The success of educational expansion can be seen in the decline in illiteracy rates, improved achievement scores, more years of teacher training, innovative curricula development, and in the greater independence and openness of young people. Despite such positive trends, a crisis in confidence in our system, stemming from the great expenditure in education with less easily perceived results, is a reality. Perhaps efficiency by itself is not an appropriate criteria for measuring a service agency and should be associated with other, social goals in establishing any real criteria for success. Inequality of opportunity, lack of adaptability and accountability are still the imminent social concerns of our educational system. Suggestions for overcoming these problems, however, usually concentrate on production. Priorities for the 70's should include a maintenance of the production goals of the 60's but also the provision for alternatives in schooling, among which parents and students may make intelligent choices, and a renewal and expansion of the apprenticeship tradition in education. The aim of the National Institute of Education for the 70's is to serve the practical needs of the local "consumers" of educational improvement, with emphasis on the establishment of renewal centers to serve as gathering and disseminating points for those concerned with education. (JH)
I believe the major priority for education in the 70's is to recover from the success we have enjoyed over the past 40 years. Look at the record. A growing percentage of our population is receiving an education in the United States; a growing percentage of the GNP is being spent on education; instructional staffs have grown while teacher/pupil ratios have declined; teachers have more training; illiteracy rates have declined; achievement scores have improved; scores on standardized general ability tests have improved.

More effort and resources are allocated to the disadvantaged. Despite minor violations, Title I funds do get to the schools that need them most. A greater number of exceptional children than ever before are receiving special education services. During recent years, school innovation has become a veritable fetish. We have open schools, free schools, community schools, and schools without walls. The literature abounds with descriptions of interesting experiments in educational renewal. Schools have also contributed to national growth and productivity.

Economists have estimated that the substantial returns on our national investment in education have lead to growth in real national income per person. (1) (2) In addition to economic returns, qualitative returns are manifested in a tough minded and idealistic young generation that asks

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difficult questions and insists on honest answers. The young products of today's schools live their morality. They are apparently much more independent of external persuasion and are more likely to apply individual principles to public issues than are their parents.

At the 1971 White House Conference on Youth (3) for example, young people interpreted liberty as "the freedom of all human beings conscientiously to choose their own way of life when the choices do not limit or harm this right of others." This interpretation of liberty was at the heart of some of the more controversial recommendations to come out of the conference: 1) legalization of any sexual behavior occurring between consenting responsible individuals, 2) the right of a woman to determine for herself her own reproductive life, 3) establishment of an all-volunteer army, 4) reaffirmation of the right of privacy, and 5) abolition of laws against the "crimes without victims" such as possession or use of marijuana.

If we're so successful then, what is the problem that prompts so many compassionate critics to go after the schools? There is no need to recite for you the list of problems that beset American education today and that give rise to the need for reform. You are as knowledgeable about these problems as I am. It is worth a little time, however, to analyze why it is that while the education system has probably reached the highest level of its achievement in history, it is facing a crisis in public confidence.

In some ways the overwhelming success in the growth of the public education is its own worst enemy. Our growth has been much greater than that of the economy in general, which raises questions about the rate of return on such large investments. The number of educators has been increasing
3. much faster than either the population or the number of students. The productivity of other economic sectors such as agriculture and manufacturing was increased by mechanization and competition, which brought unit costs down. In turn, this caused a growth in national productivity and an increased prosperity for all segments of our society. While the rate of returns in agriculture and industry easily justify the investment, the increasing size and costs of education doesn't allow the same economies of mass production and the market place. Many people believe it is necessary for us to justify the expenditure on education and explore alternative ways of performing the same functions more efficiently; and are criticizing the schools because we do not do so. (4) (5)

I submit that efficiency and productivity are not the only measures of success in our education system, or of any service area of the economy. What's more, increasing short run productivity by cutting costs, at the expense of providing equal opportunity for all; at the expense of making schools and students able to adapt to society's changes; and at the expense of establishing an acceptable basis for accountability, is probably inefficient in the long run.

Even in areas where we feel that gains have already been made like agriculture and manufacturing, success has not been unequivocal. If success is to be measured in terms of increased productivity and product quality, agricultural research has unquestionably been conspicuously effective. But if these same accomplishments are evaluated against such social goals
as equal access to good agricultural products, improved economic positions for small farmers and agricultural workers, or preservation of the country's agricultural lands, the assessment is not nearly so positive. Consequently, it is important to realize that in the case of education it is precisely such social goals, rather than the short-run productivity goals, which are the real assessment standards.

Perhaps in education we have been too efficient in terms of production, while not sufficiently equitable, adaptable or accountable to win public confidence. Let's briefly review current practice on these three criteria:

First, equality of educational opportunity. The problem of inequality in education has dominated the popular press for some time, but the problem doesn't appear to be improving very rapidly.

The current method of allocating fiscal resources contributes to the problem. In general, local school taxes are regressive, State appropriations fail to equalize resources, and Federal aid at present is too little to close the expenditure gap. That the equality principle is still alive has been affirmed by the recent Serrano decision in California. This is certainly a move in the right direction and it represents one of the most important decisions ever made in public education. Whether this decision results in greater equity depends on both the alternative formula which is used and its political consequences. For example, wealthy districts may decide to reduce the variety of services provided through the public school channels if a too severe compensatory equalizing formula is used. It is interesting to speculate on the extent to which reactions to desegregation have aided the cause of financial equalization.
Adding to the tax inequity is the use of education as a selection device or gatekeeper to sort young people out for different occupational levels. The inequity of the "gatekeeper" function is amplified by the growing evidence that job competence has little relationship to the educational criteria used in job selection. Ivan Berg’s work has shown, for example, that job competence is about the same for high school graduates as for dropouts. Furthermore, a disproportionate share of resources goes to higher education, an area where the fewest number of poor are found. The selection process effectively perpetuates existing social stratification.

A recent Project Talent study has established that the lower a student’s economic status, the less likely he is to go to college. This is true of all levels of aptitude. Furthermore, the lower the student’s socioeconomic level, the more likely he is to drop out. Carl Kaysen has proposed that we separate the selection and educational functions by establishing them in separate institutions. Three-year colleges would do the teaching while the better technical and professional universities would provide the certification. The difficulty with such proposals is how to avoid the stigma on the institution that doesn’t "count".

The inequality problem is most acute in the large cities, where a declining tax base must sustain a spiralling burden of municipal services. The results of compensatory education efforts in the large cities have been disappointing and suggest that much greater concentrations of compensatory support are necessary to provide achievement outcomes equivalent to middle class schools. Such a policy raises the hard
question of whether society wants to provide compensatory treatment or is content with equal opportunity objectives. Clearly most voters are opposed to raising taxes; therefore, if the compensatory objective is to be achieved it will have to be done in a way that is not very obvious to the public. This would be analogous to providing roads and other services which don't require a direct public vote.

A second criterion is adaptability or responsiveness. The success of the school depends on the extent to which it can serve present needs and still accommodate itself to the changing demands of individuals and society for new services. Our society still places great premium on productivity and material acquisition, so it is not surprising to find these values reflected in schools and colleges. Young people are expected to work diligently in school and compete for grades in the anticipation of a comfortable and secure job at the end of the pipeline. But the productivity goal is losing its hold on many young people who could easily make it through the pipeline but choose not to. They are more interested in self-development objectives and are deeply concerned with the quality of life ahead of them as forecasted in their daily experiences with authority in the classroom. Many of the incentives that used to hold students to the grindstone are gone. High paying pressure-cooker jobs aren't very attractive to the affluent youngsters and the escalation of credentials necessary to get those jobs discourages many of the poor kids. Of course, there are many youngsters who still want to make it.
who are willing to pay the price, and who succeed. The critical question is whether the school can adapt to meet the needs of those who don't succeed.

An even more critical question is whether the schools can be adaptable and at the same time retain their current level of efficiency. Consider some of the things necessary to make schools more open and adaptable: increasing opportunities for student and teacher participation in decision making, focusing on different goals for different students; giving each teacher a "kitty" of discretionary money to use as he pleases; allowing students to come and go according to their own time schedules; bringing in all sorts of people without credentials and putting them on the payroll for varying amounts of time; providing a rich variety of materials; giving teachers opportunities to move about and visit schools in search of good ideas; promoting a wide range of experiences in the community for the children ... these are activities that can play havoc with an orderly schedule and can offset the principles of stability and prudent management.

In the prologue of a recent book on career education, Congressman Roman Pucinski, former Chairman of the House General Subcommittee on Education, cites the inability of schools to adapt to society. He asserts that the content of traditional forms of education "for the most part is empty, dull, and meaningless to students; too often, it has no immediate relationship to the adult world they will face; and in too many cases it lacks humanness." Whether this be true or not, if
legislators accept the stereotype as fact—we have a problem that must be met before we can expect an increase in financial support. Continued lack of adaptation to today's problems will elicit alternatives that would compete with and perhaps replace existing school systems.

The third criterion, accountability, is concerned with informing the public of the outcomes of their investment in education. With such information, they may allocate additional resources for those elements that contribute to desired goals and reduce allocations to elements that do not. Because most of the cost of education is the salary, that element is a focus for special attention. We have little evidence, however, that setting salaries by age, experience and certification is related to student learning. It is also hard to convince the public that teacher tenure laws or union bargaining procedures have contributed to an improved learning environment for their children. The allocation of resources in schools doesn't seem to be at all contingent on outcomes. An interesting table of school expenditures since 1920, compiled by the U.S. Office of Education, reveals no appreciable variation among percentage allocations for different school services in the past 40 years. If allocations were used to provide incentives for reform one would expect to find year to year variations for different categories of school services. Perhaps one reason for the extremely narrow range of actual experimentation in schools is the lack of reward for successful reform and the high risk of unsuccessful reform. Reform rhetoric seems to pay off better than real change and it doesn't cost
A recent Gallup Poll indicates that the public wants proof that they are getting their full value from the education money now being spent. They want accountability, but they also value teachers, and in case of money shortages do not want to cut school costs by increasing class size or reducing teacher salaries. Despite the importance credited to teachers, when children do poorly, the Poll's respondents most often placed blame on the home life of the children. If a tight money squeeze forces a cut, the most popular target chosen from among some 16 items was to reduce the number of administrative personnel. It seems as though the respondents attribute custodial functions to the teachers, educational functions to the home, and are doubtful about the role of school administrators.

I believe it is precisely these kinds of value and assessment issues, using similar criteria for analysis, that provide the basis for much public dissatisfaction with schools. This is so even in the face of the enormous success of the education enterprise on almost any a priori criteria. Most of the concerns have to do with principles of equity, adaptability, and accountability, but the most commonly proposed solutions are more concerned with productivity. Let me review two recent proposals for dealing with the productivity problems, and the issues that surround each.

One proposal is to eliminate schools and professional education. Ivan Illich has proposed that we devote our energies to making it
possible for people to learn in the informal settings of their daily activities without mediation by schools or professional educators. This would be done by simplifying equipment and business procedures so that with minimal assistance, people can readily learn what is necessary for them to know. His rationale is that since the cost of education rises faster than the productivity of the entire economy, it would be cheaper to give people personal responsibility for what they learn and teach without the aid of professionals. He contends that schools render access to know-how more difficult than need be. His first step toward opening up access to skills would be to provide various incentives for skilled individuals to share their knowledge. He proposes computerized matchmakers to match peers or assemble people with common interests in a particular learning topic. He would replace schools with reference services which would provide access to learning objects and learning opportunities. The money now spent on schools would be used to provide all citizens with a greater access to the real life of the city. Special tax incentives would be granted to those who employed children between the ages of eight and fourteen for several hours a day, provided employment conditions were humane. Reference services with lists of educators-at-large would give rise to the vocation of independent educators who would help show "natural educators," such as parents and peers, how to help one another.

This proposal for informal institutions, or "learning webs," has some strengths that shouldn't be ignored. The proposal places more
trust in learners and makes more adult demands on them. It promotes higher expectations for responsible behavior in young people instead of assigning them to long periods of dependency within school institutions. By emphasizing that formal schooling is but a small part of total learning, it also attacks the schoolmen in a vulnerable place--their tacit assumption that education is primarily a school function and that the world outside schools is relatively noneducational.

The weakness of this proposal is that it does not provide a detailed plan for implementation. The awesome problems of transition from the present system are handily ignored. If one were to attempt such a plan, it is likely that the new system would be far more expensive and result in a far greater bureaucracy than we have now. Illich doesn't adequately explain how the intellectual matchmaker would establish the credentials of group members to insure an effective learning match; or how space, logistics, schedules, and all the other arrangements would be managed; or how prerequisite skills would be taken into account in arranging for learning experiences. For example, reading skills might be a necessary prerequisite for a particular work experience to have much value. It is only at the molecular level of detailed planning that one learns whether or not a proposal has practical political and economic feasibility. Simplifying society to make it a more palatable learning environment is an engineering problem of enormous complexity. Illich's views on technology are quite simplistic and, if followed, would likely produce results quite different from those he intends.
A second proposal that has received growing support lately is to establish new educational systems, using such tools as television and computers, to bring the cost per student hour of instruction below present levels. There are a number of questions that are raised by the prospect of converting education from a labor-intensive, to a technology-or capital-intensive enterprise. One question that should be considered is whether the effort to technologize education will seriously alter the obtainable outcomes. This is the question of quality—while there is a demand for reducing the cost of education, it is assumed that quality of education will not suffer in the process.

In education, producing people is the end, not the means. Education isn’t simply a tool for turning out skilled manpower. By using technology to increase the productivity of education, we will doubtless do great justice for and be accountable for the specific knowledge and skill objectives; we will be able to provide vicarious experiences by TV; we will be able to perform the gatekeeping function in a more orderly manner and may even strengthen achievement motivation. But less tangible objectives: learning how to learn, to accept change, to be flexible, to be sensitive to the needs of others, to identify with the problems of people one hasn’t met, to work well with others, to accept people who are very different, to appreciate beauty and accept leisure without guilt, to put together life experiences in an integrated way, to be self directing—these could be readily ignored. In the past our efforts at establishing a technology didn’t threaten the attainment
of these types of social objectives because technology was grafted into existing practices which were people dominated. Any serious attempt at increasing productivity, however, that converts education from a labor-intensive to a capital-intensive enterprise, will have to delegate a large share of responsibility to the technology, and will likely focus on the objectives that are easiest to accomplish. The people who do the development work will have to think broadly.

Proposals to eliminate schools or apply technology to reduce school costs are going to be heard more frequently during the 70's. This will be especially true if the response of school leaders is to ignore the noise and go on with a business-as-usual holding pattern, expecting the same strategies that sustained us through the 60's to suffice. Well, we have pretty good evidence that the attempts at innovation during the 60's didn't do the job and that alternative strategies must be found. The Ford Foundation, for example, reviewed some 25 major projects that had been designed to achieve comprehensive school improvement over a ten-year period from 1960 to 1970. The results were quite sobering.

In general, innovations were quickly dropped once supplementary funds were no longer available. This was attributed to both the tack-on nature of the activities, and the conservative backlash to changes that were great enough to make noticeable and bothersome differences. The majority of the efforts soon slid back into traditional patterns of operation. New materials were used only by the teachers who developed
them, and new staffing patterns reverted to traditional modes of operation. It seemed that those who were concerned with school improvement efforts became preoccupied with the novelty of implementing innovations, moving from one new practice to the next without knowing what each contributed, or how to make it a permanent part of the educational process. As a result, those in the projects felt good about what happened, but when it was all over, nothing was really changed. The greatest change that took place in these comprehensive school improvement programs was in people development. The projects supported people and give them a context for professional growth. A second important benefit was that project principal investigators learned how to attract more funds. Another finding was that the "light house" approach, whereby one isolated school was established as a definitive demonstration, had little success in influencing even its own neighbors;

One of the positive recommendations from the study was that one powerful change should be selected and then pursued in depth, exploring all of its implications. For example, one project set out to create a school where students help one another, where everyone involved is both a teacher and a learner. As this concept was implemented to a limited degree it did not affect the total structure of the school, but when the idea was pursued until 80 to 90 percent of the students and teachers were involved, some rather substantial changes in the rest of the school structure became necessary. Existing scheduling and staffing patterns
were no longer suitable for handling student logistics, and human interactions among teachers and between teachers and members of the community demanded a higher priority than they had been receiving. Pursued in depth, the tutoring concept changed the whole school structure. It was also discovered that what a project did, and how it operated were almost entirely determined by the project director.

While the Ford study reviewed comprehensive school improvement efforts, a study by Allan Graubard and Tim Afflek looked at the New Schools' movement and examined the life history of many of these non-public school reform efforts. They found that most of the new schools start with a great deal of enthusiasm and idealism, but suffer from lack of structure and lack of funds. After a year or so chaos leads to conflict, and either some form of structure does emerge or the school does not survive.

If reform efforts in the 60's fell short, who do we turn to in the 70's? I believe we must stay with the same team. Without the strength and assistance of school administrators it would be difficult, if not impossible, to meet the challenge to improve the quality of education in the 70's. There are 13,000 superintendents and 120,000 principals in the United States. Regardless of how much legislation is obtained, these school leaders will be responsible for implementing educational reform. Whatever the new programs of the 70's will be, the administrators will determine how readily they will be accepted and whether or not they
will succeed. The superintendent must work with his community and his school board to decide what changes should be made and how to make them. What changes should be made? There are many good examples for us to learn from. Some plans provide a wide range of choices, some use children to help one another, others use adult workers or families to help. There are ways of increasing productivity without sacrificing equity, adaptability, or accountability. Implementing such plans should be at the top of the priority list for the 70's. I've heard exciting things about Berkeley's program of experimental schools. They provide a pluralistic form of education that offers enough diversity to suit the needs of many different kinds of students. Superintendent Dick Foster has twenty-four alternate schools for students and parents to choose from. He is substituting a mosaic for the melting pot. This requires greater local participation and use of community resources. Giving students and parents choices in the kind of schooling they have is probably the first step in building greater confidence in public education. A major priority for the 70's is to develop alternatives and mechanisms for helping parents and students make intelligent choices.

Another priority is for a renewal and expansion of the apprenticeship tradition. The value of socially meaningful employment is being demonstrated in some of the schools-without-walls. Recently the Office of Education's National Center for Educational Research and Development gave a grant to the Center for Urban Education in New York
City to set up a program of Satellite Academies. These small schools, with about 150 students each are located in office buildings near companies where the students are employed. The Academy Administrators are responsible to the N.Y.C. Board of Education and have deputy administrators loaned from member companies. Students in these schools: Work as regular, fully paid employees of private companies and public agencies every other week during the school year; receive job training designed to help them advance to more interesting and better paying jobs; receive special instruction in reading and mathematics designed to help them succeed on the job; receive special counseling to help them decide their future career and education plans; and work with teachers and other students to design their own independent study projects based on their talents and interests.

The total cost per pupil is about $1,400 including all development and evaluation expenses. Employers pick up on-the-job training and supervisory costs and the academies have a staff-to-student ratio of 1:7. Participating companies include the Chase Manhattan Bank, Equitable Life Insurance Company, New York Telephone Company, several stock exchange firms, and the Lincoln Hospital. Many of the teachers were not licensed but were given special certificates of competency by the Board of Education after having passed a screening board including five high school students. Special aids from youth organizations are on the staff to conduct "rap" sessions with the kids,
and help students and their families get services from city agencies. Four-hundred students are enrolled in three academies so far. These high school youngsters will get a regular diploma but are also receiving a combination of job experiences in downtown Manhattan and the Bronx. Although at some increment of cost, this represents a considerable improvement over what they had available in their regular high school. I submit that the community will be willing to sustain that additional cost because the quality of the program is so much greater than a cheaper program that would fail to engage the kids. I understand that a program in Sweden where every 8th grader works six weeks for pay during the school year has been most successful.

In addition to the many proposed solutions to bring children and adults together again in the world of work, some solutions focus on promoting interactions between parents and children. For example, a group at the recent White House Conference on Children proposed a reevaluation of employer practices that separate families; such as work schedules; out of town weekends; evening obligations; and geographic moves which tear children away from familiar friends, schools and neighborhoods. They also suggested: revision of work laws affecting children and families, such as increasing the number and status of part-time positions so that people who want to give more of their time to parenthood and family can do so; and low cost insurance to cover children at work. They also proposed interactive TV to promote family discussions, games, and joint activity at home.
Let me close by putting in a plug for the Federal role in the task of helping with educational renewal. I'm sure you know that both House and Senate have passed bills to establish a National Institute of Education. The NIE will inherit some existing research and development programs from the Office of Education, including the career development programs such as the satellite academies that I described, the experimental schools program, and the Regional Laboratories and R&D centers. In addition, new development programs will be started in the NIE with a new emphasis to respond to problems that are perceived and defined by practitioners in the field. It will be aimed at serving the practical needs of the local "consumers" of educational improvements. The NIE will work closely with the network of renewal centers that are being established in low income areas by the Office of Education. These will be local, not Federal renewal centers. Federal aid will be provided in concentrated amounts to help local systems and their staffs carry out their own comprehensive improvement plans. The purpose for establishing these renewal centers is to promote reform by focusing the discretionary resources of the Office into particular sites that can serve as vehicles for spreading well-developed programs and new ideas coming out of the schools. These Centers should be places where teachers can come together and talk, share ideas, and get help if they want it. The centers can be places designed by and for teachers, where a demand for change can
grow, and where educational leadership can be found. They can be places where teachers can meet all sorts of people who share their interest in education, and can get information on new programs that have been developed and are available. (18)

To sum up my comments on priorities for the 70's, I don't think it is necessary to launch a whole new set of goals. Let us instead implement the ones we already have: To increase productivity but at the same time to promote equity, adaptability, and accountability.
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