DOCUMENT RESUME

ED 093 084   EA 006 283

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TITLE   Critical Issues in the Future of American
              Education.
INSTITUTION   Stanford Research Inst., Menlo Park, Calif.
              Educational Policy Research Center.
PUB DATE   Jun 72
NOTE   51p.

EDRS PRICE   MF-$0.75 HC-$3.15 PLUS POSTAGE
DESCRIPTORS   Educational Development; Educational Needs;
              Educational Objectives; Educational Planning;
              *Educational Problems; Educational Research;
              *Educational Trends; *Equal Education; *Futures (of
              Society); *Social Change; Trend Analysis; Values

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CRITICAL ISSUES IN THE FUTURE OF

AMERICAN EDUCATION

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June 1972

Menlo Park, California

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This nation and the developed world, generally, are involved in

a pervasive transformation which may appear, in retrospect, as one of

the major transitions of history. It is within the context of this

transition that educational issues must be understood. Because this

transition, like the Industrial Revolution, is intimately associated

with technological change, and because that cl ange has tended to take

place exponentially, the transition is occuring with extreme rapidity.

Because it is associated with challenges to fundamental cultural premises

(e.g., the sacrosanct value of economic growth, the inviolability of

nationalism, the uniquer.ess of the truths of "value-free" science),

it is accompanied by dissension, anxiety, distrust, and violence

reminiscent of the religious vars accompanying the Reformation. Because

it is also accompanied by signs of moral decay--from a "credibility gap"

in high places to a lapse of order and respect, to radical hedonism in

living, eradication of shame and horror, decline of truth and value in

the universities, worship of instruments and material things--it recalls

the Fall of Rome.

Such fundamental change brings both great opportunity and great peril. The nation faces deeper division than at any time since the Civil War. And the society is faced with a multiplicity of worsening social problems which threaten to significantly reduce the viability of a democratic form of government and society. On the other hand, there is observable a widespread desire to re-humanize society, to restore public control to public life, and to revitalize the American dream of a society dedicated to human freedom, individual growth, personal dignity, and peaceful cooperation with and respect for differences among peoples.

I. Parameters of Change

Because this ongoing transformation is the context for critical educational issues, we need to begin with some attempt to characterize its nature. This undertaking is summarized in the following three statements:

1. The problems faced by this nation, and by the developed world, will require for their resolution major changes in our economic and political institutions within the next 15 years.

2. For these institutional changes to take place, they would have to be supported by major changes in cultural values and perceptions.

3. There are numerous indications that such value and perceptual changes may be underway.

We are keenly aware that the truth of these three statements cannot be demonstrated, particularly by the brief arguments given below. However, because evidence can be assembled to indicate that they may well be true, and because the implications for social and educational policy are so profound if they are true, they cannot be lightly dismissed.

1. Major institutional changes will be required

Few informed persons would question that advanced nations such as the U.S. are undergoing some kind of transformation to a "post-industrial" society, characterized by decreased dominance of industrial production, increased importance of service activities, and increased concern with value questions relating to the quality of life.

This industrial age has been characterized by:

● Emphasis on efficiency through organization and division of labor; replacement of humans by machines

● The main form of the search for knowledge being the wedding of science and technology

● Faith in material progress, technological and economic growth; in the sufficiency of acquisitive materialism as a guiding value for society

The term "post-industrial" implies that some or all of these characteristics are in for re-examination.

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The industrial age has been a (historically speaking) brief period, starting a couple of centuries ago and lasting at the most a few decades more. It was preceded by a long period during which man made rather little impact on the environment and only extremely modest demands on the natural storehouses of useful materials. It must be followed by a period of indefinite duration in which human activity fits into some new set of economic-ecological relationships which are not "natural," but partly of man's devising, and in which the natural recycling processes are supplemented with new ones in which man is a conscious participant.

The list of social problems accenting the immanent need for this shift is long and familiar. It ranges from pollution and depletion of fossil fuels to alienation and the breakdown of welfare approaches. Need for institutional changes is indicated by such conflicts as:

- Environmental consequences if technological and economic growth, in the sense we have known them, are not slowed down, vs. economic and political consequences if they are

- Exacerbated problems of the aged if early retirement policies are enforced, vs. increased unemployment if they are not

- Obvious need for more planning of future technological and environmental impact vs. fear of powerful centralized bureaucratic planning.

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Examples of needed institutional changes include:

- Coordinated network of local, regional, national, planetary planning units dealing with technological and environmental impacts; use of land, water, and air; population distribution; transportation and communication systems; in short, the total human environment--combining the technical task of analyzing future and second-order consequences of complex alternative courses of action with the democratic task of selection among alternatives.

- A fundamentally different approach to unemployment and welfare problems, wherein the focus is on the question of how the society employs all its citizens, in a broad sense, rather than on how it provides jobs in the traditional sense.

- Changed operative goals of corporations to include greater social responsibility while preserving the strengths of the free-enterprise system, and corresponding changes in other economic institutions.

- Institutionalization of continuing education for adults, and the adopting of learning and human fulfillment as operative goals of the society, in such a way that all its institutions become directed toward that end.

Taken together, these changes might be considered to characterize a new "humanistic capitalism" and a "learning-and-planning society."

2. <u>These institutional changes will have to be supported by cultural change.</u>

Institutions function in intimate relationship with cultural values and perceptions. A modern banking, checking, and credit-card system requires a certain threshold trust level in the culture if it is to work at all. The quality of good family life rests on shared values and assumptions that would not be present if a number of people with diverse self interests were simply living together. Institutional change requires value and perceptual change for its support--just as, on the other hand, new institutions may be required to implement new values and perceptions.

From analysis of the needed institutional changes can be derived needed value changes. They are perhaps best summarized as:

- An "ecological ethic": Man comes to view himself as an integral part of the natural world, in a partnership with Nature to establish self-regulating economic-ecological systems with suitable recycling processes, with his fate intimately related with that of his fellow man and future generations. (This would replace the previously dominant "exploiting ethic".)

- A "self-realization ethic": The end of individual experience is held to be the evolutionary development of self and the human race, with the proper function of

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social institutions being to create an environment
which will foster this process. (This would replace
the older "social conditioning ethic.")

Our basic problem is that, somehow, these humane and spiritual

values have come to be considered a luxury superimposed on economic

values rather than being a measure by which the appropriateness of

economic valuations is continually being tested. Thus, rather than

reinforcing the best we know, economic institutions often appear

to be at odds with society's highest values. (For example, economic

perceptions dictate that we must maintain growth in conventional

terms, despite the observed degradation to human beings or their

natural surroundings.)

Both institutional and cultural change are required, and they

have to take place together. If the cultural shift supports it,

we can imagine evolution of the economic system toward what might

be termed "humanistic capitalism"--a system having more or less the

institutions and structure of the free-enterprise system as it has

evolved thus far, but operating on the basis of the "ecological ethic"

and the "self-realization ethic." In such a system the corporation

emerges as the primary institution in which adults would seek to

obtain a sense of fulfillment and happiness from their participation

in a purposeful, organic, social process, and in which their talents

and capabilities--including their ability to help set the organization's

direction--might be used to the fullest.

The most likely alternative route seems to be a continuation of the trend of the past four decades, speeded by the press of grave societal problems, toward collectivism, big government, and the paternalistic welfare state. Ever more stringent curbs would be placed on free enterprise to protect the environment and preserve tolerable quality of life. Without a major cultural shift this path seems about the best that could be hoped for.

3. <u>There are indications that the needed cultural change may be underway</u>.

Many indications could be listed that the "ecological" and "self-realization" ethics are rapidly becoming more influential, despite strongly opposing tendencies in practically all economic and social institutions. Among these are:

- Surveys indicate significant value shifts, particularly among certain elite groups such as students and corporate executives, placing increased emphasis on humane and spiritual values and reduced emphasis on materialistic values and status goals.

- Numerous cultural indicators (e.g., books read, organizations joined, themes of plays and motion pictures, "New Age" subculture) display growing interest in interrelationship of man with the total ecosphere, in its physical and spiritual aspects.

- Environmentalism and "human potential" movements show growing political influence.

- Both the "ecological" and "self-realization" ethics are intrinsic to practically all the world's religious traditions, hence should display "staying power."

- The new scientific interest in exploring subjective states, altered consciousness, employing new tools relating inner experience to physical and physiological correlates (e.g., galvanic skin response, body electric fields, brainwave components, biofeedback signals) is resulting in a new legitimation of studies of religious beliefs, psychic phenomena, mystical experience, meditative states, and the suprarational; hence also of attention to the question "What values are wholesome for man?"

This last indication is especially significant. Wherever the nature of man has been probed deeply, the paramount fact emerging is the duality of his experience. He is found to be both physical and spiritual, both aspects being equally real, and neither describable in terms of the other. He is found to be in touch with some sort of transcendent spiritual order, discoverable in human experience, and against which human value choices are assessed. To the extent that some such fundamental perceptual change appears also to be taking place in the culture at large, the associated value change is far more basic and lasting than a mere change of tastes and mores.

II.   Four Societal Crises

It will be useful to reconsider the societal problems mentioned
earlier, and to look particularly at four metaproblems which together
characterize the nature of the transition which is upon us. We might
call these a crisis in the image of man and society, a crisis in
the effectiveness of social structures, a crisis in management and
government, and a crisis in authority and the legitimacy of social
institutions.

    1.   A crisis in the image of man and society.

This nation (and much of the technologized world) is divided
and crippled by a lack of agreement on goals and the ways to achieve
them.   More serious, it is afflicted with a fundamental lack of
agreement on a proper basis for choosing goals.

An intrinsic and serious conflict exists between the basic
premises of democracy--that man is, by virtue of his transcendental
nature, endowed with reason, will, and a valid sense of value--and
the reductionistic, deterministic, and physicalistic premises which
have thus far dominated the social and political sciences.   The
concept of a transcendental, choosing, ultimately responsible self
is essential to the entire theory of democratic government.   It
underlies the assumption that the criminal is responsible for his
act (while not denying that his antisocial traits may be partly a

response to harsh environmental circumstances). It is basic to the assumption in the judicial process that the judge can meaningfully make a normative judgment.

The kind of educational system and educational goals a society sets up, the way it deals with the issues of poverty, the priorities it gives to aesthetic considerations, the extent to which it considers its citizens' needs for communion with nature, the uses of leisure it fosters--all these aspects and many more are affected by what image of man dominates. Central to the current youth ferment is a rejection of the impoverished image of man which has subordinated human experience to the economic processes of the consumer society, and led the social sciences inexorably toward the prospect cf the "psychocivilized" society of Delgado and Skinner[1] where correct behavior is to be induced in persons through operant conditioning or through electric signals introduced into the brain, in preparation for which we are admonished to dismiss romantic notions of freedom and dignity as delusions of a prescientific culture.

The crisis of which we speak is not merely cynicism over the society's failure to live up to its goals. It goes much deeper than that, and essentially is rooted in the erosion of belief in the highest human values--coming about in considerable measure because of the striking practical successes of positivistic science through technology.

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2. <u>A crisis in the effectiveness of social structures.</u>

Complaint is widespread that the economic, educational, and
legal systems are not adequately and appropriately serving the
society. We shall mention here particularly the problem of
employment, and the problem of distribution.

The term employment as used here is intended to connote something
more than is ordinarily meant by the word "jobs." Employment,
making a contribution to the society or its institutions and
receiving recognition in return (in the form of wages or otherwise)
satisfies two quite different types of needs for the individual. It
is one of the main ways in which he takes care of his economic re-
quirements. It is, on the other hand, one of the chief ways in which
he fulfills his <u>psychological</u> needs for belongingness, affirmation,
self respect, and sense of accomplishment and worth.

It is a key failure of contemporary industrial society that it
does not provide opportunities for employment, in this expanded
sense, for all, including those whose capabilities are, temporarily
or permanently, submarginal by strictly economic criteria. Furthermore,
despite all our whistling in the dark about job creation through
technological and economic growth--and despite attempts to ameliorate
the situation by featherbedding, disguised makework, and shortening
the hours worked per lifetime--society falls short of meeting this
minimal goal by a large and increasing margin. Unemployment and welfare

rates are high, and a significant fraction of those with jobs fail
to reap the psychological rewards of true employment.

The problem is intrinsic to the industrial-state system. The
entire thrust of technology and industrialization is toward replacing
humans by machines in the production of goods and services, and only
by artifically manipulatively raised consumption (which is now
approaching ecologically imposed limits), plus lags in applying
already developed cybernetic technology, has the dilemma been kept
as far out of sight as it has. There is no ultimate solution short
of major insitutional change toward something like what we earlier
termed a "learning-and-planning society." The employment (broad
sense) opportunities in citizen-involvement planning, participatory
research, environmental protection, community development, and mutual
learning activities are endless; what is lacking is adequate social
imagination--currently we are limited and disabled by misconceptions
about what is "economically feasible."

The second problem we wish to mention here is that of distribution
of political, economic, and knowledge power. It is not clear that
equitability of power distribution has appreciably worsened in recent
decades. However as the poor gain in awareness of their situation
(aided by modern communication media) they are increasingly intolerant
of remaining poor. This is true for socioeconomic classes, and for
nations. The laboring-consuming masses are assuming political potency;
more equitable distribution of power is essential for a stable society.

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But the economic system contains within it no rationale for re-
distribution. That rationale has always been an altruism based
in transcendental non-economic values. Those values in the modern
industrial state are weak compared with the force of intrinsic
economic incentives--incentives which inexorably widen the gap between
"haves" and "have-nots."

Again the dilemma appears to be resolvable only through
fundamental cultural and institutional change.

3. A crisis in management and government.

It is very nearly a truism that most contemporary societal problems
are essentially the consequence of previous technological and in-
dustrial successes. For example, earlier success in reducing infant
mortality contributed to excessive population growth. Technology-created
affluence faces us with resource-depletion problems. New materials,
new agricultural techniques, and numerous other varieties of technological
impact have interfered with natural recycling processes. Machine re-
placement of manual and routine labor has exacerbated unemployment
and poverty problems. Nuclear weapons development has led to the
hazard of worldwide decimation. Other new technologies have the
potential to harm or intrude on the rights and freedoms of the
individual, society, or future generations (e.g., weather control,
behavior and thought conditioning, genetic engineering).

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In other words, there is an important sense in which most societal problems reduce to the single problem of regulating the "Faustian powers" of modern technology and regulating the economic-ecological systems in which civilized man is an active participant. But it is precisely here that the management abilities of duly constituted governments prove to be sorely lacking. They have neither the institutional coordinations, nor the systemic and anticipatory analysis techniques, nor the guiding ethics required to deal with a task which daily grows more complex.

4. A crisis in authority and legitimacy.

These three crises lead to a fourth, the continuing alienation from social institutions and erosion of perceived legitimacy of established authority. Not only are the poor increasingly aware of the extent to which the system denies them full realization of the potentialities of human existence. The non-poor commonly express feelings of impotence, victimization, and dehumanization from their encounters with the system. Recent decades have witnessed the hastening erosion of the authority of the parent, the teacher, the scholar, the church, the law, and the state. Today's youth deeply question the legitimacy of the nation's policies and apparent aims. Furthermore, there is a growing conviction that present institutions and leadership are incapable of resolving the three crises mentioned

above, and that a continuation of present trends will lead to an intolerable future.

The key issue resides in the balance between authority based on power and authority based on voluntarily given respect and loyalty. A central fact of today is that a significant fraction of the population, largely minority groups and youth, have concluded that established authority on national and local levels is illegitimate-- that is, it does not adequately represent their interests, and it is not based on trust, nor on a general consensus.

III. Critical Educational Problems

The problems of American public education are not separate and distinct from the conditions, problems, and changes of the larger society. On the contrary, they arise from the broader context in three ways:

- As components of social problems (e.g., campus disorders as part of general dissension, segregated schools as a consequence of segregated housing)

- Through demands made on education as a result of social problems (e.g., education of the disadvantaged, ecological education)

- Through intra-system stress related to social change (e.g., conflict over professionalization, controversy over behavior-shaping vs. freeing-to-grow approaches).

A great deal of current criticism of education stems from the frustration of facing apparently unresolvable social problems plus over-expectations regarding what education might do about them.

Of the four crises discussed above, alienation is most intimately related to the plight of the schools. Most of the problems besetting the schools are either the product of, or are exacerbated by, erosion of the perceived legitimacy of societal institutions and the accompanying alienation of students, parents, communities, and the society at large. This is manifested in a number of ways:

- As an early-encountered and pervasive societal in-
  stitution, schools are a focal point for dissatisfaction
  with society in general.

- Schools are simultaneously criticized by social
  analysts and upper-middle-class parents as being in
  need of "innovation", and by minority-group members and
  working-class parents as providing inadequate discipline and
  training of basic skills.

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- The school is pledged to a goal of equal educational
  opportunity and yet clearly, and not surprisingly,
  ends up being one of the primary instruments of
  perpetuation of social class discrimination.

- The schools is proclaimed as a main avenue of pre-
  paration for economic and social success; yet for
  many the link between school success and job success fails
  to materialize, in ways that are outside the power of the
  school to control.

- Isolation of schools from other social institutions
  results in students being considered as "non-citizens."

Schools are caught in the middle of the crisis in the effectiveness

of social structures, particularly with regard to the problems of

employment and distribution. The problems are implicit in the

premises of industrial society; clearly they cannot be solved by

the schools alone. Yet the schools are charged with providing equality

of educational opportunity (and, by implication, equality of life

opportunity) while forces from the remainder of the social system

press them to assist in maintaining class discrimination; they are

charged with providing desegrated schooling in a society that

resists desegregated housing; they are charged with satisfying the

demands of numerous stakeholder groups with vastly differing priorities,

even when those demands are in part mutually contradictory. And the

schools have, gladly it sometimes seems, accepted both blame for the

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past failures of society and expectations for future results they cannot possibly achieve.

The most fundamental crisis of all, in one sense, is society's split over fundamental issues relating to the nature of man and of the good society. Issues of goals, curriculum, methods, and accountability cannot be resolved within the educational system while these larger questions which control the direction of education remain unresolved in the society at large.

Finally education's involvement with the crisis in management and government is no less vital, though somewhat more subtle. While much about the future is uncertain, of one thing we can be sure: Resolution of the complex societal problems which have accompanied development of "Faustian" technological and industrial powers will entail increasing curbs on the actions of individuals and groups. Constraints will be required on human reproduction and population distribution, on disposal of waste products, on use of natural materials, on energy consumption, on constructions that affect the environment, on a multitude of actions by individuals, organizations, and nations which impact on the lives of present and future generations. Leaders have always known that it is far less effective to control men's actions against their will than to control their wills. Thus they have sought to win inner consent through persuasion, exhortation, positive and negative incentives, operant conditioning, brainwashing,

and education. The degree of governmental control likely to be imposed will be less if cultural adaptation along the lines of the "ecological ethic" has made such intervention less necessary. Whether the restrictions on behavior are mainly willingly self-imposed through ecological awareness and a more satisfactory ethic, or are externally imposed through behavior modification and operant conditioning techniques, the educational system will no doubt play a central role and its character will be shaped thereby.

In arguing that the problems of education are essentially those of the society we have not meant to preach a counsel of despair. The remaining sections attempt to arrive at some minimal indispensable characteristics of a strategy for education which would be politically viable, in that it appears to address the most flagrant inequities affecting disadvantaged stakeholder groups, and confronts directly the obvious and serious problems of the schools, and it also would be systemically sound in that it is compatible with what we have argued is a necessary transition to a "learning-and-planning society."

IV. Equal Opportunity--Economic and Educational

The concept of equal opportunity, and the extent to which that goal is realized or fails to be realized in contemporary American society, has in recent years provided a chief yardstick for the effectiveness of education. The public schools have claimed, since the latter part of the 19th century, to be a principal instrument for increasing social mobility and equality of opportunity.[2] Of late that claim has been challenged vigorously.[3,4]

The decline of an old goal

To set a stage for examining the relationship between the schools and equality of opportunity, we shall begin with several assertions. Each of these is well demonstrated through analyses of statistical data (from such sources as the Bureau of the Census or the Equality of Educational Opportunity (Coleman) Survey), as well as being explainable from accepted sociological and psychological models.

- The society in its individual and collective decisions regarding employment rewards primarily those who demonstrate characteristic middle-class values and traits.[5,6] Likewise the schools reward highly the same middle-class values and traits.[7]

- Despite the general belief that schools have operated to improve equality of opportunity in the society, the schools have never been particularly effective in developing in their students those values and traits conducive to later success. The main attempt appears to have been

to impose those values and attitudes upon students by using them as norms in meting out disciplinary actions and achievement awards.[8] Consequently both economic and school differential achievement are much more dependent on family background than on school interventions.[7,9,10,11,12]

● The possession of the educational credential is more important than the relative skill demonstrated in obtaining it. Many occupations require some minimum academic level (e.g., a high school diploma, or 1-3 years of college). Thus years of schooling correlate with occupational status. However, achievement measures such as grades or class standing are poor predictors of future economic success within an occupational area.[7,9]

● The skills that are taught in the school can in fact be learned by all students within wide limits of initial ability.[13] (Thus pre-school measures of I.Q. are not good predictors of later school success if one holds constant family socio-economic status.) The most important single element in determining whether or not the student learns these skills appears to be his motivation, which in the usual school situation is highly correlated with family socioeconomic class and ethnic background.

● Expectations of teachers and employers based upon such indicators as racial characteristics, speech patterns, or hair length, initiate processes that tend to lead toward outcomes confirming the initial expectations.

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These assertions add up to a picture of the society and the school operating to reward those who start with the desired middle-class values and traits. The remainder are identified early in the educational process and sorted toward lower-status and less economically rewarding positions in the society. Not only do the schools not provide equal opportunities--they are relatively powerless to do so as long as the crucial values and traits are not subject to appreciable modification by the schools. Moreover, the school as a sorting-and-labeling mechanism has in the past operated to supply a differentiated labor force with diverse skill levels without providing the threat (which full equal opportunity clearly would) of potential displacement and downward mobility of upper and middle class persons.

The ideal of equal opportunity would seem at first glance to be antithetical to the school's playing a strong sorting-and-labeling role. However, as long as the primary emphasis is placed on the schools, contributing to future economic success, the rhetoric of equal opportunity leads directly to the sorting-and-labeling effect. Economic success does, in fact, tend to demand characteristic middle-class values and traits. Therefore it is not only understandable but morally virtuous that the school foster diligence, passivity, attendance to detail, respect for hierarchical authority, and other characteristics valued in the blue collar and white collar assembly lines of industry and government. The teacher no less than the ghetto mother knows what she has to do to insure that the black or brown youth will be able to survive.

Only for the upper classes where economic opportunity already is assured (and hence behavior change or moral improvement is not needed) is a freer educational environment appropriate.

Thus calling upon the schools to provide equal economic opportunity turns out to be essentially equivalent to calling upon them to produce a differentiated and tagged labor pool for business and industry. In fact, it may be this apparently noble attempt to provide every American through the public school system an equal opportunity for success which has reduced a long history of appeals for more open, child-centered education to little more than rhetoric. Child-centered education was too likely to result in children who would not fit well into the system. That would not only be bad for the system; it would be unfair to the children.

Today many progressive and liberal educators are calling for equality of educational outputs.[14] This proposition would seem more believable if the public school system had any success record either in teaching skills independent of values and traits, or in altering values and traits.[*] On the contrary, a massive amount of evidence indicates that as presently constituted the school system will simply not be able to produce equal educational outputs

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[*]   The one approach that lays claim to being able to succeed at
       such a task is behavior modification by operant conditioning
       (see reference 3). We have earlier noted that if the society
       responds in one way to the crisis in management and government.
       school emphasis on behavior modification techniques is a
       natural concomitant. (A distinction must be made between the
       use of behavior modification to aid a person in achieving freely
       selected goals--e.g., removal of a speech defect--and to im-
       plement goals externally chosen.)

in any meaningful sense.[7,9,10,11] The myth of the public

schools providing either equality of educational opportunity or

equality of economic opportunity is one of the main reasons for

the widespread disaffection with education. The myth's lasting

power in the face of contradictory evidence may be due to its

utility in helping society to evade confronting issues of equity

in income distribution, housing, and social and political dis-

crimination. These issues must be resolved but it is the society

working together, not the schools alone, that must resolve them.

And the emergence of a new goal

If the goal of equal opportunity is an untenable one for

public education, what appropriate guiding objective should take

its place? In order to approach this question we need to recall

our earlier comments (in section II above) regarding income dis-

tribution and employment.

The relative income distribution in the U.S. has been nearly

constant since World War II. As mentioned earlier, some degree

of redistribution, reducing the disparity between extremes,

seems prerequisite to domestic stability. In principle, this

could be a fairly straightforward matter, using such devices

as progressive taxes and transfer payments. In practice, achieving

income redistribution without deleterious side effects is less

simple, as the history of income tax and welfare programs ade-

quately demonstrates. Key to success is satisfactory resolution

of the employment problem, as outlined earlier.

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But let us assume that society is moving, however slowly, to
resolve these problems by transmuting to a "learning-and-planning
society." Then a new goal for the schools becomes feasible--
one which embodies the spirit of equality of opportunity but does
not lead to the consequences that goal has engendered. Let us
term this goal equal access to appropriate education. This is
meant to imply that every child will have access to educational
experiences which are suitable and acceptable to him and his
community, which are well-advised in terms of the long-term ex-
perience and accumulated wisdom of the society, and which in light
of the child's individual characteristics will fit him for employ-
ment, in the broad sense used earlier. Moreover since there are
no longer the same standards by which to compare every child
there should be a reduction in the extent to which the schools
sort and label.*

Unless the society is simultaneously moving toward something
like a "learning-and planning society" the goal of equal access
to appropriate education would probably serve little better than
its predecessor. If the receiving system for graduates of the
schools remains the same, with built-in racial and economic
segregation, then the flexibility and diverse educational paths

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* The Duke Power Co. Case in which the courts held that credential-
ling for a position must be related to the requirements for the
position is also a step towards reducing the credentialling
function of schools. However, the system is so pervasive that
it is doubtful that by itself the decision will attack more than
the most obvious misuses of paper and pencil tests and degrees
for low level positions.

are likely to be used in support of that segregation.

But assuming that the society is moving in the direction of learning and planning being fostered by all its institutions, and that in this way the employment problem is being resolved, and also assuming that gross income inequities are being reduced, the schools would then find it possible to devise more child-centered, multipath approaches to learning basic skills and developing interpersonal attributes.

Some would claim that the freedom and flexibility envisioned in such a child-centered approach might be desirable but that it is not possible at a time when estimates of the number of functional illiterates coming out of the public schools run as high as 20 percent and businesses in some areas are finding it hard to hire public-school graduates who meet minimum skill requirements. But these failures are the results of sorting-bin functioning, of garbage-can remedial tracks, and of highschool pushouts. They are and will continue to be high costs for the society. Those approaches which perpetuate the sorting and labeling of the schools, even though they travel under such noble banners as equal educational output or better compensatory education, will only further postpone the necessary transformation of the schools.

We have attempted in this section to highlight the undesirable consequences of the schools' adopting a goal of equal educational opportunity in pursuit of equal economic opportunity. The job cannot be done by the schools, and accepting an unrealistic

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responsibility has pushed the schools into a sorting-and-labeling mode which denies in action, while affirming in rhetoric, the goal of equal opportunity.

V. Processes for Change

Since those in charge of the nation's schools already tend to see themselves as providing "equal access to appropriate education," or attempting to, the initial response to this goal may well be, "What's new?". We have already argued that this new goal will not be achievable unless a major shift takes place in the larger social system. We now want to add that two additional elements will be required for the goal's implementation. One is a broadening of the governance structure to increase the roles of the student, the family, and other social institutions whose aims overlap those of the schools (e.g., business corporations, service agencies). The second is the creation of new decision structures within which the unique competencies of each participant in the education transaction (student, teacher, parent, specialist) will be preserved and their interaction will be synergistic rather than tension producing.

Supporting these recommendations are several observations regarding change processes:

- If any significant change is to occur in the schools
  for large numbers of students during the 70's, the
  persons who will mainly provide the day to day resources

to make it operate will have to be those teachers
and administrators who are presently in the system.
Others may make significant contributions but the sheer
numbers involved make any idea of abandoning the current
public school, whatever its lack of merit, simply im-
practical.

- The problems the society faces in the areas of
distribution, employment, regulation, and alienation
have been and will be faced on a gradual incremental
basis with different groups in the society having
different emphases at each point in time. This fact
will be reflected in education in the form of fractionated
and diverse views on students' needs and on the role that
education should play in meeting their needs. If the
schools are not to exascerbate conflict, they need to
provide education appropriate to each group's perceptions
of their needs. It is reasonable to expect that as the
societal transformation progresses, those options most
congruous with the main thrust will increase in importance
while those at odds with it will diminish. However, to
attempt to speed up this process by restricting
non-congruous options is inimical to the concept of equal
access to appropriate educational experiences, and is likely
to increase dissension.

- Despite agreement on the desirability and necessity for
increased parental involvement with the school (and the
child) in selecting the education appropriate for the needs
of the child, the history of parent involvement in the
parent advisory groups (PAG's) is spotty and has been

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a mixed blessing. [15,16,17,18] One major reason for this
is that with relatively uniform goals, conflict tended
to center around which program would best upgrade
students to meet uniform goals. The battle lines were
frequently drawn between the parents and the school,
and fights ensued over program content, staffing, or
materials. Parents were generally outclassed in the
rational, logical analysis of program, for this was
inevitably the area of the professionals' strength.
Moreover even when parents won, the programs still
had to be implemented by a balky and recalcitrant staff.

Taken together, these recommendations and observations suggest
the efficacy of an alternative-schools strategy.

An alternative school is defined[*] as a separate administrative
entity within the public school system which is willing to (1)
specify its set of goals and objectives, (2) outline the processes
and practices by which it will attempt to reach its objectives,
and (3) report its performance in relation to the objectives. Each
school would not be all things to all people, but a limited-purpose
resource with a specific orientation. Comprehensiveness would be

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[*]
There are so many different connotations to the term "alternative
schools" as used by different groups that we thought of choosing a
new expression. However, it seemed likely this would add to the
confusion.

obtained through clusters of alternative schools. The alternative

schools as administrative entities need not be constrained as to

size by the physical capacity of existing buildings, but rather

can be part of a building or several buildings depending on the

educational focus (e.g., academic or vocational) and student

demand.

The crucial elements in a system of alternative schools are:

(1) the active support of parents and children in making their

selection of the alternative school which best meets the child's

needs, and (2) the district's willingness to make administrative

changes to increase the types of schools in high demand and reduce

those types in low demand. Successful alternative schools are

likely to require some operational changes--for example, increased

instructional leadership from the principal and senior teachers to

create focused and integrated programs.

In an alternative-schools strategy the appropriate division of

labor between educator and parent (and/or student) is taken to be

between creation and selection of programs. Educator-parent inter-

action can be much more effective than when only one program is

available--be it academic, general, remedial, or vocational.

The task of creating multiple programs falls appropriately

to professional educators. Among a diversity of programs a

diversity of felt needs can be accommodated, and the child can

be provided with educational experiences appropriate to him.

Initially the range of alternatives may inadequately accommodate

the range of students' needs, and may be limited by the staff's

abilities and desires to create alternatives. Both student

demand and staff retraining and growth can induce further

expansion of the spectrum of alternatives.

The parents' task is not limited to selection (in concert

with the child) of the most appropriate alternative. Parents

will be expected to continue to monitor the child's education

through formal and informal information sources, and to influence

through their selections the types of educational experience to

be provided. The parent demand profile will inform the educator

of the various educative processes that he can develop and find

acceptable.

The alternative-schools strategy should release the

educator from many obstacles to innovation:

- The need for bureaucratic uniformity is eliminated
  and replaced by positive rewards for excellence in
  diversity. While individual teachers have always
  had considerable freedom behind their classroom
  doors, the building of their diverse efforts
  into effective integrated programs has usually
  been hampered by bureaucratic restrictions.

- There is reduced likelihood that innovative attempts
  will be thwarted by small pressure groups who object
  to their children being submitted to the experimental
  program. With the creation of alternatives the

success or failure of a program will be determined by the number who support it, not the number who oppose it.

- Educators will obtain better evaluations of their programs. Professional evaluation might appear more valid than parent evaluation. However in practice programs devised in the central district office were "doomed to success" because the staff could not afford public failure. This tendency inhibited the improvement of good programs as well as the elimination of poor programs. Parent choices, supported by professional advice and relevant research data, provide a responsive evaluation mechanism, whatever it may lack in objectivity or sophistication of criteria.

- Involvement of the parents in the educational process should increase their feelings of potency and their view of the responsiveness of the system to their desires. Hence an increase in public support for the schools, at least for those judged responsive, can be anticipated, and performance expectations will be more in line with competencies for both the teachers and the parents.

Another potential benefit of alternative schools is in moving the schools toward other institutions in the society. Business corporations comprise one example. The real-life experiences which are possible in work study programs can be most useful to many students. Currently such opportunities are quite limited, but with both a need and a growing social awareness on the part of business, this activity could accelerate, particularly if the somewhat conflicting

needs of school and industry can be reconciled through joint participation in the governance and planning process.

Other areas for broadening arise in HEW proposals for site concentration of public services. This concept looks toward integration of such services as health, job training, income maintenance, correction facilities, day care and education. Such site concentrations would provide numerous possibilities for learning and leadership for the schools far beyond the normal "field trip."

Proposals for broadening are not new and it is the alternative school process which provides support for groups of teachers, parents, students, and institutions to attempt such efforts that provides the mechanism for change.

The alternative-schools strategy should not be confused with a similar proposal, educational vouchers, although many of the reasons advanced for alternative schools also underlie voucher proposals. The main difference is that voucher plans include private schools into the matrix of alternatives. The main issues that generate opposition to vouchers are the inclusion of aid to parochial schools, the possibility of vouchers becoming a vehicle for resegregation, and the implicit threat to continued existence of the public school system. Of these, only the problem of resegregation applies to the alternative-schools strategy, and it can be kept within bounds by minor restraints on freedom of choice.

There appears to be compelling reason to limit alternatives to the public schools, at least for the present. Given how things stand, with great economic, educational, and power diversity existing among students and their families, the increased freedom and diversity from inclusion of private schools would create major opportunities to increase the inequality rather than decrease it. Administrative safeguards to prevent this can be more effectively applied if the present public school system is used to implement all the alternatives.[*]

The alternative schools strategy is more than an immediate response to a present crisis. It is a way to learn and to adjust to a truly child-centered educational approach in a transitional society. It is consistent with the broad needs of the overall societal transformation, and as such provides a regenerative path to the future.

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[*] The freedom and flexibility of an alternative school presents numerous administrative problems from student and teacher allocations to utilization of physical plant and "unwanted" tenured teachers. However detailed studies of voucher plans done at the behest of OEO give assurance that administrative problems for both strategies can be worked out.

VI   Specific Educational Issues

In light of the changing image and goals of education and the proposed alternative schools mechanism to reform education, a revised perspective can be gained on a number of the specific educational issues of the day. Five areas will be mentioned: educational finance, accountability, early childhood education, integration and compensatory education, and research and development policy

Educational Finance

We have focused on a redefinition of the role of education and a process by which to bring it about. On the input or resources side, teachers are crucial, because it is not possible to just go out and "buy" teachers with new perceptions and capabilities matched to an altered vision of education. Rather a process must be created which fosters relearning on the part of those already in the system. If this challenge can be met, and the public is satisfied with the schools, obtaining adequate financing appears to be a surmountable problem.

Nevertheless there are substantial questions of disequity in the present system of educational finance, and the broad directions charted by Serrano v. Priest and the subsequent legal and legislative actions need to be part of any overall educational reform.

Less clear is the desirability of some of the second-order consequences that may accompany rearrangement of educational financing.

To implement an alternative-schools strategy local schools need
curricular and pedagogical freedom. Increased accountability is
clearly desirable but it should be oriented toward the parents and
the local community. Statewide goals and behavioral objectives,
adopted in the aim for equal educational outcomes and superceding
local goals and objectives, would be particularly detrimental.
It is almost certain that state and Federal governments will exert
increasing power over the schools. However, on balance movement
toward centralization can be either favorable or unfavorable to an
alternative-schools policy.

The recommendations of the Fleischman Commission in New York
State appear particularly sagacious in this regard. The commission
recommended that the state centralize both revenue collection and
dispersal and also teacher contract negotiations. On the other hand
it recommended the decentralization of educational programs to the
level of the individual school with direct funding and accounta-
bility at this level.[19] Thus broad administrative and resource
questions would be handled at the state level, while educational
questions would be focused upon the individual school. In addition
the commission recommended a parental choice plan similar to an
alternative-schools approach. Choice would be limited within
clusters of four schools with an integrated student body. Other
provisions of the recommendation would phase-in equalization over
several years, thus creating minimum interference with a shift to
alternative schools. However, this is only one state's recommendations.
Other states, frustrated with the failure of the schools, may

recommend much less educational freedom for local school districts and through restrictive control schemes greatly limit both inter- and intra-district variation in educational program.

Accountability

There are many dimensions to accountability and equally many proposals. At the emotional level accountability expresses public and legislative dissatisfaction with the public schools. However, the expression of such dissatisfaction in laws which threaten state take over of nonperforming school districts, weakening of teacher tenure provisions, or the reduction of funds to nonperforming districts is unlikely to be productive. Faced with such threats educators tend to close ranks and protect each other as a matter of principle. Moreover, the fear and distrust that such actions provoke tend to choke off rather than foster innovations and creative alternatives.

The alternative-schools strategy would have opposite effects. By developing competing alternatives and increasing the information flow to parents and community, each school would provide stronger and more relevant accountability than any state level system could hope to provide. The specific school is accountable, not the "public school system," thereby creating opportunities and incentives for achievement rather than fear of reprisals. The school and parents are brought together, not separated. This is the type of accountability that can improve the schools and restore trust in them.

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The state has a vital role to play in creating public alter-
native schools. The concept is new, and initially it may appear
threatening to educators--particularly to those most emotionally
committed to traditional educational modes. Additional money and
especially information will be needed to plan for and develop
alternatives. The state legislatures and departments of education
could facilitate the introduction and growth of alternative
schools by their visible support of the strategy and by aiding the
exchange of information on and the planning of the detailed require-
ments. However, to require alternative schools would probably
create resistance and retard if not kill the growth of a system
of effective alternative schools.

Early Childhood Education

There are many good reasons for providing pre-school educa-
tional experiences and day care facilities. However, one poor
reason for the development of such facilities is the attempt to
aid the disadvantaged to overcome their family deficits and thereby
achieve at an equal level with middle-class whites later in school.
Such a policy represents the old sorting and labeling approach in
a new setting and it will have the same limitations described
earlier.

The importance of new research findings on the potential for
early childhood learning is not to be minimized. Findings from
programs such as Heber's at Wisconsin, which for an expenditure of
$25,000 per child was able to raise the I.Q. of children of

retarded parents from 70 to 120, are very significant. However, as the results of Head Start evaluations show, for lesser improvements, that any cognitive gain unsupported by teacher expectations and visible middle-class traits can be quickly eroded in the schools. Special programs for the disadvantaged are one form of sorting and labeling.

This is not to deny that middle-class children and parents appear to enjoy and perhaps benefit from pre-school educational experiences, although nursery school has never been shown to be a significant determinant of later school performance. Furthermore there are many mothers at all socio-economic levels who would like to leave home for part of the day--to provide child care facilities for those who want to work is probably good for the child as well as the parent. Early-childhood education in an alternative-schools setting may well be advantageous; as compensatory education to help the disadvantaged "catch up" it is of dubious value.

Integration and Compensatory Education

The "great" discussions of recent years on reforming the public schools have focused on racial and socio-economic integration, and on compensatory education. One manipulates the ethnic and social-class composition of the student body; the other the level of financial inputs per student. Neither approach can present any body of statistical evidence showing major improvements in cognitive achievement or even attitudinal-affective improvement.

Both approaches are formulated primarily on a gross numerical level for large aggregates of students (as is the newer strategy of equalizing financial resources). It is the percentage of Blacks or Chicanos in School A or the dollars for disadvantaged children in School B that is the focus. After all the heat, there is little light left for the organizational-pedagogical-curricular questions that relate to what goes on inside the school. For example, many integrated schools have mostly segregated classrooms, but this goes unmentioned. The concern with aggregates in the design of integration and compensatory-education programs is a consequence of their being designed at the federal and state level, typically by the setting of broad guidelines to be adjusted and implemented locally.

In contrast, the alternative-schools approach focuses on the desires and needs of individual students and the problems of particular classroom teachers. It is fundamentally directed towards questions of local concern that tend to be glossed over in discussions of integration and compensatory education. The alternative-schools approach is a local-control approach and provides a balance of lay and professional interaction. It is not in opposition to either integration or compensatory education, but can build upon either or both to create better options from which the parent and child can select. It could be a powerful tool to provide the structure and organizational incentives to develop effective local tactics for making both integration and compensatory education effective tools for educational improvement.

Potentially at least, educational research, through the acquisition and dissemination of information on the effects of different educational strategies and tactics, is a powerful change agent. Yet the promise of educational research has not been fulfilled. One reason suggested for this is the reliance on the linear model of research-development-dissemination; a much more interactive mode between experts and practitioners in problem selection, definition, and analysis (which bears a family resemblence to the alternative-schools strategy) appears preferable.[20] Another reason given is the limited boundaries of most studies, piecemeal analyses, and omission of process descriptions which makes most research reports useless for practitioners.

In a time of societal transition and competing educational aims it is important to ask what learning goals and processes are good for man. This is the fundamental educational question and the central task of educational research--a moral inquiry. Educational research seeks to develop the most appropriate methodology and to provide the basic scientific knowledge that will implement the noblest values of mankind. However, we know that the tasks of research--from selection of topics, to choice of methods, to interpretation of results--are shaped by the implicit premises and values of the inquirer. In order for educational research to be

consistent with the nation's tradition, its goals must be selected

in an open political process. Thus analysis of educational research

objectives and strategies needs not only to be a moral inquiry, but an

open moral inquiry. That is to say, not only is examination of the

value issues and the implicit premises that lie behind them central

to the task, but open examination of them is essential in order to

arrive at agreements on common action (even though common perspectives

may not be shared.) The authority of the researcher-as-expert will

not go unchallenged in this field.

To pursue the inquiries shaped by these principles requires:

(1)   That the inquiry itself involve many people, of

different backgrounds and in different positions, to share

perspectives and test judgments.

(2)   That the inquiry must be guided by a set of values

and goals that are basic to the common endeavor which

has for two centuries been called the United States of

America.

(3)   That the inquiry be intimately linked to action, not

only in projecting consequences but in testing them as well.

(4)   That decisions regarding such tested consequences be

determined in the open forum of public debate.

These inquiries need to explore areas where massive injustices

exist, as with minority groups and the poor; where the unintended

consequences frequently outweigh the intended ones, as in the applications of new technology; where the pursuit of limited self-interests destroy community potentials. Also they will need to appear both responsible to the establishment and legitimate to the dissidents.

Some examples of the kinds of research questions, i.e., moral inquiries into the societal context of educational issues, which would be relevant to the sorts of issue that would arise in an alternative-schools system are:

- What changes would help to reduce inertias and rigidities in the educational system and foster a greater degree of experimentation and an ability to meet problems with adaptive change?

- What educational objectives could be inferred from present educational practices and results (as opposed to what educators claim as their objectives), and how do they look in terms of the kind of world the child will be living in as an adult?

- What, in terms of those objectives, are the most satisfactory models of human growth and learning?

- To what extent may present educational objectives, philosophies, and practices be contributing to the occurrence or severity of such social problems as ecological irresponsibility, racial prejudice, unemployability, national disunity, and the like?

- What alternative ways can education be structured in order for business and industry, government, schools, the media, advertising, entertainments, the

courts and prisons, to be considered together as one
vast educating system?

- As only one of numerous educating influences in
  society, what educational functions should the formal
  educational system emphasize? How can those functions
  best be accomplished?

- How--in view of the changing work environment--can a
  planned evolution of the structure and function of
  vocational, or continuing, or adult, or higher
  education best take place?

- What are the comparative advantages and disadvantages
  of retaining the present sorting-labeling and gate-
  keeping functions that education performs for the
  society, compared with dropping some of them or shifting
  them to other institutions of society?

- What are the present patterns of rewards and sanctions
  in the educational system, especially with regard to
  experiment and innovation, and what are feasible modifi-
  cations?

- What sorts of changes will be necessary in the schools
  to restore a widespread feeling of legitimacy?

- What are the alternative choices with regard to
  increasing the accountability of the educational system
  to the society, and what are the basic issues involved in
  making the choice?

If educational research deals with these types of questions
in an interactive mode with school professionals, it will provide
a major force for the support and guidance of the evolving alternative-
schools process.

VII   Summary

We have led the reader through a tortuous and multifaceted

argument. At the end, we would not claim so much a demonstrated

conclusion as a framework for further analysis. Many of the

supporting points along the way will need to be checked against

further developments, particularly developments indicating

whether or not the societal transformation described appears

to be taking place. Only after significant social experimentation

will it be clear whether the basic strategy of alternative

schools is as sound and desirable as these arguments suggest.

Thus in summary we would simply reiterate the main themes

of the preceding six sections, hoping that this framework of

reasoning will contribute to the ongoing dialogue.

1. Society may well be in process of one of the major

transformations of human history. It is a transformation which

is on the one hand needed for resolution of social problems of

macro dimensions, and on the other hand appears to be spontaneously

occurring. It is a transformation from the industrial era to

some sort of post-industrial epoch, which we have characterized

as a "learning-and-planning society." That is to say, we are

moving toward a society in which learning, in the broadest sense,

and consciously choosing our destiny, are the predominant functions

of the society (displacing industrial production and economic

growth), and in which all social institutions have adopted operative

goals that reflect this.

2. There are at least four contemporary crises in industrial-
ized civilization which require such a transformation for their
satisfactory resolution. These are (a) a crisis in the image of
man and society, (b) a crisis in the effectiveness of social
structures, (c) a crisis in management and government, and (d) a
crisis in authority and legitimacy of social institutions.

3. Each of the four crises has its manifestation in critical
educational problems or issues. How education chooses to meet
these will, to a great extent, be determined by whether the grave
social problems of the near-term future are approached primarily
through cultural and systemic change, or through increasing
restraints imposed by centralized government. The role of the
schools in the first case will be largely developing the student
for employment in the broad sense, and supporting an "ecological
ethic" and a "self-realization ethic." The role in the second
case will be conditioning toward acceptable behavior. The paper
develops in sections IV and V an educational strategy for the
schools based upon cultural and systemic change which supports
the resolution of the societal problems of employment, distribu-
tion and alienation.

4. The first element of the strategy is changing the guiding
image of education. This has been verbalized as providing equal
opportunity. However this goal rests on two premises--that the
schools provide equality of educational opportunity, and that
equality of educational opportunity leads to equality of economic
opportunity. Without major changes in social and economic per-
ceptions and institutions both premises are extremely dubious.

In practice, this goal has lead the schools to sort and label students according to middle-class values and traits. Thus it has been dysfunctional--causing the schools to promise what they cannot deliver, and contributing to society's disaffection with the school system. The practicable guiding image which emerges out of these considerations and the spirit of equality of opportunity is "equal access to appropriate education."

5. To make this new goal more than merely rhetoric requires the second element, a process which will share power among educational stakeholders and encourage them to interact in ways that will enable the meaning and implementation of equal access to appropriate education to evolve. The alternative-schools process emerges as a promising way of supporting the necessary social transformation, creating the required learning among educational stakeholders, restoring societal support for the schools, promoting new and fruitful interrelationships between schools and other institutions, and enabling schools to innovate in the face of many conflicting demands.

6. In conclusion, specific educational issues are examined to see how they appear in light of the assumed societal transformation and the proposed strategy for educational reform.

REFERENCES

1. See Delgado, J.M.R., Physical Control of the Mind: Toward a Psychocivilized Society (Harper and Row, 1969) and Skinner, B.F., Beyond Freedom and Dignity (Knopf, 1971).

2. Cremins, Lawrence A., Transformation of the Schools.

3. The Illusion of Equality by Murray Milner, Jr., Jossey-Bass Inc. 1972

4. The Great School Legend by Colin Greer, Basic Books Inc. 1972.

5. Piore, Michael J., "Jobs and Training" in The State and the Poor, Samuel H. Beer and Richard E. Barringer eds., Winthrop Publishers, Inc. 1970.

6. Berg, Ivar, Education and Jobs: The Great Training Robbery, Praeger, 1970.

7. Mosteller, Frederick and Daniel Moynihan (eds), On Equality of Educational Opportunity, Vintage Books, New York, March 1972.

8. Gintis, H., "Education, Technology, and the Characteristics of Worker Productivity," The American Economic Review, LXI, 1971, 266-279.

9. Coleman, J.S., et al., "Pupil Achievement and Motivation," Chapter 3, Equality of Educational Opportunity, U.S. Department of Health, Education and Welfare, U.S. Office of Education, OE-38001, Washington, D.C., 1966.

10. Thomas, Thomas C. and Jürgen Müller, The Efficiency of Educational Expenditures for Compensatory Education - An Interpretation of Current Evidence, Educational Policy Research Center, Stanford Research Institute, Menlo Park, Calif. EPRC Research Note No. 15, 1972.

11. Averch, Harvey A., et al., How Effective Is Schooling? A Critical Review and Synthesis of Research Findings, Final Report to the President's Commission on School Finance, The Rand Corporation, Santa Monica, California, 1971.

12. Duncan, Otis Dudley, "Inheritance of Poverty or Inheritance of Race?" Moynihan, Daniel, (editor), On Understanding Poverty, Basic Books, Inc., 1968.

13. Bloom, S., et al., Compensatory Education for Cultural Deprivation, Holt, Reinhard and Winston, 1965.

14. Coleman, James S., "The Concept of Equality of Educational Opportunity," Harvard Educational Review, Vol. 38, No. 1, 1968.

15. Gordon, J.J., "Reaching the Young Child Through Parent Education," Childhood Education, Vol. 46, No. 247 February 1970.

16. Maccoby, Eleanor E., and Miriam Zellner, "Experiments in Primary Education, Aspects of Project Follow Through," Harcourt Brace Jovanovich, Inc. 1970.

17. Sharrock, A.M., "Aspects of Communication between Schools and Parents," Educational Research, Vol. 12, No. 194, June 1970.

18. Willman, B., "Parent Participation as a Factor in Effectiveness of Head Start Program," Journal of Educational Research, Vol. 62, Nos. 406-410, May 1969.

19. Governance, Chapter 12, Report of the New York State Commission to Study the Quality, Cost and Financing of Elementary and Secondary Education (in press).

20. Havelock, Ronald G., Planning for Innovation Through Dissemination and Utilization of Knowledge, Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, The University of Michigan, Ann Arbor, Michigan, 1971.