Planning for the future is a necessity for high school principals, as well as for the clear setting of goals and directions, if "crisis management" is to be avoided. The 1960's were the outstanding years in educational progress—but there is a demand now for more. Therefore, the seventies will see more basic changes in education than have been made in our entire history. Educational finance, student unrest, and student-teacher ratio changes are major factors which will be considered. Also important are the views that the school system is anachronistic, and that the schools now hold a secondary place in the educational experience of children. New institutions are needed, and there is an urgent need for overall educational design in every city—such as a metropolitan regional commission on education. (Author/DM)
Because you are considering some common-sense priorities for secondary education in the seventies, I am delighted to be with you in Houston. Increasingly, I appreciate the rare luxury of simply having time to contemplate the future. Clearly, change is the name of the game today -- in a very real sense, we are living the future. As high school principals you are beset by demands from students, teachers, and parents, for change NOW. Like some stocks and bonds, these demands are usually non-negotiable. Their urgency compels your immediate attention, and leaves you little opportunity to sit back, evaluate what has happened, and plan for the future. That's why meetings like this are important.

And yet we all know that planning for the future is not a luxury but a necessity. If we as educators hope to make sense out of these demands, if we intend to take the lead in shaping education of the future, we must take the time now to establish more clearly our direction and set our goals.
The message is clear: if we can't decide on where we want to go, it will be decided for us. We will continue to face more years of "crisis management" in education.

Let me take this precious time, then, to highlight the developments in education over the past ten years that have brought us where we are today -- and to share with you my reasons for thinking that, momentous as these were, they cannot compare with what we shall see in the decade ahead.

Many of these views are documented in High School 1980, a collection of essays on the shape of the future of American secondary education which we edited at the Academy for Educational Development -- and to which Harold Gores, Charles Keller, Lloyd Michaels, and Ole Sand are valued contributors.

During the 1960's we experienced tremendous progress in education. In these years the concept of education as a valuable national resource came of age. Local and state governments allocated enormous sums of money for more buildings, more teachers, more administrators, and more programs. Salaries of teachers and other educational personnel rose to a point undreamed of 10 years earlier. Support from the federal government was unprecedented. From 1963 to 1968 more federal legislation on education was passed and more money appropriated than in the entire previous
history of the country.

As school enrollment expanded, we began to experiment with new ways to teach larger and more varied numbers of students. Our high schools began to focus greater effort on the problems of a more diversified student body. Many of these administrative and curricular changes are listed in A Profile of the Large-City High School, prepared for this association by Professors Robert Havighurst, Frank Smith and David Wilder. They include the Upward Bound program, accelerated progress through traditional curricula, team teaching, language laboratories, the use of paraprofessionals, and teacher aides, and the introduction of ethnic studies. We made notable progress, too, in the integration of the schools. These are just a few of the innovations that helped make the 1960's the outstanding decade in educational progress. So far. I hasten to add that a prime result of progress to date -- substantial as it has been -- is the demand for more. Eager to step up the rate of change, a number of so-called radical educators and writers -- among them John Holt, Jonathan Kozol, Herbert Kohl, and Edgar Friedenberg -- support educational experiments outside the traditional school system. Many of these programs have gotten through to students who have been classed as unteachable by our schools. The federal government through the Job Corps also gives students
who failed in our schools a second chance. The success of the best of all these new programs has not gone unobserved by those pushing for further reform of public education. As Harold Howe says, "Our schools confront the challenge of making the first chance work."

It is against this background that I make the prediction that the seventies will see more basic changes in the schools and in education generally than have been made in our entire history. When we begin to put together what John Gardner calls the pieces of the educational revolution lying around unassembled, we will witness a rate of change assuming geometrical, rather than arithmetic, proportions.

Why? I think the first reason is money, or the lack of it. In today's economy the American public is unwilling to continue to foot the bill for the spiraling costs of education-as-usual. Take Ohio as a case in point. In last November's elections, only 68 of the 243 new operating school levies on the ballot were passed by the voters -- 28%. Of the 61 construction levies only 14, or 23% passed. This condition is typical among the fifty states. Voters generally rejected bond issues for education.

We are not talking merely about curtailing school expansion, or cutting back on ancillary programs. We are talking about schools closing early because they can't meet payrolls. We are talking about bankrupt school systems.
I do not write this rejection off simply as a revolt against ever-higher taxes. Nationwide, voters in the same election were far more generous when it came to recreation, highways, and the fight against pollution -- over 50% of the bond issues for these purposes passed.

I sense a widespread if somewhat unfocused feeling among American voters that they want better results for their educational dollar. Businessmen know this drive as consumerism. In education we speak of accountability. Whatever the label, the fact is that schools are now faced with a financial crisis. This shortage of funds will force drastic changes.

My second reason for predicting substantial change is the widespread student unrest with which you are all too familiar. From 1967 to 1969, 53% of the high schools in large cities experienced student unrest. Conflicts among students, and between students and staff have already brought about changes in curriculum, in teaching methods, in governance, and in the relationship between the school and community. We are experiencing a revolution not unlike other revolutions we have passed through in our history. The violence that surrounded the early organization of labor in this country led to a recognition of the rights of the worker. Likewise, as Superintendent Redmond of Chicago has predicted, out of this present student crisis is emerging a concern for the civil rights of students.
Incidentally, I was interested to read in this past Sunday's New York Times an article on recent research into the age at which children reach physical maturity. Scientists have found that the age at which boys and girls mature has been declining steadily, especially during the last one hundred years -- and especially for children in modern, urban environments. Whereas the average age at which boys' voices change today is around thirteen, records from Bach's boys' choir in Leipzig during the 18th century indicate that sopranos didn't change to bass until about the age of eighteen. We must admit that we have not yet reflected this earlier maturation in the ways we deal with our students.

My third reason for predicting more changes in the decade ahead is the growing realization that there is nothing sacred about the standard twenty-five-to-one student-teacher ratio. This ratio determines how we construct our schools and, once they are constructed, how many teachers we hire, and, therefore, the operating budget for our schools. No evidence exists showing that this formula, so central to our school planning, establishes optimum conditions for learning. John Goodlad has summarized 50 years of research on class size in the Encyclopedia of Educational Research; he finds nothing to indicate that a class of twenty or twenty-five produces a most effective educational setting.
Where does this belief come from? It does, as a matter of fact, have its roots in sacred teachings. As far as I can determine it was first recorded in the Babylonian Talmud of the third century! The exact quotation from the Talmud translates as follows: "Twenty-five students are to be enrolled in one class. If there are 25 to 40, an assistant must be obtained. Above 40, two teachers are engaged." Written in the third century, this no doubt reflected practices of centuries prior to that.

Is there any other situation in American life in which so much depends on a single formula dating from so long ago? I have been raising this question for many years, and have yet to find a single formula or pattern of comparable age on which so much depends. I can only conclude that if we continue to operate a twentieth-century educational system based on an untested third century premise, we deserve what we get.

Last fall I read a newspaper report about a gentleman named George M. Day. At the age of 85 he enrolled for a freshman history course in Ohio's Lorain Community College in the admirable belief that one is never too old to learn. Mr. Day observed -- with what surprise we don't know -- that the classroom hadn't changed much since he finished high school in 1903.

Can this be said of any other aspect of our life? I am afraid our school
system today finds itself in essentially the same position as the railroads in an age of air transportation: a few experiments, but so far no basic changes. Even today the railroads insist on a fireman in every locomotive, although the need for a fireman has long since passed. In the same way, schools today still insist on twenty-five students in a classroom with one teacher in charge, when with our modern communications systems there is no further need for such an arrangement -- as a number of brilliant experiments have shown. If the schools persist, like the railroads they too will go bankrupt. This is the basis for Superintendent Redmond's statement: that "We cannot survive if we cannot change."

My fourth reason for predicting change in the years ahead is that the schools today no longer dominate the educational lives of their students. Television has taken the lead. By the time the average American student completes high school today, he has spent 11,000 hours in school, and 15,000 hours watching television, 4,000 hours more. Our schools are now the Avis and not the Hertz in education. I look for evidence that they will try harder.

They would not have to try much harder to improve upon the effects of television. In handing over the primary educational influence on our children to television, we have abandoned them to what Newton Minow,
former Chairman of the Federal Communications Commission, has called a great American wasteland. A present member of the FCC, speaking at Berkeley recently said, "Television is perhaps our nation's greatest single tragedy. Not only has it failed to make us a better race of men, it has actually made us worse." This national crisis has come about in large measure because of our willingness to turn over our minds -- and even more important, the education of emotions -- and the instruments that program them to the exclusive control of commercial TV.

These, then, are the bases of my prediction that we will see more changes in the decade of the seventies than ever before: First, the financial crisis. Second, student unrest. Third, an anachronistic school system. And fourth, (perhaps as a result of the first three) a school system that no longer holds a primary but only a secondary place in the educational experience of our children.

Having stated the problems that I believe will impel our schools to change, what changes do I foresee? What are my recommendations? I agree completely with the recommendations of the Havighurst report: Devise more experimental schools, rotate faculty members, permit students attendance at more than one school, offer open attendance options, develop more educational parks, break down the barriers of the school walls, among others.
What I am saying, in other words, is that we need -- more than anything else -- to rejuvenate our interest in new forms of education to provide new opportunities, meet new needs. In the past, our educational inventiveness produced some uniquely American institutions. Take higher education, for example. Our colonial forefathers sensed a need for a more liberal general education for ministers, lawyers, and doctors. Not satisfied with models provided by European universities, they invented a new type of school, the liberal arts college. Today the liberal arts college remains uniquely American. It was later joined by other kinds of institutions. In the nineteenth century, when our economy was primarily agricultural, we invented another kind of higher-education institution, the land-grant college. Land-grant colleges took as their purpose society's central concern at that time: raising food. We can attribute the phenomenal increase in the yield per acre dating from the last century to the research and instruction carried on in these schools. Later, when our interest in science outstripped the resources of existing schools and colleges, we conceived still another kind of institution that could carry on scientific investigation, conduct research, and teach. Examples of the technological institute include the Massachusetts Institute of Technology, Cal Tech, and Case-Western Reserve.

As we began to put scientific theory to work on improving our lives,
we recognized the need for new institutions that could help us apply this scientific knowledge to practical problems. We created institutions such as Arthur D. Little, Battelle Memorial Institute, Armour Institute, and the Stanford Research Institute, to name but a few. Spurred on by the needs of war, we created the Manhattan Project, concentrating a new combination of talents to harness the energy of the atom. The atomic bomb was the immediate result.

The enormity of the challenge of space inspired us to greater institutional inventiveness. When it became apparent that the efforts of scientists scattered around the country were making little headway, we created NASA with three centers -- at Cape Kennedy, Huntsville, and of course here in Houston.

The junior or community college stands as a recent example of a new kind of educational institution that we created to meet a new need, namely the demand for some kind of post-secondary education for a substantially larger student population. And, as costs of campus construction and resident programs continue to rise, we may soon see the development of still another means to satisfy the demand for higher education. I refer to the external degree program, supported by Alan Pifer of the Carnegie Corporation; Ewald Nyquist, New York State's Commissioner of Education -- and long
in operation in Britain as the external degree program of the University of London and now in a new "Open University." Under this program, students may be able to receive a degree solely on the basis of passing examinations. They will make use of television, independent study, and work experience to gain knowledge necessary to pass the examinations. Even more important, they will learn to learn independently -- a habit that is more likely to continue throughout life than attending classes.

We should heed these examples. We are faced today with a series of major urban educational problems, far more complex in terms of human resources than any of these other major problems we have solved. We should learn from our past history that the solution to a problem greater than the capacity of any one institution frequently lies in our ability to create a new institution. We need new institutions today.

But even more than new types of institutions and programs, I see an urgent need for an overall educational design in every city in this country, an overall design to provide education for each individual from the cradle to the grave. Our cities comprise a richness of educational resources of which schools are only one part. I am referring to television, radio, preschool programs, adult programs, hospitals, libraries, museums, art galleries, music halls, theaters, and the many programs offered by industrial corporations. These educational programs are not now coordinated,
nor have we mechanisms in any of our cities to see that they are.

Charles Vevier, President of Adelphi University on Long Island, recently proposed one step towards this goal when he proposed the creation of the Nassau County Metro Plan. He suggests that five colleges in Nassau County pool their resources with other nonprofit institutions in the area -- hospitals, museums, arts centers -- in order to provide better services at less cost.

I would like to go even further. To coordinate all educational resources at all levels, I recommend that we set up in each city a metropolitan regional commission on education. Its chief functions would be:

First, to make an inventory of all those educational resources within the city. Every city has an abundance of such resources, but to the best of my knowledge no city has systematically catalogued them. This inventory should include facilities not now used for educational purposes, but which might be. Churches, for example, stand idle much of the time and could be put to good educational use. So could commercial buildings during the evenings when they are empty. This inventory should include a listing of all educational programs now offered, as well as a list of those people who might contribute to further educational development.
Second, following this inventory the commission should prepare a master plan for the city which would provide educational opportunities for every citizen throughout his life; a plan which would reveal how all the learning resources in a community can be used most effectively.

Third, this commission should stimulate the development of new kinds of educational programs to fill gaps it has identified.

Fourth, this commission should stimulate and coordinate educational research, and evaluate the contributions of different kinds of educational experiences on the individual's growth and development.

Fifth, and perhaps most important, this commission should spearhead intelligent community support for education, which we so desperately need in the decade ahead. Not support only for the schools, but for all broadly construed community educational efforts.

In short, the times require that we apply all of our ingenuity to meet more realistically the educational needs of all of our citizens. We must not be afraid of creating new institutions, if such are needed, nor of
adapting old ones. This kind of creative change is in the best American tradition.

To close, I paraphrase a statement made by Justice Cardozo concerning law. "When I was a young psychologist and educator, I thought that education was carried on through the schools, colleges, and universities. But the older I grew the more I discovered that education is a creative process in which principles that have served their day expire and new principles are born."