mainly to describe conditions of high schools, contributing factual

knowledge about students, teachers, institutions, and the extent to

which it formulates recommendations or prescriptions about what ought to

happen in high schools. The two functions are related (descriptions may

imply prescriptions and prescriptions may assume particular

descriptions), but projects do distinguish themselves in their emphasis

upon offering information and new knowledge versus their attention to

advocacy and implementation of desired changes. The designations D and

P represent our best judgment about the primary purpose of a project.

If adding to knowledge and implementing particular changes seem equally

important, both functions are indicated.

HSB offers extensive new data, for example, on students'

aspirations, programs, perceptions of school discipline, and working

patterns; NAEP provides continuing information on student achievement;

SEMG and MS describe unique conditions in middle schools; and EBCE

summarizes the implementation of a Federal program. None of these,

however, devotes major effort to recommending specific changes for high

schools. In contrast, projects such as PP, RGE and SS take a strong

stand for reducing electives in the high school curriculum so that a

common general education can be achieved; EQ recommends new standards

Chart 1 Project Focus

Project Name		Main Concerns						Descriptive Emphasis			
		Descriptive/ Prescriptive	Program Content	Teaching	Climate/ Organization	School Improvement Process	Special Student Groups[1]	Causal	Longitudinal	Comparative[2]	General Narrative
1. Project Paideia	PP	P	X	X							
2. Stanford & Schools	STS	D,P			X			X			X
3. EQuality project	EQ	P	X				M,CB				
4. University/Urban Schools	UUS	D	X	X	X	X	U				X
5. American High School	AHS	D,P	X	X	X					LS,RU,VC	X
6. Urban Education Studies	UES	D,P	X		X	X	U				X
7. High School and Beyond	HSB	D	X		X			X	X	PP	X
8. Redefining General Education	RGE	P	X			X					
9. Effective Schools	ES	D,P		X	X		M,D,U			EI	
10. Experience Based Career Education	EBCE	L			X	X				EI	
11. National Assessment	NAEP	D	X						X		
12. Higher Education and the Schools	HES	P	X	X			CB				
13. National Commission on Excellence	NCE	D,P	X	X	X					INTERNATIONAL	X
14. Options for Mid-Adolescents	EO	D,P	X	X			CB		X		X
15. A Study of Schooling	SS	D,P	X	X	X	X		X		EI	X
16. What Makes a Good School	GS	D,P			X	X				LS,PP,RU	X
17. Catholic High Schools/Minority Students	CSMS	D	X		X		M			PP	
18. Articulation/Secondary School & College	ASEC	P	X				CB				
19. Renewal, Improvement/Secondary Education	WRISE	D,P		X	X	X		X	X		X
20. School Effectiveness/Middle Grades	SEMG	D		X	X						X
21. Value Assumptions in American Education	NAE	L,P	X								X
22. Study of Magnet Schools	MS	D			X		U				X
23. Fifteen Thousand Hours	SSE	D		X	X		U	X	X	EI	
24. Secondary School Improvement Project	IDEA	P			X	X	X				
25. Alternatives in Education	AE	D,P	X	X	X						X
26. Study of High Schools	SHS	D,P			X	X				PP	X
27. Scarsdale Group	SG	P	X				CB				
28. Federal Educational Policy	FEP	D,P							X		X

[1] Key for special student groups:

    CB = college bound
    D = disadvantaged
    M = minority
    U = Urban

[2] Key for types of comparisons studied:

    EI = effective vs ineffective schools
    LS = large comprehensive high schools vs smaller more specialized schools
    PP = public vs private schools
    RU = rural vs urban schools
    VC = vocational vs college preparatory programs

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for college admission; and ES and WRISE prescribe certain principles for improving instruction in schools. Eight of the projects appear to be primarily descriptive and seven largely prescriptive, with thirteen including both functions. To understand the particular points of emphasis and how a project conducts its work, other dimensions in the charts and project descriptions must be consulted.

Main concerns. Regardless of a descriptive or prescriptive orientation, the main concerns of projects can be characterized as program content (courses of study and student learning outcomes), teaching (classroom practices and teachers' characteristics), school climate and organization (institutional procedures, role definitions, and expectations that affect life in schools), and the process of school improvement (methods of implementing innovations and of helping schools to engage in rational planning, cooperative functioning, self-evaluation, and renewal). Some projects define their mission as improving or studying the education of particular groups of students such as minority, disadvantaged, or college bound.

Most projects express concern for enhancing the quality of high school education and for equity in educational opportunity. Several of those concentrating on program content emphasize the need for up-grading academic standards by halting the proliferation of electives and concentrating instead on basic areas of competence, variously defined, but usually including English, Science, Math, and Social Studies. Recognizing multiple interpretations of such traditional subject labels, the explosion of knowledge within the disciplines, and the need to encourage a degree of teacher autonomy in designing instruction, several

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projects have struggled with dilemmas in defining the "basics." Three projects (PP, RGE and SS) emphasize that all students master a common curriculum of general education, and four (EQ, HES, ASEC, SG) direct their new conceptions of competence mainly to college bound students.

Not all projects concerned with program content focus on academic competence. NAE and GS emphasize the teaching of critical values, "provisional morality," or character. EO and SEMG stress the importance of enhancing students' psychological and social development. EBCE studied programs concerned with vocational competence. Descriptive accounts of national trends in student outcomes (e.g., through HSB or NAEP) provide much information about achievement in academic areas, but relatively little on students' values, psychological development, or career orientations.

The classroom teacher is commonly recognized as the key to effective instruction, and some projects pay close attention to what happens in high school classrooms (AHS, SS, SHS), characteristics of teaching that seem to be effective (ES, SSE), or general principles for designing a powerful instructional environment (WRISE). Because successful teachers may differ greatly in personal style, because effective pedagogy may vary, depending upon different educational goals and idiosyncratic student needs, and because findings are not yet available from the three studies that look most closely at teaching (AHS, SS, SHS), it is difficult to anticipate conclusions about the projects' contributions to our understanding of high school teaching.

School climate and organizational dynamics attract attention from most projects, but also represent diverse orientations. Previous

concern with schools as organizations seems to have focused in recent years on school effectiveness. Criteria for effectiveness may be disputed, but conclusions from different studies (e.g., Rutter et al., 1979, Wynne, 1980; Grant, 1981) suggest that schools with impressive records of academic achievement have a unified (rather than fragmented) school culture that communicates consensus about the central purposes of the school: high achievement and socially responsible behavior for all members of the school "family." Projects such as ES, GS, SEMG, SS, and SSE analyze schools from such a perspective.

Projects such as UUS, UES, and AE describe a variety of programs with implications for innovative patterns of school organization (e.g., changes in governance, or cooperation with outside agencies). WRISE and IDEA both emphasize a school-wide process of individualized programming. MS discusses a range of organizational features such as faculty culture, principal's leadership style, internal politics, scheduling, and logistics. HSB and CSMS construct a conception of school process from such variables as student perceptions of homework assigned or discipline in the school.

Some projects (especially RGE, WRISE, IDEA) focus primarily on the process of empowering schools to define and implement changes based on their own needs assessments, faculty resources and community mandates. The purpose of project intervention from this perspective is to facilitate rational dialogue among school constituents and to develop effective decision-making procedures so that adopted changes, regardless of content, are pursued with local commitment, effective coordination, and remain subject to periodic self-evaluation. Approaches to school

improvement also deal with staff development and accountability (UUS, UES), the ways that local constituencies define programs to fit particular needs (EBCE), and strategies of community collaboration (UES). Note that only eight of the projects seem mainly concerned with the process of school improvement.

Most projects construe their work as relevant to all students. Only three devote special consideration to needs of minority or disadvantaged students, while five aim primarily at college bound students. One project (EBCE) deals with vocational education as an aspect of experience-based career education, but none of the studies shows a primarily concern for vocational education in high school (AHS may address this question), and none deals extensively with other groups struggling for equity such as women, handicapped, or non-English speaking students. This may reflect a national political climate that stifles a "special needs" approach to educational programming, accentuating instead what appear to be common needs of all.

Classifications in the chart must be qualified by the recognition that important concerns of some projects do not fit into our categories (e.g., the HES emphasis on teacher education, the FEP focus on federal education policy, the NAEP orientation toward general levels of achievement rather than qualities of schools themselves); also that common classification in our categories may obscure important differences among projects that we have not mentioned (e.g., both UUS and UES collected a variety of information about different exemplary practices in urban schools, without trying to construct a generalizable synthesis, but SSE tried to develop a quantitatively tested conception

of effective school climate). In trying to perceive patterns among the
diverse set of projects, we must be alert to complexities that our
charts cannot convey.

Descriptive Emphasis. The last set of categories in Chart 1
indicates the nature of descriptive information coming from the
projects. Research on schooling typically lacks information powerful
enough to support confident causal statements ("Schools of a particular
type produce particular learning outcomes."), longitudinal claims
("Between ninth grade and graduation, students learn the
 following . . ."; "Schools with certain features maintain consistently
high performance over several years"), or even valid claims of a
comparative nature ("Public schools differ from private schools;"
"Minority students may have different learning styles from majority
students," "Small schools have different effects from large schools").
Based on the projects' designs, we assess their potential for increasing
descriptive knowledge in each of these ways. Almost half of the
projects are not likely to contribute a systematic study of cause,
historical (longitudinal) change, or comparison, although they will
produce general narratives and calls to action. Studies such as HSB,
CSMS, SSE investigate the effect of particular school variables in
accounting for student achievement. NAEP has documented trends in
school achievement over several years. HSB has produced a study of
differences between public and private schools that should be
complemented by future conclusions from SHS. AHS will probably comment
on important differences between types of schools. Studies of
"effective schools" (ES, SEMG, SSE) make an implicit comparison with

ineffective schools. SS will compare more and less "satisfying" schools. Of the eight projects concerned with school improvement process, none is a comprehensive study of several high schools that have launched specific school plans over a several-year period.

B. Project Outcomes

Chart 2 portrays project outcomes which may take the form of recommendations for change, analyses and descriptions of practices or both--in any of the areas of primary concern. First we identify target constituencies toward which projects' direct their findings. Many

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Insert Chart 2 about here
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address specific policy agents such as local education agencies, classroom teachers, or colleges and universities. Some (the purely descriptive ones) are prepared primarily for the general research community. Some projects speak to diverse audiences without a mission to influence particular constituencies. The classification of "diffuse" indicates that several constituencies are intended, but specific ones do not seem highlighted. Of those aiming at specific policy agents, only four direct special attention toward policy at the Federal level, and only three show concern for particular changes at the state level. Most of the projects seem to assume that the power and responsibility for school improvement should rest primarily in the hands of local educational administrators, classroom teachers, and their immediate communities.

Chart 2 Project Outcomes

Project Name		Specific Policy Agent[1]	Research Community	Diffuse	Active Intervention Strategy[2]	Media[3]
1. Project Paideia	PP	CT,LEA,CU				B
2. Stanford & Schools	STS	CU,LEA	X	X	CONF	PUB
3. EQuality project	EQ	CT,CU,LEA		X	CONF	PUB
4. University/Urban Schools	UUS	LEA,CT,CU	X	X	CONF	CP
5. American High School	AHS	CT,FED,LEA,PF		X	DEM	B
6. Urban Education Studies	UES	CT,LEA				PUB
7. High School and Beyond	HSB		X			PUB,D
8. Redefining General Education	RGE	LEA,CT,P			COOP,CONF	PUB
9. Effective Schools	ES	CT,LEA				PUB
10. Experience Based Career Education	EBCE	FED	X			PUB
11. National Assessment	NAEP			X		PUB,D
12. Higher Education and the Schools	HES	CT,CU,ST			CONF	PUB
13. National Commission on Excellence	NCE	ALL LEVELS		X	CONF	PUB
14. Options for Mid-Adolescents	EO	CT,CU		X	CONF	PUB
15. A Study of Schooling	SS	CT,LEA,P	X	X	CONF,COOP,DEM	B,PUB
16. What Makes a Good School	GS		X	X		PUB
17. Catholic High Schools/Minority Students	CSMS		X			B,PUB
18. Articulation/Secondary School & College	ASEC	CT,CU,ST,LEA,P			CONF	PUB
19. Renewal, Improvement/Secondary Education	WRISE	LEA,CT	X		COOP	PUB
20. School Effectiveness/Middle Grades	SEMG	LEA	X			PUB
21. Value Assumptions in American Education	NAE			X		B
22. Study of Magnet Schools	MS		X			PUB
23. Fifteen Thousand Hours	SSE		X	X		B
24. Secondary School Improvement Project	IDEA	CT,LEA			COOP	PUB
25. Alternatives in Education	AE	CT,LEA	X	X	CONF,COOP	B,PUB
26. Study of High Schools	SHS	CT,LEA	X	X		B,PUB
27. Scarsdale Group	SG	CT,LEA			CONF	CP
28. Federal Educational Policy	FEP	FED		X	CONF	PUB

[1]Key to policy agent: CT = classroom teachers
CU = colleges and universities
E = employers
P = parents
FED = federal agencies
LEA = local education agency, including principals, superintendents
PF = private foundations
ST = state agencies

[2]Key to intervention of strategy: CONF = various meetings, including conferences, workshops, seminars, public dialogs, symposia
COOP = visits to schools to train local personnel, assist with program implementation and evaluation, to encourage communication through networks
DEM = establishing a lab school or network of model schools to implement a project's recommendations

[3]Key to Media: B = book
CP = conference proceedings
D = data tapes
PUB = other publications such as contractor reports, technical reports, commissioned papers, journal articles, pamphlets

Projects vary according to the _form_ in which outcomes are communicated. All will communicate conclusions through some form of media, and most will also exercise active intervention strategies such as conferences, cooperative consulting and networking, and the funding of demonstration projects. RGE, for example, works closely with 17 high schools, and EQ works with many universities. None of the projects advocates a centralized, top-down strategy for educational reform. Several may take a position on ideal criteria for high school education across the nation, but most assume that effective educational change can occur only through a process of local development, not through adoption of centrally developed programs.

C. Project Methodologies

Chart 3 summarizes methodologies and types of schools studied. Some projects (AHS, SHS, SS) sought a representative sample of diverse schools, without strict randomized or stratified sampling procedures; others followed more rigorous sampling techniques (HSB, NAEP). Several projects focused on particular types of schools such as urban (UUS, UES), middle school (SEMG), magnet school (MS), Catholic schools (CSMS),

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Insert Chart 3 about here

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alternative schools (AE), schools with a heavy emphasis on college preparation (ASEC, SG), or exemplary schools as defined by the individual project (UES, SEMG). As a whole, the projects show a wide range of concerns with specific types of schools. Absent, however, are

Chart 3 Project Methodologies

Methodologies*

Project Name		On-Site Visit	Extensive On-Site Studies	Aggregate Data	Historical Analysis	Diverse Testimony	Data Re-analysis
1. Project Paideia	PP					X	
2. Stanford 6 Schools	STS						
3. EQuality project	EQ					R,M	
4. University/Urban Schools	UUS	U	R			U	
5. American High School	AHS	R	R		X		
6. Urban Education Studies	UES	E,U	E,U			E,U	
7. High School and Beyond	HSB			RS			
8. Redefining General Education	RGE	X					
9. Effective Schools	ES			EL,M,U			EL,M,U
10. Experience Based Career Education	EBCE		E				
11. National Assessment	NAEP			RS			
12. Higher Education and the Schools	HES					CP	
13. National Commission on Excellence	NCE	X		X	X	X	X
14. Options for Mid-Adolescents	EO		E	E			
15. A Study of Schooling	SS		R	R			
16. What Makes a Good School	GS	R	R		X		
17. Catholic High Schools/Minority Students	DSMS			RS			P,M
18. Articulation/Secondary School & College	ASEC					CP	
19. Renewal, Improvement/Secondary Education	WRISE	E		E			
20. School Effectiveness/Middle Grades	SEMG		E,MS				
21. Value Assumptions in American Education	NAE					X	
22. Study of Magnet Schools	MS		MS,U				
23. Fifteen Thousand Hours	SSE		U	U			
24. Secondary School Improvement Project	IDEA	X					
25. Alternatives in Education	AE		A	A			
26. Study of High Schools	SHS	R	R		X		
27. Scarsdale Group	SG					CP	
28. Federal Educational Policy	FEP			X	X	X	X

*Symbols refer to the type of schools included in a project's work.

    A = alternative school
    CB = special emphasis on college preparatory programs
    EL = elementary schools
    M = special emphasis on minority or disadvantaged students
    MS = middle grade schools
    P = private schools
    R = representative sample of schools as defined by project
    RS = stratified random sample of schools
    U = urban schools
    E = exemplary school(s) as defined by Project
    X = methodology was employed, but without special attention to selecting schools on any of above criteria

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studies of technical high schools, specialty schools such as those for

the performing arts or careers in human services, schools for the

handicapped, or schools for special groups such as students with

full-time day jobs or expectant mothers.

Projects used at least seven methods for collecting and organizing

information. Some used short-term visits to consult or to make general

observations, but without comprehensive reporting of the data collected.

SHS used site-visits, for example, to gather general background for more

intensive studies at twelve sites.

"Extensive on-site studies" refers to several days of collecting

information at a school, aiming toward a complex understanding of the

dynamics of the institution. Projects in this category vary, however,

from visits of about seven days within a school year (e.g., SEMG) to

three days per week throughout a semester (e.g., MS), to 20 school days

within a month (SS). At this writing none of the projects have produced

ethnographies of high schools. Several have collected enormous amounts

of information on individual schools (especially AHS, SHS, SS), but it

seems unlikely that this will be developed into detailed school

ethnographies similar, for example, to the MS report on magnet middle

schools. Because of an interest generalization across schools, in

contrast to understanding the dynamics of schools as unique social,

historical phenomena, several projects tend to translate information

into generalizations which portray commonalities among institutions, or

types of institutions (illustrated in the statistical analyses of CSMS

or SSE). Projects such as AHS, SHS, and SS, however, will probably

devote much attention to significant differences between individual schools.

Projects that arrive at generalizations through surveys, tests and standardized observation scales subjected to statistical analysis are recognized by the column, Aggregate Data. Such efforts vary greatly in sample size (HSB surveyed 1015 schools, AE 1200 schools, SS 36 schools, EBCE 36 programs, SSE 12 schools, WRISE 5 schools).

Only three projects (HSB, WRISE, SSE) have followed particular cohorts of students, in several schools, for two or more years and have collected data on school characteristics that may help to explain changes in the students.

To place current issues of secondary education in perspective, a few studies (SHS, FEP, NAE) engage in historical inquiry.

Several projects gathered information not through the study of specific schools, but through diverse testimony at public hearings, commission meetings, conferences, commissioned about 50 papers. NCE, for example, has held meetings and hearings throughout the country, and has commissioned papers to study the problem of achieving excellence in American education.

As a whole, the projects have collected new information about high schools. Several data bases on secondary education exist; for example, Project Talent (American Institutes for Research), Equality of Educational Opportunity (U.S. Office of Education), Youth in Transition (Survey Research Center, University of Michigan), National Longitudinal Study (National Center for Education Statistics), National Diffusion Network (U.S. Department of Education), The Safe Schools Study (National

Institute of Education), but few projects have relied on reanalysis of such data. CSMS is based on the recently collected HSB data which has attracted much attention in the research community.

D. Location of Project Activity

Chart 4 and the map, show project headquarters, sites of discourse involving conferences and hearings, and research sites for those projects that revealed the identity of individual schools or communities. Note that research sites for several studies remain

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Insert Chart 4 and map about here

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anonymous (AHS, HSB, SS, MS, CSMS), and these represent over 1200 schools. Research sites are reasonably scattered throughout the nation, but concentrated in high population areas. Project headquarters and discourse sites are concentrated toward the east, with little activity in the plains and the west (except for California).

Chart 4

Location of Project Activity

Project Name and Headquarters	Activity and Research Sites
1. Project Paideia Chicago, IL	Meeting: Aspen, CO.
2. Stanford and the Schools Palo Alto, CA	Research sites: San Francisco, San Jose, San Diego, San Mateo, Santa Clara.
3. EQuality project New York City, NY	Dialogues: Atlanta, Chicago, Hartford, CN, Los Angeles, Minneapolis, Nashville, and Washington, DC. National Symposium: St. Louis. Diverse activities elsewhere.
4. University/Urban Schools New York, City, NY	Conferences: Bermuda, New Orleans, San Francisco. Exemplary programs presented concerning schools in: San Francisco, Chicago, Baltimore, San Diego, New York City, and Philadelphia, Detroit, Minneapolis, St. Louis.
5. American High School Washington, DC	Fifteen schools visited for intensive on site study. Schools were diverse in terms of type, size, location, ethnic composition, and geographical location. Specific sites confidential.
6. Urban Educational Studies Dallas, TX	Research sites: Atlanta, Chicago, Cincinnati, Columbus, Dade County, FL, Dallas, Denver, Detroit, Indianapolis, Milwaukee, New York City, Norfolk, Oakland, Philadelphia, Portland, Toledo.

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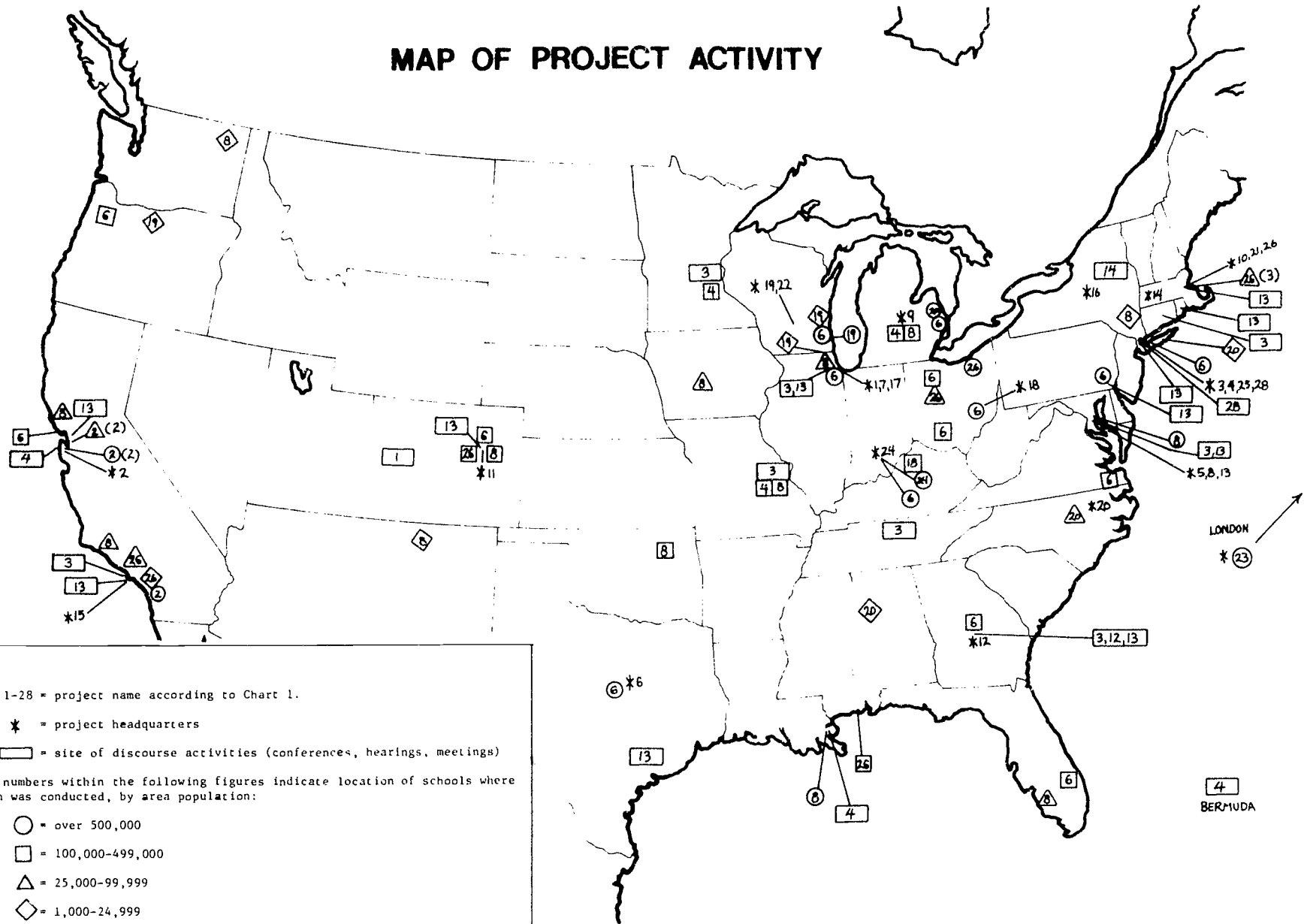| Project Name and Headquarters	Activity and Research Sites
7. High School and Beyond Chicago, IL	Stratified random sample of 1015 public and private high schools across the nation. Schools were demographically and geographically diverse. Specific sites confidential.
8. Redefining General Education Alexandria, VA	Consultation visits to 13 network schools: Ames, IA, Ann Arbor, MI, Ventura, CA, Carlsbad, NM, St. Louis, MO, Colville, WA, Denver, CO, New Orleans, LA, Oak Park, IL, Page, AZ, Largo, FL, San Rafael, CA, Scarsdale, NY, Tulsa, OK, Baltimore, MD.
9. Effective Schools East Lansing, MI	Research sites at 20 inner city Detroit schools.
10. Experience Based Career Education Cambridge, MA	Intensive study of more than 35 programs representing a range of policy variables, geographic location, and developer laboratory affiliation. Specific sites confidential.
11. National Assessment Denver, CO	Stratified random sample of 9, 13, and 17 year old youths. Specific sites confidential.
12. Higher Education and the Schools	Meetings in Atlanta, GA among SREB members from Texas, Louisiana, Arkansas, Mississippi, Georgia, Florida, South Carolina, North Carolina, Tennessee, Kentucky, Virginia, West Virginia, Maryland.
13. National Commission on Excellence	Commission meetings, panels, and hearings: Washington, DC, New York City, Palo Alto, CA, Houston, TX, Atlanta, GA, Chicago, IL, Denver, CO, Cambridge, MA, Philadelphia, PA, Los Angeles, CA, Kingston, RI.

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Project Name and Headquarters	Activity and Research Sites
14. Options for Mid-Adolescents Great Barrington, MA	Research conducted at Simon's Rock of Bard College, Great Barrington, MA.
15. A Study of Schooling Los Angeles, CA	Research studies of 37 schools in seven states: 12 senior high schools, 12 junior high schools, 13 elementary schools. Schools were diverse by size, median family income, geographic location, community size, and ethnic makeup. Specific sites confidential.
16. What Makes a Good School Syracuse, NY	On site visits of 33 schools; intensive study of 5 schools. Specific sites confidential.
17. Catholic High Schools/ Minority Students Chicago, IL	Data analyzed on 7,000 Catholic school students from 84 schools, 7,000 public school students from about 900 public schools. Specific sites confidential.
18. Articulation/Secondary School School & College Columbus, OH	Meetings at several sites in Ohio.
19. Renewal, Improvement/ Secondary Education Madison, WI	On-site research and consultation at 5 schools in Milwaukee, WI, Cedarburg, WI, Hood River Valley, OR, Mundelein, IL. Periodic consultation with a network of over 70 schools.
20. School Effectiveness/ Middle Grades Carrboro, NC	On-site research at 4 schools in Alamance County, NC, Detroit, MI, Louisville, KY, Shoreham, NY.

Project Name and Headquarters	Activity and Research Sites
21. Value Assumptions in American Education Cambridge, MA	Meetings in Cambridge, MA.
22. Study of Magnet Schools Madison, WI	On-site research in 3 urban middle schools. Specific sites confidential.
23. Fifteen Thousand Hours London, England	On-site research in 12 London secondary schools. Specific sites confidential.
24. Secondary School Improvement Project Indianapolis, IN	Consultation with 6 Indianapolis area high schools.
25. Alternatives in Education Hempstead, NY	Survey of about 1200 alternative schools, proposed study of 100 and intensive study of 30.
26. Study of High Schools Cambridge, MA	Research at 15 schools in Andalusia, AL, La Jolla, CA, Cambridge, MA, Cleveland, OH, Denver, CO, Findlay, OH, Newton, MA, San Diego, CA, Vista, CA, Watertown, MA, Mobile, AL.
27. Scarsdale Group Scarsdale, NY	Conference Site: Scarsdale, NY.
28. Federal Educational Policy Cambridge, MA	7 meetings in New York.

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MAP OF PROJECT ACTIVITY

Key:

Numbers 1-28 = project name according to Chart 1.

＊ = project headquarters

▭ = site of discourse activities (conferences, hearings, meetings)

Project numbers within the following figures indicate location of schools where research was conducted, by area population:

◯ = over 500,000

▢ = 100,000-499,000

△ = 25,000-99,999

◇ = 1,000-24,999

( ) indicates more than one research site in an area.

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III. Knowledge About American High Schools

Proposals for high school reform are based on assumptions about conditions in the schools, the nature of teachers, learners, and the process of school change itself. To the extent that assumptions about the conditions are inaccurate, reforms are likely to be ill-conceived. An inventory of knowledge about conditions in high schools, therefore, is essential to evaluate proposals for change. Many projects try to describe those conditions, but at this writing only seven have produced completed reports with extensive information about the nature of high school education (UUS, UES, HSB, EBCE, NAEP, CSMS, SSE), and these vary substantially in the questions addressed. Relying extensively on literature beyond the projects, we can summarize knowledge on American high schools in terms of six questions that seem pertinent to efforts to improve them: What are the distinctive characteristics of high school students? What programs do high schools offer? What kinds of teaching occurs in high school? What organizational characteristics influence high school education? How do high schools relate to the larger community? How do high schools improve? In taking stock of knowledge on such topics, we must be sensitive to underlying cultural values, for these tend to define both the visions of opportunity and the constraints within which school reform can occur. While none of the projects has yet responded to all of these questions, we shall assess the extent to which different projects may enlighten us about them.

The ensuing summary represents an estimate of general trends, but before presenting it we should recognize that claims about high schools can be made on at least three levels of generalization.

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Universal claims try to characterize all high schools--or at least a very large proportion of them, as in statements that the high school is beseiged with multiple purposes, offers fragmented curriculum, attracts teachers more interested in subjects than in students, or has lowered its standards of academic achievement. Such claims intend to convey tendencies about high schools in general, and to offer simple, clear statements, but in striving for parsimony and all-inclusive knowledge, universal claims tend to obscure qualifications and complex contingencies.

A second type of generalization might be called a qualified universal, for it restricts generalization to a special class of events, institutions, or processes. Claims that focus upon urban desegregated schools, or vocational programs, or Catholic schools, or schools with exemplary histories of academic achievement present a narrower class of phenomena about which to generalize. Such claims attempt to establish central tendencies only within a limited class or to differentiate among classes, but still have the quality of trying to reach for universal claims within particular classes, or about persistent differences among classes.

Finally, there are claims which imply virtually no attempt to generalize across schools. These idiosyncratic claims aim to describe only unique situations, apparently with no intention of aggregating the unique characteristics beyond particular schools. The assumption is that single cases or events, relevant initially only to individual participants at the site, may have generalizable value, determined largely by the imagination or analogy-finding power of the reader.

These three levels of generalization can also be applied to prescriptive claims that schools should adopt certain practices. Some recommendations seem to be intended universally, such as "all schools should strive for excellence" or for "disciplined thinking by students," or for the "building of character." Other recommendations are qualified for application only within a specific class; for example, "vocational education should be pursued primarily on the job," "schools with large proportions of disadvantaged students may need more attention to career options," or "college bound students should have competencies in six general areas." Finally, recommendations may be highly idiosyncratic, relevant only to a particular school at one point in time: "The best curriculum for this school consists of x, y and z;" "In this school students should be given more autonomy in the classroom." In working toward constructive dialogue about the nature and improvement of high school education in America, it is useful to identify explicitly the level of generalization at which discussion is to proceed, and to pursue discussion at that chosen level. In this section we concentrate on claims at the universal or qualified universal level.

A. What are the distinctive characteristics of high school
      students?

If professionals are to help clients, presumably they must have an accurate understanding of client characteristics relevant to effective treatment. We cannot present a complete profile of human characteristics relevant to effective education, but at least two salient issues deserve consideration: motivation and ability. In contrast to older or younger students, high school students manifest

special motivational features and ability levels that ought to be considered in plans for school improvement.

Compared to other professionals such as attorneys or physicians, teachers require of their student clients extraordinary amounts of attention, effort and activity. Not surprisingly, therefore, how to motivate high school students to do the work often seems a more perplexing question for teachers than choosing a specific pedagogy to accomplish a particular learning objective. To respond to the motivational patterns of adolescence, some teachers may channel instruction through enticing topics such as sex, clothes, cars, sports, but this strategy neglects more fundamental aspects of motivation.

Secondary education is structured largely on two assumptions regarding adolescents' motivation: that adolescents will be inspired or stimulated to devote much energy and effort in order to secure a) future rewards of status and income, and b) immediate approval from adult authorities. A good deal of evidence (Hirschi, 1969; Willis, 1977; Ogbu, 1978) suggests that large proportions of adolescents cannot be induced to work hard in school exclusively through these motivational devices.

Educators, parents and policy makers readily concede that the hard work demanded for high achievement in school has no immediate relevance to problems that adolescents perceive in daily life. Nevertheless, students are implored to work hard, to delay immediate gratification on the grounds that it will lead to success in life many years hence (success may be defined as a good job, a high income, opportunity for choice, or whatever). It has been shown that adolescents have more

complex and salient images of the distant future than young children (Cottle and Klineberg, 1974), but this increased cognitive capacity is not sufficient to call forth commitment to schoolwork. To persuade a rational student to undertake relatively unpleasant work only for distant future rewards, the student would presumably need to subscribe to at least four beliefs: a) working hard will in fact produce success in school, b) success in school will actually produce the rewards promised, c) the rewards will not be available without success in school, and d) the distant rewards are valuable or worth the price.

Like people of all ages, high school students vary greatly in their sense of personal control (the belief that one's destiny is determined more by one's own intentional actions than by fate, luck or external social forces). The experience of large numbers of students, especially minorities and those from low-income families, offers little support for this belief, thus disconfirming assumptions a) and b). Many students, especially affluent ones, may perceive future rewards coming their way even without attaining records of high achievement in school. Finally, students can be critical of the "rewards" of income and status they are urged to pursue, and conclude these do not justify present deprivation or hard work. For all of these reasons, the dominant reward structure fails to stimulate serious motivation for large numbers of adolescents.

As adolescents struggle toward more autonomous definitions of self, toward reducing their dependency upon adults, their reliance upon adult approval diminishes; they evaluate themselves increasingly in terms of internal standards or those of respected peers. As an extensive literature suggests, adolescents are more likely to be motivated to work

hard in activities that provide reasonably immediate and concrete

evidence of success, rather than distant, abstract rewards, and in

activities that allow application of the students' own, internal or

peer-defined standards of excellence, rather than those of authorities

which may often be incomprehensible to adolescents. Variation among the

norms of adolescent groups (Coleman, 1961; Hargreaves, 1967; Cusick,

1973; Willis, 1977; Wehlage et al., 1979; Hargreaves, 1982) must be

taken into account in planning instruction to motivate high school

students. This is not to suggest that most adolescents have no interest

in conventional adult-prescribed standards of excellence, but that these

sources of motivation are likely to generate significant student effort

among only certain segments of the student population. Except possibly

for AE and IDEA, the projects devote little attention to the

significance of diverse subcultures among adolescents.

In education, criteria for success with clients often depend upon

unique, variable client characteristics, especially ability. In law, we

know with great certainty whether a client has won or lost a case, and

in medicine it is usually clear whether an illness has been cured. In

education, however, we are continually concerned about whether the

student has learned as much as he/she could, and since we assume that

all students can probably learn more, we are persistently troubled in

defining what constitutes success. Educators are thus plagued by the

question of assessing the abilities of students, whether they have

reached their potential, and what group norms ought to be established

for successful learning.

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Do high school students as a whole have particular levels of ability that ought to be considered in plans for school improvement? Without delving into the complex problem of defining and assessing innate ability, there is widespread agreement that, in spite of glaring differences between 14 and 18 year olds and also within age groups, high school students seem to have grown quite close to what would be considered "adult" capabilities in physical coordination, capacities for complex thought, social perspective-taking, and other underlying abilities (Havighurst and Dreyer, 1975; Mosher, 1979; Adelson, 1980). Regardless of how ability is defined, we find persistent concern that high school students' abilities far exceed the challenges presented to them in school instruction. This is pointed out not only by developmental theorists, but also by teachers critical of low student motivation, and of school practices such as grouping procedures that stand in the way of optimal development for individual students.

Familiar critiques of high school (including those represented in several projects) assume that students are capable of much greater depth in the mastery of conventional cognitive subjects. A significant literature also points to the limited breadth of abilities tapped by the high school curriculum. High school students have manifested impressive capabilities in at least three areas which high schools place at a low priority: aesthetic perception (the development of complex sensitivities to art, broadly conceived), coordination of mind with physical behavior (e.g., in performing arts, manual crafts, sports and physically demanding activity), and the exercise of social responsibility through community service, self-governance and advocacy

(National Commission on Resources for Youth, 1974; Gibbons, 1976; Conrad and Hedin, 1981).

The point of recognizing neglected capabilities is not necessarily to suggest that they be placed at higher priority than the cognitive competence conventionally prescribed for general education. By acknowledging additional dimensions of students' competence, however, it may be possible to enhance student motivation to take school more seriously, even within academic subjects. As literature on adolescence suggests, and as the IDEA project affirms, adolescents develop a sense of competence by testing and risking themselves in diverse endeavors such as those indicated. Participation in these areas may tap sources of motivation less dependent on future abstract rewards or on approval from adults than academic subjects can offer. Broadening our vision of the abilities of high school students may in this sense help to enhance their motivation for the entire educational enterprise.

This rendition of the motivation and talent of high school students should not obscure the enormous variability that teachers confront among students from different family backgrounds, conditions of physical handicap, or cultural traditions. Although developmental literature offers a general framework for construing the growth of all, and sociological literature offers some generalizations about common influences upon all, only the sensitive judgement of a professional can determine how to inspire devoted energy from a particular student, or what kind of instruction will best challenge the students' innate capabilities.

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In spite of a considerable literature on individual differences (Tyler, 1965; Buss and Poley, 1976; Peterson, 1982) and cognitive styles (Messick, 1982), the structure of high schools restricts well-intentioned efforts to individualize instruction to occasional allowances for different rates of learning or choices among elective courses, and inhibits fundamental variation in teaching form, learning tasks, and goals (Berk, 1979). This tends to discourage research aimed at understanding how individual students differ in their quest for mastery. None of the projects is likely to produce a set of learning biographies of individual students through the high school years.

We seem to be left with the necessity of formulating general educational practices based on assumptions about characteristics that students have in common. Thus far HSB has produced considerable data on student aspirations and participation in activities such as work, NAEP has recorded general levels of achievement, several of the projects contain descriptions of exemplary efforts by students (IDEA, UES), and WRISE compares the achievement of students to their potential as measured by mental ability. Even this information will provide only a limited sense of commonalities among high school students, with virtually no indication of how individual differences affect plans for high school improvement.

B. What programs do high schools offer?

High school programs can be described by course titles and requirements for graduation. Substantial variation exists among schools, but a typical pattern of graduation requirements in

comprehensive public high schools is about 20 academic credits or
Carnegie units in which a year-long course, meeting for about 120 hours,
equals one credit. Common subject requirements are 3 credits in
English, 3 in Social Studies, 2 in Math, 1 in Science, 2 in Physical
Education (1/2 credit per year over 4 years), 1/2 in Health and 1/2 in
Driver Education. Within required areas, students may often select from
a variety of course offerings. College bound students fill the
remaining credits (about 9 electives) with additional instruction in the
four main subjects, plus a foreign language. Vocationally oriented
students concentrate their electives in business education and
shop-related fields (automotive, wood and metal technology, electronics,
etc.). Courses in art and music are also available.

Describing the formal content of high school, fails to convey what
happens to students in school or what they actually learn. National
data exists on achievement levels in academic subjects (NAEP);
ethnographic and analytic studies of curriculum make claims about the
nature of student learning (Dreeben, 1968; Peshkin, 1978; Cusick, 1973;
Apple, 1979), but research has only begun to document the particular
effects that high schools have upon student learning, in contrast to the
effects of influences beyond school (HSB, SSE). Most projects are not
preoccupied with disentangling the effects of school versus non-school
variables on students' learning. Nevertheless, competent observers of
high school programs, of testing results and of student behavior
on-the-job, attribute a variety of learning outcomes (positive and
negative) to high schools. Proposals for reform flow from critiques
that high schools teach either the "wrong" things (e.g., too much

emphasis on specific vocational skills, or an anti-social, relativistic approach to moral values), or that they fail to teach the "right" things effectively (e.g., competence in writing, mathematics, and science). Reform proposals can be summarized as four dominant critiques of what students learn, or fail to learn, from high school.

The academic critique calls attention to declines in student scores on tests such as the SAT or the National Assessment of Educational Progress, the relatively small amounts of coursework in math and science taken by most students, the proliferation of electives in the curriculum that do not seem to call for high levels of academic competence, the large percentages of college students who need remedial help, and testimonials from college professors that students cannot handle college work. Several projects (PP, EQ, HES, NCE, ASEC, SG) claim or imply that most students do not achieve sufficient academic competence for higher education, for functional literacy on the job or for the activities of citizenship. Some students do achieve at high levels and some schools offer exceptionally effective academic programs, but most high schools are assumed to be seriously deficient in the degree to which they teach basic knowledge and thought processes in the subjects of English, math, science, and social studies. While national testing (summarized in Dearman and Plisko, 1982) has shown some improvement for disadvantaged and minority students on achievement tests, these groups continue to score lower than white, economically advantaged students. Claims of declining academic achievement have not been rebutted, except for critiques of achievement testing itself as an index of educational quality (Madaus et al., 1980), noting that actual rates of decline may be

considered small in magnitude (a few percentage points), and pointing
out that many high schools offer, and high-achieving students master,
coursework considerably more advanced in many subjects than was
available to previous generations.

The _vocational_ critique finds high schools deficient in educating
for job-related proficiencies and values.* It is alleged that
functional literacy in reading, writing, and mathematics is below
acceptable levels. Employers also complain about the lack of healthy
attitudes toward work (discipline, perseverance, taking pride in one's
work, punctuality, meeting commitments), which can also be considered
part of the "socialization" critique discussed below. Some critics
worry that high schools fail to teach specific job-related competencies
such as computer programming, and other facets of advancing technology,
but usually employers are least interested in training for specific job
skills, which they agree can be best learned on the job. The numerous
high school programs in which students leave school to work part-time at
a job typically call only for entry level work, with few opportunities
to develop advanced technical competence. The future employment
benefits of vocational education are difficult to substantiate, but much
evidence exists that a) outcomes for students enrolled in vocational
programs are not consistently more lucrative than for students in
general programs; b) outcomes also depend significantly upon students'
sex and race, in contrast to program characteristics; and c) vocational
programs within comprehensive high schools bring fewer benefits than

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*The ensuing summary is based on Grasso and Shea (1979), Carnegie
 Council (1979), David (1981), Woods and Hainey (1981); Benson (1981).

speciality or technical schools. A final aspect of the vocational

critique focuses on students' knowledge of career options and the

process of rationally selecting a vocation for oneself. Thousands of

schools, from elementary through high school have implemented

career-oriented programs, but the degree to which students develop

increased knowledge about career options appropriate to their interests

and abilities varies considerably among programs (Farrar et al., 1980b).

The developmental critique, less apparent in public discussion and

policy debate than either the academic or vocational critiques,

emphasizes a conception of human growth in which individuals develop the

capacity to differentiate and integrate a wide variety of experience.

From this perspective, education's main task is to help students move

from egocentric to sociocentric views of social life, with increasing

tendencies to incorporate in their feeling and thought, events,

institutions, ideas, and people with which they have had no direct

concrete experience (Kohlberg and Mayer, 1972; Lipsitz, 1977; Mosher,

1979; Bronfenbrenner, 1979; Newmann and Sleeter, 1982). The mastery of

academic knowledge and vocational competence is necessary for

developmental growth, but unless teaching of subjects is oriented toward

development, there is great likelihood that school learning will

inhibit, rather than enhance, development. Developmentalists argue for

example, that learning environments must include opportunities for

students to struggle with conflict, ambiguity, and challenges to

familiar thought patterns, along with opportunities to exercise

discretion, judgment and action that can contribute to the lives of

others. While isolated programs accentuate these principles, more often

high school instruction violates them. Students may learn either academic content or vocational skills without growing in a developmental sense. Three of the projects (EO, SEMG, IDEA) advocate and describe successful developmental approaches to adolescent education, but even they will leave many areas of doubt regarding the specific ways in which high schools can enhance development for all students.

The socialization critique challenges the values that schools communicate. Although there exists no systematic data base on the effect of schools on students' values and much data suggests that students simply adopt their parents' values on many topics (Goslin, 1969; Jennings and Neimi, 1981) claims abound, from all parts of the ideological spectrum, on values taught in high schools. Schools are criticized for teaching relativism, secular humanism, and traditional Christian morality. They are attacked both for teaching insufficient amounts of patriotism or too much of it. Analysts of hidden curriculum (Apple, 1979; McNeil, 1981) point to subtle ways in which schools teach submission and acceptance of conventional social forms, while others argue that schools fail to emphasize pro-social behavior or provisional morality (Wynne, 1980, Grant, 1981, Leming, 1981). Some find inadequate support for the individual work ethic in high schools while others find it emphasized to the fault of inducing unhealthy stress.

Through analytic discussions of school experience, ethnographies of individual schools, or public opinion polls, studies have characterized the schools' contributions to socialization, but the literature is dominated more by arguments over what values students ought to learn, than by careful studies of the values they actually do learn in school.

Although all of the projects represent assumptions about appropriate socialization, only GS focuses primarily on the values that schools teach, and only NAE intends to devote scholarly work to a rationale for the values that American schools ought to teach.

Whether one considers the academic, vocational, developmental, or socialization outcomes of high schools, persistent concerns have been raised about the differential opportunity of students to learn. Literature on tracking (Rosenbaum, 1976), on the way knowledge within classrooms may be used to empower or to control different groups of students (Sharp and Green, 1975), on staff reactions to students from minority and disadvantaged backgrounds, and on the effect of parents' socioeconomic status on access to school administrators, indicates consistent differences in the educational opportunities of privileged (i.e., white and affluent) students over those of color and low-income (Rist, 1973; Lightfoot, 1978; Steinberg, 1980). Aggregate data on levels of educational and occupational attainment show clear mobility between generations (Jencks et al., 1972; Featherman and Hauser, 1978), but in most comprehensive high schools, one is likely to find distinguishable "classes" of students: some clearly benefitting from many of the school's services, others tuned out, in trouble, going through the motions (Wehlage, Stone and Kliebard, 1980). Individual personality, ability, and unique family situations can explain some of the variation, but differential opportunity based on class, race, and sex must be included to provide a full understanding of differential student success in school. As indicated earlier, the projects as a

group show only scant attention to this problem, except for EQ, CSMS, and ES (based on elementary schools).

C.   What kind of teaching occurs in high schools?

A complete description of pedagogy would consider the nature of instructional materials, teachers' styles of interaction with students, responses to student success and failure (reward structures), methods of grouping, organization of time, etc. Classroom phenomena might be categorized on the extent to which they promote individualized versus group-based learning or student versus teacher-directed learning, and the ways in which different approaches seem appropriate to different learning objectives with different types of students. To date, none of the projects has produced a detailed analysis of pedagogy in high school, although this should come from SHS and SS. The general literature on research in teaching (e.g., Peterson and Wahlberg, 1979; Good, 1982), along with specific approaches such as "direct" instruction (Rosenshine and Stevens, 1981; Stallings and Hentzell, 1978) or cooperative learning (Slavin, 1980; Johnson et al., 1981) should be considered in surveys of high school instruction.

Adler (1982) has offered a provocative scheme (modified somewhat below) for thinking about prevailing styles of teaching. In the didactic mode of presentation, the learner is a passive recipient, trying to absorb a message from an external authority such as a teacher, textbook or film. Called the "banking" concept of education by critics, the central task here is to transmit information from an authority so that the student can reproduce it exactly as transmitted. In contrast, supervised practice, engages the learner more actively, still aiming

toward mastery of a body of content or a skill, but now coached or drilled by others (teacher or peers) who give periodic feedback on the student's developing performance (e.g., memorizing vocabulary, writing good sentences, playing the piano, or using a lathe). Finally, the pedagogy of critical inquiry calls upon students to react creatively either to the work of others (e.g., in great books, works of art) or to situations that beckon for solutions to unresolved problems (e.g., how can a society committed ostensibly to cultural pluralism also reinforce commitment to common values?). This third mode requires socratic questioning, active inquiry, intellectual synthesis.

Most high school teaching is didactic. Teachers do assign numerous worksheets and assignments requiring practice, but they rarely provide the prompt and useful feedback on how to improve that effective coaching requires. Even less evident in teaching is critical inquiry, which most studies of schooling have discovered only rarely. Critics deplore the lack of emphasis on supervised practice and critical inquiry, and at least three other features of teaching have also been forcefully criticized.

Much time is spent on cognitively simple forms of learning such as learning the capitals of states, the definitions of metaphor and simile, abbreviations in the atomic table. Complex material such as the economic interdependence of people throughout the world, the dynamics of ecological systems, or the relationship between literature and history is usually avoided. Second, instruction presents a conception of knowledge as absolute, certain, and final, rather than as relative to

cultural circumstances, tentative and evolving, or problemmatic.* Finally, because of class periods limited to 50 minutes, frequent interruptions, obsession with procedure rather than the substance of education, and lack of integration across subjects, instruction generally lacks intensity, concentration and sustained involvement.

Apart from formal pedagogic practices, teachers influence student learning through the role models they represent: the extent to which they show enthusiasm for learning, along with care and pride in their work, the extent to which they treat students fairly in matters of discipline and evaluation, and the extent to which they demonstrate general commitment to the education of all students or only to a favored group. Research suggests that if many students are to take school seriously, teachers must function in extended roles, showing general concern for students' welfare as well as adhering to effective pedagogic technique (Wehlage et al., 1980; Newmann, 1981). In many high schools, however, such role models are hard to find.

Ineffective teaching has been attributed to teachers' low intelligence and ability (compared to professionals in other fields), to the difficult circumstances of teaching as a profession (e.g., lack of definitive knowledge about effective practices, organizational pressures to maintain order among large groups of students, bureaucratic limits on autonomous professional judgment, disagreement on criteria for student success), to subtle effort by dominant classes to maintain social

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*The dimensions of simplicity-complexity or certain-problemmatic can be seen as independent. One may teach a complex structure of the atom but also communicate to students an unquestioning acceptance of this knowledge as absolute.

control, and to faulty teacher preparation (secondary teachers may take only about 20% of their university coursework in education, and rarely are they challenged to develop a coherent educational philosophy).

These trends in teaching at all levels of schooling (supported, for example, in NSF studies of the teaching of math, science and social science), should not, however, distract us from significant exceptions in particular courses and schools. Intense forms of learning do occur, with teachers who offer complex material in a problemmatic spirit, guiding students in practical exercises and critical inquiry, as well as in mastery of didactically delivered content. Projects such as AHS, SS, and SHS may show examples, and give some indication of their frequency in high schools today. The projects, however, do not include much research on how persons can be formally educated to become effective teachers.

D. What organizational characteristics significantly influence high school education?

We have already mentioned a variety of organizational characteristics that seem to hinder education. In elaborating on this theme here, we do not intend to suggest that organizational features inevitably stand in the way of constructive improvement, nor to absolve individual educators from personal responsibility for offering education of high quality. Projects such as HSB, ES, CSMS, SEMG, IDEA, WRISE, UUS, UES, have already described "good" schools that apparently overcome some of the following obstacles. The point of describing what is known about organizational determinants is, therefore, not to stifle well-intentioned efforts at school improvement, but to call attention to some otherwise subtle dimensions that must be confronted.

Recognizing that high schools differ in many respects, certain common features of the "comprehensive public high school" will be found frequently in high schools chosen at random: mass processing of students, specialization-diversification of staff, loose coupling, and involuntary clientele.* Each characteristic poses considerable problems for meaningful reform, not unique to high schools, but exacerbated there, because comprehensive high schools attempt a more complex set of services than schooling at lower levels.

An economy-of-scale argument holds that a greater variety of services can be offered in schools with large enrollments (say, more than 1200 students). Although a wider variety of services can be offered to special groups of students (e.g., handicapped) and some students may receive extensive personal attention, in large schools, where students tend to be instructed in large groups (for the sake of economic efficiency), teachers have less opportunity to respond to the individual needs of all students.

The larger the number of people in the organization, the more potential for alienation any given student is more likely to be considered a stranger by a larger proportion of the total community than would be true in a smaller organization. As Barker and Gump (1964) showed, participation rates are higher in small schools, creating more of a sense of belonging or connection to the school among all members.

Several of the projects recognize the challenge to individualize instruction and to make high schools more personal, human institutions,

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*See Miles (1981) for a more thorough treatment of the common organizational properties of schools.

but none (except possibly AE) seems to take a strong stand that high schools (or student body groupings within schools) ought to be limited to a particular size, and none seem likely to clarify beyond earlier work (Schneider, 1980) the uncertain effect of school size interacting with other variables on student learning. Several high schools ameliorate negative results of mass processing through smaller units, or house systems, in which students and staff spend much of their time. However, significant research on the effects of house systems in large schools has not been reported.

Like other formal organizations, high schools are organized according to the principle of specialized division of labor, invoked particularly by program demands that the curriculum be highly diversified. Separate specialists are hired for the teaching of physics, biology, driver education, U.S. History, typing, woodworking, mathematics, music, physical education, etc., as well as for administration, counseling, custodial work, or food service. Specialization-diversification is supported for its apparent efficiency in delivering to students a higher quality of service than could be obtained by a few teachers responsible for all aspects of a program. On the other hand, such specialization-diversification (combined with mass processing) also leads to fragmentation in learning and in student-teacher relationships, and the loss of a coherent sense of purpose for the institution as a whole (Cusick, 1981; Newmann, 1981).

One way to reduce fragmentation within a school is to focus the entire program upon a single area of competence such as music or electronics (speciality schools). Antoher is to offer a variety of

subjects, but to maintain integration by having teachers teach many
subjects to a single group of students, as elementary teachers do.
Another alternative is to have teachers confine teaching to one subject
at a time (to several groups of students), but to rotate teaching
assignments frequently enough so that teachers (with more comprehensive
backgrounds) will consistently show students the connections among
subject fields. Some projects aim toward decreasing specialization-
diversification by reducing electives, concentrating more on a common
curriculum (e.g., PP or RGE), but none seem to have emphasized these
alternatives.

Loose coupling refers to lack of tight coordination among several
parts of a system (the lessons of a math teacher and biology teacher may
have no impact on one another, a principal may not persuade every
teacher in the school to concentrate on student writing). Weick (1976)
and others (Deal et al., 1975; Meyer and Rowan, 1978; Abramowitz et al.,
1978) have explained how the ethic of professional autonomy (teachers
working alone), along with inconclusive knowledge about the proper goals
and methods of education, make it extremely difficult to operate schools
as tightly coordinated enterprises (such as fast food restaurants or
automobile assembly lines). Specialization-diversification and loose
coupling both tend to fragment students' education, but loose coupling
also dilutes the sense of a unified mission for the school as a whole
and makes it difficult to coordinate the organization's resources in a
rationally consistent manner (teachers are free even to undermine one
another's work). Those projects (e.g., ES, CSMS, SEMG, SSE, GS) which
study the effects of consensus and high expectations among staff--a

school culture that brings coherence and coordination to diverse parts of the school--recognize that maladies of "loose coupling" can be overcome, but it requires strong leadership and commitment of staff to work cooperatively in support of collective purposes.

The compulsory nature of schooling creates an involuntary clientele which, combined with mass processing, poses the potential of unruly mobs in schools, and research highlights the exceptional effort expended to control student behavior (National Institute of Education, 1978; Stake and Easley, 1978). This leads to the dominance of some instructional styles over others (e.g., emphasis on didactic teaching and simple cognitive tasks, rather than critical inquiry into complex issues), and adds to motivational problems discussed earlier. An involuntary clientele also hampers organizational renewal. As Hirschman (1970) has shown, organizations, from private businesses to public bureaucracies, are most likely to engage in productive self-improvement when their clients have some voice in the management of the organization and when they have the power to leave the organization if it fails to serve them. Voluntary membership is important, but if all clients desert at the first sign of poor organizational performance, the organization will die rather than improve. Organizations are most likely to improve when the threat of exit is real, but when clients feel enough loyalty to try to reform the organization through the exercise of voice.

Adult-planned education for youth will always remain involuntary in a sense, but only a few of the projects (e.g., AE and IDEA) seem to emphasize ways in which students might exercise more choice in the selection of schools and teachers, voice in school governance, or ways

in which schools and teachers might exercise more choice in the students
they serve. Ideas such as magnet schools or vouchers represent ways of
reducing ill-effects of involuntary clientele in high schools.

E.   How do high schools relate to the larger community?

Experience in a particular school depends upon local norms that
students and parents bring to schools, socioeconomic conditions, and
mandates from external sources such as state and federal agencies,
accreditation groups, unions. A diverse literature (e.g., National
Committee for Citizens in Education, 1975; Peshkin, 1978; Burns, 1979;
Gottfredson and Daiger, 1979; Wirt and Kirst, 1982) has mapped
interactions between schools and community variables, and some of the
projects will add to this (especially AHS, SHS, MS, SS, FEP). We
consider the school's relation to community from two perspectives:
issues posed by the principle of democratic political accountability,
and the problem of achieving integration between the experience of
schooling and life in the community at large.

According to the principle of democratic accountability, schools
must serve the public, responding to demands for service which citizens
express. Although certain groups (especially low income and minority)
have been consistently unable to speak with power equal to other groups,
clear effort has been made to enhance schools' accountability to the
public. The citizen participation movement has amplified the voice of
diverse constituencies such that the schools face a highly heterogeneous
set of demands and formal mandates: general education, career education,
opposing approaches to the teaching of values, providing equal
opportunity for minority, handicapped, women, non-English speaking

students, services ranging from recreation to psychological counseling to job-placement. A well-intentioned response to public demands, given great diversity in the set of demands, risks the result that the educational program makes politically acceptable accommodations to diverse interests, but cannot be molded into a coherent, coordinated enterprise.

Democratic accountability also threatens staff sense of professional autonomy or local ownership for its program. Studies of implementation affirm the importance of school site autonomy in meaningful innovation (Berman and McLaughlin, 1978; Berman, 1978; Farrar et al., 1980a). External mandates in the form of detailed blueprints and complicated regulations, however justified they may seem in order to achieve equity or to raise the quality of education for all students, can undermine local autonomy and control (Wise, 1979). Most of the projects claim to respect the need for school site autonomy, but several are generating universal, non-local standards of excellence (PP, EQ, HES, ASEC, NAEP, NCE). Even projects that work largely toward school responsiveness to the local community must confront the threat this entails to teachers' autonomy as professionals. None of the projects seems to face this question directly, for those that concentrate on local development (e.g., RGE, WRISE. IDEA) work primarily within school staffs.

Another issue in the school's relation to community is the extent to which the schooling experience is isolated from or integrated with non-school life. A considerable literature (Conrad and Hedin, 1977; Newmann et al., 1977; National Commission on Youth, 1980; White, 1981),

but apparently only four of the projects—EBCE, UES, IDEA, AE, invites

schools to make greater use of community resources. Many schools have

programs for parent volunteers in the school, for placing students for

part of the day in businesses and service agencies, and for bringing

outside authorities into the school to offer special instruction (e.g.,

attorneys who assist with law-related education). Staff members and

external evaluators describe difficulties of coordinating

community-based education with school-based instruction, but students

consistently endorse work-experience, community service, and other

out-of-school programs as being educationally worthwhile (Conrad and

Hedin, 1981). Reform efforts represented in the projects seem to focus

more attention on high schools shaping up their internal operations than

for extending learning activities beyond the school.

Large proportions of high school students hold time-consuming jobs.

According to 1980 data from HSB (Peng, 1981), 42 percent of sophomores

and 63 percent of seniors were employed for pay at least one hour per

week. Of those employed, 36 percent of sophomores and 71 percent of

seniors worked more than 15 hours. Of employed seniors, 10 percent

worked 35 hours or more, and the average number of hours worked was 19

(13 was the average number of hours for working sophomores). Opinion

seems divided, however, on the proper relationship of high school

programs to the world of work.

If high schools construe their role modestly, as providing only a

limited set of educational influences (argued by Coleman, 1974), they

will act as brokers, trying to wean students from dependence upon

school, integrating them quickly into economic responsibilities beyond

school. Carnegie Council (1979) argued that high schools should assertively facilitate the transition of students into the workforce. Work is viewed positively as contributing to healthy socialization and development. It is assumed that working students will be in responsible roles, with opportunities to feel useful, to interact with a variety of adults, and to learn specific vocational skills. Research indicates, however, that much adolescent work is dull, offers little cognitive and technical challenge or significant responsibility, that it can reinforce destructive human relations, and can conflict with school or non-paid activities of greater educational value (Greenberger et al., 1982).

A contrasting point of view, characteristic of the Dewey tradition, assumes that schools must offer expanded opportunities for challenge and models of excellence not otherwise available in society at large. This philosophy also emphasizes the importance of practical experience and action in learning, but it suggests that the school itself become an ideal institution. Much experience in the "real world" is not helpful to growth, and the school is necessary, therefore, to assemble a comprehensive representation of positive learning experiences. The contrast between the original Parkway school-without-walls and a progressive private boarding school illustrates the difference between these two views of the school's relation to community. The conflict is not necessarily between "thinking" and "doing," but between different notions as to where productive learning experiences are most likely to be found.

We should also consider ways in which high schools themselves may vitalize community life. In smaller communities, the high school,

through its athletic programs, drama performances, fund-raising drives, graduation ceremonies, draws people together in public, civic-minded activity (Peshkin, 1978). In towns with only one high school the school can become a cultural center, and, in the vision of the community school movement, the major hub of public life, offering not simply educational services to youth, but adult education, community recreation, meeting places for private and public groups. In metropolitan areas served by several schools with a highly mobile population, the high school has much less potential as a community-building institution.

The closing of neighborhood elementary schools has attracted some attention to the school as a resource for communal life, but literature on the high school, including all of the projects has generally ignored this dimension. Instead it is usually assumed that high schools exist for the limited purpose of providing effective education to individual students. Local control and sense of ownership of high school programs are endorsed more as a means for enhancing individual services responsive to local priorities, than as vehicles for stimulating civic cohesion or cultural celebration (non-school institutions are assumed to discharge that function).

F.   How Do Schools Improve?

Most proposals for improvement tackle one or a few problems at a time, rather than attempting comprehensive changes in school structure and program (Newmann, 1981). Studies of school improvement, therefore, tend to focus on innovations in specific areas such as reducing vandalism, drop-out prevention, changes in curriculum content, new programs such as career education, increasing basic skills or academic

achievement, desegregation, or services for the handicapped. Although research has not described comprehensive high school reform efforts, findings from studies of innovations in these more specific areas have been synthesized into some factors commonly cited as critical to high school improvement. Strong administrative leadership is perhaps most frequently recognized as the key factor in school change, but this concept leaves much to be explained as to how effective administrators cope with the complex factors affecting their work, especially school boards, teacher unions and external agencies. Other critical factors are school-wide staff support and the community at large, periodic setting and monitoring of school-wide goals, local adaptation and "ownership" in implementing external mandates. None of the projects intends to develop or test quantitative models of school improvement that might clarify the relative power and interactions among above factors.

Four of the projects (RGE, IDEA, WRISE, SS) work to support school improvement as locally defined, and much literature testifies to the importance of local empowerment in terms of facilitating citizens' input into school policy (National Committee for Citizens in Education, 1975), enhancing the role of teachers and students in school decisions (Klausmeier, et al., 1980; Mosher, 1980; Little, 1982) and decentralizing budget decisions from central office to local schools. In spite of much support for local "ownership" of school improvement projects, there is little helpful description of how high schools manage locally initiated reforms, weaving their way through the complex web of actions by school boards, teachers' unions, competing local interests

and state and Federal agencies. The process of local high school improvement has been described in case studies (e.g., Weisberg, 1981; material from UES and UUS; Daedalus, 1981), but powerful, generalizable models have not been discovered or tested.

Recent literature on school "effectiveness" may increase our understanding of how to improve high schools, although the literature is based largely on research in elementary schools, and few projects (HSB, CSMS, SSE) have investigated the problem systematically across a sample of high schools. Selecting criteria for effectiveness poses problems, for great disagreement exists on the most significant goals for high schools. One might legitimately evaluate a school's effectiveness in terms of the students' academic achievement, their social-psychological development, the quality of life in the school (Epstein, 1981), students' and parents' levels of satisfaction with the school, or other criteria. Since literature on effective schools includes only limited discussion of alternative educational goals, we avoid consideration of such value issues here, assuming they are reflected in our discussions of program content and school climate.

Most studies of effectiveness have used measures of academic achievement, but even this decision (much disputed among authorities) leaves several further issues unresolved. Indices of effective achievement could include comparisons among schools in students' entering and leaving scores, the location of a school's mean score in relation to district or national means, or the extent to which students perform beyond expected levels based on their "mental ability." Each of these might be controlled for students' pre-test achievement scores or

other variables (such as socioeconomic status) that might otherwise disguise schools effects.

In spite of such issues, (along with problems in research design) a portrait of an effective school, not specifically elementary, middle, or high, has been constructed from diverse studies. According to the review by Purkey and Smith (1982), important characteristics involve both organizational-structural variables susceptible to policy manipulation, but also aspects of school climate and culture that must develop organically and cannot be easily manipulated through administrative mandate. Organizational level attributes include autonomy for an individual school to manage its quest for high achievement; strong leadership from the principal, staff stability (as opposed to frequent transfers); coherent (rather than fragmented) curriculum coordinated across grade levels; school wide, staff-initiated development activities; parental involvement and support; school-wide recognition of academic success; maximum time on learning tasks, district support for school policies. These attributes presumably help to encourage evolution of four critical dimensions that Purkey and Smith call "process-form" variables: collaborative planning and collegial relationships, sense of community, clear school goals and commonly shared high expectations, order and discipline.

Some variables in this 14-part model have been confirmed in previous research, but the complete model has never been tested quantitatively and it would be difficult to do so, given the latitude for conceptualization of many of the variables. Purkey and Smith emphasize that schools develop their own unique approaches to building

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collegial relationships and establishing shared, clear goals; and that it would be a mistake to try to impose a recipe of 14 conditions on a high school in order to increase academic achievement. Aware that their own portrait has been constructed largely from studies of how more effective schools differ from less effective schools at a given point in time, Purkey and Smith note that previous research has failed to show how schools actually change in order to become more effective. As a group, the present projects are not likely to shed much further light on this problem, although some such as IDEA, RGE, WRISE, and SS are deeply involved in local school improvement efforts.

Further limitations of the model arise in the potential for contradiction within the list of attributes. In seeking additional parental input, for example, a school may exacerbate conflict and ambiguity in goals, when diverse constituencies press for possibly incompatible priorities such as increased academic or vocational offerings. A school's autonomy may be legitimately challenged by a district office if the school neglects special needs of minority or disadvantaged students. Policies aimed at order and discipline can threaten a sense of community if they are not enforced fairly. We raise such qualifications not to dismiss the value of this conception of an effective high school, but to indicate that the pursuit of these guidelines is likely to raise a number of additional issues for which the research literature has few answers.

Perhaps the most significant contribution of effective schools research is the finding that schools are not likely to be improved exclusively through one-dimensional solutions such as minimum competency

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testing for graduation, increased academic coursework, assigning more homework, eliminating elective courses, or cracking down on student discipline. As a school or district reacts to proposals of this sort, it should pay special attention to the potential of any given change for both reinforcing and undermining each of the many other dimensions that function interactively to produce an effective or ineffective school. As Wehlage, Stone and Kliebard (1980), the Berlaks (1981) and others have shown, school improvement demands inconclusive resolution of a number of dilemmas in school practice, rather than adoption of a discrete set of practices whose effectiveness has been demonstrated.

IV. A Perspective on Recommendations for High School Improvement

Having described the projects and discussed their possible contributions to knowledge about high school education, we now examine critical issues related to their recommendations. Recommended changes can reflect the three levels of generalization discussed earlier. Some may be intended for all high schools (e.g., the PP recommendations for a common learning). Some may be aimed only at limited sets (e.g., urban or rual, alternative, ineffective, desegregated, vocational, large schools or small ones, schools with a severe dropout problem or those with high proportions of college bound students). Qualified recommendations are helpful, because they can acknowledge tremendous differences among high schools, without concluding that all constructive change must be entirely locally prescribed. Proposals for qualified sets of schools, however, require as much caution as universal recommendations, because variation within a set can be as significant as

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variation between sets. Thus far projects' recommendations reflect little effort to differentiate among types of schools (except public and private) or plans for reform that might vary according to school type. Of course, many changes will be helpful only if designed idiosyncratically to apply to a particular school at a unique point in time. While schools continually struggle with questions of their own improvement in ways unreported to the public, most projects are unlikely to make recommendations in the idiosyncratic form, because they tend to be concerned with schools in general.

A.   Critical Choices in Five Areas

Here we summarize five areas, parallel to topics previously discussed--program content, staff performance, school climate, the school's relationship to the larger community and the process of school change. For each we discuss critical choices in formulating plans for improvement.

1.   Program Content

In what ways should the content of high school education be improved? In Section III we summarized four perspectives (academic, vocational, developmental and socialization) on priorities for the high school program. At times the perspectives will clash dramatically, as in arguments about the resources devoted to college preparatory academic programs versus vocational training. At times conflicting choices within a perspective may be more salient than choices between perspectives. That is, controversy over the primary values of socialization or over the emphasis on sciences versus humanities within academic preparation might polarize a high school as much as controversy

over academic versus vocational studies. Academic curriculum is conventionally assumed to develop critical intellectual faculties, transferable to a wide variety of human challenges, but it is often taught as a set of trivial, arbitrary behaviors resembling the most narrow forms of vocational preparation, violating human intellect, creativity, and curiosity. Conversely, students involved in some vocational programs may find extensive opportunities to develop critical skills, problem-solving competence, and mastery of subject matter appealing to advocates of general education. Discussion about program content should consider choices that transcend all four perspectives. To what extent should all students learn how to conduct intensive problemmatic inquiry? Must such inquiry be taught only through complex formal language systems, or can it also develop through concrete, unformalized, experience?

Without addressing these issues explicitly, several projects ask for higher academic standards in terms of course requirements and specified competencies. Although we can expect a major push to upgrade science and math curriculum, bringing curriculum up to date with university-generated knowledge seems less emphasized now than in the reform movements of the 1960's. Concern seems to be directed more toward underlying priorities and general integrity of high school programs than to revision of content.

Projects seek a more coherent high school program by reducing the number of elective courses, adding required courses, and prescribing as a major part of the four-year program a common curriculum, or general education sequence that all students study. Such changes can bring more

order to students' course of study, but will not necessarily enhance intellectual integration. So long as knowledge is pursued exclusively through separate courses bounded by disciplinary conventions, there is little hope for intellectual synthesis in students' education. Common course requirements for all can produce a common education, but not necessarily an integrated one.

The quest for a common curriculum raises other problems. A reasonable case can be made for a variety of schemes for organizing knowledge, illustrated by the different frameworks proposed by PP, AHS, RGE, EQ (see also Phenix, 1964). Since a reasonable case can be made for each scheme, it is most difficult to explain why one is preferable to another. Perhaps the choice of any particular scheme is inconsequential so long as students do experience a common learning. As individual schools choose different schemes, however, students in the society at large are unlikely to experience a common learning. In practice even students within a particular school are unlikely to experience common learning, because the prevailing approach is to specify course requirements and credits, not to stipulate common content for all students. The emphasis which national projects place on local school implementation of the specific knowledge to be taught reinforces the probability that students from different schools will vary in the knowledge and skills they acquire. In contrast to curriculum rationales, and lists of competencies, nationally marketed textbooks and tests probably exert more influence toward creation of a common learning.

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Program integration can also be approached vertically, through sequential development of knowledge from kindergarten through high school (and beyond). Three of the projects (EQ, HES, ASEC) work toward more coordination between high school and college, but none have attacked the problem of coordinating elementary and secondary programs (which local districts face continuously through their scope and sequence or articulation committees). Sequential integration will continue to be difficult for at least two reasons. Few subjects or disciplines possess an inherent sequential logic of how material must be learned (math, the sciences and foreign languages contain perhaps the most powerful sequential structures). Since the learning of most subjects could reasonably proceed according to a variety of sequences, the choice of any given sequence will be hard to defend rationally as the best. Second, the value placed in this culture on political decentralization and individual professional autonomy invites resistance to coordinated plans from kindergarten through college, such resistance being fueled by cultural controversy over the goals of education and by the absence of self-evident sequential logic within subjects.

It may be assumed that lower levels in the system exist largely to prepare students for higher levels, but behavior at all levels suggests that the assumption may not be widely shared. Instead, high school educators might well ask, "Why should high school curriculum be dictated either by the needs of universities or by a developmental middle school philosophy? Why shouldn't both middle schools and universities tailor their curriculum to the unique needs of high school students?" In spite

of abundant commentary on the need for greater vertical integration, these issues remain unresolved.

Debates over priorities for program content often loos_ sight of more fundamental choices in the relationship of public education to social policy. Public policy dialogue on the need for school accountability has heightened an apparent conflict between "excellence" and "equity" in education (Greene, 1981). In simplifying a number of debates we see three alternative social objectives. The essential purposes in contention are a) to educate all students to common minimum standards of competence, b) to increase standards of excellence to make sure that the talents of the most able students are fully realized; or c) to insure that all students fulfill their innermost capabilities, which can be indicated by reducing the correlatio' between academic achievement and students' social background. Thus far the projects have not illuminated discussion on the relationship of program priorities to these issues, nor have they presented much in the way of comprehensive social theory (such as Green et al., 1980) to resolve contradictions among the three alternative policies. These are obviously difficult value questions, but program proposals should be scrutinized for their implications on such policy issues.

2. Staff Performance

Most would probably agree that high schools will be improved largely through improving the performance of individual classroom teachers. There may be diverse definitions of effective teaching, calling for different styles and talents, depending upon goals and classroom conditions. At the same time, we can suggest some

characteristics desirable for all staff: accurate, up-to-date knowledge in one's field and in teaching techniques; demonstrated excitement, interest, curiosity in one's field; self-reflection about one's work, one's effectiveness and how to become better; a commitment to the education and achievement of all students; concern and support for the welfare of the entire school community.

We try to secure teachers of this sort through two general approaches. Structural-organizational strategies, for example, may hold teachers accountable for teaching specific competencies to all students; create smaller schools so that teachers can become more personally familiar with, and thus more committed, to all students; limit the transfer of teachers to build staff stability within a school so that loyalty to the whole school develops; raise teacher salaries to attract more able teachers; make arrangements for teachers and students to choose one another; or organize instruction through team planning and teaching.

A second approach (which may also involve organizational changes) focuses largely on the training of teachers, either at pre-service or in-service stages; for example, by adding licensing requirements; providing release time for retreats, workshops, sabbaticals; incentives for university coursework; opportunities to assist in the training of novice teachers.

Each approach tries to help teachers become more "professional," and efforts to enhance both organizational climate and teacher education can be hampered by limited financial resources, resistant attitudes within a school, union agreements and government policy. The

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improvement of teacher performance, however must come to grips with three even more troublesome problems: the ability of people who teach, the role of teacher as a "street level bureaucrat," and persistent dilemmas in teacher education. The intellectual competence of teachers, in comparison to other professionals, leaves much to be desired, and the status and financial rewards for teaching in the U.S. steer the most able into other careers (Vance and Schlechty, 1982). Proposals for excellence in teaching need to be viewed realistically in relation to the intellectual mediocrity represented in the profession.

Regardless of talent, however, teachers, like many other professionals in human service bureaucracies (Lipsky, 1980), teachers are severely constrained in their autonomy to use their best professional judgment and skills. While they are the primary resource for helping clients, their accountability to the larger organization and to constituencies other than the individual student makes it frustratingly difficult to help many students.

A final problem is that additional education often cannot provide clear answers for many questions of practice. The best it can do, on many issues, is to help teachers become more reflective about persistent dilemmas. This is useful, because it increases awareness of alternatives and prevents arrogant acceptance of false solutions, but it leaves many problems to the judgement and discretion of the individual, not to be solved through increased education.

The point of these observations is not to discourage staff development, but to recognize challenges to improving staff performance. Several projects have worked with teachers, but none seems to have

considered the problem of staff development from this broad perspective (HES, for example, simply recommends tightening of requirements for teacher certification). The work at the Institute for Research in Teaching at Michigan State and the Research and Development Center for Teacher Education at University of Texas-Austin should be reviewed in deliberations on how to improve high school teaching.

3. School Climate

The projects' extensive concern with school climate differs from more familiarly advocated specific program interests in other reform efforts. Usually, school improvement is provoked out of the necessity to react to interests who press schools to adopt or to upgrade special programs--in environmental education, human relations, sex education, remedial reading and writing, bilingual education, global studies, competency testing, career education, or opportunities for work-study and community service. A significant body of opinion now exists that the overall integrity of a school's operation is at least as important as the provision of special services to special interest groups. While the literature on school climate offers a number of clues as to what variables must be considered (e.g., consensus on clear goals, high expectations for students, collegial relationships, sense of community), Purkey and Smith (1982) have described the difficulty of building such qualities through administrative actions. Even as a school may take deliberate actions to improve its overall climate, it will have to respond in some fashion to demands, which cannot be lightly dismissed, from diverse constituencies which may disrupt efforts to bring more coordination and coherence to the school community.

It remains to be seen, for example, whether a large high school with a highly diverse set of offerings, and an individualistic orientation which undermines integration and general school loyalty, can be changed from an atomized school, with much dissent about fundamental goals and acceptable behavior, to a coordinated enterprise showing commitment to common purposes and collective caring.

The thrust of popular opinion (and research) is that school climates need to be tightened or more focused toward consensus and coordination within the institution. Surprisingly little has been written recently about the need for enhanced choice, freedom, or even the productive use of conflict within schools. We should inquire, however, as to whether schools with cohesive, doctrinaire climates, enforcing blind conformity in thought and behavior can be opened enough to allow genuine democratic inquiry and choice among alternatives, without destroying their previous sense of community and common mission.

Although much research has recently elucidated aspects of school culture or climate (Anderson, 1982), there is very little information on how a school deliberately tries to create or change a particular climate. If projects could enlighten us on how schools cope with the tension between the quest for communal cohesion and for individual choice, this might help to suggest strategies for arriving at a constructive balance. Projects have not, to our knowledge, construed the problem in these terms.

4. Relationship of high schools to the community at large

This is not the place for extended discussion on the relationship between education and community (see Newmann and Oliver, 1967; Oliver,

1976), but disputes over education often reflect alternative conceptions about the communities or communities of interest that high schools should serve. This is illustrated in our earlier discussion of high school as an ideal community itself versus a broker among interests in the larger community, and in policy debates over public subsidies for private schools.

In pre-industrial times, education (even after it became formalized) reinforced well-defined, reasonably stable roles, a consensually supported value system, and a set of communal institutions in which it was often difficult to distinguish "public" from "private" interests. With industrialization and the immigration of culturally diverse groups to the United States, the distinction between "private" (i.e., ethnic and religious) communities, and the interests of the public at large became more problemmatic. In a pluralistic culture, it would presumably be possible both to celebrate unique cultural traditions and to develop citizenship oriented toward a more universal public community, deriving its strength from local culture but at the same time allowing members of parochial groups the freedom to "grow" beyond particularistic traditions and communities. The tensions between education's obligation to serve particularistic communities versus a more general sense of public interest (Butts, 1980) is illustrated in disputes on how students should be assigned to high schools and how common the curriculum should be.

The argument for a broad, cosmopolitan sense of community, emphasizes human interdependence on a large scale, a constitutional and ethical commitment to equal rights for all people (Butts, 1978; Boyer

and Levine, 1981; Adler, 1982). Though private schools should be allowed, the public interest can only be served through a primary commitment to publically financed and regulated education in which students are assigned to schools, not on the basis of private or sectarian interests, but largely on the basis of residence and birthdate (two official indices of one's identity in the body politic).

The curriculum should focus not on the aggrandizement of individual students but upon the shared knowledge, skills, and attitudes required for justice in a democracy. This conception of public community assumes the possibility of society-wide consensus on values which encourage just resolution of disputes among individuals, sectarian interests, economic interests, or contending political jurisdictions. Historians have questioned the workings of such consensus in practice, but this rationale still provides a philosophical basis for schooling to be oriented mainly toward public rather than individual or sectarian interests.

An alternative position, highlighted in arguments for cultural pluralism, the rights of families and religious groups, contends that the vitality of community life lies not in an abstract commitment to the public interest of a mass society, but instead in local, face-to-face communities expressing particularistic values, life styles, private and religious preferences that the populous at large may not share. The quest for a particularistic sense of community arises in part from reactions against impersonal public bureaucracies that claim to be impartial, but which actually impose arbitrary, objectionable requirements on large numbers of students, which prevent people from

relating to one another in human ways, and which fail to deliver high quality services such as education. According to this position, schools should be based on voluntary communities of interest rather than enforced integration of diverse students, for these would stimulate more serious effort, respect and community spirit. This position, finding support in advocates for tuition tax credits, family choice in education (Coons and Sugarman, 1978) and the revitalization of mediating structures (Berger and Newhaus, 1977) argues that the public interest is best served through the strengthening of private institutions.

Thus far, discussions of common curriculum, the components of effective schools, the upgrading of teacher education, or the likely winners and losers from tuition tax credits have shed little light on the more fundamental dilemma of how public high schools might both enhance the public interest, conceived in broad societal or global terms, and at the same time vitalize particularistic communal life. A theoretically attractive solution is to organize education on communities of interest, rather than residence, but through a publicly financed system of vouchers and magnet schools, with strong regulations to guarantee adequate resources for disadvantaged students and incentives for maintaining diverse student populations in schools.

Even if the above issue were resolved, the scope and breadth of the services that high schools provide must be defined. Historians have explained the declining role of family, church, workplace and neighborhood in the socialization of youth and in providing services to the community at large. Schools have been asked to assume many functions formerly performed by other community institutions: custodial

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care of children, including feeding and responsibility for their health and fitness; recreation in non-school hours; counseling services; career orientation and placement; instruction in homemaking and driving; responding to groups with special needs such as handicapped, non-English speaking, or refugee students. Some reformers explain difficulties of schooling in terms of its expanded responsibilities, and suggest that its scope must be narrowed. Others believe high schools should serve the community in more comprehensive ways. Neither position is customarily presented in terms of a detailed rationale for youth policy. Proposals for high school reform should not limit their discussion to educational issues as defined by literature on curriculum and teaching, but should also address broader questions such as the structure of community and previous literature on youth policy (e.g., Timpane et al., 1976; National Commission on Youth, 1980).

5.   The Process of Institutional Change

To what extent should high schools be improved through standards issued from central authorities or through local schools that determine their own standards? These strategies may not always be mutually exclusive, for local institutions could conceivably participate in the formulation of centralized standards, and they could also voluntarily agree to subscribe to them even if excluded from their formulation. There is sufficient potential for serious conflict between the two strategies, however, for school reformers to examine carefully the meaning of local initiative in a technologically advanced society.

At first glance the rationale for local control seems unassailable, but actually it is continuously threatened by at least four

considerations that invite the exercise of centralized authority: efficiency, expertise, funding, and justice. Efficiency in the daily operation of institutions, especially those interdependent upon others, requires delegation of power to central sources (such as principals, superintendents, school boards, state agencies). Local citizens, including teachers, with limited expertise in the subjects taught in school, must often rely on expertise of non-local scholars, technicians, or artists who establish criteria for achievement in the fields from mathematics to metal technology. Further limits on local autonomy arise from the necessity of schools depending upon financial resources from external agencies. Finally, all schools, regardless of local preferences, have obligations to the society at large, defined, for example, through Constitutional standards that guarantee equal protection of the law to groups who might otherwise be discriminated against, that preserve freedom of speech and inquiry, and that assume due process of law. If local initiative violates such principles of justice, it invites intervention by central authority. Legitimate appeals to efficiency, expertise funding, and justice can thereby stifle empowerment in local schools and communities.

None of the projects consciously seeks to inhibit local democratic empowerment, but a number represent centralized standards for excellence (PP, EQ, HES, ASEC, NAEP, GS, NAE). Whether such standards have the effect of inhibiting local empowerment or of inspiring local schools to direct their energies in productive directions remains to be seen. Any attempt at high school improvement, however, should assess the extent to which it aims largely toward local democratic empowerment, regardless of

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the ultimate directions that a school may choose to follow, and the extent to which its primary interest lies in establishing what it considers to be externally valid standards of quality for a school, regardless of how local constituents may view such standards.

It is inappropriate to construe school improvement simply as a choice between local control and imposition of external standards, because neither local constituencies (parents, teachers, administrators, students) nor external authorities (state agencies, federal agencies, colleges, publishers) tend to speak with one voice. Within both local and external sources, diverse constituencies usually compete for influence. Ideally the school improvement process would be seen as a dialectic among many parties in which well-intentioned reformers argue vigorously, but also listen, suspend judgment, and modify their views in response to legitimate concerns of opponents. Dialectic conflict of this sort is healthy and frequently possible among individuals, but unfortunately, institutions are often locked in positions that make it difficult to translate constructive individual dialogue into organizational policy.

Policy from district, state and federal agencies has characteristically relied on blunt mechanisms for improving schools: funding formulas, eligibility requirements, governance mechanisms, evaluation procedures. Such tools are blunt in the sense that their implementation can both undermine and support ostensible policy goals, but in ways inforeseen by policy-makers. Desegregation plans have led to segregation within schools, Title I funds have supported educationally disruptive "pull-out," mainstreaming has increased

paperwork burdens that detract from instruction. Even a local district
requirement for minimum competency testing or increased credit
requirements in English may not raise student proficiency in
composition.

Research on unanticipated effects of externally initiated change
supports the idea that central policy would be better formulated through
a process of "backward mapping" (Elmore, 1980). District, state, and
federal policy would be formulated primarily in response to specific
classroom and school level concerns which would then be "mapped
backward" toward the statehouse or Congress to formulate policies that
minimize unforeseen and counterproductive results. A major challenge
for high school reform proposals is to see whether they can pass the
test of "backward mapping."

A final choice in approaching high school improvement is to decide
upon the scale and comprehensiveness of the effort. Having noted the
alternative levels of reform (program content, teaching,
climate-organization, relation with community) and the multitude of
interests involved in each level, comprehensive coordination of all
levels may seem not only impractical, but even impossible to
conceptualize. Some educators work passionately toward grandiose,
coordinated plans of reform for a total system (or school), but most
tend to focus on limited projects where they perceive some limited
chance for success--better equipment in the physics lab, a policy for
increasing attendance and keeping security in the halls, a special
program for marginal students, a program for the gifted, an experimental
partnership with a local business.

Such isolated, piecemeal efforts may be criticized as giving only a short-term illusion of improvement, while failing to attack the fundamental problems of school in a sustained way. On the other hand, "small" innovations can be seen as the most significant opportunities that educators have to act as committed professionals. Rather than assuming that high schools can be improved only through comprehensive, coordinated plans (which themselves often fail), it is possible to approach reform from different, perhaps more chaotic, perspective. An alternative is to offer every staff member within a school some margin of freedom in which to devote special efforts toward school improvement, and to support these efforts with special recognition. If the zeal to build rationalized, coordinated programs is to be channeled constructively, it must respond to the human tendency to improve the world through personally defined margins of freedom.

B. Neglected Problems

Throughout this review we have identified issues that remain unresolved and/or unexamined, despite the extensive and varied work of the projects. Here we call attention to two issues which, in this society, complicate most attempts at high school improvement, whether aimed at program content, staff performance, school climate or the empowerment of local schools. The first is how to respond to the enormous variation among human beings, and the second is how to face honestly the limits of institutional reform.

1. Student Diversity

That students differ substantially in their competencies, their
values (including interests, aspirations, standards of the "good"), and
their personalities (persisting styles of human interaction and of
processing information), is typically acknowledged, continually
reiterated and even celebrated by many educators. We can respond to
such variation by acting to maintain, or even to increase it; for
example, by encouraging expression of diverse ideas, outlawing
censorship, guaranteeing free press, speech, and religion. Or, we might
also attempt to reduce variation in the sense of trying to make all
people alike in some ways: having all share a commitment to democracy
as a way of life, teaching all to perform minimal acts of literacy, or
to view hard work as a virtue. The principle of human dignity (an
example of something "everyone" should believe in), properly understood,
involves the apparent paradox that individual uniqueness be encouraged
and respected, but also that dignity arises in large part through
individuals' sharing in common, collective effort which itself may
entail restraints on human variation.

Proposals for the content and structure of high school education
can reflect more or less of either side of the continuum from honoring
and advancing differences among people to restricting them in the cause
of the common good, and each thrust can be construed nobly in the quest
for the dignity of all. Large numbers of elective courses, highly
specialized programs that separate college preparatory students from
vocational ones and that separate vocational students from one another
among countless fields, special programs for handicapped, minority,

women, poor, non-English speaking students, ability grouping within subject areas, the use of individualized counseling and programming--all can be justified out of respect for individual uniqueness and human diversity. Critics will argue, of course, that fragmentation and diversification of high school programs, far from honoring the unique needs of individuals and groups, only give that illusion while actually enforcing subtle conformity and control on all. Even zealous, well-intentioned efforts to respect differential student characteristics can, however, raise at least three serious problems: lack of coordination and efficiency in the student's education, weakening of cultural and civic cohesion, and the crystallization of different tracks of opportunity from which it is hard for a student to escape.

Fragmentation and diversification have led some to conclude that the apparent celebration of diversity in high school programs needs to be replaced by common standards of excellence. A common education for all would presumably facilitate coordination and efficiency (although it was pointed out earlier that common learning will not necessarily entail an integrated learning), communicate common values that bind people together, and increase equality of opportunity by avoiding specialized education-career tracks for youth. Each of these arguments represents a view that common learning is helpful or instrumental to achieve such ends as efficiency in learning, social cohesion, or aspects of individual fulfillment such as material advantage or pursuit of individual interests. Another argument for common standards assumes a less instrumental, more transcendent notion that certain forms of knowledge, intellectual skills, sensitivities, are by their nature good

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for everyone, because they represent the best in wisdom and performance that the human species has produced. It may be difficult to refute the claim that mastery of certain subjects and skills has inherent, as well as instrumental value. It is not difficult to show, however, the likelihood of cultural bias in the definition of and selection of these "common" models of excellence.

In the quest for common standards, the problem of diversity can be handled in two ways. One might try very hard to articulate only those common standards that involve no substantial challenge to the diversity in ability, values and personality represented in individuals and cultural groups. This approach is illustrated in attempts to develop culture-free measures of intelligence, to insure that if U.S. History is a required subject, the histories of a variety of ethnic groups are included in the story, or to require work-experience of all, but to recognize and celebrate excellence in manual work as well as white collar professional work. As teachers, guidance counselors and others exert honest effort to respect student diversity, however, they soon see that society at large imposes dominant norms: college graduates earn more than those who have finished only high school, professionals secure higher status than manual laborers, gregarious extroverts seem to succeed more than shy introverts.

We may try sincerely to avoid imposition of monolithic standards which threaten idiosyncratic expressions of dignity, but we can go only so far in this direction, because no culture can rid itself completely of dominant norms. Modern cultures demand high levels of verbal and numerical literacy. Capitalist societies demand assertive,

individualistic personalities. Societies working toward democracy

demand individuals who respect the rights of others. In this sense,

conformity to some norms will inevitably be required and will restrict

the permissible range of human activity. The challenge is to think

carefully about which particular standards can be justified even if they

are likely to inhibit individual and cultural variation.

Once such standards are articulated, we still face the challenge of

implementing them in ways that benefit, rather than harm, individuals

who otherwise might not accept them. This obligation brings

excruciating choices of policy, given scarce resources. If achievement

in math and science is a common goal, what level of effort must be

expended to persons who, for reasons of family background, social

discrimination, cultural socialization, and ability, will have special

difficulties mastering the subjects? How should funds be distributed

among special programs for minorities, the poor, women, the handicapped,

gifted and talented so that the quest for common learning in math and

science does not simply exacerbate inequalities of material advantage

and dignity? The tremendous attention some projects give to definition

of the common standards must be supplemented by dialogue on criteria for

making such choices on distribution of resources. We have seen no

significant attention to these problems in the projects' published work

to date, but we look hopefully to EQ, NAE.

Another dilemma, unresolved by research literature, is the extent

to which students should be grouped homogeneously or heterogeneously

within classes and schools. Although this langu e refers most

frequently to ability grouping, we use it here to represent grouping

dilemmas at several levels, all involving the question of how to mix

students with similar and different characteristics. Students can

conceivably be distributed in a school or in a classroom group such that

the group is homogeneous or heterogeneous (in varying degrees) with

regard to sex, age, race, ethnicity, interests, ability, socioeconomic

background, etc. Without reviewing studies on this problem, we can

acknowledge well-reasoned arguments supported both sides of the

continuum.

The case for homogenous grouping by ability is supported by

arguments concerned with efficient classroom pedagogy. Homogeneous

grouping by interest is supported by the presumed motivational advantage

among people with shared values (as in arguments for educational

vouchers). To the extent that social characteristics such as ethnicity,

race, or socioeconomic status are highly associated with value

preferences relevant to education, then research on the importance of

consensus in school climate would also support socially homogenous

schools.

On the other hand, research shows that a critical mass of highly

able students increases the probability of success for less able

students, without apparent damage to the achievement of the more able.

Developmental literature indicates that psychological and social growth

depends largely upon persons interacting with those different from

themselves--in ability, interests, values, and experience. A final

argument for heterogeneity is that mechanisms for homogeneous grouping

(by ability or interest, for example) often lead to inaccurate labels

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and rigid classifications from which students cannot escape and which violate equal educational opportunity.

Research has not instructed us on the "ideal" way to group students, but it gives strong indications of costs and benefits. Successfully desegregated high schools, for example, (i.e., those where blacks and whites have frequent interaction), face more conflict and tension than desegregated schools that maintain high degrees of internal segregation (Crain et al., 1982). The benefits of such tension can be seen as equality of opportunity and possible growth of social tolerance. The costs can be seen as anxiety among students and staff, and resources expended to resolve conflict. Programs for high school improvement should examine ways in which homogeneous-heterogeneous grouping can entail costs and benefits to particular groups of students and to the school community as a whole. To date, only HSB and SSE have shown focused concern for this issue.

Lack of clarity on what common standards can be legitimately imposed on all, and how to group students will present persistently disturbing tensions in pluralistic or loosely-bound cultures (Merelman, 1981). Perhaps this represents a central dilemma of the human condition in all cultures, but some cultures may have more effective rituals for arriving at temporary resolutions of the dilemma than others. In the Western tradition, neither liberal, conservative, nor Marxist frameworks offer adequate principles for resolving such issues. E Pluribus Unum retains its symbolic value as a slogan, but offers little help in how educators should cope with student diversity.

B. Limits of Reform

Projects committed to the improvement of schools cannot be expected to devote much attention to the limits of their own mission. Nevertheless, we must face honestly the views of critics suggesting serious limits on the extent to which high schools might be altered on a large scale to provide an education of excellence for all students. The limits of reform are indicated first by the fact that public schools, universities, citizen groups, private foundations, and state and federal agencies in recent decades have poured millions (perhaps billions) of dollars and enormous human energy into school improvement. While Federal investment in high school reform has been far less than at the elementary or collegiate level, high schools have commanded the serious attention of competent professionals, lay people, and public officials. In spite of these efforts, complaints persist about the lack of meaningful change, and the failure of high schools to adequately educate both elite and disadvantaged groups. Even people who succeed in the system frequently indict its performance.

This is not to suggest that change has not occurred, for much has been reported on the expansion of program offerings, changes in instructional materials, innovations in scheduling, widespread diffusion of selected models, novel approaches to administration and governance, new methods of school financing, and disadvantaged groups gaining increased access to high schools. The changes are regarded by many, however, as cosmetic, not substantially improving the quality of education for most students.

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Why is it apparently so difficult to change high schools in ways that significantly improve students' education? We find at least four major limits: philosophical or ideological confusion on how to cope with the facts of human diversity (discussed above), the structural-economic role of schooling in a modern capitalist society, internal demands of school bureaucracies, and the power of personal background in affecting potential educational benefits. Having already discussed the issue of philosophical uncertainty on diversity, we summarize below the last three limits.

Many observers have elucidated the larger structural purposes of a prolonged formal educational process (e.g., Bowles and Gintes, 1976; Apple, 1982). According to one point of view, the capitalist economy, in its modern form, must find something to do with the surplus labor of youth. Since youth cannot be put to work on a full-time basis, and since they are considered too immature to take full-time responsibilities for the care of dependent people (the very young, the aged, the handicapped), or duties of citizenship on a volunteer basis, youth are placed in schools for at least twelve to twenty years. Another structural economic explanation is that prolonged schooling exists primarily to train students to serve particular economic institutions (e.g., business organizations, professions, etc.) and to provide a consumer market for the many institutions directly dependent upon prolonged schooling (e.g., colleges and universities, publishers, teacher unions, testing agencies). These claims, however difficult to test empirically, do help to explain why so many students and parents perceive education as irrelevant to the problems of life about which

they want to learn. If the driving structural force behind prolonged schooling is to serve underlying economic functions, we would not expect high schools to orient their work impartially toward the growth of individuals. Instead education would be directed primarily toward behaviors and attitudes that particular institutions demand or toward mindless forms of activity that keep students occupied and that support certain consumption patterns.

Another reason for the apparent ineffectiveness of reform lies in organizational requirements of school bureaucracy, discussed in Section III. Demands for efficiency lead to mass processing of students which inhibits individual attention, the teaching of complex materials, and critical inquiry. Departmentalization prevents the integration of subject matter. Both features promote personal alienation in the organization. Some schools have significantly reduced mass processing and departmentalization, but they struggle continuously against pressure to become a bureaucratized component within a larger system.

Teachers comment at length about the fourth limit--the personal background that students bring to school. Aspiration and support within a student's family (affected by economic resources) and the student's competencies on entering school are critical in affecting what the student is likely to achieve. In spite of impressive evidence on schools (mostly at the elementary grades) that tend to diminish the correlation between academic achievement and socioeconomic status, teachers testify to the enormous difficulties of overcoming alleged liabilities arising from personal background. This is not to imply that schools should entirely liberate individuals from the influence of their

family background—such posture would violate respect for individual and cultural differences. But we must realize that when educational goals of the school can be either reinforced or inhibited by personal background (however innate or socially determined), those background variables will pose powerful limits to what students accomplish.

Lip-service is easily given to the principle of meritocracy, but school reformers are reluctant to accept the possibility that ultimate differences in competence among people, after the best conceivable education, may be distributed in much the same way as critical factors in students' personal background. While students' personal backgrounds both enhance and inhibit opportunity for educational success in high schools as presently operated, there is great danger that teachers' perceptions of students' abilities result in self-fulfilling prophecies, and that schools will resist changes appropriate for students whose personal circumstances require learning environments different from those effective with dominant groups.

This account of the difficulties of fundamental improvement is not intended to discourage energetic pursuit of that goal, but to help projects avoid self-deception and the illusion of significant advances. By addressing such problems explicitly at early stages, reform efforts will maximize their chances for success.

C. Reactions to Improvement Efforts

As projects prepare recommendations, it may be useful to recognize distinct perspectives with which they are likely to be received. The unique lenses through which individuals evaluate proposed changes are likely to be influenced by four sets of interests.

The private consumer (usually a student, or parent or spokesperson therefor) wants to know how a given reform will benefit him/her. A consumer wants the best education for oneself, not, as Green (1981) pointed out, the best education for all or an equal education for all. The point is not to characterize consumers as hopelessly egocentric, but to recognize that their legitimate self interests may be somewhat distinct from the interests of teachers, organizations or the welfare of society at large.

In contrast the teacher, as teacher, is most interested in helping students learn a subject or skill in its most sophisticated sense. Standards of excellence in a field are so important that the interests of private consumer and organizational logistics of schooling should be shaped to serve the field, rather than compromising the integrity of a subject by catering to the whims of private interest or to bureaucratic rituals.

Teachers, administrators and others also function as bureaucrats interested largely in logistical details to help an organization run smoothly—conforming to schedules, to an authority structure, to defined duties, to the art of the possible within an organization. When teachers advise that idealistic changes cannot work because of departmental tradition, or when administrators collect data to enhance the image of the school (or their own position), they represent a bureaucratic perspective. The interests of organizational maintenance, even within reform projects themselves, often supercede interests of the three other perspectives.

In the role of public citizen, we are concerned ultimately not with the services we receive as individuals, nor with excellence in a particular field, nor with the smooth functioning of an organization. Instead the public citizen tries to articulate and to promote a general vision of the public good which, to be sure, takes account of the three prior perspectives, but which transcends them by arguing more broadly for the good and just society and advocating policies in its behalf.

As educators we operate at various times from each of these perspectives, and discourse within the projects seems to reflect all four, although not explicitly. Project proposals are likely to generate conflict between the different perspectives, to stimulate dialogue in which people from different perspectives talk past one another, and to contribute to personal confusion when thoughtful people try to develop their own views simultaneously responsive to each perspective. As projects launch plans for high school improvement, it would be helpful for them to examine the extent to which they might respond in some integrated fashion to the dominant concerns of each perspective.

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