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ABSTRACT

This document contains papers that discuss (1) the role of the Federal Government in educational finance; (2) some proposals for full State funding of schools; (3) the implications for educational finance of recent State court decisions invalidating inequitable State school finance systems; (4) State plans for financing public schools; and (5) such contemporary issues in school finance as property tax reform, urban school finance, school bond markets, performance contracts, and PPBS applications. A roster of conference participants is appended. A related document is ED 046 082. (JF)

ERRATUM

Financing Education: Who Benefits? Who Pays?
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Erratum: The first three lines of paragraph 4 on page 159 should read as given below. The underscored words were inadvertently omitted.

> Economists, as pointed out above, generally use rather comprehensive criteria to evaluate tax structures. However, the lay public generally considers a progressive tax to be a good tax and a regressive tax, beyond certain limits, to be a bad tax.

Erratum: The 5th line of paragraph 2 on page 154 should refer to Chapter 10 of Volume 5 of NEFP, entitled, ALTERNATIVE PROGRAMS FOR FINANCING EDUCATION, and not Volume 3 as appears.

FINANCING EDUCATION

WHO BENEFITS?

WHO PAYS?

CEF

NEA Committee on Educational Finance

Proceedings of the 15th National Conference on School Finance

March 26, 27, and 28, 1972

Statler Hilton Hotel

New York, New York

Sponsored by the

Committee on Educational Finance
National Education Association
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CONTENTS

FOREWORD

EXISTING SCHOOL FINANCE systems which rely heavily on local property taxation are now under challenge in state and federal courts because of the wide disparities within states in revenues available to finance public schools. The design of adequate and equitable revenue raising and distribution schemes for state school systems is the major challenge of the decade to school finance experts and legislatures.

While states are struggling with the intrastate problems of equality of educational opportunity for children and equity for taxpayers, more attention is being focused on the role of the federal government in school support. The inequities which exist among local school districts within a state are repeated in the inequities which exist among the states. The National Education Association, as well as other groups, is calling on the Congress to begin now to increase the federal share of educational costs from 7 percent this year to 33 percent by 1976-77.

If public education is to meet the needs of an expanding economy for better educated workers, and provide equal educational opportunity for all children, exchange of ideas among persons responsible for school finance is beneficial. It is to this end that the National Education Association, Committee on Educational Finance, has sponsored a series of annual national conferences for the past 15 years. The Conference, which was held in New York City, focused attention on the theme: FINANCING EDUCATION: WHO BENEFITS? WHO PAYS?

The papers prepared by experts in school finance and economics formed the bases for general sessions and small-group discussions. They give evidence to the fact that although many children have enjoyed the benefits of a well financed education, others have not.

This Conference report is published to make available to all interested persons the stimulating, informative, and practical material presented. The points of view expressed are those of the individual authors and do not necessarily reflect the views of the Committee, the National Education Association, or the majority of the conference participants.

This is the final publication in the series of Proceedings of the Annual National Conferences on School Finance. We are indebted to the staff members of the NEA Research Division who have contributed much time and effort to the work of this Committee during the past years. Special recognition for the preparation of the proceedings of the 15th National Conference on School Finance is due Jean M. Flanigan, Assistant Director and NEA Staff Contact for the Committee; Arthuryne J. Taylor, Staff Associate; Beatrice C. Lee, Publications Editor; Frances Scott, Secretary; and William E. Dresser, Chief of the Graphics Section.

Wilbert V. Bolliger, *Chairman*
NEA Committee on Educational Finance

Greetings from the National Education Association

Catharine O'C. Barrett
Vice-President, President-Elect
and Member, Executive Committee

WELCOME to this conference on school finance. I am delighted to observe the comprehensive representation here; I am happy to see students here, members of our UniServ staff, and school finance scholars and practitioners. I am also happy to see some ladies participating in this conference.

It is my pleasure to bring you the greetings of the officers and the staff of the National Education Association. We have here a group that can, and I hope will, give direction to the vital area of school finance. It is an understatement to indicate to a group so involved as you that we live in a time when the very survival of public education is being challenged—certainly threatened, and certainly in the position of never having achieved priority status. At least as far as our federal government is concerned education has never been a national priority. I believe there is nothing to indicate that the federal government is ready or willing to assume its full share of the cost of education.

On March 6, I believe it was, we had the Report of the President's Commission on School Finance which had been studying the whole question for two years. We were pleased to see that the report demonstrated some sensitivity to the problems facing us in education, but we could find nothing that indicated positive recommendations for adequate financial assistance—the kind of adequate financial assistance that school systems must have if we are to solve the educational problems facing us in all school systems, and particularly, in large ones.

Long a champion of the cause of equalization of educational opportunities for all children, the NEA, through its Executive Secretary Sam M. Lambert, is presenting a comprehensive far-reaching proposal for a national support program for public schools. Actually, we are challenging the federal government to face its responsibility in the area of education, to move education for all the youngsters of this nation into a place of priority, and to make available the funds that are needed to guarantee a national stan-

dard of quality education for all public schools. The base for school support must be broadened to equalize educational opportunity for all children. We are calling on the federal government to meet its obligation to every child—it makes no difference to what estate each of those children may have been born. And that responsibility is to provide the opportunity for equal educational advantages. We are proposing a national standard for education. We are presenting a plan to discuss; we will discuss it with a broad spectrum of organizations and we hope much of that discussion may come from the experts in educational finance assembled here. We recommend it to you for discussion and for serious consideration.

Again, I welcome you and hope that this may prove to be a profitable meeting.

The Role of the Federal Government in Education

Claiborne Pell

IT IS MOST APPROPRIATE that I, as Chairman of the Senate Subcommittee on Education, should meet with you at this 15th National Conference on School Finance, for some difficult basic decisions must soon be made which will affect our schools for many years to come. The Congress is now in conference on a major higher education bill of which I am the principal sponsor; and we expect to deal with elementary and secondary education legislation during the course of 1972 and 1973.

My first major bill as Chairman of the Education Subcommittee was an elementary and secondary education bill, which, by and large, completed the process of earmarking special categories of assistance to improve education, a process begun in 1965 with the enactment of the Elementary and Secondary Education Act.

Perhaps the point that struck me most during our consideration of that legislation was the fragmentation of the federal, state, and local efforts in education. Because this is probably as much the fault of the Congress as the education establishment, one of my goals as chairman is to bring about a more comprehensive approach to governmental support of education. While some progress has been made, more is needed.

The role of the federal government in education has changed radically since 1965. In 1965 the question was, Should there be federal aid to education? In 1972 the question is, What form should that federal aid take? Some would say, What should it support? Underlying it all is the question of general financial support for education.

We can no longer indulge in the luxury of unlimited debate on this question. Schools are closing now. We have all read of school terms starting late, of extended vacations, and early closings, all to pare expenses. Residential property owners cannot afford increased property taxes. In fact, it looks as if a property tax revolt has developed to such a point that school systems must look elsewhere for necessary financing. This is a serious situation. A major prop of the financial support for operating school systems is the property tax. When an increase in that tax is proposed, most states

require approval of the increase by vote of the people. In 1965, 2,071 bond issues were placed before the people in order to raise $3,129,000,000 in taxes. Of those, 74.7 percent were approved for revenue amounting to $2,485,000,000. Each year the rate of approval of bond issues has decreased. By 1971, 1,086 bond issues to raise $3,337,000,000 in revenue were voted on; only 46.7 percent were approved.

It is now apparent that we should not and cannot rely on the property tax as a means of financing education. In an urban technological society there is no relationship between the value of real estate and the amount of money needed to run the schools. This has been obvious as courts have examined the issue. The Supreme Court of the State of California in the *Serrano* case and a federal court in Texas found school financing mechanisms based on property taxes unconstitutional, when there was failure to provide an equitable distribution of public funds for education. The overriding issue in both cases was, Do public school financing systems, which depend to a large extent on property taxes, violate the Equal Protection Clause of the 14th Amendment if they result in wide disparities in school revenues?

To decide these cases, the courts examined the role of education in our society to determine whether education represented a *fundamental interest* of the state. This is significant because, other than in the desegreation cases, there had been no pronouncement regarding constitutional law on education. In essence, we now have a constitutional ruling which states that all children have a right to an equal educational opportunity. Any system of financing education that does not provide that opportunity violates the 14th Amendment.

The California and Texas decisions, and others which may follow, should not surprise us. The legal concepts pronounced by the courts in those two decisions have been developing for more than a decade. It is fair to say that in 1960 the general belief was that education—an opportunity to attend school—was a privilege granted by the state. What we thought was a privilege in 1960 we now have come to believe is a right — the right of children to education; and as a corollary, the obligation of the state to finance that education. Let us carry it further. If children have a right to education, they also have a right to equal educational opportunity; and if the means of financing does not result in an equal educational opportunity, the state is depriving children of equal protection of the law.

We can talk about rights and privileges in education. We can legislate high-sounding phrases about equal educational opportunity. But the recognition of rights and the legislation of high-

sounding phrases will not result in that opportunity unless a process is established for guaranteeing it.

A basic constitutional tenet holds that there is no real individual right unless there is a process to guarantee it. Government has an obligation to provide that process. This is an obligation of all levels of government—federal, state, and local. In the case of education, one of the means for guaranteeing the right to equal educational opportunity is money.

In 1972, we must seek to build a structure which guarantees the right to equal educational opportunity. The people responsible for education at all levels—federal, state, and local—will have to review the whole education question and take their respective positions, in line with a common goal, with courage and determination, that of providing quality education for all American children. As a Senator, and as Chairman of the Education Subcommittee, I have a responsibility for making sure that the federal obligation is not neglected.

In 1972, more than $50 billion will be provided nationally for elementary and secondary education. Of that, the federal government contributes about 7 percent. If the funds authorized for education were fully appropriated, the federal contribution would be about 14 percent. Each year since I have been Chairman of the Subcommittee, I have made an effort to increase appropriations up to the level authorized. Those authorizations are commitments to the young people of the country. However, even if those authorizations were fully funded, the federal government would not be carrying its full responsibility for financing education.

It is axiomatic that the level of government which has the greatest financial resources ought to carry the greatest part of the burden in financing those activities which governments share. For many years the federal government has been shirking its responsibilities for education. All governmental structures have a responsibility. The federal government has in many ways been the direct beneficiary of state and local expenditures to educate young people; yet it has not paid its share.

The degree to which the obligation to finance education belongs to the federal government is subject to debate. However, the existence of that obligation is unquestionable, and recognition of it seems to be gaining in the Congress.

Some type of general assistance legislation may well become law during this or the next Congress. What has been offered to meet the question of financing our schools? The first answer was revenue sharing—special and general. What revenue sharing tells you is that the federal government somehow will make available a big pot of money which the local agencies can utilize for educa-

tion. We have held hearings on revenue sharing, and it is clear that people are really talking about two things when they discuss revenue sharing. First, there is a concern about the complexity of present federal law and the problems in applying for and participating in available programs. I sympathize with the local education agencies and have supported efforts to consolidate many of the programs. However, this is really a technical question and does not get to the philosophical problem in revenue sharing.

The second point is the attempt by this Administration, past Administrations, and probably future Administrations to slip loose the tight rein on the use of funds that currently exists in federal legislation. Here, I would like to make one point clear. We do not legislate for the sake of legislating. The federal government establishes a program where it sees a vacuum which needs filling. A good example is the education of the handicapped. We established a comprehensive program to attain an end. Revenue sharing always follows the passage of a program like education for the handicapped and the growth of funds therefor. Legislators will not be quick to do away with these categorical programs, for we still feel that certain areas should be reached. Therefore, revenue sharing is not the answer.

Also, we are hearing about an Administrative proposal which, like other proposals, will miraculously find money to grant to local education agencies. This time, the money will come from a value-added tax or some other form of revenue raising means. If the Administration were talking about cutting out a space shuttle and using those funds, I would be for some type of proposal. My point is that any general revenue proposal should have a definite source of funding. I do not believe the American public will accept another authorization with nothing to follow it up. And I add that the more I have thought about our proposed version of value-added tax, the more it appears to be simply a national sales tax, hurting the poor more than the rich.

The President's Commission on School Finance has labored mightily. Many people on the Hill have dismissed its report, *Schools, People, & Money,* as being somewhat superfluous. I do not. The report urges a major shift of responsibility and funding for education—the states are not to be the focal point. Yet, after recommending such a shift, the report does not say how this is to be accomplished. It endorses all that is good, but does not say where the money should come from. And again I say, that the level of government with the greatest revenue-collecting capacity should carry the greatest load.

I would like to add one parenthetical thought here. The question of school financing must include an understanding of the

relationship of nonpublic education to our nation's education offering. About 5.6 million children are in nonpublic elementary and secondary schools. They have the right to share in the tax money allotted to education. A way must be found to treat them equitably.

The enactment of legislation in this area will be no easy task. It will require our Subcommittee to learn school finance to an extent that Senators are not normally expected to do; it will require many hours of diligent study and work, more than Senators are normally expected to devote to a single Subcommittee's activities; it will require the education of our Senators in order that they may understand concepts not normally brought before the Senate; but these are not normal times. We are faced with new issues and problems each day, especially in education.

The legislation we will propose must be solidly grounded. To prepare such a basis for upcoming legislative tasks, I expect to introduce in the Senate legislation which would provide $200,000 dollars for a broad, across-the-board study of school financing. This will not be a theoretical, conceptual "pie in the sky" piece of legislation, but a hard look at what has been done and what is needed, all related to the peculiar needs of the Congress. I see this study as a nonpartisan project, with both the majority and the minority having equal say in the hiring of staff and experts. The report for the special study would be due early next year.

I spoke earlier about my concern over the fragmentation of programs to aid education. The next law affecting school financing must be comprehensive. If it is not, we shall be adding another story to a house whose foundation is already most shaky. As you can see, I have no answer, no panacea.

There will not be a miraculous breakthrough in this area—what is needed is hard work.

The confusion brought on by the dramatic changes in thinking about education might make some throw up their hands in dismay. *That* we must not do. You, as local educators, and I, as Chairman of the Subcommittee on Education, must treat our present problems as a challenge. I am convinced that our response to that challenge can result in the achievement of our common goal—an equal opportunity for all children, without regard to their race, religion, or economic circumstance.

The Role of the Congress in School Finance

Albert H. Quie

I APPRECIATE this opportunity to participate in this Conference and to share with you my thoughts on the role of Congress in financing education. While I realize that the interest of the National Education Association extends across the whole spectrum of education, I shall confine my remarks to the problems of financing our public elementary and secondary schools.

This is your 15th National Conference on this topic and my 14th year in Congress. In any one of those years my topic of the role of Congress in school finance would have been appropriate, but in the early years the issues would have been quite different.

When I first came to Congress in 1958 the issue of whether or not the federal government should have any role at all in educational finance was very much alive. In the intervening years this has ceased to be an issue. In 1958, I believed that there was a national interest in education, but that the extent of federal involvement should be minimal and limited to sharply defined areas of national concern. As most of you know, my views have changed over the years.

While I believe that there are still special fields for federal concern, which I shall discuss later, my target for federal aid for elementary and secondary schools would be something in the neighborhood of 25 percent of the costs. The current federal share of roughly 7 percent is a long way from that goal, and I do not believe we shall have an easy time reaching it, particularly in view of increasing budgetary problems at the federal level.

However, before we discuss goals for educational finance, I think it would be instructive to see the issues in terms of both the progress we have made and the current situation.

This year we shall spend at least $43 billion for public elementary and secondary schools alone. This is more than three times the amount expended in 1958, when I first came to Congress, and, even allowing for inflation, it is over two and half times the amount expended in 1958.

Increases in federal aid are, of course, even more dramatic. With the enactment of the National Defense Education Act in

1958 we had made a breakthrough in recognizing the national interest in education. Yet five years later, in 1963, the total appropriation for all programs administered by the U.S. Office of Education was $652.5 million, or slightly over 1/10 of the more than $6 billion budgeted for that Office by President Nixon in fiscal 1973. I think that represents dramatic progress.

Incidentally, as the ranking Republican member of the Committee on Education and Labor, I am keenly aware of criticism of the President's education budget. But it seems to me that, while I have yet to see a Presidential budget which satisfied everyone, President Nixon has been treated rather unfairly on some counts. While severe budgetary restrictions dictated a general holding of the line for 1973, the 1972 education budget of $6.1 billion represented a 53 percent increase over the 1971 budget, the largest increase in history for the Office of Education. The 1971 budget was itself a 24 percent increase over the last Office of Education budget submitted by President Johnson for fiscal year 1970. In fact, although President Johnson was rightly regarded as a great friend of education and initiated the ESEA which has proved to be landmark legislation in so many respects, his last four budgets for the Office of Education (for the fiscal years 1967 through 1970) included a total increase of only 2 percent, from $3,513,000,000 to $3,591,000,000.

The point I want to make is that the federal government has not stood still or slid backward in its commitment to education. Still, as I have indicated, we have a long way to go in assuming any substantial share of educational costs, and there are difficult issues of federal policy which we must confront and resolve. Some of those issues, as we all recognize, even now are being shaped by the courts as they consider the legal implications of patterns of school finance.

What is coming to be known as the "*Serrano* line of decisions" by courts, both state and federal, is shaking the foundations of traditional patterns of school finance. I have no competence to attempt a guess whether those cases will be sustained in their essential holdings when they reach various state supreme courts and the Supreme Court of the United States. But even if they are not sustained, the findings upon which they are based are bound to have an impact. School people were not astonished to learn that in California, for example, per-pupil expenditures for elementary schools varied from a low of $407 to a high of $2,586, with the median at $672. This is the pattern for virtually all of our states. Personally, I was somewhat surprised to learn, after rather close analysis, that even when you eliminate the extremes of differences between school districts and consider only those falling between

the 10th and 90th percentiles, the differences are still very great. In California, for example, the spread is $538 to $1,096, or 2 to 1. This is fairly typical, yet in some states the spread reaches 2½, 3, or even 4 to 1, with the extremes of high and low expenditures eliminated.

While it is true that per-pupil expenditures are not the sole measure of educational quality—and in some instances provide no measure at all—it is equally true that these kinds of differentials are indefensible.

In my state of Minnesota we did not have such great differentials in per-pupil expenditures as in most states, yet we still were the subject of a suit in federal court, which, while ruling only on the technical question of whether the complainants had a cause of action on which they could proceed, nevertheless restated the basic findings of the *Serrano v. Priest* decision in California "that a system of public school financing which makes spending per-pupil a function of the school district's wealth violates the equal protection guarantee of the 14th Amendment to the Constitution of the United States."

As those of you from Minnesota know, the case there is being held in abeyance because the complainants withdrew their action in view of the adoption of a new state school financing law under which the state will assume 65 percent of the cost of education and permit a variation of only 10 percent above a guaranteed per-pupil expenditure in any district.

So, regardless of the outcome of these cases, I think that the fact of wide public understanding of the unfairness of the large disparities in expenditures and in the tax effort required to support schools will tend to produce dramatic changes.

At the same time, and assuming now that the *Serrano*-type decisions will be sustained, I am deeply concerned about some of the possible implications. I say "possible implications" because it is becoming increasingly clear that the legal experts and the experts on school finance are far from unanimity about what these consequences may be. The courts have laid down essentially a negative standard, telling states what they cannot do but leaving unclear what can be done and still satisfy legal requirements. Articles are beginning to appear expressing second thoughts about the kinds of positive action which might be approved. Those who are concerned about the education of inner-city disadvantaged children, for example, have become concerned that an equalized state-wide tax levy, with the revenues equally distributed in per-pupil expenditures throughout the state, would in many cases result in a decrease in expenditures in inner-city schools. Yet this appears to satisfy the negative standard of the *Serrano* decision.

I am concerned that this kind of result might occur. But I am also concerned about another possible consequence—the loss of all local responsibility for financing local public schools. I fully agree with the observation of some of the courts that the present financing system typically leaves no room for educational decision making in poor districts, and, therefore, cannot be defended on grounds of local control, but that is a long way from saying that we cannot devise a fair system which preserves a significant degree of local responsibility. I strongly disagree with educators who have advocated that the state assume, for example, 70 percent of the cost of education, with the federal government picking up all the rest. Such a system might make their lives easier in terms of not having to pass local bond issues or obtain approval of local tax levies, but it could also spell the end of intense public interest in and support for the local public schools.

I am convinced, incidentally, that quite aside from the issue of who pays for education, we need more, not less, community involvement in our schools. We need stronger ties binding the parent, the teacher, and the child one to another in support and understanding. If I were a superintendent of schools, I would strongly encourage teachers not only to become involved with the school community, but also to get to know parents in their homes. School visitation is an uncomfortable experience for many parents, but is worthwhile; home visitation might be uncomfortable for many teachers, too, but I think it would be even more worthwhile.

A suggestion growing out of *Serrano* which parallels that of a complete state-federal sharing of educational costs is that so-called local "add ons" or various schemes of local choice which have been described by such terms as "power equalizing" might not be permitted. This has led some to speculate that in each state, rather than level any district down to an average, every district might be leveled up to the expenditures of the wealthiest. As Frederick Andrews pointed out in a recent article in the *Wall Street Journal*, nobody knows what this would cost, but one as yet unofficial estimate was an additional 20 percent, or $8 billion in new funds.

Personally, if we are talking about the short term, I think any such prospect is dim. We already have a virtual taxpayers' rebellion in this country, and it does not much matter to the taxpayer whether he pays local, state, or federal taxes because they all come out of the same paycheck. However, all these possibilities and speculations must and do involve the Congress in its consideration of the federal role in financing education.

If I could convince the majority of the Congress to work with me, I would rather earmark a portion of the income tax for educa-

tion rather than go to a value-added tax. A value-added tax is not as regressive as the property tax, but is more regressive than the income tax, and that is the choice we have to make. Before we throw out the property taxes, which I would not want to do, we should remember an adage which I learned in public finance in college: "A bad tax that is accepted is better than a good tax that hasn't been accepted by the people."

If you want revenue for education you should get it from the taxes that are acceptable and on the books rather than from something that has not been accepted as yet.

From what I read and from listening to constituents and people who have studied the programs, I do not find an overwhelming support for a value-added tax at this time. I believe when the Congress or the Education and Labor Committee looks *this year* at increasing federal funding for education, we will find ourselves divided up into three groups. One group would be like myself who would like to see consolidation of programs. Consolidation of programs has been well developed by the Administration in its special revenue sharing for education, meaning that in moving to block grants, we are not ready to turn them into general aid and have no categorization.

The five categories are:

1. Impact money, which is still needed as long as the property tax is being paid on the local level.
2. Aid for the handicapped. (The handicapped seem to be shunted aside when the local school district is pressed just to keep its doors open. I think federal aid for the handicapped needs to be protected.)
3. Aid for occupational education. We are coming to the time when we might eliminate the earmarking for occupational education because the fight between academic educators and vocational educators is diminishing, and there is greater acceptance of the need for occupational education.

We would finally reach that acceptance if every state would do what I think it ought to do; that is, pass a law requiring each secondary school to place a person on the job when that person leaves school, whether he or she graduates or leaves before he or she graduates from the secondary school. I think this would have the effect on curriculum to bring about an interrelatedness between the academic and the vocational occupational efforts of the schools.

4. Aid for disadvantaged children. We still have a long way to go in providing adequately for those who are educationally disadvantaged.

5. Aid for special services. We can put all the special services which are currently available together in one program and let the schools choose among them.

Now, that does not mean that there will be an increase in funds. The Administration proposes $200 million there, and it will take at least that, I believe, to prevent any school from receiving less money than it had before.

The second proposal that the Administration has recommended is the Equal Educational Opportunity Act which is now before us, basically for the Congress to set some standards for the courts in using busing as a remedy for desegregation. Even more important is the shift in the Administration's proposal on the Emergency School Aid bill. Evidently, in two years since the President recommended the $1½ billion additional federal funds to help pay for the added costs of desegregation, some things must have occurred. Maybe there has been satisfactory desegregation, and local schools and states are paying for those additional costs themselves, and therefore, we can shift the national emergency school aid to compensatory education. This reminds me, though, that during those two years, I was stressing very strongly that we ought to put that money just into the added costs of desegregation (so we could see if that's going to do any good to improve education) rather than go to compensatory education with that money. Many of my colleagues wanted to increase the money for Title I of ESEA instead. It is interesting that some of them now object to the Administration's wanting to shift the emergency school money to compensatory education money. And they want to stay with the old emergency school aid rather than go back to the position they held for the past two years. It is hard to keep track of the changes in position, not only on the part of the Administration, but also on the part of my colleagues in Congress.

That's the position of one group—to support those two programs which would mean $200 million additional in the special revenue sharing and $1 billion additional for schools to desegregate and improve education for the disadvantaged where they are concentrated. While this is not $1 billion additional in the budget for 1973, there would be an additional $1 billion for schools that is not currently available.

The second group in Congress, a sizeable group, would think that we ought to increase by $2 billion the funds in Title I of ESEA. This is hard to do through a resolution, as Chairman Perkins proposed, because the Appropriations Committee will make the determination on the increase in Title I of ESEA. The authorization is there already for increased funding. Chairman Perkins would not prevail in his bill in the Education and Labor

Committee because you cannot force increased funding in our Committee. But, rather, that kind of push, plus the push of lobbying groups, plus the Administration's push for more money for compensatory education from the Equal Educational Opportunity Act will mean that the Congress will appropriate more than the $1.6 billion that is in the budget for Title I of the Elementary and Secondary Education Act for this year.

The problem currently, as the Administration indicated in testimony, is that Title I money is not going just to the schools where there is a concentration of educationally disadvantaged children, or at least a concentration of poor children. Only 27 percent of the money goes to schools that have 30 percent or more poor children and therefore disadvantaged children.

If we base our concept of improving education on the Coleman studies and a restudy of the Coleman Report, we show that the schools that are in the most difficult position for improving the quality of education are those in which more than 30 percent of children are poor.

I think it would be tough on the egos of teachers to read the Coleman Report, and much tougher on the egos of superintendents! The Coleman Report, you know, indicates that what the child brings from home has the greatest impact on what he learns in school and how well he does. What the child in the next seat brings from home has the next greatest impact on what the pupil does and how much he learns. There is little impact on what children learn from the various teachers! That is why I think it must be tough on their ego—teachers (according to Coleman) who are doing well do so because they have good pupils who want to learn, and teachers who are not doing well do not have pupils who come from the kind of cultural and social background to do well.

But I say it is toughest on the ego of the superintendent, because in the Coleman study, facilities make no difference in the quality of education at all. And so, as the superintendent takes pride in a new school building, he really, according to that study, has not improved the education of the children at all. Because of my biases, I do not fully agree with the Coleman study on teachers. I guess that comes from the fact that some particular teachers had a tremendous impact on me, and I can pick three of them through my school experience without whom I would not have done as well as I did. Maybe everybody else has had some particular teachers who have improved their lives.

If we increase federal school aid, say $1 billion additional money that the Administration asked for in the emergency school aid and fund it through Title I of ESEA, only $270 million (27 percent) goes to those schools in which 30 percent or more of the

children are poor. However, if that $1 billion goes through the emergency school aid proposal, $900 million of it under the plans of the Administration would go to those schools which have concentrations of poor children (30 percent or more). From the studies I have seen, such concentration of funds is necessary for the kind of impact to bring about some successes in the elementary and secondary schools for the disadvantaged. The dilemma we face is that the disadvantaged supposedly improve just by associating with the advantaged, but where they are in large numbers it takes great effort on the part of teachers to correct it. Schools like the extra money even where few disadvantaged attend, but then the money is used more like general aid.

The third group in our Committee is composed of those who want to go immediately to general aid for elementary and secondary schools. Now that is a real problem, I think, even if one were disposed to go this route at this time. We have not resolved the fights that have occurred through the years, and the biggest fight of all is the church-state fight. That was resolved in the Elementary and Secondary Education Act, and as far as I am concerned very satisfactorily. I believe very strongly in the approach that was taken in the Elementary and Secondary Education Act to provide assistance for nonpublic-school children, and to the extent we limit our efforts to the consolidation of programs, we can retain the ESEA principle. In this election year there is little chance for general aid. And remember, in the House every other year is an election year, and in the years between, Congressmen are still looking over their shoulders! I doubt that you can get the Congress to adopt a bill that would bring out that old fight between the church schools and the public schools. They just do not want to face that one, especially watching the legislatures trying to find the means whereby they, too, can aid nonpublic school children, and finding that the tax credit concept which was adopted in Minnesota, for instance, may be a viable solution depending on how the courts look at it. The other question with general aid is that many feel it would only increase teachers' salaries and not improve educational opportunities for children.

Those are the three approaches, I think, that will be taken by members before our Committee. I believe, though, that whatever progress we make will be steps in the direction of substantially increased aid in the years ahead. I think we must move to where the federal government will assume a much greater financial responsibility than it has in the past.

Schools, People, & Money: The Need for Educational Reform

The President's Commission on School Finance

Norman Karsh, Executive Director of The President's Commission on School Finance, presented an abbreviated form of Part I of the Final Report of the Commission, Summary of Findings and Recommendations. Part I is given here in its entirety.

For millions of children, American education—both public and nonpublic—is not working as it was intended to work.

Having stated that, this Commission hastens to point out that, for many millions of others, the educational system has worked remarkably well. Despite the manifold problems which today beset our society, it is clear that our phenomenal progress as a Nation is due largely to the success of our schools.

Yet, commissions to study broad national problems seldom, if ever, are appointed to record only the good and the pleasant to hear. Like others with different concerns, this Commission was assigned to seek ways of making a vital system better. To do that, it is necessary to dwell more on what is wrong than on what is right, but to recognize that our present strengths provide the strongest resources for correcting our weaknesses.

There is regrettably, much that *is* wrong in education. The system which has served our people so long and so well is, today, in serious trouble, and if we fail to recognize it, our country's chance to survive will all but disappear.

That very recognition, however, provides a foundation for hope. This Nation surely possesses the intellectual and the physical resources to provide fruitful education for its children. Yet in the process of creating itself—the system of governments, public and private institutions, and people that comprise American education—the Nation has often lost sight of its fundamental responsibility to the children. Now, as education faces the urgent task of reforming its institutions and its functions, it must not lose sight of the children. That is the first premise of this Commission.

The interrelationships among the governments, institutions, and people—complex and intractable as they appear—must and, in fact, do provide means for reform. Both the Constitution and our history make that clear. The Constitution makes no reference to education as such, implying without question that it is a responsibility retained by the States. But in its Preamble, the Constitution seeks to "promote the general welfare, and secure the blessings of liberty to ourselves and our posterity." In that way, it assigns the Federal Government a significant role in education, which surely is an ingredient of "the general welfare" and of concern for "our posterity." Even before the Constitution was ratified, the Federal Government began the practice of contributing public lands in States and Territories for school sites as incentives to the spread of local education. That relationship provides the basis for effecting the reforms American education requires now.

For both constitutional and practical reasons, the States must bear the primary responsibility for designing, financing, and implementing those reforms. But the Federal Government must provide the States with incentives sufficient to enable them to initiate and carry through the great changes in the financing and the distribution of educational resources without which changes our schools cannot really begin to deliver on their promises to our children.

Our Major Findings

The financial problems of education derive largely from the evolving inabilities of the States to create and maintain systems that provide equal educational opportunities and quality education to all their children. Having made that observation, we hasten to state that we are not assigning blame, but are rather attempting to locate the points where reforms must be achieved. Efforts by the States over the years to eliminate or at least reduce disparities in the delivery of educational resources have simply not kept pace with needs that have grown beyond the abilities of the States to fulfill them. These disparities among school districts and among schools have been thoroughly documented for this Commission.

The relationship between cost and quality in education is exceedingly complex and difficult to document. Despite years of research by educators and economists, reliable generalizations are few and scattered. What is clear is that when parents, with the means to do so, choose their children's schools, the ones they select, whether public or private, usually cost more to operate than the school they reject. There are exceptions, of course, where costs are relatively low and parent satisfaction high, or conversely other schools where costs are high and satisfaction nonexistent. And there are numerous examples of schools where increases in

per pupil costs have been accompanied by no discernible improvement in educational quality.

The conviction that class size has an important or even a measurable effect on educational quality cannot presently be supported by evidence. A review of a great body of research on the effect of class size (pupil-teacher ratios, to use a technical term) yields no evidence that smaller classes, of themselves, produce more or better education in any accepted sense. Nor, conversely, has it been shown conclusively that larger classes, of themselves, provide less or poorer education to children—and they obviously cost less.

Reason would seem to dictate that there must be fruitful ways to spend money to improve schools, to equalize educational opportunity and to produce quality education for children. The fact that research has revealed no sure means for improving schools should surprise no one. The truth is that educational research itself is only beginning to come to grips with the complexity of the total teaching and learning process.

As we examine the special difficulties that have arisen in our urban educational systems, we recognize that education is itself only one in a group of economic and social services that affect the deteriorating quality of urban life. Some city schools may be shortchanging our children, but to expect schools alone to cope with the many faults of city life is unfair and, more to the point, unrealistic.

In reviewing the plight of the nonpublic schools, we find that the most serious problems exist among those schools sponsored by Roman Catholic institutions. And despite the pressing financial problems of the Roman Catholic schools, we find that their survival does not depend totally or even mainly on the amount of money available to them.

COMMENT BY BISHOP McMANUS

I dissent from the "Commission's finding" that the survival of Roman Catholic schools "does not depend totally or even mainly on the amount of money available to them." There is no official record to indicate that the Commission made this kind of "finding." The Commission only heard some researchers allege, in my absence, that the Catholic school crisis was more ideological than financial. The only sure fact is that the Catholic school crisis has ramifications other than financial difficulties.

(Concurring—Gonzales, Walton)

Encouraging more research into needs, methods, and possible solutions may seem like counseling patience to a person trapped in a burning building. That is certainly not our intention. But we do not agree with those who argue that money is the remedy for virtually all the ills of our educational system.

With all that, we recognize that money builds schools, keeps them running, pays their teachers, and, in crucial if not clearly defined ways, is essential if children are to learn. And we find that money, whatever its effects, is not being collected equitably or spent according to the needs of children. We conclude that it will be better spent when the bulk of it is raised and distributed by the States to their districts and their schools. At the same time, parents are entitled to know whether their expectations for their children are being fulfilled by their schools.

The recommendations which follow deal only with the major issues associated with our deliberations. The reports of our contractors and staff cover, in considerable detail, many additional aspects of school finance. They will be available to those who wish to obtain additional background and information. (A list of those reports appears in the Appendix to this Commission report.) We have reviewed those reports and have found much value in them. However, we have drawn our own conclusions and we offer our own recommendations. It is our hope that the implementation of these recommendations will play a vital part in restoring public confidence in American education.

Recommendations

1. The Preeminence of State Government in Education

Educational reform, the theme of this report, is dependent upon the exercise by the States of their constitutional responsibility to provide equal educational opportunity and quality education to all children within their boundaries. Continuing reform requires the wise use of the State's instrumentalities–the local boards of education–and the process of reform must be encouraged by the Federal Government.

We recommend that each State assume responsibility for determining and raising on a statewide basis, the amount of funds required for education; for the allocation of these funds among the school districts of the State, and for the evaluation of the effective use of these funds.

COMMENT BY BISHOP McMANUS

While I agree in principle with the Commission's endorsement of "full State funding," I do not agree with the report's assertion that "State governments" have a "preeminent" role in American education. All governments, local, State, and Federal, have not a "preeminent" but a subservient role. The preeminent role belongs to parents whose reasonable and legal preferences and wishes for their children's education should be respected by governmental agencies charged with the responsibility equitably to raise and to distribute tax funds for the support of approved schools of parents' choice.

(Concurring—Gonzales, Walton, Francis, Zylstra)

COMMENT BY IVAN ZYLSTRA

As a member of the Commission, I feel conscience-bound to totally reject the concept contained in the report which advocates that the government has preeminence in educating the Nation's children. The Commission report fails to acknowledge that parents have the prior right and responsibility of educating their children. The right of parents, being God ordained, has preeminence over the State or any other agency or institution.

It is my firm conviction that the responsibility of the State is to assure that no parent will be denied the freedom, by economic sanction or in any other way, of educating his child in a school of his choice. For a parent who is financially bound to the publicly supported and controlled school system, freedom of choice is but a sham.

(Concurring—McManus, Walton)

COMMENT BY NORMAN FRANCIS

This report has attempted to deal with financing elementary and secondary education and the State's constitutional responsibility in this regard. However, I must demur from the overemphasis and the strong implications in the several recommendations which provide, wittingly or unwittingly, for total State control of the system which must guarantee this Commission's view of quality education and equal educational opportunity for all children in this Nation.

Historical and current practical reasons demand serious reservation to the suggestion that the poor and/or minority citizens will be effectively served under existing governmental conditions and attitudes in too many States of this Union.

In endorsing the suggested alternatives for accomplishing greater and full State funding, I would prefer to see it made clear that the question of funding must be separated from the primary responsibility for designing and implementing the goals this Commission suggested for educational reform.

The simple fact of the matter is that parents and local school officials cannot muster, for the time being at least, enough power, political and otherwise, to demand from State governments accountability in the degree and kind necessary to assure the educational reforms covered in this report. This is particularly true in States which have been, and show signs of continuing to be, insensitive to the educational needs of nonwhites, the physically and mentally handicapped and the economically disadvantaged. Until there is a reordering of priorities in these States and a more realistic demonstration by the presence of ethnic and cultural pluralism in the total State governmental system, consistent with the principles this Commission recommended for schools, I cannot endorse the total consigning of the major aspects of the primacy in education to governors, State legislators or State boards of education.

Parents and local educational personnel reflective of the cultural and ethnic pluralism of the local districts must be greater partners with government in the obvious need for educational reform.

In fact, any participation by the Federal Government in incentive awards presently recommended to assure full State funding should also be conditioned on the progress State governments, local ones as well, make in full governmental use of the pluralism in human personnel in their governments.

This Commission report has reemphasized in its total presentation, checks and balances for the interrelationships of parents, school officials and governments. This parity is not clear, in my judgment, in the tone and recommendations dealing with the preeminence of the State in education.

The ultimate effect is a denial, and perhaps a naive belief, of any hope for other effective changes which the principles in this report have recommended.

(Concurring—McManus, Gonzales, Walton)

We also recommend that local boards of education be given wide latitude, within general State guidelines, to use resources provided by the State in ways that best meet their needs and demands. This should include choosing curriculums; employing, assigning and dismissing staff; and defining local goals and objectives. Within this flexibility, local boards of education should be held accountable to local taxpayers, parents, students, and to the State.

The Commission recommends that the Federal role in elementary and secondary education embrace the following major functions: (a) providing leadership in educational reform through research, evaluation and demonstration activities; (b) stimulating State and local public and private activity to meet national concerns and interest and, where necessary, providing continuing financial support; (c) providing incentives and mechanisms designed to more nearly equalize resources among the States for elementary and secondary education;

COMMENT BY NEIL McELROY

I dissent from (c) of the statement of the Commission which describes its conception of the Federal role in elementary and secondary education. I do not consider it necessary at this time to encourage the complicated task of equalizing resources among the States for elementary and secondary education because—

1. The disparity between the tax base of the poorest and of the richest States calculated on a per-pupil basis has been steadily narrowing as the industrialization of the southern States has proceeded. Informed forecasts indicate that this gap will still further narrow in the years to come.

2. Under a program of State funding of elementary and secondary education costs there is an adequate tax base per pupil even in the poorest States to support a quality education program.

3. This Commission is recommending a major shift for raising and distributing funds for elementary and secondary education from the local school districts to the States. This transfer of responsibility will take the best efforts of the States and of the Federal Government, which is being urged by this Commission to provide incentive grants to the States which undertake this responsibility. It would be far better for a concentration of effort in this area to be applied to achieve State funding than to have a distraction from this concentra-

tion, which would be necessary, in order to achieve equalization of resources among the States.

4. Some years from now, after the States have completed their assumption of responsibility for financing elementary and secondary education, the question of equalizing resources among the States can be reviewed in the light of existing tax base disparities at that time.

(Concurring—Brooks, Ford)

COMMENT BY JOHN FISCHER

The Commission's recommendations on the Federal role scarcely touch the one task on school finance that can be performed only by Federal action—equalizing educational opportunity at a reasonable level *among* the States. The justification for such action has been argued full elsewhere and here it is enough merely to review the familiar premises.

The first is that differences in wealth among the States are so wide that the poorer ones cannot support their schools adequately except by neglecting other public functions or by imposing much heavier taxes than the wealthier States require to provide good schools for their children.

The second is that if we really mean it when we say that every American child (rather than every Californian, or every Arkansan) is entitled to equal educational opportunity, we must be prepared to use Federal means to bring about such equality.

The third premise is that since every passing year sees the affairs, the problems, and the people of our fifty States more closely co-mingled, our failure to share equitably the current cost of educating the Nation's children will inevitably force us to share the higher future cost of its uneducated adults.

I recognize that on so important a policy question honest differences will persist. There are grounds for concern that larger amounts of Federal money may bring undesirable levels of Federal influence. It is conceivable that the economies of the poorer States may improve enough to assure adequate school support at some time in the future. But, for me, two considerations are compelling now. One is the evidence throughout our society of the tragic consequences that inferior education has had in the lives of millions of individuals, to say nothing of its effect upon their children and their neighbors. The second is my conviction that whatever uncertain hazards Federal influence may imply, they will be infinitesi-

mal compared to the clear danger of denying a substantial fraction of one more generation the essential foundation for productive life in an open society.

(Concurring—Thompson, Mattheis, Kurtzman, Gonzales, Francis, J. Davis, Saltonstall, Walton)

and, (d) serving as a center for collection, evaluation and publication of educational data. In brief, the Commission sees the Federal Government performing a leadership and pioneering role in long-range educational policy, but only a supplementary role to the States in the financing of school capital and operating costs.

COMMENT BY BISHOP McMANUS

While I am not adverse to being a "big spender" for education, I am reluctant at this time to endorse universal preschool education for four year olds, school-served breakfasts for all pupils, establishment of new State and Federal educational bureaus and agencies, urban demonstration projects and other not-so-essential projects which might reasonably be considered if every child in this Nation were assured schooling which meets present-day minimum standards. School systems on the verge of bankruptcy, like all too many of the large city school systems, need immediate, unrestricted, emergency Federal help to stay in business. Federal funds for demonstration projects and other specialized purposes, ideal though they may be, are not the real need in most cities today.

(Concurring—Zylstra)

2. Full State Funding of Elementary and Secondary Education

Significant disparities in the distribution of educational resources have developed among school districts. Though every State has made some effort over the years to reduce these disparities, the results have been only partially successful at best. That, we believe, is because the States have relied on local district financing for the bulk of educational revenues. Major structural reforms in current systems of school financing can increase the ability of the Nation to serve the educational needs of all citizens.

The Commission recommends that State governments assume responsibility for financing substantially all of the non-Federal outlays for public elementary and secondary education, with local

supplements permitted up to a level not to exceed 10 percent of the State allocation.

COMMENT BY JOHN DAVIS

The report states that local communities should be able to supplement by 10% the amount of State support. This may be appropriate, but in the absence of knowledge as to how the several States will view the unusual problems and needs of central cities and their children, I cannot assume that the basic State support will be sufficient.

The Commission further recommends that State budgetary and allocation criteria include differentials based on educational need, such as the increased costs of educating the handicapped and disadvantaged, and on variations in educational costs within various parts of a State.

To aid the States in moving toward this objective, *the Commission also recommends a general purpose Federal incentive grant that would reimburse States for part of the costs of raising the State's share of total State and local educational outlays above the previous year's percentage. This would be contingent on the submission by a State of a plan for achievement of full State funding over a reasonable period of time.*

Full State funding will provide each State with a greater opportunity to achieve these hitherto elusive goals of equal educational opportunity and quality education.

3. Strengthening State Administration of Education

If State governments are to assume their proper responsibilities for education, most of them urgently need to improve their present capabilities in educational planning, policy development, administration and evaluation. These improvements should extend to both their legislative and executive branches.

No single administrative arrangement would meet the needs of all State governments in the field of education. However, in most States, boards of education and chief State school officers should have more clearly defined relationships with their respective Governors and legislatures.

The future role of State departments of education will undoubtedly require strong leadership and action oriented to serving the needs of school districts.

Inasmuch as many of the recommendations made in this report require a strong State role in education, *we recommend that*

Governors and legislatures take vigorous steps to strengthen the organization and staff of the education related components of their executive and legislative branches. What every State must do will vary, but it is imperative that every State act.

COMMENT BY BISHOP McMANUS

I fear that a massive buildup of State activity in education may be a serious threat to the autonomy of the local school board, a unique American institution, which quite successfully has managed to immunize public schools from undesirable political influence. At a time when much American sentiment understandably is directed toward the simple values of the little red school house, locally controlled, sensitive to local needs and highly esteemed by the populace, I would question the timeliness of erecting collosal State structures to systemize the educational process throughout a State.

(Concurring—Gonzales, Zylstra, Saltonstall)

The Commission further recommends that, in light of the primary responsibility of the State for financing education, and in conjunction with our recommendation for full State funding, Federal educational aid funds should flow through the States, usually through State educational agencies. However, where a State is unable or unwilling to participate in a particular program, Federal funds for that program in that State should be channeled directly to the districts or other agencies involved.

COMMENTS BY BISHOP McMANUS

If the Federal Government should decide to distribute Federal funds to the States as bloc grants, it should guarantee that such funds actually benefit all children eligible to participate in the federally financed programs, even if this were to require special Federal arrangements to achieve that purpose. The Commission's position is not sufficiently specific on this point.

(Concurring—Zylstra, Walton)

4. Saving the Inner City Schools

This Commission recognizes the enormity of the problems of urban decay. To define them in terms of education alone would be to overlook their many other social, economic, and historical

sources. The big cities of the Nation are rapidly being left to the poor and the untrained. Whatever the causes of this concentration of human problems in cities, the solutions are surely more than local or even State matters. We urge that the situation demands strenuous effort now and a major part of that effort must be made through education.

We urge that the State governments assign a high priority to the critical problems of their major cities and especially to the schools of their cities. Education deficiencies are more concentrated within the cities and the educational opportunity gap between them and their suburban neighbors must be narrowed.

The Federal Government must assist the States in this area. We must learn why past efforts have not worked, and more important, just what will work.

The Commission recommends the initiation by the Federal Government of an Urban Educational Assistance Program designed to provide emergency financial aid on a matching basis over a period of at least 5 years, to help large central city public and nonpublic schools finance such problems as: (a) development of experimental and demonstration projects on urban educational problems; (b) replacement or renovation of unsafe, unsanitary or antiquated school buildings and equipment; (c) addition of remedial bilingual, and special teachers and other professional personnel; (d) addition of teacher aides, and other supporting personnel; and (e) provision of instructional materials and services. Grant funds should not be used to increase salary or wage rates of school personnel.

COMMENT BY JOHN DAVIS

The report should have made reference to the need for providing funds sufficient to permit the direct involvement of parents in at least some of the educational process their children are involved in. Partnership approach through family educational commitment could greatly strengthen schools and society.

(Concurring—McManus, Gonzales, Ford, Walton, Francis)

I do not disagree with the proposal that aid be allocated for programs or equipment rather than salary, but it is imperative to keep in mind that salaries for school personnel must be kept competitive if persons of ability are to be retained and attracted to the profession.

(Concurring—Ford)

The Commission recommends that States encourage and assist local education agencies, especially those in larger urban centers, in creating community schools which would include such elements as (a) close liaison with and involvement of parents and other citizens in the educational community; (b) extended availability—nights, weekends, and summers—of school facilities for use of youth and adults in educational, recreational, and other neighborhood activities; (c) cooperation with other community social agencies; (d) recruitment and use of community volunteers as classroom aides, hall monitors, library and clerical workers, and for other appropriate duties.

The Commission recommends that State and local education agencies authorize and encourage the provision of suitable support services and other incentives to attract qualified teachers who understand the special needs of those schools where educational achievement is lowest.

5. Toward Early Childhood Education

There exists today a clear and discernible movement throughout the country toward early childhood education. Public and private agencies are providing an increasing number of programs of preschool education and today 82 percent of the 5-year-old and 29 percent of the 4-year-old populations are enrolled in such programs. However, only 47 percent of 5-year-olds and 20 percent of 4-year-old children from low-income families are now receiving some form of preschool training.

The provision of some form of regular education beginning at age 4 offers significant promise for improving the subsequent educational attainment of children, and particularly for disadvantaged children.

This Commission recommends that the State, local school districts and nonpublic agencies continue to move towards the adoption of programs of early childhood education commencing at age 4 and that the Federal Government provide incentives for this purpose.

A distinction must be made between education at age 4 and day care or other preschool activities. There is a wide variety of the latter sponsored by both private and public organizations. Day care centers can be a valuable aid to the intellectual, social, and emotional development of children, particularly if they include an educational component as part of their program.

We believe that the Federal Government should encourage the development of early childhood education programs for all children and that financial assistance should be provided for children

from low-income families. For those children from families in middle or higher income levels, arrangements should be made to enable them to participate on a shared-cost basis. If day care centers are made available in disadvantaged areas, we urge that an educational component be incorporated in their programs.

In addition to providing general-purpose funds to the States as an incentive for moving toward full State funding, *we recommend that the Federal Government contribute part of the costs of a program to (a) assist public and private agencies in the operation of early childhood education programs that include disadvantaged children; (b) sponsor demonstration projects; (c) aid in the development of curriculums specifically designed for these children; and (d) disseminate the results of effective programs throughout the country.*

6. The Public Interest in Nonpublic Education

The legal responsibility for educating this and future generations of American youth will continue to rest with our institutions of public education; however, the Commission is also firmly convinced that private schools, both church and non-church related, also serve the public interest.

Nonpublic schools offer an alternative to public schools that is clearly desired by many people. They offer diversity and healthy competition. From the financing standpoint, they reduce the financial burden on public school systems by providing educational resources for some 10 percent of the Nation's student population.

A substantial decline has taken place in the enrollment in nonpublic schools, especially those which are church related. The reasons are more than simply financial; however, the financial problem in many of these schools is critical.

In considering what forms of financial aid to nonpublic schools might be recommended by the Commission, the restraints placed on such aid by Court decisions in interpreting provisions of the Constitution, especially to the church related schools, have greatly limited the available options.

The Commission recommends that local, State and Federal funds be used to provide, where constitutionally permissible, public benefits for nonpublic school children, e.g., nutritional services such as breakfast and lunch, health services and examinations, transportation to and from school. loans of publicly owned textbooks and library resources, psychological testing, therapeutic and remedial services and other allowable "child benefit" services.

[See page 38 for comment.]

COMMENT BY BISHOP McMANUS

While the Commission's recommendation that public funds be used to provide child benefit services for nonpublic school children is a reassurring sign of goodwill toward the Nation's nonpublic schools, it is, in fact, only a reaffirmation of a recommendation made some 32 years ago by President Franklin Roosevelt's Advisory Committee on Education. A Commission recommendation favoring Federal tax credits for tuition payment would have been a much more meaningful way for the Commission to come to grips with the well-documented financial emergency in many of the Nation's nonpublic schools.

(Concurring–Walton)

Aware that the provision of child benefit services alone will not make a substantial contribution toward the solution of the nonpublic schools' financial crisis, *the Commission further recommends that governmental agencies promptly and seriously consider additional and more substantive forms of assistance, e.g., (1) tax credits, (2) tax deductions for tuition, (3) tuition reimbursement, (4) scholarship aid based on need, and (5) equitable sharing in any new federally supported assistance programs.*

COMMENT BY NEIL McELROY

My concern about this paragraph, which refers to additional and more substantive forms of assistance, arises from my belief that the examples given are most unlikely to be permitted under present judicial restraints on government payments toward nonpublic school education. The fact is that the Commission, after considering the best legal advice it could recruit, could not find any proposal for a substantive form of assistance to nonpublic schools which appeared both practical and a probable winner of judicial challenge. Thus, the implications of this paragraph are to raise what I consider to be false hopes, and I am unwilling to be a party to such a result.

(Concurring–Mattheis, Fischer, Thompson, Brooks, Ford, J. Davis, Kurtzman)

We believe that any aid to private schools must be conditioned upon the following elements: (1) equitable treatment of various

income classes of parents, with special concern for low income, private school patrons in the larger inner cities; (2) full compliance with Title VI of the Civil Rights Act of 1964; and (3) accountability to the public in providing full information concerning enrollment, governance, pupil achievement, and expenditure data.

Evidence is inconclusive in regard to the amount of program participation that nonpublic school children are receiving under Federal education programs for which they are legally entitled. The Commission urges that the Federal Government take action to guarantee to nonpublic school children equitable participation in all Federal programs for which they are eligible. Though these programs would continue to be administered through public school systems, such action would insure that all eligible children attending nonpublic schools participate in federally aided programs.

7. Making the Educational System Accountable

At a time when the demand for public revenues for all types of services far exceeds the available supply, education officials have the dual obligation to use available resources in ways that produce the best possible results and to account to the public for their decisions and the results obtained. Such accountability requires more knowledge of the educational process than is currently available and better communication to parents, teachers and the public of the results of children's experiences in schools.

While fully recognizing the intangible nature of many aspects of education, the Commission urges State and local educational agencies to give increased emphasis to establishing and improving systems of assessing relative costs and benefits of various educational programs and organizational alternatives.

There is a need for more effective standards and procedures for measuring the performance of our educational systems, and in particular, the qualitative results of school programs. We have been concentrating for too long on the resources going into the schools, giving only minimal attention to the outcomes. The American public has assumed almost without question that educational benefits are automatically increased by spending more money. This is particularly the case in regard to the number of children per teacher in a classroom. The relationship of class size to educational achievement is open to serious question. Research has shown no consistent relationship between class size and pupil achievement in learning as measured by standardized tests, such as reading and mathematics. There is, however, wide agreement that when a class is too large for the purpose at hand, the teacher is overburdened,

discipline problems increase, and pupils may not be provided the individual attention they require.

We therefore urge that policymakers, school officials and leaders of professional organizations refrain from the simplistic assumption that reducing pupil/staff ratios will necessarily produce better education. Under some conditions it may well be possible to increase the number of pupils per staff member with no adverse educational effect, but with significant economic gains.

The Commission recommends that State governments establish statewide evaluation systems to measure the effectiveness of educational programs. These systems should include improved techniques for measuring progress and achievement in school as well as the ability of secondary school graduates to perform effectively in productive jobs or succeed in schools of higher education.

New and better methods are being developed to measure not only the acquisition of knowledge and skills, but also broader understandings and changes in attitudes. By combining such techniques with traditional achievement tests and other existing measurement instruments, it is becoming possible to report more accurately to parents and the public on the progress being made in improving the education of pupils.

The Commission also recommends that each State, in cooperation with local school districts, systematically provide for publication and other appropriate communication to the public of the results of the assessments of achievement and improvement in education. These results should be presented on a comparative basis in relation to school, district, State, and national norms, and for such grade levels and subjects as the State may determine.

COMMENT BY JOHN DAVIS

Accountability is an essential requirement of a responsive school system, but much care must be taken to insure that what is divulged in no way penalizes the learner or places an undue burden on the faculty for failing to have overcome great deficiencies in society which affect learning.

(Concurring—Thompson, Ford, McManus, Kurtzman, Mattheis, Brooks)

8. Relating Education to Career Needs

The Commission sees, as a serious inadequacy of educational planning at national and State levels, the failure to relate curriculum and counseling to long-range employment opportunities.

Too many of our citizens, political leaders and educators have defined adequate education largely in terms of preparation for and admission to institutions of higher learning. In so doing, they have neglected the educational needs of those who do not wish to go that route, as well as those who enter but do not finish college. Today, roughly 40 percent of those who graduate from high school do not go on to higher education.

As a consequence, many young people leave high school poorly prepared to offer any productive skills to prospective employers. In good part, this is the result of improper counseling or no training for employment. Vocational education, long the stepchild of the educational community, has generally been avoided by pupils and parents because of the low esteem in which it has been held. The lack of interest for such training has resulted in a corresponding lack of attention by educators.

Corrective action in this area must be taken both within educational institutions and through community groups. Schools should provide opportunity for career education and parents and community leaders should give active support and encouragement to such efforts and programs.

The Commission recommends that career education be given priority and status at least equal to that now accorded to college preparation and that Federal, State and local governments and their education agencies take vigorous policy and financial steps in this direction.

COMMENT BY JOHN DAVIS

Career education is extremely important and it must receive the support of all educators. In my experience, many high schools have provided excellent opportunities for student exposure to the world of work through actual on-job experience, coupled with part-time school attendance through vocational education. Vocational educational programs could serve as excellent examples for the overall inclusive career education program which blends the best of the older academic and vocational approaches.

(Concurring—Kurtzman, Ford, Thompson, Mattheis)

9. Creating School Districts with Balanced Resources

Today there are some 17,500 school districts in the United States, even though the number has been reduced substantially in the past several years. As the States implement recommendations

for full State funding and more equitable distribution of educational resources, it becomes evident that further reorganization of school districts can facilitate the process.

In any reorganization of school districts two prime considerations should be taken into account. First is the attainment of diversity in the school population. The most important resource of any district is the people who are served. Economic or ethnic isolation of children reduces the ability of school systems to provide equal educational opportunity and quality education. Secondly, each district should be large enough to encompass to the extent possible a distribution of wealth comparable to that of the State as a whole. This would reduce disparities and make more economical the provision of specialized educational programs. At the same time, each school district should be divisible into organizational units sufficiently small and close to the people to enable each to be responsive to local needs and interests.

We recommend that States reorganize their school districts to encompass within each one, wherever possible, children of diverse economic, racial and social backgrounds. Other criteria for consideration in establishing school districts are a more equal tax base for local supplementation of State funding; the capability of offering all levels of schooling from kindergarten to high school as well as special educational programs for handicapped, for vocational purposes and for other special needs; boundaries that would facilitate cooperation with agencies providing health, welfare, and school-associated services, and administrative economies.

10. Exploring Innovations and New Alternatives

Despite the vast amount of research into the nature and processes of education, we remain sadly deficient in our understanding of how children learn, what methods work best, what combination of resources is most appropriate for any group of children, or even how best to prepare teachers to use the knowledge and skills that are available. But every segment of education is maintaining continuous efforts to learn more about the art and science of the field.

Without access to ultimate answers, we believe that the greatest hope for education lies with encouraging diversity in educational offerings by public and private interests, within the realistic limits of available resources.

In the pursuit of these answers, we must not limit our examination to the institutional systems which now provide education to the vast majority of the Nation's children. Quite often, change is brought about by external groups, unsatisfied with the status quo

and earnestly desiring new and different methods and procedures for educating children.

Inherent in the process of experimentation in education is the length of time required for assessing its results. It is unfair and unrealistic to expect immediate results from most educational innovations. Improvements in attitude and motivation of children toward learning can be obscured by the premature assessment of results under the pressure of budget considerations. Sufficient time should be permitted for new approaches in education, depending on the circumstances, before final judgment regarding their effectiveness is made.

Several innovative or experimental concepts are now being considered in many parts of the country. Some have been attempted and are now operating. This Commission has reviewed many of them including a variety of applications of instructional technology, experimental schools, year-round schools, paired schools, differentiated staffing plans, community schools, voucher plans, and performance contracting. All of these, as well as other promising innovations, should be given a fair and reasonable opportunity to demonstrate their effectiveness.

We recommend that Federal, State and local governments and their educational agencies stimulate and finance experimentation in elementary and secondary education. This should include experiments both within and outside of the institutional systems now responsible for public education.

Innovation is not limited to educational practices or methods. It also includes alternative choices of selecting, educating and certifying individuals to teach in the schools. Much is heard from education officials about the problems of poor teacher preparation as well as the difficulties in reassigning tenured teachers. Current certification practices can prohibit otherwise well-qualified individuals who lack certain credentials from teaching in schools. We believe that great strides have been taken in this area, but introducing new procedures into current practice is excessively delayed by system rigidities.

The purpose of certification should be to make possible the employment in the schools of persons with wide varieties of talents and skills, but also to protect the schools, pupils and the public from professional incompetence.

We recommend that States reexamine their policies and procedures regarding the selection, education, and certification of persons in the education professions with the objective of encouraging the entry into the professions of those people who are uniquely qualified to teach or administer schools and school districts.

The Commission believes that reductions should be made in the number of incompetent teachers in ways that are fair and generous to the individuals concerned and that respect due process. This is one of the most critical and difficult imperatives facing public education today.

We recommend that each State give consideration to the development of appropriate plans for dealing with the problems of less able teachers, including such possibilities as early retirement (at the option of school authorities) with appropriate financial incentives, periodic review and renewal of tenure, peer review of teacher performance, and use of student evaluations, among others. We also recommend intensive research in these areas.

11. Asserting the National Interest in Education

The reforms that have already been recommended place a heavy reliance on State government initiative. The reasons should be obvious. The choice of tax and revenue systems, the allocation of money among school districts, the policies and procedures related to the organization and operation of districts, as well as the many related considerations, are clearly within the jurisdiction of the States. If changes are to be made, the States must make them.

The Federal Government, however, can greatly facilitate the reforms which we consider essential. In recognition of the financial and political constraints on the States, we have recommended considerable increases in Federal outlays. But we have seen the need to tie these outlays to reform. More money, of itself, will not produce the reforms we believe to be in the national interest. In the process of reform, however, there must be a continuous reaffirmation of confidence in American education.

In addition to the financial incentives previously recommended, the Commission offers the following recommendations:

A. *Creation of a National Educational Policy Development Council*

The work of this Commission and similar groups had highlighted the need for a continuous and concerted approach to the study of national policies in education. National needs and goals should be clarified through a combination of local, State, and national interests and set forth from time to time at the Federal level. The President's influence on educational policy has increased markedly in recent decades and his role is likely to expand further in the future. To assist him in dealing with issues of national educational policy and to give appropriate visibility to education as a fundamental interest of the Nation and its people, we propose

the establishment of a National Educational Policy Development Council.

The Commission recommends the establishment of a National Educational Policy Development Council, with membership drawn from the broad spectrum of American society, to advise the President on national educational policy; to assess the relationship between education and major social, cultural and economic problems; and to give continuing attention to education as a fundamental national concern. The scope of this council should include all levels and types of education.

COMMENT BY DAVID KURTZMAN

I disagree with the recommendation for the establishment of a National Educational Policy Development Council. The President now has ample facilities to obtain the type of advice contemplated by this recommendation. This recommendation would proliferate the number of Commissions.

B. *Concentration of Funds for Low-Income Children*

The single largest educational assistance program now being administered by the Federal Government provides approximately $1.3 billion for the education of economically deprived children. In the allocation of these funds among the States and counties of the country, equal support is provided for equal numbers of those children, wherever they attend school. This results in distributing these funds to counties without regard to the percentage of low-income children in the total enrollment. A greater proportion of low-income students in a school requires more special services and other resources than does a smaller proportion of these students, but current allocation procedures do not provide for this.

We believe that this program would be greatly strengthened if funds were distributed on a weighted basis, taking account of relative concentration. Rural areas of the country have the greatest concentration of low-income children, and would gain additional funds by this approach.

The Commission recommends that funds now being provided to States and local school systems for the education of children from low-income families be allocated according to the relative concentration of these children within school systems.

C. *Timely Appropriation of Federal Funds*

Federal financial aid to elementary and secondary education has become an integral part of local and State operating programs.

Though intended as specific categorical grants, these funds have been used to expand general school programs to pay teachers, and buy supporting services and supplies. Schools have become dependent on these Federal funds for basic parts of their total programs.

State and local agencies start planning for the next school year sometime in the spring. At that time, planners need to know how much and what kind of Federal funds will be available. Individual programs that suddenly stop and late appropriations make planning a difficult and haphazard operation. We believe that the Federal Government could alleviate part of this problem by assuring local and State officials that they would receive a minimal, continuing flow of previously authorized Federal funds.

The Commission recommends that legislation be enacted that would insure to State and local school systems, in event of delays in Federal appropriations, 80 percent of the funds provided in the previous year which have been authorized for the current year.

In addition to the above recommendations for Federal Government actions, the Commission considers that the following pending programs would greatly facilitate the implementation of recommendations included in this report:

Emergency School Assistance–School systems throughout the Nation are attempting to bring about a more heterogeneous mix of students from differing social, economic and ethnic backgrounds. We believe that equal educational opportunity is enhanced in such a student body. But achieving it is a costly activity and, in many instances, it is difficult for the States to finance. The funds that would be provided by the pending program would make a substantial difference.

Special Educational Revenue Sharing– The consolidation of many categorical aid programs, with limited transferability among them, will greatly relieve the administrative burden now imposed on State and local officials as well as increase flexibility in the use of these funds. The additional Federal funds proposed beyond this consolidation clearly indicate the Federal concern for education. We support, as part of this proposed program, the modified distribution of funds for federally impacted areas. A significant portion of these funds is currently going to school districts which, on a comparative basis, need them the least. State educational agencies should be given the opportunity to use these funds in districts of greatest need.

General Revenue Sharing and Welfare Reform– We have re-

viewed these proposals only in regard to their effect on school finance. By sharing a percentage of the annual Federal tax base on an unrestricted basis, general revenue sharing significantly improves the fiscal situation of State and local general governments. We support the concept of general revenue sharing because it will allow the States to assume their proper financial responsibility with regard to education in a manner that allows more flexibility than has been the case with Federal grants-in-aid.

The proposal for national reform of our welfare system will also provide fiscal relief to State and local governments. It will also help the States to assume their proper role in financing education.

The National Institute of Education—Leadership in research is a significant aspect of the Federal role in education. Seriously neglected in the past, such leadership is now imperative. We must know more about how children learn, how technology influences learning, how new modes of providing education can be adapted, how to improve communication between teacher and student, and much more. The NIE, separated from operational activities and staffed with professional researchers, offers a new opportunity to improve our knowledge of the educational process in all of its dimensions.

Concluding Comments

The Commission began this report by asserting that for millions of children, American education—both public and nonpublic—is not working as it was intended to work. It was for that very reason that the President of the United States established this Commission: to determine why it wasn't working, and to recommend a course of action that could make it work.

Yet it must be repeatedly recognized that despite its difficulties, the present educational system is basically sound. What is needed is not its rejection but its improvement. The schools of this Nation have served America well. The capacity of American people not only to build a strong Nation but to criticize and alter the institutions of this Nation is among the precious products of American schools and colleges.

As we seek to strengthen those schools for the new tasks laid upon them in recent decades, we must alter many parts of our American educational structure but as we rebuild, we shall do well to protect its foundations, for they are solid.

This country has reached unparalleled heights in its economic and social development—due, in good part, to our educational

system. Our public and nonpublic schools have served the majority of Americans well and are continuing to do so. The fact that many, too many, have not enjoyed the benefits to which they are entitled, should not be generalized into an indictment of the total system. It is a well recognized flaw that must be corrected by constructive and deliberative measures, not by divisive mandates.

The Commission recognizes that education, by itself, cannot be expected to solve the many problems now being faced by the American public. Housing, health care, welfare, economic stability, fair employment practices, and many other such considerations, impact heavily upon the well being of the Nation. Offering all citizens equal educational opportunity is essentially a base starting point, a beginning, that prepares an individual for a productive life. It does not guarantee anything else. Further action in many other areas of public concern is necessary, if a balanced approach to the strengthening of American society is to take place. But no yardstick is available to tell us how the Nation's resources are to be divided amongst all public functions.

Priorities are difficult to establish. To a sick person, one hundred dollars of health care is much more necessary than a gymnasium in the local school; to a person living in a slum, adequate housing is infinitely more necessary than another career counselor; and the analogies are endless. We can only state that this Commission has not been oblivious to the critical needs of public functions other than education.

We have offered many recommendations for reform of the educational system, with primary emphasis on its financing. We are not unaware that these reforms, if implemented, will have an effect on virtually all the people of this country, be they taxpayers, parents, students, or government officials. We do not doubt that these reforms will be controversial. They will be challenged and debated. This is as it should be. No single set of recommendations can be applied to all situations and circumstances. But if they can productively contribute to a national dialog on one of the most pressing problems of the day, this Commission will have served its purpose.

COMMENT BY CLARENCE WALTON

Fresh insights from the Commission's report will result in the chartering of new directions in education and a mere enumeration of some of the findings and recommendations should give some sense to the wide-ranging work the Commission has undertaken.

For years to come policymakers and parents will wrestle with ways to:

- Shore up or replace the tottering local property tax base;
- Meet the needs for early childhood education;
- Promote, as part of the public interest, the effective work of both public and nonpublic schools;
- Disseminate and evaluate pupil achievement records recognizing, finally, that publication and analysis make more sense than a calculus of concealment;
- Judge high schools on criteria other than simply the number who go to college;
- Challenge the conventional wisdom regarding pupil-teacher ratios;
- Trim the fat off budgets and increase quality and productivity.

The foregoing illustrates significant achievements. Yet, I confess to a lingering doubt. Have we measured up to the challenge given by President Nixon in Executive Order 11513—the order which brought into existence the Commission on School Finance? Possibly the President asked too much. Since, however, we did not demur we may be delivering too little. As a matter of fact official reports are often best gauged by the hosility levels they generate. Who will take umbrage with the Commission—the professional establishment? Teacher organizations? Bureaucracies? I doubt it. The taxpayer might.

Selective examples may explain my restiveness. The Commission was asked to examine the "adequacy of the existing tax base and structure for the support of the public schools, *and possible alternatives.*" The examination was undertaken but the Commission judged, incorrectly in my view, that transferring the financial burden from local communities to the States and the listing of a series of alternatives met the challenge. This recommendation for full State funding suggests greatly increased reliance on a State sales tax, personal and corporate income, and other taxes, yet no logical case was offered why one was to be preferred over others. And despite a flurry of public comment on a possible Federal value-added tax, the Commission was disinclined to examine the merits of such a tax or speak to the principles which might govern the distribution formula.

Certain omissions worry me. The problem of the inner-city schools rightly receives attention. But Appalachia and other parts of rural America fared less well. Nor did the Commission seek to answer the question: Are the schools being asked to do too much? Some things might be better done elsewhere.

Two remaining points deal with (a) the Federal role in financing education and (b) parental rights and obligations. It seems unrealistic to suggest transferring the financial burden from communities to the States, (which I accept) while according to the Federal government "only a supplementary role to the States in the financing of school capital and operating cost." I would argue that if financial responsibility is transferred from local sources to the State capitals, and if States vary widely in their capacity and will to provide equal access to quality education, the Federal government will—and should—assume a more nearly co-equal role with the States. And this is said despite my own Jeffersonian nostalgia for State's rights and State's responsibilities.

Finally, note must be taken of what appears in the report to be the permeating philosophy; namely, that States hold primacy in the education of children. What no Commissioner specifically asserts, many seem implicitly to accept. I hold that the primary responsibility for the child's education rests with the parent. I hold that education is more effectively achieved when there is fostered a healthy triangular relationship among child, parent, and teacher. I hold that too much benign neglect of the parent's role already exists and that steps should be taken to halt it!

The Fleischmann Recommendations on Educational Finance

Charles S. Benson

ON OCTOBER 28, 1969, Governor Nelson Rockefeller and the Board of Regents, with the approval of the State Legislature, established the New York State Commission on the Quality, Cost, and Financing of Elementary and Secondary Education to "conduct a searching examination of the schools and to make recommendations for meeting the challenges to them in the next decade bearing on their quality, relevance, cost, efficiency, and financing." Commissioners number 18 persons, persons who have given two and one-half years to the assignment. A small staff—at peak size, 28—assisted the Commission, and some 50 independent contractors provided studies.

To inform itself further about the problems of education in New York State, the Commission undertook a number of information-gathering projects. Meetings were held in order to provide an opportunity for individuals and groups to present their views to the Commission. These included a substantial number of executive sessions at which Commission members listened to and questioned education experts on topics such as teacher training and productivity, collective bargaining, school finance distribution arrangements, and accountability and incentive systems.

Nine public hearings were held across the state between October of 1970 and April of 1971. Over 600 individuals and groups, representing parents, students, government officials and organization spokesmen expressed their points of view to Commission members on a variety of subjects ranging from property taxes to the relevance of the present curriculum. Hearings were held in Buffalo, Suffolk County, Nassau County, Albany, Westchester County, New York City (two), Rochester and Syracuse. Commission members and staff also held numerous informal hearings at which individuals and interest groups made their views known on a variety of subjects relating to the Commission's study.

To understand better the practical problems of schools in a wide range of settings, Commissioners and staff visited many types of institutions—alternative and experimental schools, schools for the handicapped, open classroom and traditional schools, and schools using advanced educational technology.

To do all these things required a substantial budget. The figure most widely quoted is $1.5 million. To the man in the street, this is a lot of money. For it he gets only a report, a report, after all,

that says many things with which he may not agree. From the point of view of the Staff Director, on the other hand, the budget of money and time (not quite the same thing) never seems adequate to the requirements. As I commented in a public meeting recently, $1.5 million is the sum required to run the schools of New York State for about 15 minutes, and surely it is not a bad idea every 10 years or so to spend 15 minutes worth of resources to have an independent, well-informed body take a close look at priorities and means in our largest state function. Yet, in honesty, I do not believe that our report—now just appearing in three volumes—would have been much different if we had a somewhat larger financial budget and a somewhat longer span of time to use it. The operative word, of course, is *somewhat* for commissions by definition are temporary bodies. It is from this temporariness that their independence stems.

What would have been needed to produce more subtle and accurate recommendations, or recommendations held with ultimate conviction of their validity, would be a stream of scientific knowledge relating to educational objectives and the means of achieving them. In my opinion, no temporary commission can produce such a stream of knowledge. If, on the other hand, it decides to hold its recommendations in anticipation of such a stream, it will wait a long time indeed.

If we had a science of education, one of the two chief reasons for establishing a commission such as Fleischmann's would disappear, for judgment of wise men might well stand aside for actual evidence. If we all trusted each other's motives in social policy, the other big reason for the existence of commissioners would likewise be taken away.

The functions, then, of commissions might be described thusly: to explore and sift very thoroughly materials descriptive of the existing situation, with "the existing situation" defined in conventional, straightforward terms; on the basis of judgment, to make recommendations toward what seem to be improvements in the existing situation; to identify the period of time within which the state could reasonably be expected to carry out the Commission's proposals; and to estimate costs in financial terms. Note that I did not suggest that the Commission be guided by cost-benefit criteria, whether these criteria are drawn from the market economy or from ever-illusive utility functions. Nor did I suggest that costs other than financial be reckoned closely. These latter exercises require, in my opinion, more scientific knowledge than we possess. To compensate for such knowledge, a successful commission will listen closely to the voice of conscience. For those who might be tempted to think of commission membership as a do-gooder's par-

adise, I hasten to point out that listening to conscience may carry a price for Commissioners in public villification.

The Financial Recommendation

In his press release announcing the establishment of the Fleischmann Commission, Governor Rockefeller included the following as one of the seven questions he put to the Commission: What financial resources are available to finance education, now and in the future? What are the appropriate financial responsibilites for education among the federal, state and local governments? What is the impact of such factors as different tax bases in different school districts, and present statutory limits on taxation and bonded indebtedness? In this paper, I would like to describe briefly the recommendations that bear upon the specific question of the sharing of financial responsibilites between the state and the localities.[1] I shall be brief, because many of you have heard them already. In the last section of the paper, I shall take up some of the criticisms that have been made about the recommendations.

In its recommendation for full state funding of public education, the Commission sets forth general principles under which:

- Costs of leveling up, which will be needed to rid the system of discrepancies in spending, could be spread over several years of state budgeting.
- Equal sums of money would be made available for each pupil unless a valid educational reason were found for spending a different amount.
- Regional educational centers, now being developed throughout the state, can be used to help simplify the process of determining how much money is to be spent in individual school districts.
- State-wide collective bargaining relating to salary schedules and pensions could produce regional salary differentials that would be recognized in the state's distribution formula.

With respect to the state's distribution of the funds, the report proposes a general leveling up. It recommends that the state's school districts be ranked on the basis of their per-pupil expenditures. All districts ranking below the 65th percentile with respect to per-pupil expenditures would be brought up to the expenditure level of that district at the 65th percentile within three years; all those ranking above the 65th percentile would be allowed to maintain their higher expenditure levels with full state support. Expenditures of the high-spending districts, however, would not be increased until expenditures in the rest of the state's schools had risen to meet them.

In addition, the Commission recommended that "all local option for supplementary school levies should be terminated . . . [because] such levies would inevitably become a point of bargaining between the state and local governments. Also, existing disparities in per-pupil property valuation would give rich districts an indefensible advantage with respect to their capacity to raise the add-on amount."[1]

Distribution of funds to a district would depend upon enrollment in the district rather than the current method of weighted average daily attendance. A related proposal would abolish the present weighting measures which count high-school pupils at 1.25 and elementary pupils at 1.0.

The distribution formula would, however, be weighted to provide additional funds for children having demonstrable learning problems. For example, children with demonstrable learning problems in reading and mathematics would be weighted at 1.5 and children with no such deficiencies would be weighted at 1.0. The Commission also recommends that most, perhaps 70 percent, of the money for pupils with learning difficulties would go to the elementary schools of a district, and the remainder to secondary schools. This would assure that remedial funds be concentrated in the children's earlier years when they can do the most good. Funding of programs for handicapped children, debt service, school lunches, transportation, and regional programs under the Boards of Cooperative Educational Services would also be assumed by the state under the Commission's plan, but would be distributed through means other than through the basic formula.

The Commission's recommendations on how the state can raise the revenues needed for the plan call for a uniform-rate state-wide tax on the full value of property, levied and earmarked specifically for education, and put into effect over a five-year period. The rate initially would be set to produce an amount roughly equal to current total local contributions to educational revenues. For example, the report says, a rate of $2.04 per $100 of full-value property assessments would generate some $2.84 billion in fiscal year 1972-73.

The Commission also believes that the tax rate can be held and perhaps reduced once the plan goes into full effect, and that consequent economic growth of the state will provide increased dollar amounts from other taxes for improvement in education.

Provision is made for a "phasing in" period—the five-year term mentioned earlier—in which communities would either raise or lower their property taxes for educational purposes by a factor of 20 percent of the difference between their existing rates and the $2.04 per $100 suggested uniform state-wide standard. Thus, the

rate for New York City, which currently effectively assesses $1.89 per $100 of full value for education, would be raised to the uniform state rate of $2.04 over the five-year period, up $.03 per year. Once this was done, the freeze on the rate proposed above would prevent any additional dependence on property tax financing.

In this connection, the Fleischmann Report says, "If New York City's school tax rate increases in the next five years at the same average yearly rate as in the 1966-71 period (6 percent), by 1976-77 the city's full-value rate will reach $2.50 or about $0.46 higher than the rate at which we propose to freeze."[2]

In calling for use of the property tax to make a start on state funding, the Commission recognizes that there are inherently regressive features in the property tax, and that reliance on it should be reduced as soon as possible, with money to replace the losses in yield to come from the state income tax.

Criticizing assessment practices in connection with the property tax, the Commission recommends an allocation of $200,000 to $500,000 for fiscal 1973 for the State Board of Equalization and Assessment to begin to develop an analysis system of tax rolls and assessments of all property-tax jurisdictions. It also recommends that state teams from the Board perform all assessments of utilities, starting in 1973.

Believing that some homeowners are grossly overburdened, the Commission urges tax credits permitting families which pay more than 10 percent of their incomes in school property taxes to credit the excess against their state income tax bills. Families living in rental dwellings would be eligible for state tax credits to the extent that 20 percent of their rent exceeds 10 percent of their income.

"It is clear," the Commission says, "that the adoption of a state funding system such as we propose means increased over-all spending by the state for education, even before inflationary factors and the cost of improvements in educational quality . . .are taken into account." The Commission then lists the principal increases in state costs resulting from its recommendations, if enacted in 1972-73:

- For "leveling up" to the 65th percentile–$125,000,000.
- For "weighting" factors for children with learning difficulties–$465,000,000.
- For loss of revenue resulting from providing overburdened homeowners and renters with property tax credits–$125,000,000.[3]

Recognizing the current financial crisis in New York State, the Commission nevertheless concludes that each of these factors is

"an essential element of a sound state financing plan. Despite the state's fiscal plight, we consider it proper and responsible for the Commission to recommend this plan," the report says, and lists several reasons:[3]

1. If the *Serrano* decision becomes the law of the land, New York would be forced to adopt such a plan, and it is better to have careful consideration given to its details now rather than later.

2. In order to enable the new system to start operating by the school year 1973-74 at the earliest, the legislature must enact legislation in 1972.

3. The plan has flexibility. Some elements, such as costs of weighting for learning difficulties, could be reduced temporarily; real estate tax relief measures for low-income groups could also be initially reduced or postponed. The Commission does not advocate these reductions or postponements, but notes them as possibilities in time of fiscal crisis.

4. In a review of priorities, the Commission prefers "added taxation to reduced educational expenditures."

5. The Commission feels it offers the best possible plan for the next decade and thereafter, and that it will surely become financially feasible in the years ahead, particularly as some form of federal revenue sharing with the states "seems to be inevitable in the near future."

Criticisms of Fleischmann Version of Full State Funding

The finance recommendations appear to have brought forth strong reactions, some favorable to the *Report* and some unfavorable. Time does not allow further comment in outright support of the proposals. Let us turn to the criticisms, three of which seem to be important.

1. Loss of Local Control

It is true that the Fleischmann recommendations would remove power from local school districts to balance their budgets. On the other hand, local districts would remain in place and would retain their powers to hire teachers, dismiss teachers, regulate the instructional program within limits of their budgets, etc. Thus, charges of Hawaii-style centralization are beside the mark.

Why did the Commission feel it necessary to recommend that the power to balance local budgets be removed? The answer is to be found in Chapter 1 of its report, in which the Commission shows clearly that the distribution of educational attainments in New York State is highly bi-modal. The state is a leader in measured performance of secondary level scholarship; the state is also plagued by an enormous amount of educational failure. The Com-

mission took as its number one priority the eradication of that failure. To direct educational resources toward schools of low performance requires strong state intervention. Such intervention, in turn, implies curbing local freedom to set the size of the budget.

Moreover, the Commission believes that what people really want is local control of schools in the literal sense. That is, teachers, students, and parents would like to have more to say about what goes on in the single school with which they are invloved. The Commission's Chapter on Government will provide suggestions on how this kind of local control of schools may be established.

Finally, it is possible to imagine that students and parents are really more interested in making choices about specific educational services than in having a voice, often a very small voice, in the affairs of a school district. This, of course, is not clear trade-off, because most school board meetings do not allow much time for consideration of specific school programs and the distribution of such services among students. The chapter on government also shows how greater choice in the selection of services can be provided by using the instrumentality of regional education authorities. It will be a fairly complicated proposal, but it is based on two simple ideas: that highly specialized services in the public sector can best be provided when economies of scale are possible to achieve and that a certain amount of benign competition in the public sector is a good thing.

2. Deterioration of Quality Through Loss of Lighthouse Districts

It is my private view that the idea of lighthouse districts being an important wellspring of educational innovation should be consigned to the dustbin of worn-out folklore. Whether the members of the Commission share this feeling I do not know, but I think they believe that the process of innovation, meaning the development and testing of new, workable ideas, should be established as a program subject to regular and explicit funding.

However, it does seem that the existence of lighthouse districts has been a stimulus to greater spending in education. This is simply to recognize the application of the demonstration effect to the public sector. To rely upon such a means for larger state-wide total budgets implies, however, that we face a long stretch of time ahead when cities will be disadvantaged and when poor suburban districts will lack resources, relative to their richer neighbors. The Commission could not accept this policy trade-off. In sum, they could not accept the idea that those incremental rises in state-wide budgets attributable to lighthouse districts are worth the kind of gross misallocation in educational resources that the present sys-

tem of finance produces. The Commission, moreover, has stated its belief that state governments will on their own initiative advance expenditures from time to time. Hence, all is not lost in any case.

The Commission stands foursquare behind quality education, just as it stands foursquare behind the idea that distribution of opportunities for quality should be rational. The Commission has urged gradual levelling up of educational expenditures, not levelling down. It has put no deadline on the time when expenditures per pupil all over the state should be made equal. It recognizes that superior teachers, such as are now clustered in some suburban districts, are necessary for quality education, and it has not proposed that those teachers be scattered indiscriminately and arbitrarily over the schools of the state. The chapter on government and the chapter on personnel offer proposals as to how quality education can be preserved—even enhanced, one may hope—while its distribution is handled in a fair way.

3. Choice of Wrong Measures for Distribution of Aid to Disadvantaged Pupils

The Commissioners proposed that pupils who score in the bottom quartile in an early test of reading and mathematics achievement be weighted at 1.5 for purposes of distribution of state school funds. The alternative measure available in New York State would be an SES or household income measure, namely, AFDC count. The choice between tests and income is not a clear one, but the issue itself is interesting. Let us consider the choice under three headings.

a. The Incentive Problem. Use of tests as the distribution criterion is subject to the charge of creating a negative incentive for school performance—the poorer the pupils do, the more money comes into the school. The Commission's response is that distributions to elementary schools should be based upon an early test, indeed, a readiness test, and that distributions to secondary schools should be based upon a test administered just as pupils are leaving the elementary schools. For the negative incentive to operate, then, it is necessary to assume collusion between elementary and secondary teachers. And secondary teachers would want to play the game. Furthermore, on a state-wide basis, even use of an income measure is not free from negative incentive effects. In the last resort, one must trust the professionalism of teachers.

b. The Problem of Educational Potential. Test scores may be written as MA = L (GP, EN), where MA is measured achievement, GP is genetic potential, and EN is environment.[4] Plainly, use of test scores obscures the factor of genetic potential. Advocates of an income measure hold that special state grants for educational

disadvantage should compensate pupils from poor homes for embodied capital that middle-class pupils acquire through their environmental beginnings. The difficulty may be illustrated by the following example. Suppose a ghetto youth of high genetic potential who because of that potential alone is able to obtain a middle score, not a low score, in an early achievement test. By the Fleischmann criterion he would not be recognized for a special grant and his potential, let us assume, would never be recognized. By an income measure, he would be eligible for extra services and the chance is greater that more of his potential would be released.

The reason that the Fleischmann Commission chose the test measure is found in its priority: to see that the state's educational resources are used to overcome educational failure. The Commission seeks to concentrate resources on instances of extreme academic failure, not to release genetic potential over all underprivileged youth. This may not be the correct choice, but it was a choice made knowingly. Use of an income measure would spread the extra resources more thinly among disadvantaged youth and offer less concentration on educational failure.[5] It would be a good thing if the Commission also recommended a special program to discover and nurture talented youth in the slums, and I think such a recommendation may be forthcoming.

c. The Supplementary Services Problem. It is possible to make a convincing argument that educational failure as a social ill can best be overcome by assuring that pupils are provided an adequate standard of nutritional, health, housing, and recreational services. Exclusive concentration on within-school academic services may not be cost-effective nor even, possibly, effective at all (within the span of years a human being will spend in a school). In the Commission's shorthand, "If a child is failing to learn to read, and if he very badly needs eye glasses, does it make much sense to give him an extra reading specialist instead?" Unfortunately for the test measure, it appears, on the surface at least, to demand that the extra resources for the educationally disadvantaged be spent within the school. The income measure, viewed as an "equalizing of capital embodiment scheme," might offer greater latitude in spending funds on services supplementary to the educational program. I think this is an advantage for the income measure.

Weighing of pros and cons in this fashion obscures political nuances. In part, the Fleischmann Commission was deterred from the use of the income measure because there exists now in New York State a feeling against the adoption of measures that smack of "more welfare." The test measure appears to focus resources on what is clearly identified as a major educational problem. There is

a more subtle political interpretation, however. The income measure can be interpreted, fairly or unfairly, as compensation for failure of a household to bring its children up properly. The test measure more clearly indicates a failure of the schools to provide services that are compatible with the cultural backgrounds of the pupils it receives and their readiness to learn at a given point of time. The Fleischmann Commission found the latter view more in accordance with the dictates of its collective conscience.

FOOTNOTES

[1] New York State Commission on the Quality, Cost and Financing of Elementary and Secondary Education. *Report.* New York: the Commission, 1972. Chapter 2, p. 13.

[2] *Ibid,* Chapter 2, p. 26-29.

[3] *Ibid,* Chapter 2, p. 40.

[4] I am indebted to Donald R. Winkler for discussion of this point.

[5] Of course, the advocates of the income measure can point out that test scores dilute grants by spreading money to low-achieving pupils in rich suburban areas.

National School Policy

Erick L. Lindman

WHEN A FOREIGN VISITOR inquires about American educational policy, we sometimes reply that America has no national school policy; instead, there are 50 separate state school systems, each with its own policies. Then we hasten to add that these separate state school systems are very much alike.

Their similarities stem from many nationally unifying influences, including the frequent exchange of ideas in conferences such as this one. Although the informal exchange of ideas across state boundaries is, perhaps, the strongest unifying force in American education, action by the federal government is becoming increasingly significant.

The federal courts have established common policies pertaining to religious observances in public schools and to the assignment of minorities to school buildings. The U. S. Congress has appropriated funds for selected facets of the educational program; this also tends to make public schools more nearly alike. For example, the development of vocational education in public secondary schools and junior colleges has followed a national pattern since the enactment of the Smith-Hughes Act in 1917. Various approaches to compensatory education have been emphasized simultaneously since the enactment of the Elementary and Secondary Education Act of 1965.

The federal role has evolved from "benign neglect" to an active partnership with states and local school districts. Early in the history of the Republic, national leaders were enthusiastic advocates of the cause of public education. More recently, in addition to advocating better education, the federal government has sought to compensate, in various ways, for deficiencies in the school tax base. Federal aid to federally affected school districts has sought to compensate for deficiencies in the school tax base caused by federal ownership of tax-exempt property.

Another type of federal influence upon public education began with the enactment of the Morrill Act in 1862, which provided land grants for state colleges of agriculture and mechanical arts. This first of the categorical aids had a two-fold purpose: (a) *to aid*

the states in establishing state colleges of agriculture and mechanical arts, and (b) *to aid the federal government* by strengthening agriculture and training officers for the U. S. Army. Most subsequent categorical aids sought to aid the states in financing some facet of education which aided the federal government in achieving a national goal.

In addition to grants-in-aid to broaden the scope of education, the federal government has contributed funds for the education of individuals for whom it accepts responsibility. Illustrations of this type of school aid are funds for the education of native Indian children and for the G. I. Bill. Under such programs the federal government does not seek to broaden the public school curriculum, or compensate for deficiencies in the school tax base. Instead, it recognizes an obligation to a person. This form of federal aid for education is often regarded as precedent for the voucher plan since the aid is directed to a person and not to an educational institution.

Still another form of federal aid to education seeks to improve the methods and technology of education. The 1867 Act, creating the U. S. Office of Education, directed it to diffuse "such information respecting the organization and management of schools and school systems, and methods of teaching as shall aid the people of the United States in the establishment of efficient school systems, and otherwise promote the cause of education." Although this legislative mandate is more than 100 years old, only in recent years has the federal government provided significant amounts of money and specific authorization for research and development work to aid the people of the United States in the establishment of efficient school systems. The role for the federal government has received increased acceptance in recent years, partly because widespread criticism of public schools has indicated a need for improvement, and partly because it would be an obvious duplication of effort for each school district, or each state, to research problems of common concern to all school districts and all states.

To summarize, federal activities in the field of education have been designed to accomplish several different purposes:

1. To promote the cause of education.
2. To broaden the scope of school programs and services, especially those programs and services which contribute directly to national goals, such as full employment.
3. To educate individuals for whom the federal government accepts responsibility.
4. To improve the methods and technology of education.
5. To compensate for deficiencies in the school tax base.

With few exceptions, the federal government has sought to accomplish these purposes without directly operating schools or colleges. The most notable exceptions to this general policy are the federally operated schools for Indian children, the schools in the District of Columbia, and the overseas schools for dependents of American personnel stationed overseas. The tendency for the federal government to avoid direct operation of elementary and secondary schools probably reflects a conviction that states and localities are in a better position to obtain essential parental participation in school affairs.

The categorical aid system for creating national school policy has induced public schools to make concerted attacks upon selected national problems, but it has failed to provide assurances that each state will maintain a free public school system meeting acceptable standards. Moreover, the types of federal controls inherent in the categorical aid system have become exceedingly cumbersome as the system has been expanded to include more and more programs. For these reasons more attention is being given to general-purpose aid for education and to revenue-sharing proposals.

Federal General Support for Education and National School Policy

One of the strengths of the categorical aid system is that it begins to set forth (in piecemeal fashion) a national school policy. Most proposals for general-purpose aid or revenue sharing for education stressed that there would be no strings attached, and hence, would contribute little to a national school policy.

I believe that we have now reached a stage in the evolution of our concept of the federal role in education when a general-purpose aid or revenue-sharing bill should describe more clearly the role of the states and the federal government and the responsibilities of each.

If the federal-state-local partnership is to operate effectively in education, each partner must accept specific responsibilities and obligations, and assure the other partners and the American people that these obligations will be met in a satisfactory manner. This is an essential step in the development of such a partnership.

While the allocation of responsibilities between the state and its local educational agencies differs from state to state, the division of responsibilities between the federal government and the states must reflect a common national policy in the governance of education.

The following statement of obligations, that the states and the federal government should accept with respect to education, illustrates the beginnings of a national school governance policy. As a

condition for receiving its share of federal general purpose aid for education, each state should assure its people and the federal government that

1. It will maintain a free public school system, providing at least 12 years of instruction.
2. No child will be denied admission to any public school because of his race or religion.
3. School policies will foster interracial school programs, and, whenever possible, racially balanced schools.
4. All children between the ages of 6 and 16 will be required to attend a suitable school for at least 180 days each year.
5. All accredited elementary and secondary schools will maintain a basic program of instruction for all children and youth in the state.
6. Suitable remedial or compensatory education will be available for all children in need of such instruction.
7. Summer schools will be available, tuition free, in selected high-school centers throughout the state, providing remedial instruction for those who need it, as well as stimulating advanced instruction for the academically talented.
8. All high-school or junior-college graduates will be prepared to enter a four-year college and/or have a cluster of practical skills useful for employment.
9. The accomplishments of public schools will be evaluated and reported.
10. Adequate financial resources will be available for public schools in all parts of the state without excessive local taxation.

The federal government should assure the American people and the respective states that

1. Federal funds for public schools, except for payments to local school districts in lieu of property taxes, will be granted to states and administered by state education agencies under federally approved state plans.
2. Annual federal appropriations for public schools will be completed in time to permit effective planning by state and local educational agencies.
3. Federal categorical aids will be consolidated into a few block grants.
4. An adequate research and development program, seeking to solve educational problems of common concern to all states, will be maintained.
5. Federal funds for public education will supplement state

and local funds so as to make educational services more nearly equal.

6. Matching or "maintenance of effort" requirements will encourage continued state and local support of public schools without imposing excessive burdens upon low-income or high-cost states.
7. No penalties will be imposed upon states which count federal payments in lieu of taxes and PL 874 funds as available local funds in computing state equalization or foundation program payments to local school districts.

These statements illustrate the kinds of assurances which could be stated as part of a general-purpose aid or revenue-sharing program for public education. By this procedure, it should be possible to establish appropriate national policies for public education without the cumbersome federal controls which characterize our expanded categorical and system.

The Equalized Matching Approach to Revenue Sharing for Public Schools

In addition to the mutual assurances described above, it is necessary to assure that state and local tax effort will be continued. The equalized matching plan is designed to provide such assurance.

Under the equalized matching plan, federal reimbursement percentages would be computed for each state from a statutory formula, and each state would receive a federal grant equal to the product of its federal reimbursement percentage and the amount it expended from state and local sources for public school support during the preceding school year. The federal reimbursement percentages would be inversely related to the state's per-capita income, so that low-income states would receive a greater percentage grant.

The suggested formula for computing the federal reimbursement percentage is:

$$\text{Federal reimbursement percent} = \frac{25\%}{\text{State's Fiscal Capacity Index} - 5\%}$$

The federal reimbursement percentage formula would be established by law. The subtraction of 5 percent from the quotient makes the average federal contribution rate equal to 20 percent and introduces an equalizing factor. The State Fiscal Capacity Index is the quotient obtained by dividing the state's per-capita income by the national average per-capita income. For a state with average income per capita, the fiscal capacity index would be 1. By using the formula above and recent information concerning

TABLE 1.—ESTIMATED FEDERAL AID PAYMENTS TO STATES UNDER THE EQUALIZED MATCHING PLAN, USING TOTAL PERSONAL INCOME TO DETERMINE THE FISCAL CAPACITY INDEX

State	Estimated state and local school revenues per pupil in ADM	Total personal income per capita, 1969	Fiscal Capacity Index	Federal reimbursement percent	Estimated federal aid per pupil in ADM
1	2	3	4	5	6
U. S. Total	$ 782	$3,687	1.00	20	$156
Alabama	444	2,582	.70	31	140
Alaska	818	4,460	1.21	16	140
Arizona	794	3,372	.91	22	172
Arkansas	466	2,488	.67	32	149
California	733	4,290	1.16	17	140
Colorado	747	3,604	.98	21	157
Connecticut	1,260	4,595	1.25	15	172
Delaware	977	4,107	1.11	18	172
Florida	727	3,525	.96	21	153
Georgia	527	3,071	.83	25	140
Hawaii	961	3,928	1.07	18	172
Idaho	541	2,953	.80	26	140
Illinois	1,004	4,285	1.16	17	171
Indiana	641	3,687	1.00	20	140
Iowa	813	3,549	.96	21	171
Kansas	861	3,488	.95	21	172
Kentucky	571	2,847	.77	27	154
Louisiana	619	2,781	.75	28	172
Maine	678	3,054	.83	25	170
Maryland	906	4,073	1.10	18	163
Massachusetts	829	4,156	1.13	17	140
Michigan	766	3,994	1.08	18	140
Minnesota	854	3,635	.99	20	171
Mississippi	442	2,218	.60	36	159
Missouri	710	3,458	.94	22	156
Montana	751	3,130	.85	24	172
Nebraska	663	3,609	.98	21	140
Nevada	787	4,458	1.21	16	140
New Hampshire ...	725	3,471	.94	22	160
New Jersey	1,021	4,241	1.15	17	172
New Mexico	616	2,897	.79	27	166
New York	1,262	4,442	1.20	16	172
North Carolina	566	2,888	.78	27	153
North Dakota	687	3,012	.82	25	172
Ohio	720	3,738	1.01	20	144

TABLE 1.–ESTIMATED FEDERAL AID PAYMENTS TO STATES UNDER THE EQUALIZED MATCHING PLAN, USING TOTAL PERSONAL INCOME TO DETERMINE THE FISCAL CAPACITY INDEX (Continued)

State	Estimated state and local school revenues per pupil in ADM	Total personal income per capita, 1969	Fiscal Capacity Index	Federal reimbursement percent	Estimated federal aid per pupil in ADM
1	2	3	4	5	6
Oklahoma	493	3,047	.83	25	140
Oregon	921	3,573	.97	21	172
Pennsylvania	910	3,659	.99	20	172
Rhode Island	798	3,858	1.05	19	152
South Carolina	563	2,607	.71	30	169
South Dakota	594	3,027	.82	25	149
Tennessee	535	2,808	.76	28	150
Texas	592	3,259	.88	23	140
Utah	652	2,997	.81	26	170
Vermont	903	3,247	.88	23	172
Virginia	693	3,307	.90	23	159
Washington	846	3,848	1.04	19	161
West Virginia	617	2,603	.71	30	172
Wisconsin	943	3,632	.99	20	172
Wyoming	706	3,353	.91	22	155

SOURCES:

Column 2: Derived from: National Education Association, Research Division. *Estimates of School Statistics, 1970-71.* Research Report 1970-R15. Washington, D. C.: the Association, 1970. Tables 3 and 9.

Column 3: U. S. Department of Commerce, Office of Business Economics. "State and Regional Personal Income in 1969." *Survey of Current Business* 50:33-44; August 1970.

Column 4: Column 3 divided by the national average personal income per capita, $3,687 (computed by multiplying column 2 by 1/3687 equal to .000271223).

Column 5: 25% divided by Fiscal Capacity Index (column 4) minus 5%.

Column 6: Column 5 multiplied by column 2, but not less than $140 nor more than $172.

the per-capita income for each state, it is possible to estimate the range of federal reimbursement percentages among the states.

State Fiscal Capacity Indexes, based upon personal income per capita for 1969, ranged from .6 in the state with the lowest per-capita income to 1.25 in the state with the highest per-capita income. The suggested formula would provide federal reimbursement percentages as follows:

	Fiscal Capacity Index	Federal reimbursement percentage
High-income state	1.25	15
Average-income state	1.00	20
Low-income state	.60	36

Under this plan, a state would qualify for its grant by its own effort to support public schools. This approach has a built-in assurance that the state would not reduce its effort. A reduction in state and local effort would result in a decreased federal payment during the ensuing year. In this sense, the federal grant would be an incentive for at least maintaining state and local effort for public school support.

The total state and local current expenditures for public schools would be computed for each state each year by first determining the total amount it expended during the preceding school year for current public school purposes. This total would include amounts for kindergarten, grades 1 through 12, and summer schools. From this total would be deducted amounts contributed by the federal government for the current support of these school programs during the preceding year. Estimates of the amounts due each state, under the equalized matching plan, are shown in the table.

Under the equalized matching formula, the total annual federal contribution for the general support of public schools would be equal to approximately 20 percent of the amount contributed from state and local tax sources. However, it is anticipated that some federal categorical aids would be continued, making the total federal contribution for all programs approximately equal to 22 percent of the *total cost of public elementary and secondary schools.*

While these over-all amounts are reasonable, they would need to be approached gradually, perhaps over a three- or five-year period. However, the ultimate goal should be established at the outset so that orderly fiscal planning would be possible.

The equalized matching approach is based upon the assumption that states and local school districts will continue to provide most of the funds needed to operate public schools. Federal funds are supplemental, intended to compensate for deficiencies in state and local school revenues and to provide an incentive for continued state effort to support public schools.

The equalized matching plan has a relatively clear purpose—to share public school costs on an established percentage basis and to

provide an incentive for continued state effort in the support of public schools from state and local sources. Under this plan, the appropriation process should be less controversial since the states would "earn" their federal apportionment by contributing amounts from state and local tax sources. Moreover, the percentage relationship, once established, would not need to be changed each year to reflect changes in the value of the dollar. With such stability, effective local planning would be facilitated.

The chief criticism of the equalized matching plan is that it might provide an incentive for extravagance in educational expenditures. However, if the maximum state reimbursement percentage is less than 40 percent, and in high-income states less than 20 percent, the danger that federal aid would constitute an incentive for extravagance is minimized. Even so, an additional constraint upon the equalized matching approach, limiting the effect of extremely high or low state and local effort, is suggested. Under this constraint, no state could receive more than 110 percent or less than 90 percent of the national average amount per pupil. This constraint was used in computing the estimates shown in the table.

MAJOR UNRESOLVED ISSUES REQUIRING ILLUMINATION IN THE WAKE OF SERRANO*

John Silard

IN 1954 in its historic *Brown* decision the Supreme Court of the United States applied a concept of equality in public education to strike down racial segregation in the schools.[1] Once this Constitutional right had been determined, it became inevitable that ultimately the equality principle would find application beyond the area of race. It is now finding such application in inter-district funding inequities, which became illuminated by a considerable literature during the 1960's.[2] The 1971 decision of the California Supreme Court in *Serrano*, followed by similar recent rulings in Minnesota, Texas, and New Jersey, marks the beginning of a broad judicial and legislative re-examination of our school funding systems, which is likely to culminate in major revisions of our present practices and conceptions.

In 1968 the first suit challenging intrastate inequality in public education was filed by the Detroit School Board against the state of Michigan.[3] It was promptly followed by similar suits in Illinois, Virginia, Texas, and California.[4] In 1971 the California Supreme Court issued its landmark *Serrano* ruling, striking down the system of public education funding currently operative in California and most other states. The characteristic of that system which the California Court identified as causing unconstitutional inequalities in public education is the major reliance for funds on each locality's property tax revenues. Because a school district rich in taxable property can secure substantially more money per child for its schools—and at lower tax rates—than the property-poor school districts, the court said, the children of some districts are being given cheap and inadequate schooling while children in favored districts get a premium public education.

In California, as in many other states, more than a half of the localities' school revenues come from their local taxes levied upon

*Extracted with permission from a forthcoming Potomac Institute publication on the urban implications of equalized school funding.

assessable property within each school district. The *Serrano* decision was based on the fact that public school funds are thus derived in each school district largely from taxes on the total assessable property in the district, the total varying greatly from one locality to another. Because of the uneven and unapportioned concentrations of wealth and poverty among localities in the state, some school districts are 10, 50, or even 100 times richer than others in assessable property per school child. Naturally, the localities rich in assessable property are able at lower tax rates to produce far greater school revenues per child than the poorer localities. Of course, the ultimate per-child revenues do not vary as much as 50 or 100 to 1 between richest and poorest districts, because there is an equalizing effect on net expenditures from the additional school revenue which comes to localities from the state. The foundation programs of state aid, which often make up half or more of the total public school expenditure in the state, go chiefly to the poorer localities in special need of financial help. Moreover, even after that equalizing state money, there remain major disparities in net per-child annual expenditures between richest and poor localities. In a substantial number of states the range between high and low expenditure exceeds 3 or 4 to 1, and in nine states it exceeds 5 to 1. In Texas (high $5,334 - low $264) and Wyoming (high $14,554 - low $618) the expenditure disproportions exceed 20 to 1. The average of the high-low disproportions is almost 6 to 1 in the eight largest states where nearly half of the nation's population resides.[5]

In California in the *Serrano* case the court found that in the richest public school district children were receiving education at an annual expenditure of $2,500, while in the poorest the children were receiving annually a $400 education. Yet typically in the high-expenditure districts property owners pay *lower* school tax rates than the taxpayers in districts achieving only minimum school revenues because of their curtailed assessable property base.

On these facts the California Supreme Court found that the present funding system's heavy reliance on the local property tax yields high education expenditures and premium education to children in wealthy communities and curtailed expenditure levels and education to children in the poor communities. In that respect the Court also accepted the plaintiffs' contention that more children of poor families live in tax-poor school districts while more children of the affluent live in tax-rich districts, so that under the present scheme the children of affluence are given premium public education while the children of the poor get cheap and inferior schooling. The California Court thus concluded that the Constitution is violated when the cost and quality of public education

given to children in the state is made to depend on the wealth or poverty of the particular school district wherein they reside. In addition to violating the Equal Protection Clause of the federal Constitution's Fourteenth Amendment, the Court found the present funding system also in violation of the California Constitution.

It is vital to note that the theory of the *Serrano* decision and the subsequent similar rulings in Minnesota, Texas, and New Jersey, is limited. All that these courts have so far found unlawful is the fact that by virtue of the heavy reliance on the local property tax the varying level of per-child public education expenditures among localities has been tied to their differing assessable property wealth. While the rulings have opened the door to major reforms in public education funding, they do not yet define what new funding and allocation systems the Constitution either permits or requires. Recognizing the difficult issue presented in choosing among several remedial alternatives, the *Serrano* decision deliberately declined to state what alternative methods of public school funding and distribution systems would comply with Constitutional requirements. Only after legislatures enact new systems that are presented concretely for judicial review are answers likely to be given by the courts. Meanwhile, among vital questions of remedy which *Serrano* has left wide open are the following:

1. Whether a funding system could lawfully provide equal education or equal expenditure in education but *retain differing taxing levels among districts,* reflecting variations in school district poverty and wealth.
2. Whether a funding system could lawfully provide equalized taxes for education throughout the state but *retain differing school expenditures or education levels among districts,* not because of district poverty or wealth variations but for other reasons—for instance, because local voters have approved a higher or lower than average school tax rate.
3. Whether a funding system could lawfully distribute equal dollars per child throughout the state's school districts *even though education costs vary greatly from district to district.* Unless education costs are of approximately the same amount per child in each school where cost variations are high, an equal dollars standard would yield far inferior education to the children in the high-cost districts.

These questions illuminate the fact that between school districts there are such inequalities in our present public education funding systems as *tax rate inequalities, per-child expenditure inequalities,* and *education cost inequalities.* We may identify the

two separate questions of taxing inequality and schooling inequality. While the California Court held that between the rich and poor districts there were inequalities both in tax rates for education and in school expenditures per child, it did not rule whether a system which would eliminate only one of these dual inequalities would be constitutional. There are possible new funding methods which would eliminate both inequalities or only one or the other.

1. *Full State Funding.* An approach which eliminates both tax inequity and education inequity is commonly called full state funding. Under such a plan, the present practice of keeping local tax revenues in the locality to fund the schools is abolished. Instead, the state assumes the entire funding and disbursing function for public education. It may obtain the necessary revenue through an equalized state-wide property tax which eliminates tax rate variations between localities; alternatively it can resort to sales taxes, income taxes, or a combination of taxes, to fund the public education system. In addition to using a state-wide equalized tax system for funds, the state is also free to distribute school funds to districts through rational and equalized formulas of allocation unencumbered by the accidental local wealth-poverty differences which are today reflected in the school revenues based on local property taxes.

2. *Improved Equalizing Aid.* An alternative method of funding might equalize school revenue but leave tax inequalities in effect. For instance, if the state assumes an increased portion of the public education cost burden—perhaps 60 or 70 percent of the total—and apportions its funds in an intensely equalizing way to help out the poorer districts, in many states per-child education expenditure differentials between the localities could be eliminated. Of course, since the local property tax would continue to provide a portion of the school revenue in each locality, the tax inequities to that extend would remain. For under the system the rich district could still provide its equal share of school revenues, as it does today, at much lower tax rates than the poor district. Moreover, in some of our largest states where the local variations in assessable property wealth are wide, the improved state equalizing grants system is not likely to achieve equalization. To bring poor districts up to the very high expenditures of the richest, the state would have to assure as much as 90 percent or more of the total school cost burden, and no tangible purpose would then be served by retention of a minimum local input.[6]

3. *Power Equalizing.* A contrary approach to expenditure equalization is one which retains possible school inequalities but removes tax inequities. Under this approach, school spending differentials would not reflect locality wealth or poverty but simply

the differing tax rates which the voters of particular school districts choose to impose on themselves for education revenues. A prime example of such a scheme is the "power equalizing" proposal of John Coons and his associates.[7] Under that proposal, at every mill or percentage of taxes for education imposed in a wealthier-than-average locality, so much of the dollar yield on the tax as represents the district's wealth advantage is transferred for allocation to poorer-than-average districts. Thereby, through a higher *tax rate effort*, a locality can still have above average public education, but no wealth advantage with respect to revenue it collects for schools.

While local option is thus retained in a less discriminatory way, major school inequities will likely remain under this proposal in districts with voters disinclined to approve adequate school taxes. In inner cities, for instance, the voters' option to determine tax rates for education has all too often meant deprivation for school children; a majority of the voters with children past school age, or children attending private or parochial schools, or for other reasons unwilling to support adequate school tax rates, has time and again defeated the opportunity of fair and equal education. Accordingly, while power equalizing would be an improvement over the present system, it seems to be an imperfect solution.

In addition to these unresolved questions arising from the present interplay of taxing inequalities and schooling inequalities, *Serrano* also *leaves unresolved what in fact constitutes equality in school funds distribution.* At first glance, per-child dollar equalization gives the appearance of fairness. Yet children go to school not for dollars but for education. Thus, if an equal-expenditures-per-child formula yields *unequal education* to children, for instance, because pupil costs of providing education vary materially between school districts, it seems clear that mere dollar equalization is neither fair nor equal treatment of our school children.

Nor is this a merely theoretical question. It is a critical issue for the high-cost school districts likely soon to be affected by the school equalization litigation and legislation. Among them are most of the large inner city school districts, which experience extraordinary school cost burdens not found in rural or suburban districts. Typically it costs the urban school district far more to buy equivalent educational resources. The dollar which buys a fair education in a rural locality or a suburb may represent only 50 cents worth of purchasable school resources in the inner city. Particular factors of high expense are premium teacher pay, economic costs, security costs, plant maintenance, and many other items causing reduction in the purchasing power of the education dollar in the inner city. Like other important unresolved issues,

Serrano does not decide whether a valid school funding system can overlook major cost differentials and provide simply for the expenditure of equal dollars per child throughout the state. That is one of the issues left open for future resolution by courts and legislatures, and to the inner cities with their special fiscal burdens it may well prove to be the $100 question.

Conclusion

Since its inception, public education in the United States has been characterized (a) by an egalitarian dedication to educating the poor and (b) by lack of any rational or systematic allocation of money to achieve the goal. *Serrano* opens the door of the federal Constitution to new efforts seeking achievement of equality for the poor in public education. However, because we have had no substantial previous experience with rational allocation formulas, discovering facts and standards required to achieve equality in public education will prove a difficult task. There will be experimentation and failures. The ultimate answers are not yet clear, but it is time to ask ultimate questions. The single most important of those is addressed to defining the ingredients in funding which will promote not dollar equality but education equality for school children throughout the state, and ultimately throughout the land.

FOOTNOTES

[1] *Brown v. Board of Education*, 347 U.S. 483. The Court expressly stated (at p. 493) that the opportunity for education "where the state has undertaken to provide it, is a right which must be made available to all on equal terms."

[2] Wise, Arthur E. *Rich Schools, Poor Schools—The Promise of Equal Educational Opportunity.* Chicago: University of Chicago Press, 1968. 228 p.

Wise, Arthur E. *The Constitution and Equality, Wealth, Geography and Educational Opportunity.* Unpublished Thesis. Chicago: University of Chicago.

U.S. Commission on Civil Rights. *Racial Isolation in the Public Schools.* Washington, D.C.: Government Printing Office, 1967. Vol. 1, 276 p. Vol. 2, 293 p.

Coons, Clune & Sugarman, *Educational Opportunity: A Workable Constitutional Test for State Financial Structures*, 57 Calif. L. Rev. 305 (1969).

Horowitz & Neitring, *Equal Protection Aspects of Inequalities in Public Assistance Programs from Place to Place Within a State*, 15 U.S.L.A.L. Rev. 787 (1968).

Kirp, *The Constitutional Dimension of Equal Educational Opportunity*, 38 Harv. Educ. Rev. 635 (1968).

[3] *Board of Education v. Michigan*, C.A. 103342, Cir. Ct., Wayne County.

[4] *McInnis v. Shapiro, Burruss v. Wilkerson, Rodriquez v. San Antonio School District, Serrano v. Priest.*

[5] In California the variation 4.2 to 1 ($2,414 high to $569 low); in Illinois, 5.9 to 1 ($2,295 to $391); in Michigan, 2.8 to 1 ($1,364 to $491); in New Jersey, 3.7 to 1 ($1,485 to $400); in New York, 2.8 to 1 ($1,889 to $669); in Ohio, 4.1 to ($1,685 to $413); in Pennsylvania, 2.9 to 1 ($1,401 to $484); and in Texas, 20.2 to 1 ($5,334 to $264).

[6] Local tax yield equalization is another possible approach to removing the local wealth factor from educational offering but leaving the wealthier community the advantage of achieving the local dollar input for education at a lower millage rate. Such a system might work as follows: The legislature would prescribe a state-wide "local public education contribution" set at a prescribed annual per-child expenditure. Each school district would raise that local contribution by whatever millage would yield that expenditure for its pupils. This system would remove the existing expenditure differentials among localities, yet would leave wealthier districts with the advantage of being able to raise their "local public education contribution" at a lower millage rate than poorer districts.

[7] *See* Coons, Clune & Sugarman, *Educational Opportunity*, 57 Calif. L. Rev. 306 (1969).

The Concept of Equalization in School Finance*

G. Alan Hickrod and *Ramesh Chaudhari*

> The nations of our time cannot prevent the conditions of men from becoming equal, but it depends upon themselves whether the principle of equality is to lead them to servitude or freedom, to knowledge or barbarism, to prosperity or wretchedness.
>
> Alexis de Tocqueville

THE BELIEF that state governments should organize their fiscal institutions in such a fashion as to try to achieve equalization of educational opportunity has been a pervasive value in American school finance studies for many decades (56, 57)†. Two major problems are encountered when the general concept of equalization acceptable to a majority of educational researchers at any given point in time appears to have been as illusive as the Golden Fleece. The record also seems to indicate that this prize has been lost to each successive generation of researchers. Fiscal argonauts, therefore, are forever condemned to launching new quests to give meaning to the equalization concept. Secondly, among those who have somehow managed to attain a modest amount of agreement on a definition, there appears to be very little consensus on appropriate administrative strategies and tactics for achieving such a goal.

The initial task of this paper is to explore the definition of the concept of equalization as it has been used in school finance studies. Definitional problems are investigated in the first two sections of this paper. This is done initially by the technique of posing what we believe are basic questions concerning the concept, and then surveying the school finance literature for appropriate responses. The next section of this paper and Appendix A deal

*Based on an occasional paper, *Definition, Measurement and Application of the Concept of Equalization in School Finance,* of the Illinois State Superintendent's Advisory Committee on School Finance. The paper produced here omits the sections on normative models and measuring equalization.

†Numbers in parentheses refer to items in the list of references at the end of this paper.

with the application of the concept to current state educational fiscal policy matters. The authors hope that state departments of education, state legislative committees, and special study commissions may find this final section of help as they struggle with demands for increasing equalization among school districts. Our efforts in this paper have been strongly influenced by the reasoning presented in a series of recent court decisions concerning educational finance (*Hobson v. Hansen,* 1967; *McInnis v. Ogilvie,* 1969; *Serrano v. Priest,* 1971; *Van Dusartz v. Hatfield,* 1971; *Rodriquez v. San Antonio,* 1971). The concluding statement, therefore, comments on the role of the court in shaping state educational fiscal policy.

Basic Questions

We shall start our examination by asking, "Equalization of what?" A brief survey of school finance literature will suggest that answers to this question have changed as American society itself has undergone major historical transformations. In the very early fiscal literature it appears that the equalization of interest was the equalization of local tax burden to support education (29). It has been suggested that this early concern over local tax burden arose out of the increasing attempts of many states at the end of the last century to mandate minimum levels of school services everywhere within state boundaries without regard to differences in local resources (17). Later, with the wide adoption of the Strayer-Haig allocation system, tax effort was more specifically defined in terms of equalization of the local property tax required to support a specified level of expenditures (89). This notion that two taxpayers should not be required to shoulder unequal tax burdens for the *same* level of educational services is still very much of social and legal interest as can be seen from the fact that this was one of the two causes for action stated by plaintiff in a recent California school finance case (*Serrano v. Priest,* 1971).

The Great Depression left its mark on the study of school finance as it did on the study of all other aspects of American public finance. Early writers had previously expressed concern over disparities between school districts with regard to: (a) expenditure levels and (b) service levels. Writing in the shadow of the Great Depression, it seemed essential to Morrison (77) to highlight this type of inequality. Morrison had earlier documented the extent of inequalities in Illinois public schools and had proceeded to castigate that state's system of finance as "appropriate to pioneer days." But society moved away from the depression, and while expenditure and service inequalities among school districts continued to merit study, the strong reform overtones were no longer

present (78, 79). Occasionally a volume would appear which cast a spotlight upon expenditure level and service level inequalities among school districts (62). In the main, however, egalitarian goals in school finance were not of high priority in the 1950's as can be seen from this quotation from a widely adopted school finance textbook of that period:

> Indeed, equality of educational opportunity is not attainable in a single school system. It is not even desirable in a decentralized school system. What is desirable is a rising standard of educational service, not equality of service. This means that it may be more important to see that the able and willing can move ahead than to concentrate upon correcting the worst conditions. (17, p. 561)

It should be pointed out that the author of this statement has changed his point of view concerning a fiscal policy appropriate for the current period (16).

The 1960's presented a vivid contrast with the 1950's. James, Thomas, and Dyck (57) launched the first of what was to become a series of very important studies at Stanford. In this initial study at Stanford they reaffirmed inequalities of expenditure, tax effort, and fiscal capacity as an important focus for research. The sociologist Sexton (85) published an important contribution to the study of service inequalities within urban school districts while McLure (72) and Lane (66) were exploring interdistrict inequalities. At mid-decade Benson (6) published an important, popular, and widely distributed little book that also did much to restore the study of fiscal inequalities to stage center.

The real turning point, however, came shortly after mid-decade. At least three events were taking place which may well have changed forever the concept of equalization in the study of school finance. In the first place the social upheavals of the city ghetto and the militancy of minority groups had placed the entire matter of inequalities in the forefront of public inspection. Secondly, the impact of the Coleman report (25) was beginning to extend far beyond academic sociological circles. Thirdly, a movement within the legal profession was afoot that, while it did not surface until later, would have profound implications for the equalization concept in school finance. By 1968 it was clear to many that the question, "Equalization of what?" was going to be answered by a strong rededication to that ancient American dream, equalization of educational opportunity.

In rapid succession for the next four years there appeared a series of empirical studies and policy papers all dealing with various aspects of the inequality question. These studies differed greatly in design and purpose, and in the aspect of educational inequality chosen for investigation. All of them concluded, how-

ever, that a prime obligation of state departments of education was the utilization of the fiscal apparatus of the state to achieve equalization of educational opportunity (13, 22, 25, 37, 43, 50, 91). Simultaneously the groundwork for a legal revolution against the state fiscal structure based on the equal protection clause of the 14th amendment of the Constitution of the United States was being articulated (26, 27, 54, 87, 97, 98).

"Equalization of what?" is still a very important question. The activity chronicled above on the inequality front has served only to provide alternative responses to this question. As Johns and Salmon (63) have pointed out, no precise definition of *educational opportunity* much less *equal educational opportunity* has existed now or in the past. In most of the studies cited previously, inequality has been measured in terms of the wealth (variously defined) of school districts, the expenditures per pupil, the educational services provided pupils (including the quality of staff and the quality of facilities for delivering the services), and the tax effort exerted by citizens to attain the expenditure and service levels.

In more recent years several authors (22, 24, 59) have encouraged researchers to go beyond what they consider relatively weak measurements of school "inputs" and to measure instead equalization of "outputs." As state-wide assessment and testing continues to spread throughout the United States, this becomes more of a possibility. Equalization of school outputs, however, raises quite a number of thorny problems. To accomplish this type of equalization it is necessary to (a) agree on outputs to be measured, (b) hold constant inputs over which school authorities have little control, and (c) manipulate inputs known to maximize achievement and over which school authorities have control. As a long-term goal of school finance research this type of equalization may be a pearl without peer. Unfortunately it can be doubted whether the present state of the art with respect to "educational production functions" will allow us to really do this in the near future (5, 42, 67). In the meantime we will still probably need studies of "inputs" to monitor our imperfect progress toward equal educational opportunity.

A second question, "Equalization among whom?" while meriting no less attention than the first, can be dealt with in less space. The response presented by many of the publications appearing in the last few years is "equalization among different socioeconomic classes" (37, 65). But socioeconomic class can be analyzed by using several different units of analysis. Until very recently the school finance researcher simply assumed that his "proper" unit of analysis was the school district. That assumption

can no longer rest unchallenged. If equalization is to be truly effective, it is held now by some (68) that the unit of analysis should not be the school *district* but rather it should be the individual school or attendance unit. Within larger school districts there can be little doubt that great inequalities exist in educational inputs (39,46,85). If equalization is desired among individual schools, radical surgery will be needed on the grant-in-aid systems of most states. The fundamental record keeping charts of accounts, and the like would have to be changed since in many states fiscal data by individual attendance unit is not at all available.

Perhaps a more serious challenge comes from those who would answer, "Equalization among families." To explore this response fully, would carry us into a discussion of voucher systems and far beyond the mission of this paper (10, 27). It is clear, nonetheless, that if society wishes to move in the direction of an educational allowance for individual families and then proceed to use *that* instrumentality for the equalization of educational opportunity, a major institutional reorganization of American education must be undertaken. The debate over whether voucher systems would move society toward equalization, or away from equalization, will likely continue for some time. The use of nonpublic school aid as an instrument of equalization is explored at some length by Erickson (35).

In addition to the questions, "Equalization of what?" and "Equalization among whom?" it is apparent that we also need to explore what is meant by the word *equalization* itself. At first inspection it might seem that the answer is self-evident. Does not equalization simply mean reducing the variation in a set of measurements? Perhaps in a strict mathematical sense this is correct. It appears that in much of the school finance literature, however, the theoretical construct "equalization" has not been used in a univariate sense at all, but rather, in a bivariate framework. Provisionally one might then say that there are at least two responses to the question of an operational definition of equalization. One definition uses variation, but the other definition uses association. Since both variation and association are central theoretical constructs in the discipline of statistics, it will come as no surprise to learn that there are many possible techniques for measuring these fundamental notions. Likewise, many possible measurement approaches can be made to the matter of equalization.

Applications

State educational administrators, particularly those who are facing a court ordered revision of the fiscal structure of their state, are likely to be much more interested in the application of the

concept of equalization than with efforts at more precise definition and measurement. It is toward this pressing practical problem that we direct our remaining comments.

The question we shall attempt to answer in this section is simply, "What policy and administrative alternatives does a state have if a major commitment has been made to provide more funds to pupils in the poor districts of the state?" The possibility of such a commitment depends upon the political and social composition of each individual state. We think it realistic to assume, however, that more state departments of education will be interested in seeking answers to this question in the near future. Some state departments have already indicated the high priority they intend to give to actions which will increase equal educational opportunity (3). It remains to be seen whether state legislatures will concur on the priority to be assigned to increasing equalization.

The actual allocation patterns brought about by the alternatives described in the following paragraphs should be evaluated in terms of the normative models of equalization previously discussed in this paper. Very likely some of the quantitative approaches mentioned in the preceding section would also be utilized in this evaluation process. Although it is our view that the federal government does have a responsibility to help the states achieve equalization within their boundaries, we shall restrict our commentary here to those strategies and tactics that can be carried out by state departments and by state legislatures without federal assistance. There appear to be four of these over-all or general strategies: (a) full state funding, (b) district reorganization and consolidation, (c) manipulations of general purpose grant-in-aid systems, and (d) utilization of certain types of categorical grants. Each will be discussed in turn.

The heart of the equalization problem lies in the American practice of using unequal local resources to support education. Therefore, it is quite tempting to consider cutting the Gordian Knot by supporting K-12 education entirely from state taxation with no local contribution being allowed at all. State assumption or "full state funding" is not a new idea in school finance (77). It is fair to say, nevertheless, that this proposal has gained more supporters in recent years than was the case in past decades. It should be noted that many modern proposals for full state funding are not really "full" at all in the sense that they do not contemplate 100 percent state funding. Provision is usually made for the addition of certain funds derived from local taxation to be laid on top of the state support. The crucial point here is that these local "add ons" are relatively small and strictly supervised. The controls on local contributions can be a flat rate such as 10 percent of the

state grant (1, 75), or they can be in the form of more elaborate schemes by which districts may tax at different rates depending on the support level they have selected for their children. Some of these latter plans provide that if the controlled local tax yields an excess over a specified figure, the balance of the yield must be surrendered to the state for distribution to less fortunate districts (41). These proposals are frequently based upon ideas advanced by Coons, Clune, and Sugarman (27) and, therefore, collectively might be referred to by the term they used *district power equalization.*

Since there are tight controls on local contributions and the state share of K-12 support is very large, if not actually 100 percent, the manner in which the state allocates these funds becomes even more important than it is under present partnership arrangements by which both the state and the local governments provide funds for public education. Several other methods of allocation under full state funding are possible. We shall mention only a few of these. James (56) favors a distribution scheme based upon individual educational programs, essentially working a planning-programming-budgeting approach into the allocation process not greatly different from that allocation process used in higher education in many states. Benson (10) suggests that aids-in-kind provided by intermediate districts or regional service centers accompany the general purpose bloc grants and that much of the aid to poor districts be channeled through this aid-in-kind approach.

Johns and Alexander (60) have demonstrated that as the percentage of state aid rises and cost differentials for special types of educational programs, such as compensatory education, special education, vocational education, and the like are used as pupil weightings, large bloc grants can deliver a considerable amount of funds into poor districts without explicitly taking into consideration differences in local school district fiscal capacity. As state aid approaches 90 percent, they report little difference between the large bloc grant approach and the more traditional grant-in-aid formulas.

A full state funding arrangement which allocated funds on the basis of very large bloc grants per pupil and which further weighted these pupils on the basis of program cost differentials would, in our opinion, contribute to the equalization of educational opportunities. Such a scheme might also be very well received by the courts. Unless one is willing, however, to accept a considerable error variance in the accuracy of these pupil weightings, such an approach does require a good unit cost study in the state which is considering the adoption of such an approach to K-12 allocations.

Full state funding, or even any of the various proposals calling for "almost" full state funding, would require a considerable increase in state revenues. Realizing this, full state funding advocates usually also recommend that the state governments enter the property tax field once the local educational special district government has no need of this revenue source for educational purposes. It has also been suggested (91, 94) that it might be possible for the state to assess and tax only certain kinds of property, such as industrial and commercial valuations, leaving the residential valuations to local tax collectors. To ascertain the impact of such a scheme, one needs to collect data on the distribution of various types of property valuations, i.e., industrial, residential, commercial, among local school districts. While these data are often available by county, only a few researchers have been able to assemble it by school district (45).

A second general strategy is to encourage local district reorganization and consolidation in the hope that this will eliminate small districts with inadequate local tax bases. Consolidation can, indeed, make a meaningful contribution to the equalization problem, but only if wealthy and poor districts are found in relatively close proximity to one another. No giant strides are made toward equalizing educational opportunity by the merging of a number of equally poor school districts. Unfortunately, in some of our large metropolitan areas, districts do tend to form separate sectors of affluence and disadvantageousness (51). Reorganization can also make a meaningful contribution to equalization, provided the new intermediate districts, which are usually part of most reorganization plans, are provided with the facilities to aid poor local districts within their jurisdictions. Since a proper exposition of consolidation and reorganization matters takes more space than can be allowed here, we shall discuss this strategy no further. It should be pointed out, in any event, that consolidation and reorganization are often advocated, not on equity or equalization grounds at all, but rather on grounds stressing the efficient allocation of resources and the minimization of costs relative to scale of operations (34, 52, 53, 90).

Despite the obvious attractions of full state funding for equalization opportunities, and notwithstanding impressive academic support for this position, we believe that at least in the immediate future many states will continue to retain some type of joint state-local fiscal arrangements for K-12 education. We base this estimate on five considerations. First, the expense connected with moving to full state funding, or even "almost" full state funding, is such that it would necessitate the adoption of new taxes in some states and/or a considerable increase in rates on existing taxes in

many more states. Second, the notion of full state funding for K-12 education raises serious questions concerning the funding of other very important public services at the state level. With budgets in all states quite tight, full state funding for K-12 education would mean much greater difficulties in funding other needed public services such as welfare, health, transportation, and police. It will also not be overlooked by junior-college administrators that full state funding of K-12 might curtail their very rapid growth and it will certainly not be overlooked by university-based researchers that full state funding of K-12 might well mean an even further tightening of college and university budgets. Third, full state funding will also be opposed by professional educators, laymen, and legislators who continue to sincerely believe in the benefits long alleged to adhere to local control of the K-12 educational jurisdiction (82). This is true even though it is difficult to rigorously prove that these benefits do, in fact, exist. School-board associations are skeptical of a change in institutional structure, that might reduce their sphere of decision making, and it is not at all clear that state teacher organizations will support a system that places teacher negotiations at the state level. Fourth, the notion that "lesser associations," as de Tocqueville termed them, can operate both in the public sector as well as in the private sector to provide benefits to their members not provided to the general population is deeply ingrained in American custom and tradition if not in constitutional law. Such a tradition will not be summarily abandoned. Finally, it will surely not be easy to erase over 75 years of educational fiscal history in the United States, no matter what the judicial pressures to do so.

Rather than an immediate adoption of full state funding, what we think is more likely, and certainly more politically acceptable, is an acceleration of the state share of support for the K-12 jurisdiction and a reduction of the local contribution. It should be noted that this increasingly rapid shift to more state aid may be caused, not by any great desire to achieve equal educational opportunity, whether court mandated or not, but by the desire of much of the electorate to move some of the tax burden from the local property tax to the state sales tax and the state income tax. The judicial demand for equal educational opportunity may simply provide the escape valve for a property tax pressure that has been building up for some time.

The expected increase in state funding will likely be used to "level up" the educational offerings of the poor school districts. There appear to us to be at least two different tactics within the over-all strategy of manipulating the general purpose allocation system. One of these has already been alluded to in the discussion

of full state funding. It is certainly possible to "level up" the educational offerings of the poor districts by large general-purpose bloc grants distributed on a weighted pupil basis and with some provision for limited local "add ons" from local revenue sources. While this notion has been circulating for some time in school finance circles, we believe that not enough research has been done on the relative advantages and disadvantages of weighted bloc grants versus conventional grant-in-aid formulas. A second, and more familiar tactic, is the manipulation of the existing grant-in-aid formulas that now distribute funds from the state to the local levels. The heavy hand of history being what it is, we suspect that the manipulation of the existing formulas will be tried first, and then only secondly will more unconventional methods be adopted if the formula manipulation proves inadequate to meet court mandates. On that assumption we shall devote the next several paragraphs to the somewhat esoteric subject of manipulating educational grant-in-aid formulas.

There have been three types of general purpose educational grant-in-aid formulas in use in the United States since the mid-sixties. The terminology is unfortunately not standardized among fiscal researchers, but the labels most commonly used for these formulas are (a) Strayer-Haig or foundation level, (b) percentage equalizer, and (c) resource equalizer or guaranteed valuation. There are several specific treatments of the strengths and weaknesses of each of these types of grant-in-aid approaches available in school finance literature (8, 28, 55, 60). In addition, almost any standard school finance textbook feels constrained to offer many pages, sometimes whole chapters, on these grant-in-aid forms (7, 38, 61). Other methods of allocation, for example, the application of linear programming techniques, have been suggested (15), but they have not won legislative acceptance. Appendix A provides a very simple statement of each of the three major formula types in the United States. It should be pointed out that almost every state has now made many modifications in the particular formula it has adopted. These modifications are the result of compromise between the political forces at work in all state legislatures and in the various committees and commissions that recommend financial legislation for adoption.

The important point we wish to stress here is that any one of the three formula types now in use can be manipulated to provide a considerable amount of state aid to poor school districts, and, conversely, any one of the three can be manipulated to provide a very modest amount of assistance to poor school districts. It is true that school finance researchers have speculated, and will continue to speculate, as to whether one of the three forms might

tend in the long run to provide more aid to poor districts than the others, and there has been some investigation to try to establish this fact (11, 60). However, we tend to concur with Coons, Clune, and Sugarman (27) that the more important consideration is the manipulation of the formula rather than the general type of formula that has been adopted. The pattern of monies allocated to local school districts has historically been a result of compromises within legislative bodies and between the legislative and the executive branches of state government. It now appears that the judicial branch has also decided to take a seat in this formula game.

Bruno (15) is correct in his judgment that these grants-in-aid systems are nothing more than simplistic mathematical functions consisting of a few constants and a number of variables. Since they are simple functions of this nature, one can either manipulate the constants, manipulate the variables, or manipulate both constants and variables. By far the most common method of manipulating the variables is by adding weightings to that variable which is used to measure the number of pupils in a local school district. The trend in this direction was established some time ago by the late Paul Mort and his associates (80). The distribution of money, of course, can be effected by weighting variables in the formulas other than pupils. We shall describe the manipulation of constants in each formula type first, and then proceed to the topic of manipulation of variables. It may be useful for readers not familiar with these formulas to consult Appendix A as the discussion unfolds.

The foundation or Strayer-Haig formula has two constants: (F) the expenditure per pupil established as a "floor" or "foundation" for educational services, and (r) the required tax rate (see Appendix A). In a broad public finance sense this kind of grant-in-aid is related to notions of minimum wages, guaranteed family income levels, and other "minimum" social welfare concepts. Professional educators have strenuously tried to escape from this "minimum" aspect of the Strayer-Haig system by stressing the need for a "quality" foundation level that is considerably higher than any "minimum" notion (74). The second constant (r) is variously called the "qualifying rate," "mandated tax rate," "state charge back," and "state computational rate." The legal aspects of this tax rate differ from state to state and account for some of the difference in terminology. In all states, however, which use this particular formula, the rate sets the amount of local contribution needed to support the foundation level.

State aid can be directed to poor districts under a Strayer-Haig formula by increasing the magnitude of both constants. Unfortunately, what tends to happen in many states is that (r) is not

increased at the same rate as (F). In the past some state legislators have been reluctant to raise the tax rates in the formula on the grounds that effort should be determined in the local districts rather than at the state capital. There has also been a problem of conflicting local tax ceiling legislation. The necessity of manipulating both constants, (F) and (r), is one of several weaknesses of the Strayer-Haig approach. For these and other reasons it is not uncommon to find both constants kept at very low levels despite the fact that educational costs continue to rise. When this occurs, regardless of why it occurs, the result is to provide less aid to the poor districts.

The percentage equalizer has the advantage of having only one constant to manipulate, e.g., the .5 which establishes the amount of state and local contributions in the district of average wealth. As this constant is lowered, more funds are directed toward poor districts. When the parameter is raised, less is provided poor districts. What frequently happens to this type of formula is that (E) the local expenditure per pupil has a low ceiling placed upon it. This is often done out of a fear that local school boards will authorize excessive frills which, under the workings of the formula, the state will have to also support. A more important concern in recent years has been that under a percentage equalization formula the state will share in the results of all collective bargaining with teachers. In very poor districts it would be true that under percentage equalization the state would be picking up most of the costs of teacher organization agreements. Some state legislators have, therefore, believed that local boards in poor districts might commit the average state taxpayer to more than he really wishes to be committed to relative to teachers' salaries.

When ceilings are placed on percentage equalization formulas, for whatever reasons, the effect is to convert the equations into distribution systems not greatly unlike the Strayer-Haig formula. The lower the ceiling the less the funds directed to poor districts. Percentage equalizers also are sometimes accompanied by legislation which specifies that districts will receive a certain guaranteed amount regardless of what the formula computation produces. This is equivalent to a flat grant and has the same anti-equalization effects. It should be noted parenthetically that very large bloc grants and conventional flat grants do not have the same effects. As previously mentioned, very large bloc grants have the power to equalize upward while flat grants used in conjunction with conventional grants-in-aid formulas naturally disequalize.

All three formulas indicated in Appendix A can be rewritten to provide greater equalization. Taking the percentage equalization formula as an illustration, one can drop the .5 entirely from the

expression and change the V-subscript-s to a V-subscript-g; that is, form a ratio between the local district valuation and a valuation guaranteed at a much higher level than the state average. Such a formula will have much stronger equalization effects. It is also possible to operate a sort of split-level foundation approach with one foundation level much greater than the other. When this is done the intent is usually to bribe the local districts into doing something that allows them to qualify for the higher foundation level.

The resource equalizer also has only one constant to manipulate, the V-subscript-g, which is the guaranteed valuation. The higher this guarantee is set the more funds are distributed to poor schools. The lower it is set the less the funds to go to poor schools. Of course, the higher the guarantee the more the state revenue needed to flow through this particular allocation system. States desiring to explore this particular system should watch for some peculiar effects of (r) the local tax rate. In the first place, districts which are property wealthy, for example, industrial enclaves, will have low tax rates for education and hence receive little state aid. Unfortunately these districts are frequently inhabited by low-income families who have never taxed the wealth available to them. It may be that this low tax effort is due to a low priority placed on education, but it could also be due to inability to contend on an even basis with local industrial giants for control of the school board. In all these allocation systems the state must guard against systematic underassessment of local property in order to qualify for greater state aid. Perhaps this danger is even more pronounced in the resource equalizer since there is, in effect, a double reward for underassessment: once in the difference between the state guaranteed valuation and the local valuation, and then again in the resultant higher tax rate which occurs from the underassessment. Proponents of reward for local effort, or of local control, may still find this formula attractive, however, for other reasons.

One of the most straightforward ways to direct state money into poor districts through the manipulation of variables is to enter an income measurement into any of the three formulas. This can be done in various ways and defended on various grounds. For example, an income measurement can be used to weight pupils on the grounds that low-income pupils have greater educational needs than pupils coming from districts dominated by high-income homes. It is also possible to weight the property valuation variable on the rationale that a good measure of wealth or fiscal capacity in modern urbanized society should include more than simply property valuations.

There are also several possibilities with regard to the kind of income variable that might be used. For example, it is possible that a variable measuring average income in a district, for example, median family income, will not provide as much of a distribution to districts with serious poverty pockets as will a variable measuring a portion of the income distributed in a district, e.g., percentage of families or pupils below a given income level. The problem here is that the family income distribution in many school districts is thought to be highly skewed although little research seems to exist on this point. In spite of the fact that most states have now adopted a state income tax, it still seems difficult in many states to get good income data. School district income data derived from census sources useful for general research purposes (88), but not accurate enough for use in state allocation formulas. In many states, however, a large number of variables which are known to correlate highly with income can be added to formulas with allocation results not greatly different from those that would be obtained if the income variable itself were used.

A number of these income correlates are also the variables that, when added to almost any formula, will deliver aid into large urban school districts (13). For example, adding the aid to dependent children count to the formula will assist central city school districts. Another approach is to add a density variable to the formula. If the intent is to aid the poor districts, this should be a true density measurement; that is, pupils divided by square miles. While size, that is, simply the number of pupils, is correlated with lack of wealth, the relationship is not nearly as strong as that between density and poverty. Achievement test scores are also correlated inversely with wealth and, therefore, if the results of state-wide testing or state-wide evaluation are incorporated into the allocation formula the poor districts will be aided. Such a practice is open to the charge that the state would be assisting inefficient school districts as well as poor school districts. Garms and Smith (37), therefore have, outlined an ingenious scheme for using, not the actual achievement test scores, but rather the achievement scores predicted by the presence of social variables associated with low achievement. Such a scheme also has the potential for rewarding very efficient school districts. Adding a municipal overload variable, that is, a variable measuring the amount of load on the local tax base from noneducational public services, will also aid the poor districts (69, 81). The common method of doing this is by deflating the property valuation by an index relating educational revenue to noneducational revenue.

Urban school districts must operate a number of high-cost programs to meet the needs of their heterogeneous pupil popula-

tions. Many of these high-cost programs are related to the incidence of low wealth. In fact, it may be argued that many of the wealth variables are but indirect measurements of educational needs and that the differential cost approach is a more direct method of approaching individualized educational needs than are the wealth variables (73). Of course, some programs, for example, programs for gifted children, are probably inversely correlated with poverty and disadvantageousness. A change in the method of counting pupils, from average daily attendance to average daily membership, will also assist urban districts since poor districts have greater truancy rates. A more drastic move would be to drop the pupil measurement entirely and substitute a per-capita approach. There is some precedent for doing this since other non-educational grants are distributed on this per-capita basis. Such a move would aid urban districts that have been losing pupils to the suburbs.

As can be seen, the number of variables that can be added to any formula and the number of manipulations that can be performed on these equations are extensive. The real question, then, is not how poor districts can be aided, but whether there exists a political concensus to do the thing in the first place. In this connection students of the politics of education might find it profitable to speculate on the fact that at least a good number of the manipulations we have outlined can be expected to assist not only urban districts but poor rural districts as well. Almost a decade ago McLure (71) observed that formula weightings tended to aid central cities and rural areas more than suburbs and independent cities. Rural-urban, upstate-downstate coalitions are difficult to achieve and maintain, but it is clear that both rural and urban areas have much to gain in any state department or legislative actions taken to strengthen equal educational opportunity. Affluent suburbs, of course, have much less to gain by any state department or legislative adoption of the equalization goal. All this was true prior to the advent of the recent court cases, and it may be that the recent actions of the judiciary will serve only to catalyze latent political combinations that have been present in public education for many years.

The final over-all or general strategy consists of giving poor districts assistance through categorical or special purpose grants. For example, a growing number of states operate their own compensatory education programs in addition to the federal Title I, ESEA, program (16). It is also true that vocational grants tend to place an appreciable amount of funds into the poor districts. Although it does not occur in all instances, almost any categorical grant can be manipulated so that the categorical or special-purpose

grant also directs more funds into poor districts than into wealthy districts. For example, the grant for transportation in Illinois is written so that the poor rural districts receive more than do the wealthier rural districts.

Many educational fiscal analysts have something akin to a chronic allergy toward large numbers of categorical or special-purpose grants. First, these grants tend to so complicate the fiscal structure that it is difficult to analyze the total state educational fiscal picture. Second, there is some evidence that the over-all effect of all categoricals taken together is probably disequalizing rather than equalizing (14). Third, the overhead costs relative to scale of operations make many categorical grants economically inefficient. Fourth, the amount of red tape and "administrivia" attached to some of these grants is discouraging, especially to the small and poor school districts. Finally, such grants reduce the local administrator's area of discretionary authority to act in such a way as to achieve the most efficient allocation of resources. The standing of special-purpose or categorical grants among some educational fiscal analysts is probably just about equivalent to the low esteem of earmarked taxes among general public finance analysts.

One cannot be sure, however, that state legislatures will allow professional educators to indulge their allergy to categoricals. In the first place many legislators believe that categorical grants may be the only way of "seeing to it that the funds are spent the way we intended them to be spent." This may be true; however, the matter of discerning legislative intent from some of the existing categoricals is not easy. As with all other legislation the language of the special-purpose bills is a result of compromise and that compromise, while necessary, does not generally contribute to administrative clarity. In the second place, special purpose grants often carry with them specific provisions for evaluation of the programs they fund. This tendency is present in many federal special purpose or categorical grants and similar provisions have been written into some state categoricals. Until educators are willing to accept state-wide testing, evaluation, and accountability, the state legislatures may well find the evaluation provisions of the categoricals to their liking and retain them on these grounds alone.

The Courts

We have offered here a treatment of the equalization concept based upon an integration and critique of school finance research. We did not intend to offer a legal analysis. We hope, however, it will not be judged too presumptuous to conclude this study will an expression of opinion concerning the role of the courts.

It is currently fashionable in certain educational circles to complain about the alleged desire of the courts to "run the schools." It is also popular in certain legislative circles to declare loudly against the alleged judicial encroachment upon legislative prerogatives relative to public policy decisions in education. In our opinion the judicial branch could not and cannot escape responsibility for evaluating the operation of the public schools in terms of basic principles of both constitutional and common law. To do otherwise, to turn a blind eye upon the rights of parents and children as they interact with the largest of our public bureaucracies, would be to make a mockery of the independent judiciary and the fundamental notion of separation of powers. Evaluation, however, as every student of educational research is taught, assumes valid criterion measurements. To put the thought in terms more comfortable to the legalists, a justiciable standard must be found. In this paper we have argued that justiciable standards can be explored by constructing normative models consisting of contrasts between desired functions and actual functions. There are certainly other approaches to constructing justiciable standards. We have some evidence that the courts are not willing to listen to such inquiries, but indeed are desirous of having them presented.

The gratuitous warning we offer the judiciary is simply this. The search for evaluative standards amenable to judicial inquiry is certainly enough of a burden without the task of describing in detail all the fiscal techniques necessary to come into compliance with a given court order. We do not, therefore, believe that the courts should attempt to provide the details of the relief to be given to plaintiff in these class action finance suits. We note that Judge Lord (*Van Dusartz v. Hatfield,* 1971) and Judge Goldberg (*Rodriquez v. San Antonio,* 1971) appear to concur with this point of view. An order that relief should be forthcoming from the executive and legislative branches, and a continuation of jurisdiction until that relief is forthcoming, should be enough to meet the demands of justice. One thing is certain; the question, "When are the schools integrated?" has taken a great deal of judicial time. The question, "When are the schools equal?" is, if anything, even more difficult to handle and promises to demand an even greater allocation of scarce judicial man-hours.

In all these fiscal matters both defendants and plaintiffs will produce their "expert witnesses," not to mention a number of *amicus curiae* briefs filed either on behalf of, or in collaboration with, additional "authorities." The public finance of education is certainly no more of a science than educational psychology, sociology, or indeed any of the other social and behavioral sciences currently being professed. Therefore, the courts will find

that respected economists and educators will not concur completely on whether a set of fiscal arrangements does, or does not, contribute to equal educational opportunity. Fortunately the courts have developed ways of handling conflicting expert testimony. Anglo-Saxon jurisprudence still assumes that the "rule of right reason" will rise above trial by combat of learned advocates and more recently warring social science knights. Let us hope this bedrock assumption is sound. If it is not, we are all in trouble.

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APPENDIX A

Three Formulas for General-Purpose Educational Grants-in-Aid Used in the United States

The following three formulas are used in various states to distribute state funds inversely to the property valuation of local school districts. Each state has made extensive modifications of the "pure" forms presented here.

I. The Foundation or Strayer-Haig Formula:

$G = FP - rV$

where:

- F = Expenditure per pupil established by the legislature as the level at which education will be supported in the state
- P = Number of pupils in local school district
- r = Required local tax rate, sometimes called the "qualifying rate"
- V = Property valuation in the local district

II. The Percentage Equalization Formula:

$$G = EP\left(1 - .5\,\frac{V_i}{V_s}\right.$$

where:

- E = Local expenditure per pupil
- P = Number of pupils in local school district
- V_i = Property valuation in the local district per pupil
- V_s = Property valuation in the state per pupil

III. The Resource Equalization Formula:

$G = P\,[r\,(V_g - V_i)]$

where:

- r = Educational tax rate in the local school district
- V_g = Property valuation guaranteed by the state per pupil
- V_i = Property valuation in the local district per pupil
- P = Number of pupils in local school district

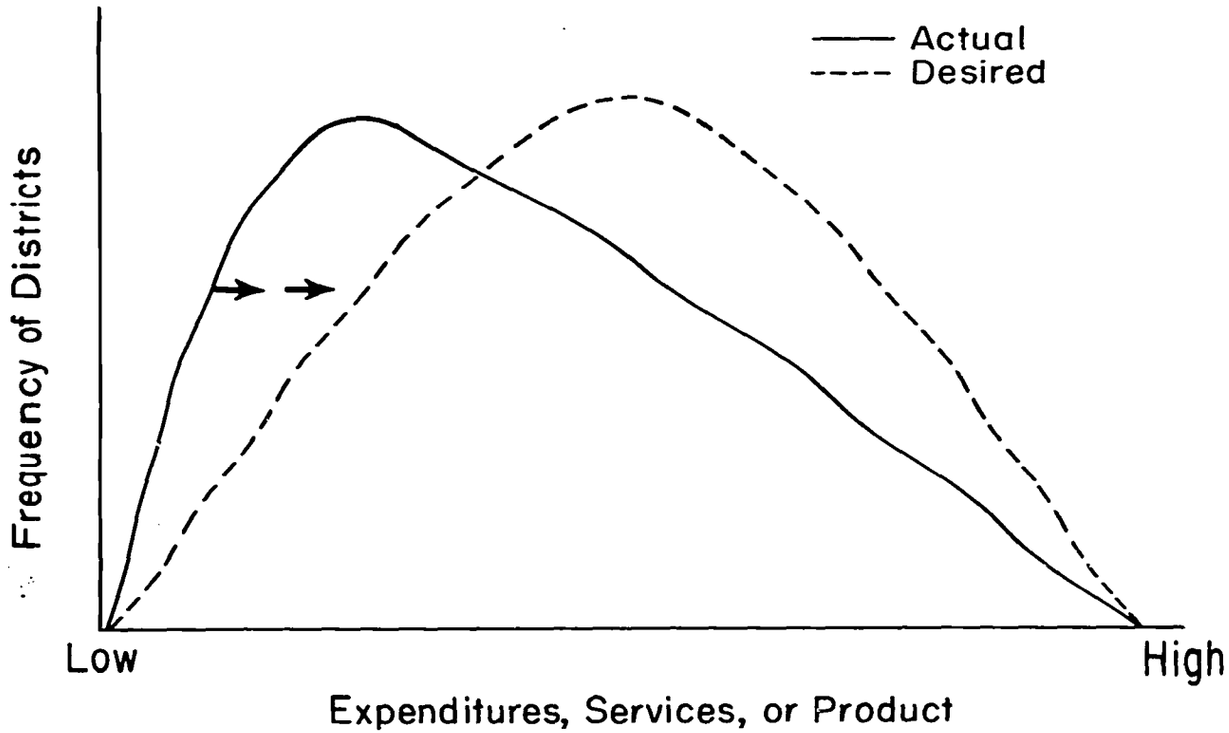


Figure I: Permissible Variance Model

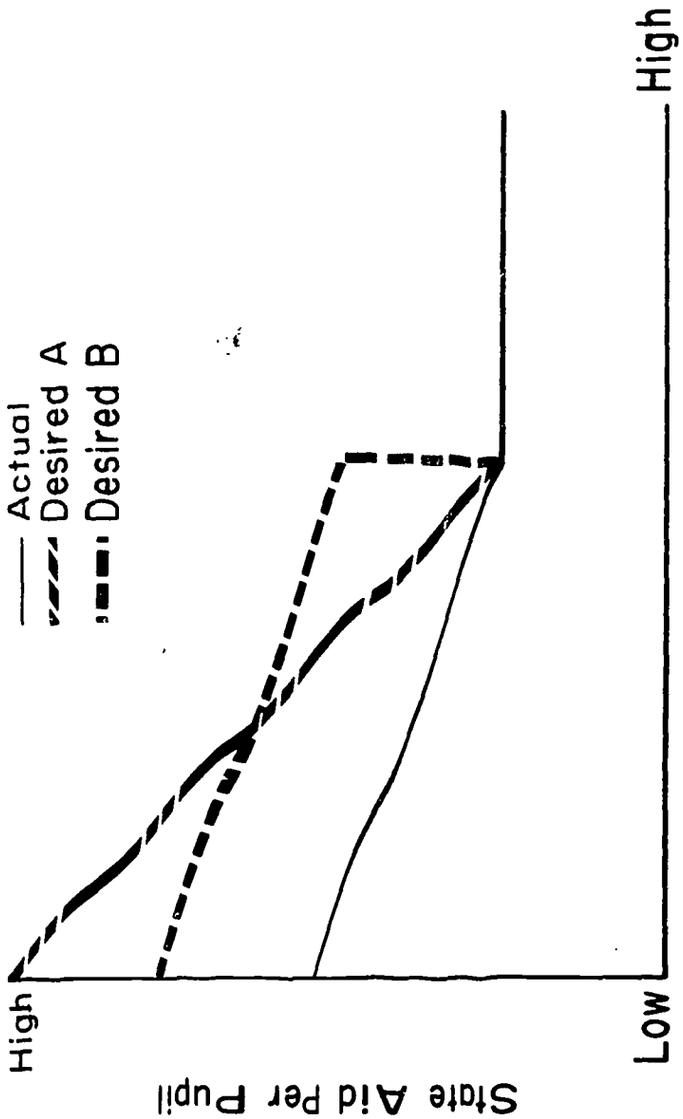


Figure 2: Inverse Allocation Model

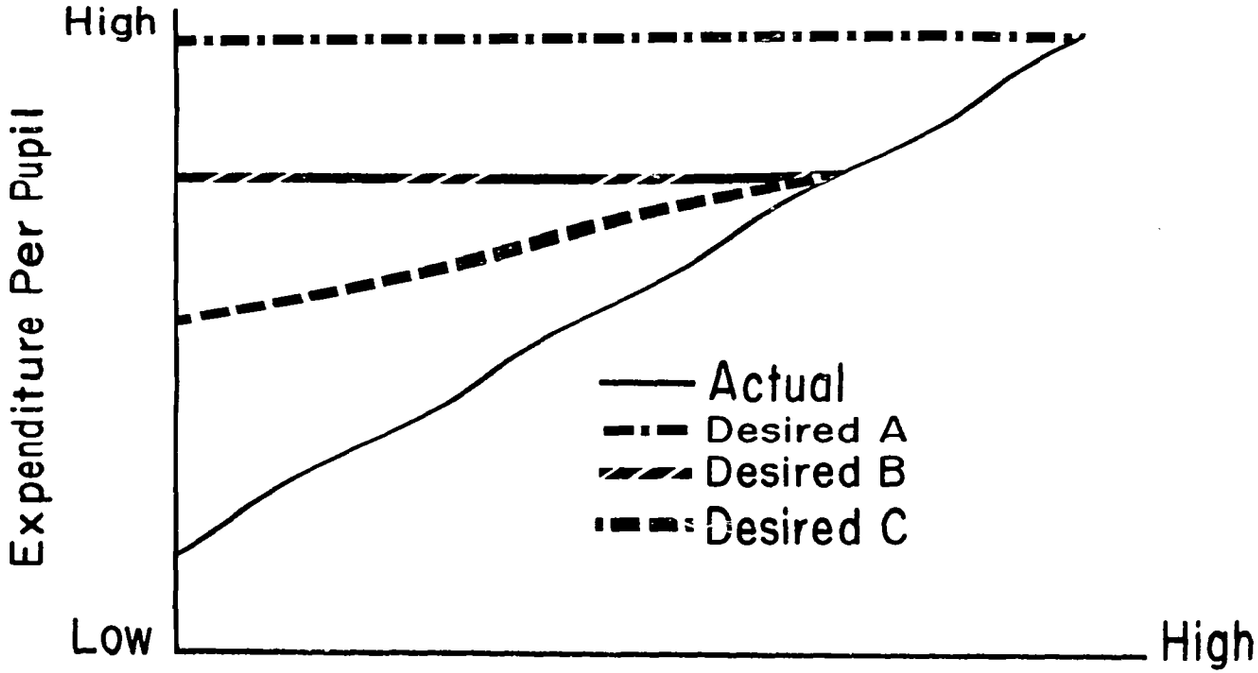


Figure 3a: Fiscal Neutrality Model

Figure 3b: Fiscal Neutrality Model

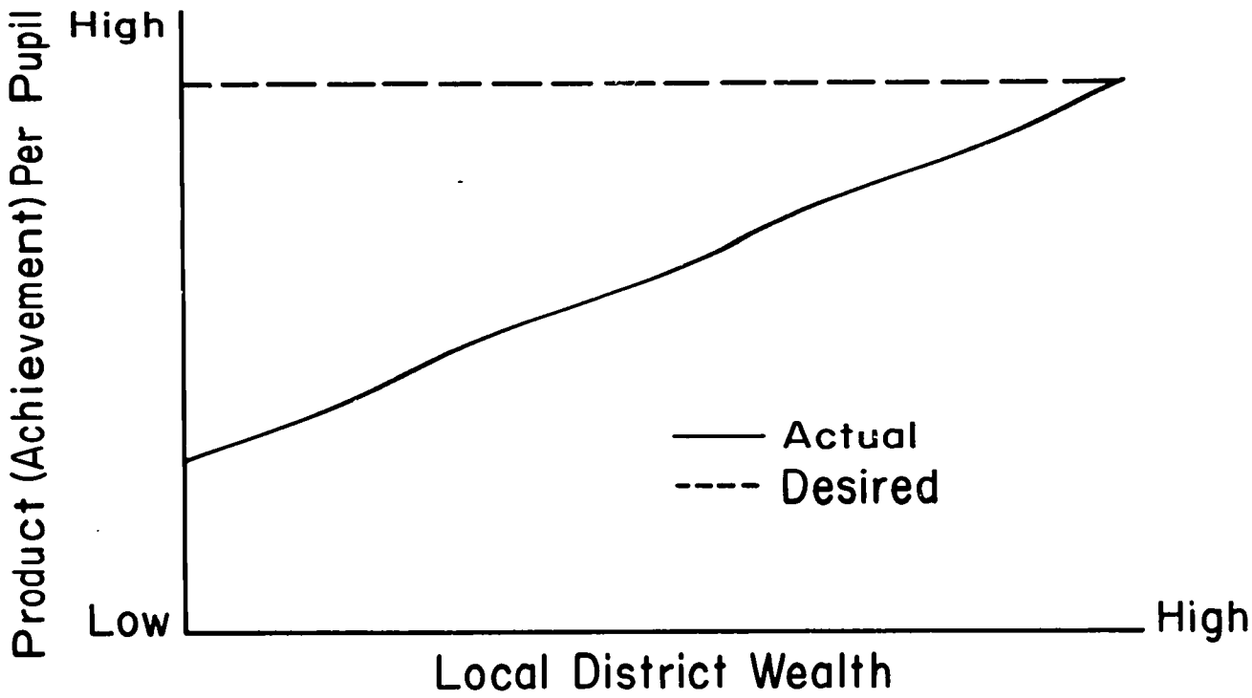


Figure 4a: Fiscal Intervention Model

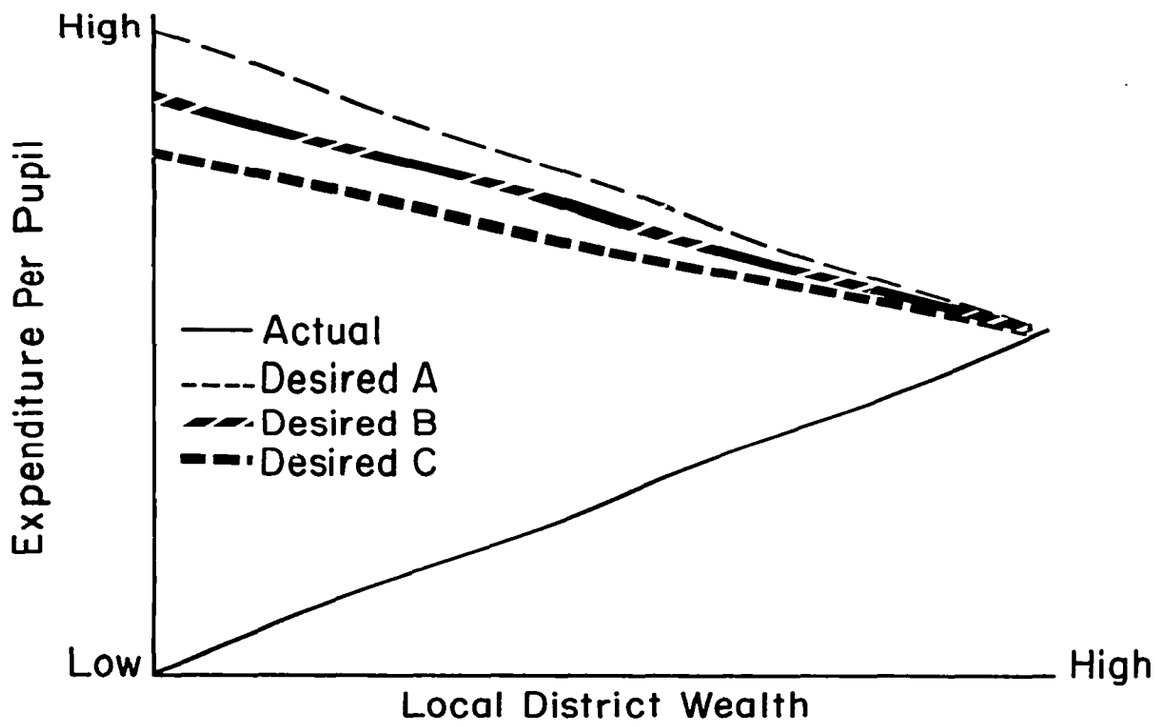


Figure 4b: Fiscal Intervention Model

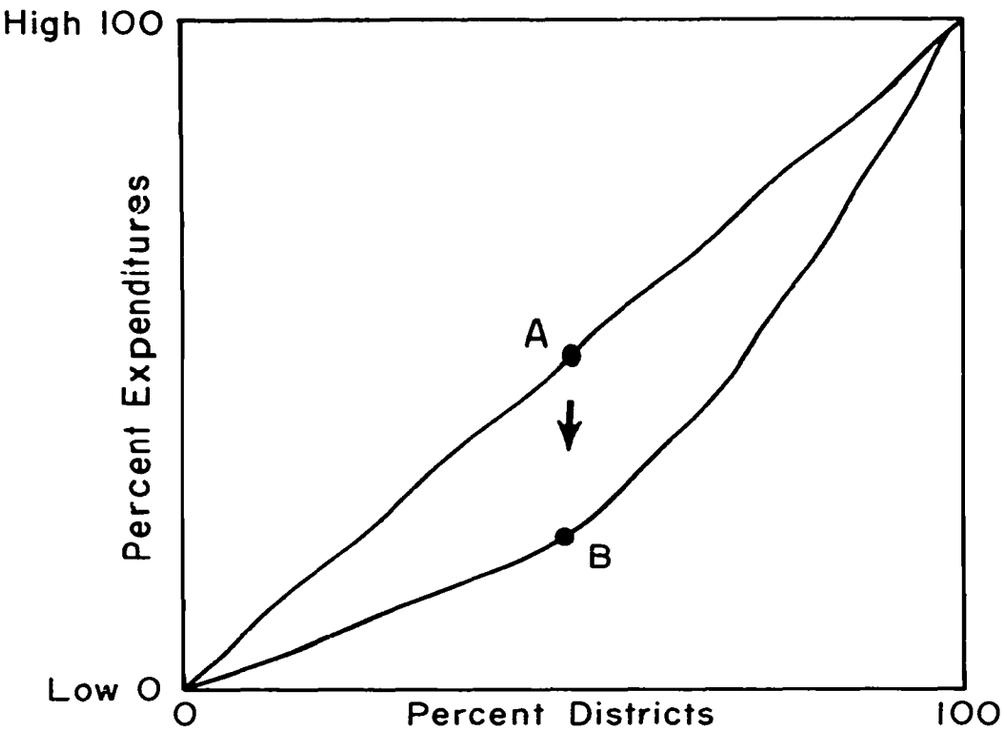


Figure 5: Lorenz Curve: Univariate mode

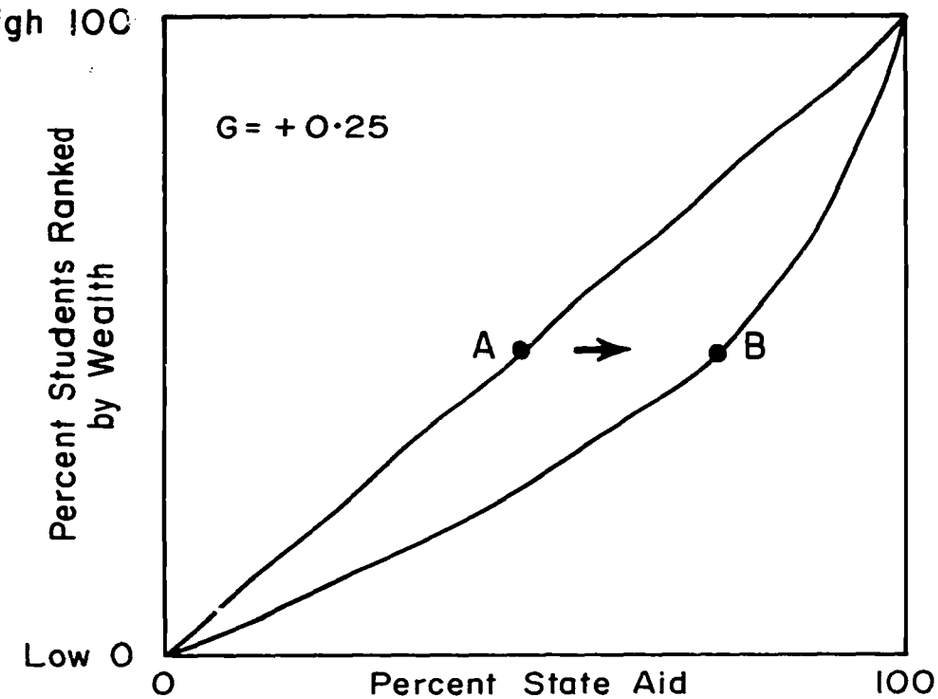


Figure 6: Effect of State Aid shown by Lorenz curve in Bivariate Mode.

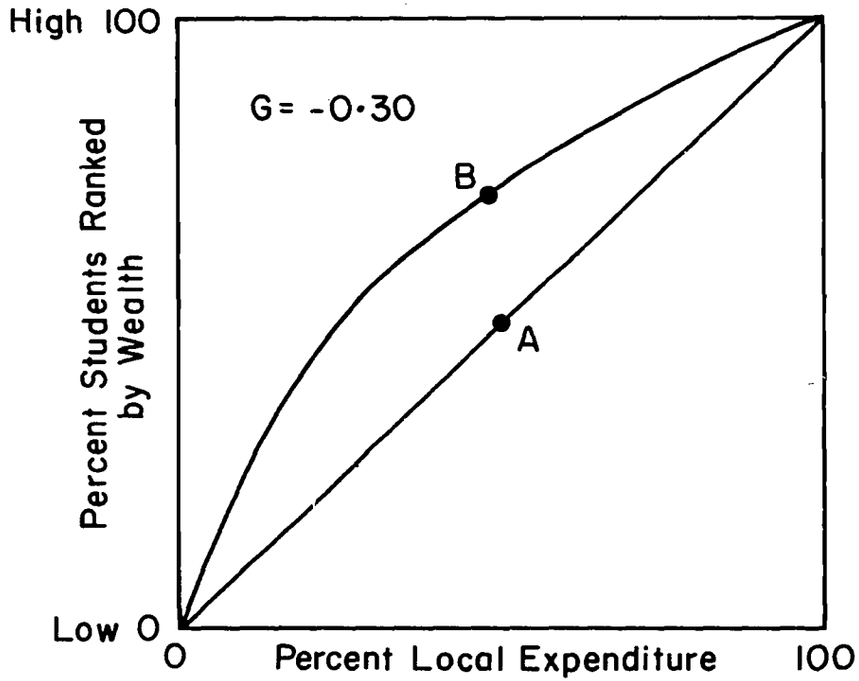


Figure 7: Disequalizing Effects of Local Resources shown by Lorenz curve.

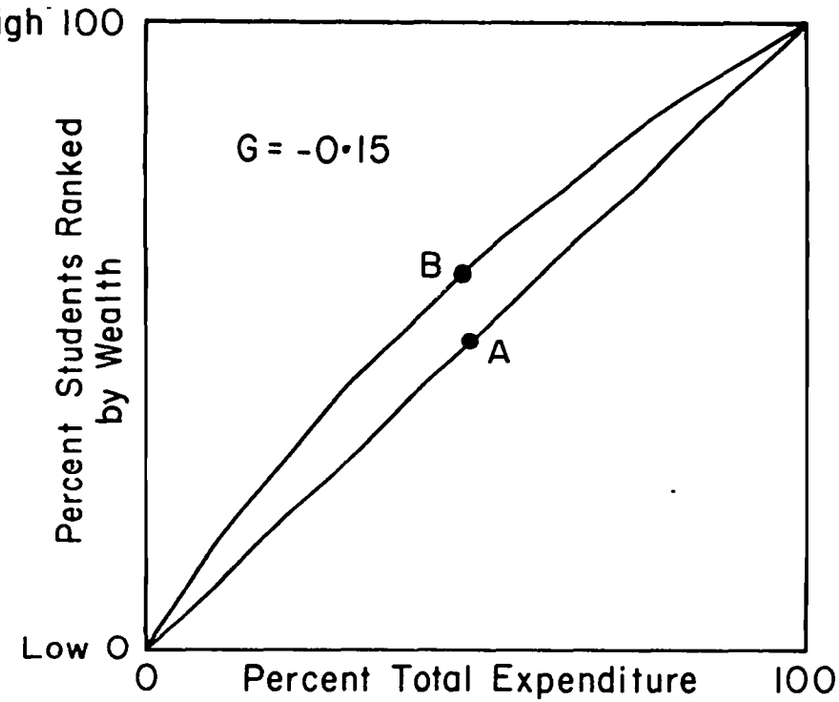
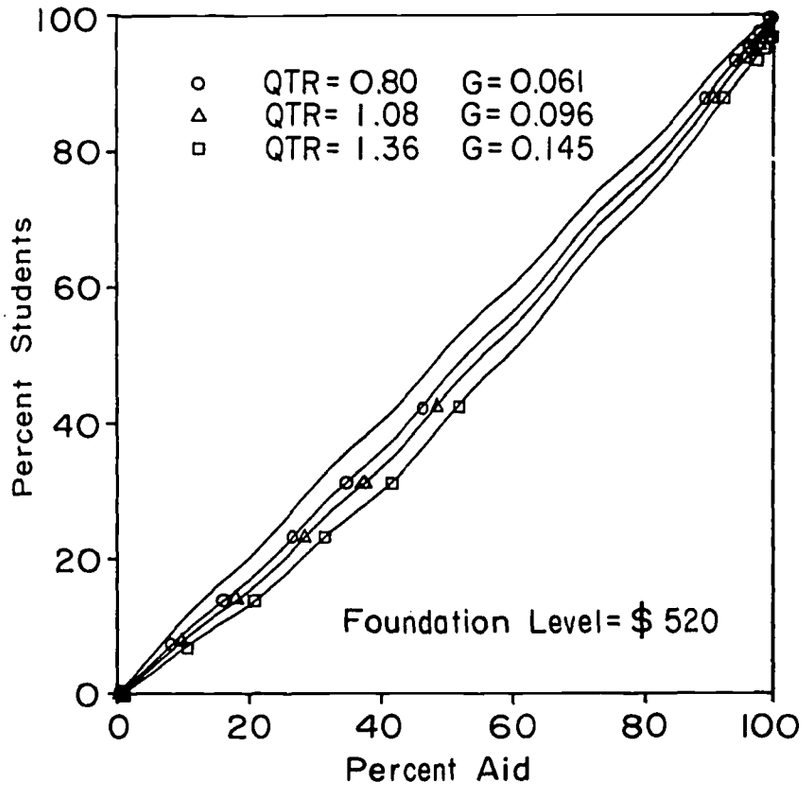


Figure 8: Combined State and Local Resource Effects shown by Lorenz curve.



(Lorenz Curve for Unit Districts)

Figure: 9: Example of Gini index and Lorenz curve using 1968-69 data for K-12 districts in Illinois.

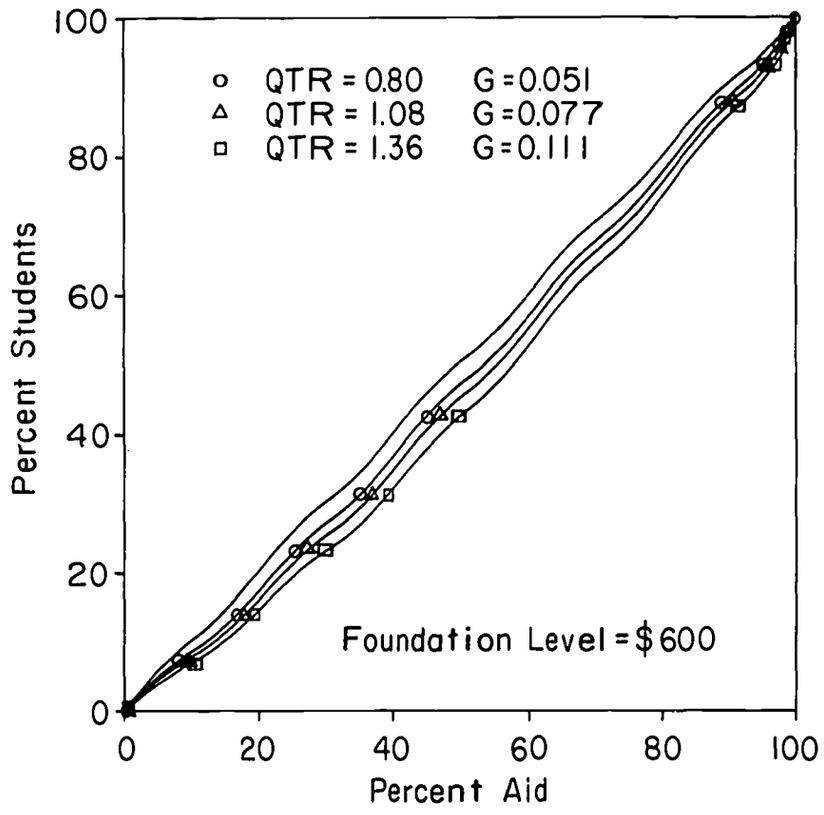


Figure 10: Example of Gini index and Lorenz curve using 1968-69 data for K-12 districts in Illinois.

New Developments in Property Tax Reform

Mabel Walker

REFORM generally implies reshaping for improvement. Today, I shall talk about forces that are reshaping the property tax. Whether the resultant changes represent improvement, I shall leave to you to decide.

Several forces are currently converging upon the property tax. So much is happening, and it is happening so fast, and coming at us from so many different directions, that we cannot keep up with developments, nor analyze them adequately with respect to their future impacts.

What are these forces that are zeroing in on this timeworn tax? There are four that I believe are particularly important.

Force Number One—Federal and State Courts

The most dramatic and immediately powerful force is represented by court decisions. Not just the educational finance decisions that have been rendered in a few states and that may well be repeated in a number of others. There are other categories of decisions affecting the property tax, and some may be just as monumental in their impact as the school finance rulings.

Judicial developments related to the property tax within the past few months have been unprecedented, and the agitation is constantly gaining momentum. This area of interest represents a mare's-nest of problems: education, property tax relief, housing location, protection of the environment, land speculation, industrial location, planning, transportation, and many others.

Current judicial decisions in the property tax area are like volcanic eruptions that will cause tremendous upheavals.

In roughly chronological order the categories of judicial decisions are:

1. Decisions demanding uniformity of assessments.
2. Decisions relating to "exclusionary zoning," or as it is frequently dubbed, "snob zoning."
3. A decision relating to equality of governmental services in different parts of a city.

4. Decisions relating to educational and tax disparities resulting from local property tax financing of public schools.
5. A decision relating to school district merging in metropolitan areas.

Assessment Decisions. Judicial decisions concerning property tax assessments are not a new phenomenon, but there is something distinctly new and revolutionary in the types of decisions set in motion in New Jersey 15 years ago this month. These decisions have been distinctive in that the plaintiff did not follow the customary procedure of seeking individual *private* relief through a reduction in the plaintiff's assessment, but instead sought *public* action in the reassessment of all real property at full, or least at *uniform*, value.

Decisions of this nature have been rendered in New Jersey, Massachusetts, Florida, Kentucky, Georgia, Tennessee, Alabama, and Ohio.

It is interesting to note that in this series of cases the plaintiffs were primarily railroads or other corporations and school groups. The former were concerned over being penalized through discriminatory assessments and the latter because schools were being deprived of revenues as a result of unequal assessment ratios. It seems likely that appeals of this nature will continue, at least until the more glaring assessment differentials are eliminated.

Decisions Relating to Exclusionary (Snob) Zoning. The second category of decisions concerns exclusionary, or snob, zoning, and is definitely related to the property tax. Such zoning may take the form of establishing acreage requirements for each new house, or permitting only one-family homes, or limiting multifamily homes by the number of bedrooms. A major purpose in each case is to keep property tax rates down by excluding poor families with large numbers of school children.

Many articles are currently appearing in legal journals concerning legal action directed against such zoning. The following brief quotation from one of these articles indicates the nature of the approach of this issue. Samuel C. Jackson, Assistant Secretary for Metropolitan Planning and Development of the Department of Housing and Urban Development, said in the Winter 1971 issue of *The Urban Lawyer:*

> The days of exclusionary zoning may be numbered, however. And if this is so, it will be a victory in which members of the legal profession have played a leading role. We at HUD are most encouraged by several recent court decisions indicating that exclusionary zoning is being recognized for what it is—a tool of discrimination.

In *Appeal of Girsh*[1] the Pennsylvania Supreme Court recently issued a landmark decision holding that it is unconstitutional for a community not to provide for apartments in its zoning ordinance.

Norman Williams in a discussion of recent "Zoning and Planning Decisions" in the October 1971 issue of *The American City* reports on a Maryland case[2] in which the bedroom restriction was upheld by the state's highest court, and a New Jersey case[3] in which a lower court invalidated such a restriction. The latter case is being appealed.

In a comment on these cases, Williams said:

In a broader context, all this provides another example of how the present reliance on local real property taxes to finance education pushes communities into policies on housing which are at least morally dubious.

A Decision Relating to Equality of Governmental Services. We come now to the third major category of current judicial decisions that are having, or appear likely to have, a significant impact on the property tax. That is decisions relating to equality of governmental services in different sections of a city. I know of only one decision of this nature that has been rendered so far, but that was a decision by a federal court.

In *Hawkins v. Town of Shaw,*[4] Judge Tuttle of the Fifth Circuit (Mississippi) held on January 23, 1971, that the town must equalize the municipal services in different sections of the city. Some legal writers expect that similar suits will be brought in state courts,[5] as well as in federal courts.

Decisions Relating to Educational and Tax Disparities in Financing Education. The fourth category of judicial decisions—relating to educational disparities resulting from local financing of schools—appears to be the most sensational, judging by coverage in the press.

On August 30, 1971, the California Supreme Court in the *Serrano* case[6] held that the local property tax system of financing schools was unconstitutional "because it makes the quality of a child's education a function of the wealth of his parents and his neighbors."

On October 14, a federal district court in Minnesota upheld the plaintiff's contention that Minnesota's system of allocating school funds was unconstitutional.[7] This lawsuit was withdrawn after the state legislature revised the school aid formula.

On December 23, a special panel of three federal judges declared the Texas public school financing system—based largely on the local property tax—unconstitutional because it makes educational expenditures a function of local wealth, and ordered the state legislature to devise a new one.[8]

The finding was essentially the same as one made last August by the California State Supreme Court, and last October by a United States District Court in Minnesota. But unlike either of those courts, the three-judge panel in Texas ordered the state to take remedial action.[9]

Lieutenant Governor Ben Barnes declared the ruling to be "the most far-reaching federal court decision in recent history."

On January 19, 1972, State Superior Court Judge Theodore I. Botter in New Jersey held that the school taxing system, based heavily on local property taxes, violated both the federal and state constitutions.[10]

On January 20, 1972, however, Justice Joseph F. Hawkins (New York State Supreme Court, Westchester County) dismissed a legal challenge to the constitutionality of the public-school financing system in New York State.[11] The suit, however, was initiated on the legal ground of educational needs, rather than on the more precise one of educational expenditures as a function of local wealth, which was used in California.

A Decision Relating to School District Merging in Metropolitan Areas. Since the Supreme Court's famous ruling on segregated schools in 1954,[12] there have been many supplementary rulings, but most of them were applicable only to southern states because they did not affect segregation resulting from housing patterns. On January 10, 1972, however, lawyers won a landmark decision affecting de facto segregation in Richmond, Virginia, when the federal district court ruled that the predominantly black school district of Richmond must merge with those of two predominantly white adjoining counties. This ruling has been called "cataclysmic," and a "real blockbuster," which will have a heavy impact in northern states.

Aside from the integration aspects of the case, if these school districts are merged, their financing will also be merged.

Force Number Two—The States

We are getting quite a bit of activity on the part of the states with respect both to property taxation and to other problems resulting from the structure of local government. I think that we can expect considerably more. Although some of this activity has resulted from court decisions, much of it has been self-generated. Both governors and legislatures have shown considerable interest in these problems, and much of this interest was evident before the educational finance and exclusionary zoning decisions. Some of the outstanding examples are the work of important study groups in New York and New Jersey.

The New York State (Fleischmann) Commission on the Quality, Cost and Financing of Elementary and Secondary Education,

which was appointed by Governor Nelson A. Rockefeller two years ago, reported on January 28, 1972. The Commission recommended a uniform state-wide property tax for schools, increases in the operating expenditures of a majority of the state's 720 school districts, a "freeze" on spending of wealthier districts, and a massive program of aid for disadvantaged children.

Governor William T. Cahill of New Jersey appointed a Tax Policy (Sears) Commission in 1970. The Commission issued its six-volume report in February 1972. Recommendations include a graduated state income tax and a state-wide property tax of $1 for each $100 of assessed valuation, with the state financing schools.

Hawaii already has centralized financing and operation of schools, and Michigan's Governor William G. Milliken proposed on September 30, 1969, that the burden of school financing in that state be shifted from the local communities to the state and that a uniform state-wide property tax and other state taxes be substituted for local school taxes.

Force Number Three—Congress and the Federal Administration

One of the very interesting forces in this turbulent scene is that of the federal government, represented by both the Congress and the Administration.

The Congress is showing growing interest in local government structure problems. The Subcommittee on Urban Affairs of the Joint Economic Committee has become actively interested in the problem of local government organization. It held hearings on "Regional Planning Issues" in October 1970, and invited further comments in January 1971.

At the request of President Lyndon B. Johnson, the Congress set up the National Commission on Urban Problems in 1967 to generate "ideas and instruments for a revolutionary improvement in the quality of the American city."

The Commission devoted one of its reports to *Fragmentation in Land-Use Planning and Control.* In the Foreword, Senator Paul H. Douglas, Chairman, said:

> The jumble of political controls over the development of urban areas has a lot to do with the mess in which cities find themselves today and stands in the way of many logical solutions.

Perhaps the most significant federal move in this area has been the formation of the Advisory Commission on Intergovernmental Relations. The Commission is financed by the federal government, but it is under intergovernmental control.

An unprecedented development has been the active interest of the President in this area. President Nixon recently asked the Advi-

sory Commission on Intergovernmental Relations to make a study of the feasibility of a value-added tax to be used to relieve property taxpayers of the school financing burden. It was suggested that educational aid from this source be given to the states on condition that *both local and state* property taxes for schools be abolished. The Commission staff is now studying this proposal.

The President's Commission on School Finance presented the results of a two-year study on March 6, 1972. A major recommendation is that the states take over the responsibility for raising taxes for neighborhood schools. It also recommended that the federal government provide from $4.6 to $7.8 billion over five years to encourage and assist states in making the transition. It further recommended that the federal government invest in addition $1 billion annually for at least five years to improve inner-city schools; that state governments establish systems to measure the effectiveness of education programs; and that a National Educational Policy Development Council be established to advise the President on national educational policy, and to give continuing attention to education as a "fundamental national concern."

Force Number Four—Taxpayer Resentment

Taxpayer resentment is a relatively lethargic force in getting under way, but when thoroughly aroused, it packs a terrific wallop. The attitude of taxpayers is the seminal force in this area. Courts act only after taxpayers file suit. Elected officials and legislators are susceptible to the demands of the electorate.

A major evil of the property tax is the manipulation of the rate to meet burgeoning governmental needs. This is particularly unfair as property ownership is, for most persons, a substantial, long-term—perhaps lifetime—investment. They have checked on tax and mortgage rates and have tried to estimate whether they can assume the financial responsibilities involved in ownership of property. They know, of course, that if their property increases in value, the *assessment* will be, or should be, increased. But a valid argument could be presented for maintaining a stable *rate*. A sharply increasing rate on their capital investment jeopardizes their solvency. It seems that juggling (can we use the term "juggling" for something that goes up but never down?) the property tax rate is far less defensible than changing the rate of income or sales taxes, since the former affects a long-term capital investment. It is this manipulation of the rate that makes the tax so onerous on the elderly, who thought they had provided a home for their old age only to find that they are being penalized beyond their most somber expectations.

If all property were always assessed accurately at full value and if the tax rate were kept constant, the homeowner would be relieved of a great load of anxiety.

Some Specific Results

This has been a hasty review of the major current and potential forces in relation to property taxation. There have already been some interesting developments and more can be expected.

If there is one social edifice more than another toward which these battering rams will be directed, it is the pattern of local governmental units. I shall not try to give you in detail what changes will be made for the excellent reason that I do not know. That the current fiscal fragmentation of local units with their shocking disparities in educational resources will be altered I have no doubt; and the pattern of school district financing may perhaps be the most sharply altered, with patterns of housing location and industrial location also vitally affected. Moreover, these changes will reinforce each other, and all will probably tend to lessen the disparities between the haves and have-nots among governmental units.

Some of the specific things that have happened, or that seem likely to happen, are the following:

State assumption of educational costs, as indicated in New York and New Jersey studies
Metropolitan-wide school districts (see Richmond decision)
New emphasis on property tax limits
Sharing the tax base (as in Minnesota plan for Twin Cities Metropolitan area)
State Municipal Bond Bank (as in Vermont)

The last two items may need a brief word of explanation.

In Minnesota a highly novel property tax measure, designed to reduce interlocal competition for development and to make possible more orderly and more logical planning, has been passed by the Minnesota legislature and deserves careful consideration.

Minnesota is one of the states suffering from an unusually large number of local units. According to Census data, in 1967 the state contained 4,185 units and ranked fourth among the states in the multiplicity of local governments.

The new approach is an attempt to share *tax base* rather than *tax revenue*. It provides that every local government in the Twin Cities area will have access on a per-capita basis to 40 percent of the net growth of the commerical-industrial tax base of the entire community.

The Vermont Municipal Bond Bank is another innovative procedure. One of the alarms that has been sounded over state financing of public schools relates to the validity of outstanding school bonds. For example, Paul Heffernan, editor of *The Daily Bond Buyer*, said:

> If the United States Supreme Court were to go along with the Texas ruling, an estimated $30 billion of school bonds issued throughout the nation would become invalid.[13]

Vermont has promptly taken action to prevent such a catastrophe. The state was sufficiently concerned over the recent property tax decisions to amend the law setting up the Vermont Municipal Bond Bank (which was enacted in 1969) on February 20, 1972, by deleting the provision that it could purchase only bonds payable with ad valorem taxes and substituting general obligation bonds.

The Bank "refinanced nearly $40 million of bonds backed by ad valorem taxes and began to sell bonds under a new set of terms designed to avoid the controversy," and saved $2 million in the process.[14]

Conclusion

These are some of the things that are appearing on the horizon. We cannot foresee in detail what may happen, as we are dealing with 50 states and more than 70,000 local property tax levying units.

But I think that we can all agree with the remark that Adam is purported to have made to Eve as they left the Garden of Eden. He turned to her and said: "My dear, we are living in a period of great social change."

FOOTNOTES

[1] 437 Pa. 237, 263 A.2d 395 (1970).

[2] *Malmar Associates v. Board of County Commissioners for Prince George's County.*

[3] *Molino v. Mayor and Council of Borough of Glassboro.*

[4] 437 F.2d 1286 (5th Cir. 1971).

[5] Fessler, Daniel W., and Haar, Charles M., "Beyond the Wrong Side of the Tracks: Municipal Services in the Interstices of Procedure." *Harvard Civil Rights–Civil Liberties Law Review* 6: 465; May 1971.

[6] *Serrano v. Priest*, 5 Cal. 3d 584, 487 P.2d 1241 (1971).

[7] *Van Dusartz v. Hatfield*, No. 3-71 Civil 243 (D. Minn., Oct. 12, 1971).

[8] *Rodriguez v. San Antonio Independent School District*, No. 68-175-SA (W.D. Tex., Dec. 23, 1971).

[9] *New York Times*, December 25, 1971.

[10] *Robinson v. Cahill.*

[11] *Spano v. Board of Education, Lakeland Central School District*, No. 1, No. 10510 (Sup. Ct. Westchester County, N. Y., filed Sept. 15, 1971).

[12] Brown v. Board of Education, 347 U.S. 483 (1954).

[13] Heffernan, Paul. "The School Tax Issue." *New York Times*, January 16, 1972.

[14] Allan, John H. "Vermont Sidesteps Property Tax Controversy." *New York Times*, February 20, 1972.

Recent Court Decisions and the Constitutionality of State Support Programs

Richard A. Rossmiller

IN A MAJORITY OF STATES the constitutionality of the program for financing elementary and secondary schools is currently under attack. During the past few months state or federal courts in a number of states have ruled that the state support program currently in force violates state or federal constitutional guarantees. Thus, in nearly every state, educators, laymen, and legislators have suddenly become aware of the inequities and disparities which characterize existing programs for financing education.

A Genealogy of Court Cases

The first generation of cases testing the constitutionality of state support programs were those which were decided early in the history of state "equalization" programs. In several states, taxpayers brought suits in which they attempted to prevent the distribution of state funds in a manner which would result in greater equalization of school revenue among the state's school districts. The constitutionality of state statutes which provided for the unequal apportionment of revenue raised for school purposes was attacked on the grounds that citizens were deprived of property without due process of law, that constitutional provisions concerning uniformity of taxation were violated, and/or that public funds were being diverted to a private purpose. These contentions were universally rejected, the courts holding that a state legislature may exercise wide discretion in determining how state school aids shall be apportioned among the state's school districts as long as the basis for the apportionment is not arbitrary.[1]

The second generation of cases involving the constitutionality of state support programs were those cases brought by or on behalf of school pupils under the Fourteenth Amendment. Plaintiffs in these cases charged that their Fourteenth Amendment rights to due process and/or equal protection of the law were violated by state support programs which enabled school districts where the local tax base is large to spend much more per pupil while, at the same time, having local tax rates as low or lower than those levied

in school districts where the tax base was small. The plea of the plaintiffs was that they should have equal access to the state's school tax dollars, since education is a state function. In its historic *Serrano* decision, the California Supreme Court accepted this argument and ruled that the amount of money available per pupil may be a function only of the wealth of the entire state, not the wealth of the individual school district.[2] Courts in several other states have in recent months handed down similar decisions.[3]

A third generation of cases contesting the constitutionality of state support programs also may be identified. In these cases, which have not yet been decided, the plaintiffs claim that the state, in distributing school funds to individual districts, must recognize the varying educational needs of children and vary the distribution of funds accordingly. In *McInnis v. Shapiro*, the court, while recognizing the inequities of the existing Illinois state support system, could find no manageable standards which might be applied in distributing educational dollars in accordance with the varying educational needs of pupils and refused to hold the state support system unconstitutional.[4] The ruling in a Virginia case was similar.[5]

It should be noted that the standard established by the courts in the second generation cases, i.e., the level of expenditure for public education in a local school district must be a function of the wealth of the state as a whole, does *not* require that educational expenditures be equal for each child. In fact, the Federal Court in the Texas case stated, that "on the contrary, the state may adopt the financial scheme desired so long as the variations in wealth among the governmentally chosen units do not affect spending for the education of any child."[6]

It is possible, indeed it is likely, that litigation involving the constitutionality of state programs for financing public education will become commonplace. In fact, such litigation is likely to be as pervasive and protracted as the litigation involving racial segregation in the public schools. The Rodriguez case is expected to be the first to reach the Supreme Court of the United States. However, even if the Court overturns the lower court ruling, litigation in this area is not likely to end. In the New Jersey case (*Robinson v. Cahill*), the trial court ruled that New Jersey's state support system was unconstitutional under the state constitution, as well as under the Fourteenth Amendment to the Constitution of the United States. In many of the cases currently on file in the various states it is contended that both state and federal constitutional guarantees are being violated, and such litigation can be expected to be pursued regardless of how the Supreme Court eventually rules.

Also, cases may be expected to pursue further the argument that the level of expenditure for education should be related to the cost of the educational programs needed by pupils. Research conducted by the National Educational Finance Project has demonstrated that substantial differences exist in the cost of the educational programs provided for various target populations such as the culturally disadvantaged or physically or mentally handicapped. This research also illustrates how manageable standards might be developed for allocating varying amounts per pupil on the basis of program classification.

Cost Differentials in Educational Programs

In planning for the National Educational Finance Project it was recognized that while conventional wisdom acknowledged that not all educational programs were equally costly, very few data existed on the characteristics of educational programs designed for specific target populations or on the cost of such programs. Thus, a major objective of the Project was to identify target populations of pupils who needed special educational programs and measure the cost differentials associated with such programs. Therefore, it was assumed that a comprehensive study of school finance should begin with a study of educational program needs—a series of studies to identify the costs associated with early childhood education programs; educational programs for mentally, physically, or emotionally handicapped children; educational programs for culturally disadvantaged children; vocational education programs; educational programs for adults; and community junior college programs. In each study the researchers sought to (a) establish criteria for identifying members of the target groups to be served, (b) develop accurate estimates of the number of persons in each group, (c) determine how the educational programs required to meet the needs of each target group differ from the regular educational program, and (d) determine the cost differentials associated with each special program in comparison with the regular program.

The educational programs costed were those judged to reflect "best current practice." An attempt was made to identify such programs on the basis of empirical evidence substantiating their effectiveness. However, in nearly all cases empirical evidence of program effectiveness was unavailable, and the researchers were forced to rely upon the recommendations of authorities in each program area to identify states and school districts offering high-quality educational programs for the target groups under study.

A second problem encountered by the researchers was the lack of adequate and consistent program accounting information

which could be used in determining cost differentials. The lack of a common information base forced the researchers to build their own information base from which they could determine cost differentials.

The results of the research studies which dealt with the various educational program areas are reported in Volume III of the National Educational Finance Project publications.[7] In Table 1 are summarized the cost differentials developed for various elementary and secondary educational programs as a result of National Educational Finance Project research. All weightings shown in the table are based on full-time equivalent pupils. It will be noted that a weight of 1.0 was assigned to pupils in regular programs in grades 1 through 6; a weight of 1.2 was assigned to pupils in grades 7 through 9; and a weight of 1.4 was assigned to pupils in grades 10 through 12. Heavier weightings were also provided in recognition of the additional cost of educating pupils in isolated areas where it is difficult to bring together a large enough number of pupils to operate a school efficiently. The weights assigned pupils in special educational programs ranged from 1.2 for speech handicapped pupils to 3.25 for physically handicapped pupils. A weight of 2.0 was assigned to pupils in compensatory education programs, and a weight of 1.8 was assigned to pupils in vocational education programs.

It should be emphasized that the weights given in Table 1 reflect current practice; that is, they are based on what is currently being done in the schools, *not* on what should be done. It may be argued, for example, that more money should be spent on pupils in grades 1 through 6 than is spent on pupils in grades 10 through 12. To resolve this question, data concerning the effectiveness of the various programs will be required. Unfortunately, National Educational Finance Project researchers were unable to find sufficient output (effectiveness) data upon which to base judgments concerning the relative merits of various approaches to providing education for particular target groups. Cost-effectiveness studies of various educational programming alternatives are one of the great research needs in the field of educational finance at the present time.

It also should be noted that the term *compensatory education* is not sufficiently precise to be of much use in determining educational programming. Compensatory education programs are developed for various purposes, ranging from providing meals for hungry pupils to intensive work with pupils who have severe reading disabilities. The cost of these programs varies widely and will depend upon such factors as the educational handicap being treated, the intensity of the program, the duration of the program, and the

TABLE 1.–PROGRAM COST DIFFERENTIALS DEVELOPED BY THE NATIONAL EDUCATIONAL FINANCE PROJECT

Programs	Weighting for cost differential
1	2
Early childhood	
3-year-olds	1.40
4-year-olds	1.40
Kindergarten (5-year-olds)	1.30
Non-isolated basic elementary and secondary	
Grades 1-6	1.00
Grades 7-9	1.20
Grades 10-12	1.40
Isolated basic elementary and secondary[a]	
Elementary size	
150-200	1.10
100-149	1.20
Less than 100	1.30
Junior high	
150-200	1.30
100-149	1.40
Less than 100	1.50
Senior high	
150-200	1.50
100-149	1.60
Less than 100	1.70
Special (exceptional)	
Mentally handicapped	1.90
Physically handicapped	3.25
Emotionally handicapped	2.80
Special learning disorders	2.40
Speech handicapped	1.20
Compensatory education	
Basic: Income under $4,000	2.00
Vocational-Technical	1.80

SOURCE: Johns, Roe L., and others. *Alternative Programs for Financing Education.* Gainesville, Fla.: National Educational Finance Project, 1971. p. 272.

[a]Elementary schools must be 10 miles or more by road from another elementary school in order to be weighted for isolation; junior high schools, 15 or more miles from another junior high school; and senior high schools, 20 miles or more from another senior high school.

like. It is essential that subcategories of programs be identified within the general area of compensatory education. Examples would be programs where the primary objective is improving reading skill and comprehension, programs where the primary objective is to improve mathematical or quantitative skills, programs for pupils who have mental, physical, or emotional handicaps, or programs to improve the nutrition of children. Although a weight of 2.0 was assigned pupils in compensatory education programs, the need for more precise program definition in this area is apparent.

Fiscal Equalization in State Support Programs[8]

To test the effects of various approaches to the financing of elementary and secondary schools, the National Educational Finance Project developed a computer program which makes it possible to determine the impact of various state support models on individual school districts of varying characteristics. A prototype state consisting of 32 school districts was developed for the purpose of testing alternative models of state support. All districts in the prototype state are real school districts, all of them have 1,800 or more pupils enrolled, and all of them operate both elementary and high schools. The prototype state includes at least one representative of each of the following types of districts: (a) large urban core city, (b) suburb, (c) medium-size city, (d) small city, and (e) rural area. In addition, the state includes districts with high and low equalized valuation of property per pupil, districts with high and low personal income per pupil, and districts with high and low percentage of culturally disadvantaged pupils. Table 2 shows for each district in the prototype state the average daily membership (ADM), the weighted ADM based on NEFP cost differentials, the equalized assessed valuation (full market value) of property per pupil in ADM, and the equalized assessed valuation per pupil in weighted ADM.

The impact of various state support models on each district can easily be demonstrated by using the National Educational Finance Project computer program. It is also possible to evaluate the extent to which various approaches to state school support comply with the test posed in *Serrano*; namely, the revenue available per pupil shall be a function only of the total wealth of the state, not the wealth of the individual district in which a pupil happens to reside. In testing each model it was assumed that (a) the same total amount of revenue was available but that the proportion obtained from state and local sources varied from one model to another, and (b) all districts levied the legal limit of taxes permitted by the state.

TABLE 2.—AVERAGE DAILY MEMBERSHIP, WEIGHTED AVERAGE DAILY MEMBERSHIP AND EQUALIZED VALUATION OF THE PROTOTYPE STATE

District	Average daily membership (ADM)	Weighted average daily membership (WADM)	Equalized assessed valuation (EAV) (in thousands)	EAV per pupil in WADM (in dollars)
1	2	3	4	5
1	14,230	17,934	$ 771,363	$43,011
2	10,481	13,644	560,413	41,074
3	32,532	42,274	1,286,623	30,435
4	123,318	160,101	4,624,308	28,884
5	5,197	7,682	181,070	23,571
6	10,179	13,223	293,313	22,182
7	15,220	19,712	429,791	21,804
8	1,811	2,404	51,978	21,621
9	7,058	10,792	226,790	21,015
10	137,329	177,038	3,586,843	20,260
11	3,231	4,070	78,197	19,213
12	4,730	6,164	118,360	19,202
13	4,065	6,014	107,516	17,878
14	165,324	209,378	3,715,068	17,743
15	4,761	7,238	122,025	16,859
16	16,649	22,202	348,643	15,703
17	73,945	97,005	1,512,960	15,597
18	21,240	30,139	458,200	15,203
19	30,017	39,044	555,443	14,226
20	14,861	20,902	292,053	13,972
21	25,011	35,508	495,610	13,958
22	18,968	27,516	341,873	12,425
23	6,124	9,173	110,308	12,025
24	7,245	11,612	129,830	11,181
25	208,014	324,828	3,580,364	11,022
26	13,918	19,042	209,837	11,020
27	13,577	19,353	200,515	10,361
28	2,503	3,131	32,243	10,298
29	11,284	16,838	141,236	8,388
30	5,531	8,139	60,105	7,385
31	6,064	9,116	66,219	7,264
32	4,985	7,171	50,616	7,058
Total	1,019,401	1,398,386	24,739,630	...

SOURCE: Johns, Roe L., and others. *Alternative Programs for Financing Education.* Gainesville, Fla.: National Educational Finance Project, 1971. p. 297.

FIGURE 1.—REVENUE PER WEIGHTED PUPIL WITH A UNIFORM STATE-WIDE LOCAL PROPERTY TAX LEVIED AND RETAINED BY EACH DISTRICT

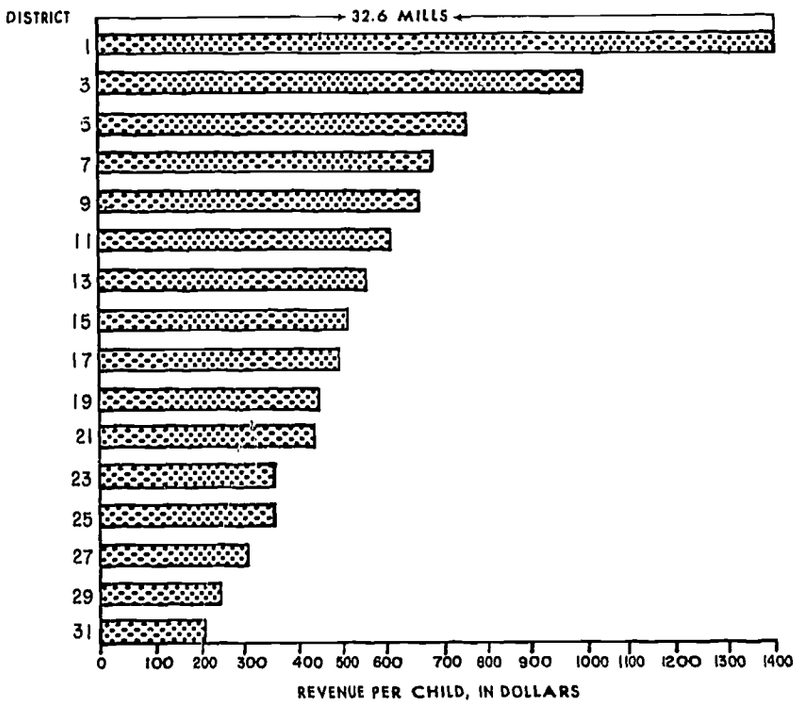


Figure I illustrates the amount of revenue per weighted pupil that would be available in each district if all school revenue were raised from a local property tax levied at the same rate in each district. A total of $806,574,000 would be required for the state, which would require a local tax levy of 32.6024 mills in each school district. As shown in Figure I, a levy of 32.6024 mills would yield approximately $1,400 per pupil in District 1 (the wealthiest district) compared with slightly over $200 per pupil in District 31 (the poorest district). Obviously, this approach to school support fails to meet the *Serrano* test, for the amount of revenue per pupil is strictly a function of the wealth of the local district.

Figure II illustrates the effect of a school support model in which the state provides a flat grant of approximately $350 for each pupil in weighted average daily membership and permits each district to augment the state grant by the yield of a local property tax of 12 mills. In this example, District 1 will have available approximately $875 per pupil, while District 31 will have approximately $475 per pupil. The difference in revenue available per pupil depends solely on the size of the local property tax base. Thus, this approach also fails to meet the *Serrano* test, for the amount of revenue per pupil is clearly a function of the wealth of each district and results in a difference of approximately $400 per pupil between the wealthiest and the poorest district.

Figure III illustrates the effect of a school finance program where the state has established a minimum foundation program of $440 per pupil in weighted average daily membership. Each district is required to levy a 12-mill local property tax, but in this example the yield from 5 mills of the tax is charged against the amount of revenue per pupil guaranteed by the minimum foundation program. In District 1, the 5-mill charge back of the local property tax levy will provide about one-half of the guaranteed $440 per pupil with state aid providing the balance. The remaining 7 mills of local property tax will yield nearly $300 per pupil, so that District 1 will have available approximately $740 per pupil in weighted average daily membership. In District 31, on the other hand, a 5-mill local property tax will produce only about $40 per weighted pupil and the state will provide the balance of the guaranteed amount–$400 in this instance. The remaining 7 mills of local property tax will generate approximately $70 per weighted pupil in District 31 and this amount, when added to the $440 guaranteed by the minimum foundation program, will give the district revenue of about $510 per pupil. Again, the variation in revenue per pupil which results from the 7-mill local property tax is purely a function of the wealth of the individual district. In this

FIGURE II.—REVENUE PER WEIGHTED PUPIL WITH A UNIFORM STATE GRANT AND A 12-MILL LOCAL PROPERTY TAX LEVIED AND RETAINED BY DISTRICT

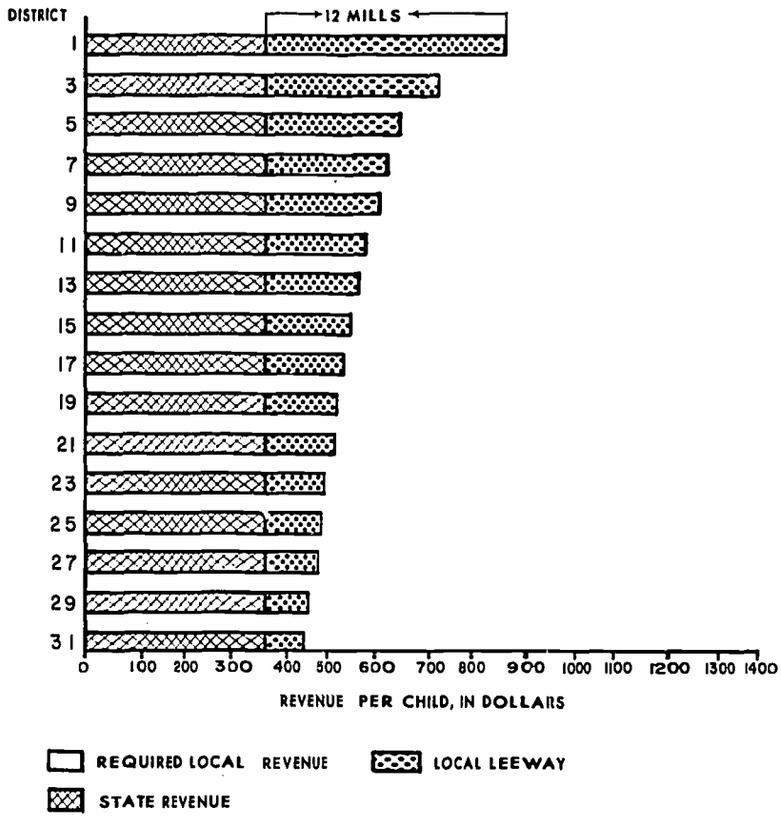
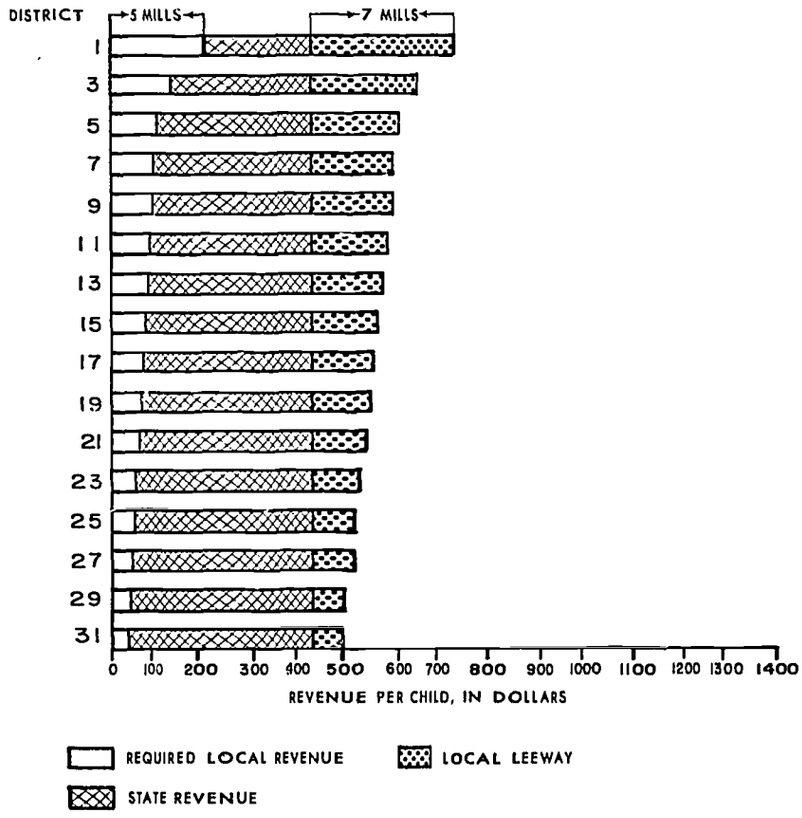


FIGURE III.–REVENUE PER WEIGHTED PUPIL WITH A GUARANTEED MINIMUM FOUNDATION PROGRAM AND A 12-MILL LOCAL PROPERTY TAX WHERE THE YIELD OF 5 MILLS OF THE LOCAL TAX IS CHARGED AGAINST THE FOUNDATION PROGRAM AND THE BALANCE RETAINED BY THE SCHOOL DISTRICT



example, District 1 will have over $200 per pupil more revenue than will District 31. Thus, this model also fails to meet the *Serrano* test.

Figure IV displays the effect of a state support program identical to that illustrated in Figure III, but with the yield of 10 mills of the local property tax charged as the district's contribution to the minimum guaranteed foundation program. Each district also has available the yield of a 2-mill local property tax in addition to the revenue guaranteed by minimum foundation program. In this illustration, District 1 has total revenue of approximately $615 per weighted pupil; District 31 has total revenue of approximately $580 per weighted pupil. Note that although the variation in revenue between the richest and poorest district is only about $35 per pupil, the variation is due entirely to differences among the districts in the size of their tax base. Whether or not this much variation in revenue per pupil is permissible under *Serrano*-type decisions remains to be decided. In this case, the variation in revenue per weighted pupil is less than 6 percent and perhaps a court would consider this much variation to be permissible.

Figure V illustrates a complete state support model in which all revenue is provided by the state. Note that there is no variation in the revenue available per weighted pupil and that there is no local school tax. This model clearly would meet the *Serrano* test, for there is no variation in revenue per weighted pupil between the wealthiest and the poorest district.

Figure VI illustrates the effect of a state support program in which the amount of revenue provided by the state varies according to the amount of tax effort exerted by each local school district. This is commonly referred to as a percentage equalizing or power equalizing approach. To test this model, it was necessary to assume varying rates of local school taxes in each district. The local property tax rates are shown in Figure VI. (It also was assumed that the percentage of state aid provided a district of average wealth would be equivalent to that provided in the model illustrated in Figure IV.) It was assumed, for example, that District 1 would choose to levy a 12-mill local property tax, that District 3 would levy a 17-mill tax, etc. Note that the revenue per weighted pupil available under this model is not a function of district wealth; it is a function of district tax effort. District 1, District 19, and District 31 each chose to levy 12 mills of local property tax and each has available $635 per pupil in weighted average daily membership. In District 1, the 12-mill local levy produced approximately $515 and the state contributed an additional $120. In District 31, the 12-mill local tax levy produced approximately $85, with state aid providing an additional $550 per weighted

FIGURE IV.--REVENUE PER WEIGHTED PUPIL WITH A GUARANTEED MINIMUM FOUNDATION PROGRAM AND A 12-MILL LOCAL PROPERTY TAX WHERE THE YIELD OF 10 MILLS OF THE LOCAL TAX IS CHARGED AGAINST THE FOUNDATION PROGRAM AND THE BALANCE RETAINED BY THE SCHOOL DISTRICT

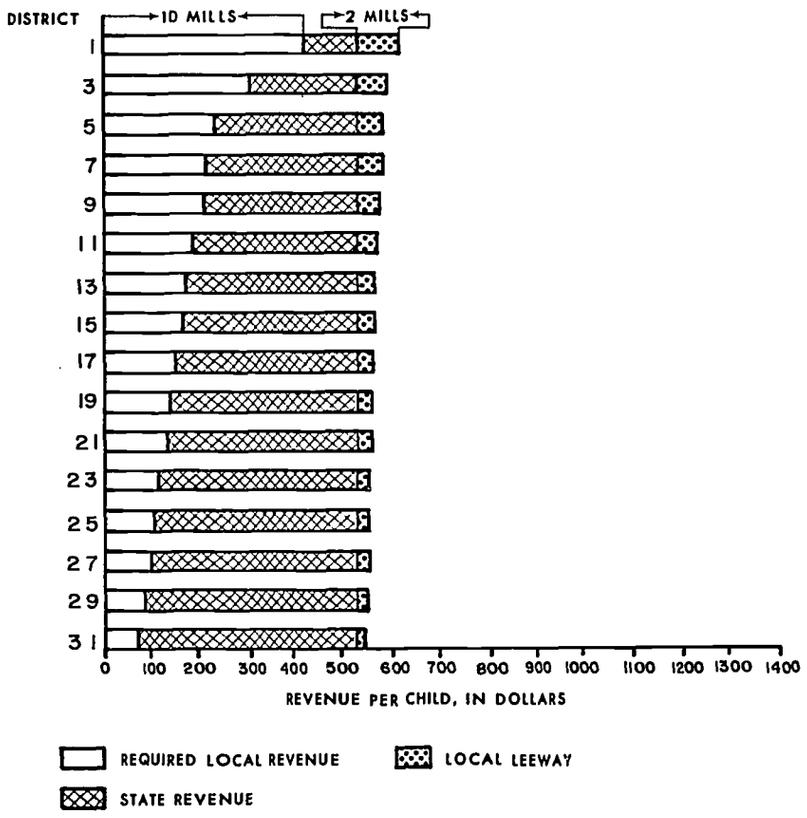


FIGURE V.—REVENUE PER WEIGHTED PUPIL WITH A COMPLETE STATE SUPPORT PROGRAM

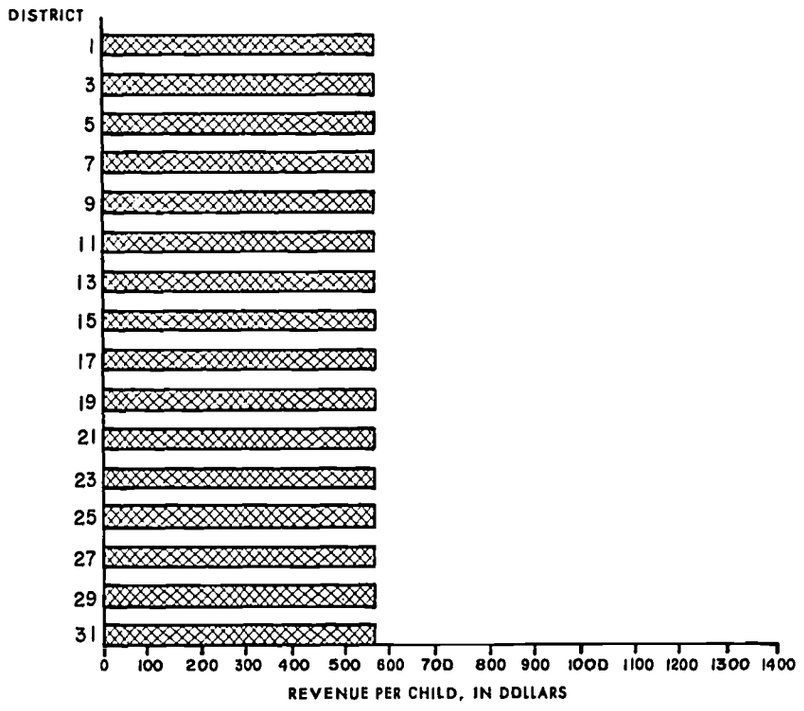
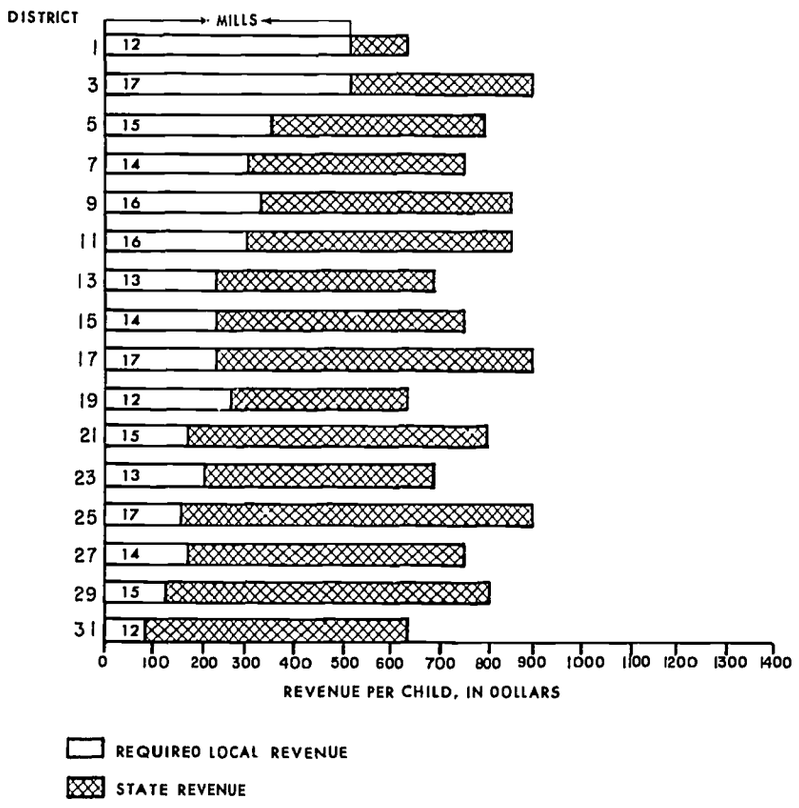


FIGURE VI.—REVENUE PER WEIGHTED PUPIL WITH A POWER EQUALIZING STATE SUPPORT PROGRAM



pupil. In each district, however, a total of $635 per pupil is available. This model does meet the *Serrano* test, for the amount of revenue available per pupil is not a function of the wealth of the local school district.

One may question, however, whether or not the amount of revenue available for a child's education should be permitted to depend upon the aspirations of his parents and neighbors if it is too important to depend upon the wealth of his parents and neighbors. It is clear that the model illustrated in Figure VI does not produce equality of educational opportunity, at least as measured by the revenue available per pupil, for the amount of revenue per pupil depends upon the propensity of a child's parents and neighbors to tax themselves for education. Their decision will rest upon the relative value they attach to education in comparison with other possible expenditures. The research which is available concerning income elasticity of demand for education suggests that districts populated primarily by persons in the middle- and high-income brackets are likely to place a higher value on the education of their children, and consequently will tax themselves at a higher rate, than will persons who are in low-income brackets. If the research evidence is accurate, educational finance programs of the type illustrated in Figure VI are not likely to produce substantial improvement in equality of educational opportunity among the school districts of a state.

FOOTNOTES

[1]See, for example, *Miller v. Korns*, 140 N.E. 773 (Ohio, 1923); *Sawyer v. Gilmore*, 83 A. 673 (Me., 1912); *Mumme v. Marrs*, 40 S.W. 2d 31 (Tex., 1931).

[2]*Serrano v. Priest*, 407 P. 2d 1241 (Cal., 1971).

[3]*Van Dusartz v. Hatfield*, 334 F. Supp. 870 (Minn., 1971); *Rodriguez v. San Antonio Independent School District*, ___ F. Supp.___(Tex., 1971); *Robinson v. Cahill* (N.J., 1972, citation unavailable).

[4]*McInnis v. Shapiro*, 293 F. Supp. 327 (Ill., 1968); affirmed, *McInnis v. Ogilvie*, 394 U.S. 322 (1969).

[5]*Burriss v. Wilkerson*, 310 F. Supp. 572 (Va., 1969); affirmed, 397 U.S. 44 (1970).

[6]*Rodriguez v. San Antonio Independent School District*, ___ F. Supp. ___(Tex., 1971).

[7]Johns, Roe L; Alexander, Kern; and Jordan, K. Forbis, editors. *Planning To Finance Education.* Gainesville, Fla.: National Educational Finance Project, 1971. 463 p.

[8] For a more comprehensive discussion, see: Johns, Roe L. and others. *Alternative Programs for Financing Education.* Gainesville, Fla.: National Educational Finance Project, 1971. p. 265-350.

Evaluating State Plans for Financing the Public Schools[1]

Roe L. Johns

MANY METHODS for evaluating state plans for school financing are available. In this paper, I shall consider only *state* statutory and constitutional provisions for school financing. I am ignoring federal funds in this analysis because state legislatures have no control, at the present time, over federal provisions for school financing.

The National Educational Finance Project (NEFP) has utilized a number of methods and techniques for evaluating state school finance programs. Some were adaptations of old methods and some were new techniques developed by the Project research staff.

Both objective and nonobjective methods can be used for evaluating state support programs. I shall first present a useful nonobjective method.

Checklist of Criteria for Evaluating the State School Finance Program

The first comprehensive checklist for evaluating state school finance programs was developed by the National Education Association, Committee on Tax Education and School Finance in 1946. The instrument was entitled *School Finance Goals.*

The report contained a scale by which a state could be rated on 77 general, state, local, and federal school finance goals. According to the scale, only 17 percent of the desirable school finance goals had been completely achieved in 1946 by the typical state.[2]

A workshop on school finance, attended by some 400 people, was conducted by the Committee in Cleveland in 1948. It developed at this workshop that there was some disagreement among the participants on the desirable characteristics of a school finance program. The Committee decided that it should call a conference of leaders in school finance for the purpose of clarifying issues on some of the technical approaches to the state financing of public schools. The conference, held in summer 1949, had the following participants: Arvid J. Burke, Leslie L. Chisholm, Roe L. Johns,

Eugene S. Lawler, William P. McLure, Edgar L. Morphet, Paul R. Mort, Alfred D. Simpson, Francis G. Cornell, Arnold E. Joyal, Frank W. Hubbard, and Clayton D. Hutchins.[3]

This conference produced a list of criteria entitled *Guides to the Development of State School Finance Programs.* These Guides were revised slightly in 1958. This instrument served a good purpose. It was used primarily by experts in school finance, state education associations, and state departments of education. However, the Guides were stated in general terms, for the most part, and the focus was not sharp enough for evaluating purposes.

The National Educational Finance Project developed a revised checklist or Guides for evaluating school finance programs which had a somewhat sharper focus than the original Guides. Following is the checklist of criteria developed for the state school finance program:

Prefatory Statement

A comprehensive state school finance plan must deal with at least three major types of public policy issues:

1. The scope, content, and quality of the public school program
2. The organizational arrangements for providing public schooling
3. The level and method of financing public schools.

For convenience of presentation, criteria for state school finance plans may be grouped under these headings as they are below; however, the interrelated nature of the criteria should not be ignored when they are used in making a state study.

Program Criteria

The state school finance plan should:

1. Provide local school systems a level of support for an educational program commensurate with the relative financial ability of the state
2. Include provisions for innovation and improvement in instructional programs
3. Include provisions for the identification and evaluation of alternative methods of accomplishing educational objectives.
4. Provide a system for local districts to develop program and financial data which permit accountability to the public
5. Substantially equalize educational opportunity throughout the state.

Organizational Criteria

The state school finance plan should financially penalize or at least not financially reward:

6. The establishment or continuation of small inefficient school districts
7. The establishment or continuation of small inefficient enrollment centers, except in cases resulting from geographical isolation
8. The continuation or establishment of school districts that segregate pockets of wealth or leave pockets of poverty in the state or result in the segregation of pupils by race or socioeconomic class
9. The continuation or establishment of school enrollment centers that result in the segregation of pupils by race, religion, or socioeconomic class.

Finance Criteria

The state school finance plan should:

10. Include all current expenditures as well as capital outlay and debt service to facilitate equitable budgetary planning for all phases of each district's educational program
11. Recognize variation in per-pupil program costs for local school districts associated with specialized educational activities needed by some but not all students, such as vocational education, education of exceptional or handicapped pupils, and compensatory education
12. Recognize differences in per-pupil local district costs associated with factors such as sparsity and density of population, e.g., pupil transportation, extra costs of isolated schools, variations in cost of living
13. Be funded through an integrated package which facilitates equitable budgetary planning by the local school district
14. Utilize objective measures in allocating state school funds to local school districts
15. Be based on a productive, diversified, and equitable tax system
16. Integrate federal funds with state funds and allocate them to local districts in conformance with the criteria herein set forth to the extent permitted by federal laws and regulations.[4]

It is readily recognized that the application of these criteria requires a comprehensive survey of a state's provisions for school financing.

The NEFP Method of Measuring the Equalization of Financial Resources

The research staff of NEFP needed an objective instrument to measure the relative extent to which the financial resources for schools were equalized in each state, and also to enable a state to evaluate proposals for changing its finance program and to measure its progress from year to year in the equalization of financial resources. The need for this type of instrument has become more urgent as a result of recent court decisions concerning the equalization of financial resources.

A suitable instrument was not available; therefore, NEFP developed its own instrument. This development involved the preparation of a new typology for classifying school funds which could be used to produce an index of financial equalization in each state. Following is a description of the technique developed by NEFP.

The NEFP Typology

The major purposes for developing the NEFP Typology for classifying school funds and measuring the extent of financial equalization were as follows: First, to determine the extent to which financial equalization is achieved in each state; second, to provide a historical benchmark from which future educational finance programs can be evaluated with respect to progress made; and third, to provide a method by which alternative school finance models may be evaluated with respect to financial equalization of educational opportunity.

The basic assumption behind the NEFP Typology is: Financial equalization is most nearly accomplished when (a) the varying educational needs of the student population are taken into consideration in the method of allocation of funds to the expending units, and (b) the variation of the ability among the local school districts to support education is reduced or eliminated through the utilization of state resources.

The NEFP Typology is based on the following assumptions:

1. Local school funds in and of themselves provide no financial equalization unless local variations in taxpaying ability are taken into consideration in the state's apportionment formula.
2. If a given amount of state revenue is apportioned to the districts of a state:
   a. No equalization is obtained if state dollars are required to be matched dollar for dollar from local funds.

b. The first level of equalization is reached when state funds are allocated in the form of uniform flat grants per teacher or per pupil without taking into consideration necessary variations in costs and without taking into consideration variations in local taxpaying ability.

c. The second level of equalization is reached when state funds are allocated in the form of flat grants which take into consideration necessary unit cost variations but which do not take into consideration variations in local taxpaying ability.

d. The third level of equalization is reached when state funds are allocated in the form of uniform flat grants without taking into consideration necessary unit cost variations but which take into consideration variations in local taxpaying ability.

e. The fourth and highest level of equalization is obtained from a given amount of state revenue when it is allocated in such a manner as to take into consideration necessary variations in unit costs and also variations in the taxpaying ability of local school districts.

Briefly, the NEFP Typology classifies local and state funds into five levels of financial equalization, the levels ranging from Level 0 to Level 4.

State Funds

State funds are classified in the following five levels according to their established criteria:

1. *Level 0 of Equalization:* When state funds are allocated in such a manner as to leave districts with the same or greater differences in local financial capacity to support education as they were before receiving state allocations, they are classified in Level 0. Such method of state distribution is a minimum guarantee of funds to certain wealthy districts which are not entitled to receive state funds under strict interpretation of the equalization formula. Also, if districts are not entitled to receive as much under the equalization formula as they received under a minimum guarantee, the difference between what they should have received under the equalization formula and the minimum guarantee amount is classified as Level 0. The remaining amount that the districts are entitled to under the equalization formula is classified as either Level 3 or Level 4 described below, depending on whether educational needs

are taken into consideration. The allocation in dollar for dollar matching grants without regard for differences in taxpaying ability of the districts provides for no equalization and is also classified in the zero level of equalization.

2. *Level 1 of Equalization:* When state funds are allocated on the basis of a flat amount per unweighted pupil, or unadjusted classroom unit basis, or some other method which ignores unit cost variations in meeting the educational needs of the pupils, and a required local share in proportion to the taxpaying ability of the local districts is not deducted before the apportionment is made, the funds are classified in Level 1.
3. *Level 2 of Equalization:* When state funds are allocated on a weighted unit basis or some other method that recognizes unit cost variations in meeting the educational needs of the pupils and a required local district is not deducted before the apportionment is made, the funds are classified in Level 2 of equalization.
4. *Level 3 of Equalization:* State funds are classified in Level 3 when they are allocated on the basis of unweighted pupils or some other method that ignores necessary variations in unit costs, but a required local share in proportion to the taxpaying ability of the local districts is deducted before the apportionment is made.
5. *Level 4 of Equalization:* When state funds are allocated on a weighted pupil basis or some other method that recognizes unit cost variations in meeting the educational needs of the pupils and a required local share in proportion to the taxpaying ability of the local districts is deducted before the apportionment is made, they are classified in Level 4 of equalization.

It will be noted that the NEFP Typology is a continuum ranging from Level 0, which provides for no equalization, to the highest level of equalization which is Level 4.

Local funds can also be classified by the NEFP Typology. The required local share in proportion to the taxpaying ability of the local districts that is deducted from the total cost of the basic program is classified as either Level 3 or Level 4, depending on whether unit cost variations in meeting the educational needs of the pupils are taken into consideration. The remaining local (leeway) revenue raised for the support of education is considered additional local revenue and is classified as Level 0 of equalization.[5]

Developing an Equalization Score

A state advances toward the equalization of the financial resources available for education when it:

1. Increases the percent of school revenue provided from state sources
2. Apportions the state funds available in inverse proportion to the taxpaying ability of local school districts
3. Makes allowance in its apportionment formula for the necessary variations in costs per unit of educational need.

The following paragraphs describe a method of scoring the extent of financial equalization of educational opportunity in a state which includes the three variables listed above. This measure is comparable among the states. It is not intended to measure all of the desirable characteristics of a state support plan, but was devised solely to measure the extent of financial equalization among the districts of a state.

Scoring Unitary Models. Following is the method of scoring a unitary model:

1. A finance model with all school funds provided from local sources would have the minimum equalization score unless the state comprised only one taxing district as is the case of Hawaii. A state comprising only one district would have a maximum equalization score if all funds were provided from local sources or state sources or a combination of state and local sources with budgetary provision made for pupils in different communities with varying needs and conditions requiring varying per-pupil expenditures to provide equivalent educational opportunities. Even in states organized into units large enough to permit reasonable efficiency and economy of scale, districts will usually vary at least from 5 to 1 or 7 to 1 in equalized valuation per pupil. For our first model, let us assume that a state comprising a number of districts varying in wealth, finances its schools entirely from local funds. Such a state has the minimum level of equalization. Let us assign the score of 1 as the equalization value of any funds providing no equalization. Therefore, a finance model which includes no funds equalizing the differences in taxpaying ability among districts would be given an equalization value of 1.
2. Finance model 2 under which all school funds are provided by the state by a formula which allots the same amount per pupil to all districts would eliminate the dif-

ferentials among districts in financial ability. The equalization value of this model should be at least 5 to 7 times the equalization value of model 1.

3. For model 3, let us assume that all funds are provided by the state but that cost differentials owing to sparsity, high cost of disadvantaged or exceptional pupils, vocational education, etc., are provided for in the state formula. Although the cost per pupil for vocational education, exceptional education, compensatory education may be as great as 2 or 3 to 1 and the cost of transportation and the extra expense of low pupil-teacher ratios in sparsely settled areas may be considerable, the necessary variation of the total per-pupil costs among efficiently organized districts probably does not exceed 20 percent for a significant number of districts within a given state. Therefore, if we include necessary variations in school costs in model 3, it would at least be a 20 percent improvement in equalization over model 2.

Scoring Mixed Models. Scoring mixed models is more complex. Most states have complex finance models comprising local funds (some equalized in state programs and some unequalized), flat grants equalized and unequalized, and variable unit grants equalized and unequalized.

Let us assume that local funds become state funds when they become part of the equalization formula; that is, that portion of local funds included in the state guaranteed programs before determining the allocation of state funds to a district, in effect, becomes a state fund used to equalize educational opportunity.

We can score mixed models by utilizing the typology set forth above. Let us assume that as we move toward equalization, all state funds become Level 3 funds and all local funds are charged back in allocating state funds (that is, deducted before allocating state funds). Let us then assign an equalization value of 7 for Level 3 equalization.

As we approach maximum equalization, all state and local funds become Level 4 funds. If all state funds were allocated on a Level 4 formula and all funds charged back, the maximum equalization value for this model would be 8.4 which would be 20 percent more than the maximum value of Level 3 funds.

The following method is developed from these assumptions:

1. Level 0 funds are assigned a score of 1 in order that other levels may be made proportional to it.
2. Level 1 funds have at least 5 times the equalization value of equalization Level 0 funds. As Level 1 funds approach

100 percent of total state and local funds, the equalization value of Level 1 funds approaches the value of Level 3 funds. Therefore, the equalization value of Level 1 funds should be computed as follows: 5 + (.02 X the percent of total state and local funds in Level 1 X 100).

3. Level 2 funds have at least 20 percent more equalization value than Level 1 funds. However, as Level 2 funds approach 100 percent of state and local funds, the equalization value of Level 2 funds approaches the value of Level 4 funds which have the maximum equalization value. Therefore, the equalization value of Level 2 funds should be computed as follows: 6 + (.024 X the percent of total state and local funds in Level 2 X 100).
4. As indicated above, Level 3 funds are assigned an equalization value of 7.
5. Level 4 funds are assigned the maximum equalization value of 8.4 which is 20 percent higher than Level 3 funds.

This method of scoring assigns higher equalization values as a state moves from the Level 0 of equalization through Levels 1, 2, 3, and 4, making proportionate allowances as a state moves toward greater equalization by using both state and local funds to eliminate the disadvantages of inequalities of wealth among districts, by making financial provision for necessary variations in unit costs, and by increasing the percent of school revenue provided from state sources.

This equalization score should not be considered a total evaluation of the financial program of a state, for it does not take into consideration such important factors as financial adequacy of the program, incentives to stimulate local initiative, quality of education, educational outputs, and other important matters. The equalization score should be interpreted only as measuring the extent that state and local funds are being used to equalize the financial resources available for education in a state.

Table 1 shows the equalization score of each of the 50 states for the year 1968-69. The highest possible score is 8.4 and the lowest possible score is 1.0. It will be noted from this table that equalization scores range from 2.295 in Connecticut to 8.40 in Hawaii.

The Pearson Product-Moment Correlation yielded a coefficient of +.646, which is significant at the .01 level, between the percentage of school funds provided by the state and the equalization score obtained by applying the NEFP Typology. This supports the opinion of many authorities in school finance that when a state assumes the primary responsibility for funding its school

support program, greater financial equalization is usually achieved. However, if all state funds were apportioned on the Level 4 basis, the correlation between the percentage of school funds provided by the state and the equalization score obtained from the NEFP Typology would be higher.

Also, when the Pearson Product-Moment Correlation was applied to each state's equalization score and total number of school support grants, a coefficient of −.294 was found which is significant at the .05 level. Although this coefficient was not extremely high, it does give added support to those who contend that a proliferation of categorical grants usually detracts from financial equalization.

The Pearson Product-Moment Correlation between the number of districts in a state and the equalization score was −.312 significant at the .05 level. This may indicate that the existence of a large number of districts in a state is a political factor retarding the development of financial equalization.

Conclusions. One of the most important conclusions that can be derived from the analysis of the financial sources available for education presented in this paper is that the extent to which financial resources for education are equalized does not depend as much on the type of plan used as on the content of the plan and the extent to which it is financed. For example:

1. If the variable unit cost type of flat grant is used to provide 100 percent of the financing in the state, including federal funds, the variable flat grant plan becomes the Hawaii plan which theoretically provides complete equalization of financial resources.
2. If any type of equalization plan absorbs all of the local taxing leeway, and educational need is measured on a variable unit cost basis, all of the equalization plans become equivalent to the Hawaii plan of complete state support because local funds are, in effect, converted into state funds.
3. As complete state funding is approached, differences in the equalizing properties of flat grant models and equalization models begin to disappear.

However, if a state finances its schools from a combination of state and local funds, it will achieve greater financial equalization from a *given amount of state revenue* if it utilizes the equalization plan of state financing and maximizes the required local effort within the legal tax limit of school districts which is included as a part of the total program equalized.[6]

The details for classifying school funds according to the NEFP Typology are presented in Chapter 9 of Volume 5 of the National Educational Finance Project entitled *Alternative Programs for Financing Education.* The detailed instructions for classifying school funds should be followed carefully if an accurate equalization score for a state is obtained.

Other Objective Methods Used for Evaluating a State School Finance Program

Other objective methods have been used for evaluating the equalization of financial resources among the school districts of a state. They range in technology from very crude to fairly sophisticated. The judges in four court decisions: *Serrano v. Priest* in California, *Van Dusartz v. Hatfield* in Minnesota, *Rodriguez v. San Antonio Independent School District* in Texas and *Robinson v. Cahill* in New Jersey used relatively crude objective measures in evaluating state provisions with respect to whether the school financing plans violated the equal protection clause of the Fourteenth Amendment to the federal Constitution. The measures used were assessed valuation of property per pupil and expenditures per pupil. Even such crude measures revealed to the judges in those states that variations in expenditures per pupil were caused largely by variations in local wealth per pupil. The judges in all four cases ruled that the state finance plans in all four states violated the equal protection clause of the Fourteenth Amendment because the quality of a child's education was a function of the wealth per pupil of the district rather than of the state as a whole. In the future the courts may require more refined measures of the extent of the financial equalization of educational opportunity in a state. One of these measures, an equalization score based on the NEFP Typology, has already been presented in this paper. I shall now discuss some other measures of financial equalization.

Improved Measure of Wealth and Expenditures

Local officials assess property at widely varying percentages of market value in most states. Therefore, an accurate measure of the relative wealth of local school districts cannot be obtained by dividing the local assessed valuation by the number of pupils in a district. Only equalized valuations should be used for this purpose. By equalized valuations, I mean the valuation of property determined by the same percentage of market value in all districts in a state. It is better for statistical purposes to determine equalized valuation at 100 percent of market value in order that wealth and local tax effort in relation to ability be made comparable among

districts of different states. Unless local boards of education have the authority to levy local nonproperty taxes, equalized valuation is the only valid measure of local ability to support education. The equalized local tax effort of a district can readily be obtained by dividing its local tax revenue receipts by its equalized valuation.

The measure of the relative wealth of school districts can be further improved by dividing the equalized valuation of a district by its weighted pupils or instruction units adjusted for necessary unit cost variation. Some districts have much higher percentages of high-cost pupils than other districts. Examples of high-cost pupils are vocational, exceptional, culturally disadvantaged, and senior high-school pupils and pupils in sparsely settled areas. Studies made by the National Educational Finance Project of a prototype state showed that when pupils were weighted properly for necessary cost variation, the number of weighted pupils ranged from 125 percent of unweighted pupils in some districts to more than 165 percent of unweighted pupils in other districts.

It is beyond the scope of this paper to describe the methods used in weighting pupils or instruction units to make provision for necessary variation in unit costs. Those methods are described in Volume 3 of the National Educational Finance Project entitled *Planning To Finance Education* and Chapter 10 of Volume 3 of NEFP entitled *Alternative Programs for Financing Education.* See ERRATUM P. 1

When the equalized valuation of a school district is divided by its weighted pupils or its instruction units adjusted for cost variation, a much more nearly accurate measure of local ability to support education is developed because "equalized wealth" is divided by equalized educational burden. This measure can be used as one device to evaluate the equity of district organization in a state. Usually the greater the number of local districts in a state, the greater the variations in wealth per weighted pupil or per pupil.

The development of comparable measures of the expenditures of the districts of a state is more complicated. Only current expenditures should be used for this purpose because capital outlay and debt service expenditures are usually not proportionate among the districts of a state. Expenditures for transportation should also be deducted from current expenditures because transportation costs vary widely among the districts of a state. An improved measure of comparable expenditures of the districts of a state can be obtained by dividing the current expenditures of a district less expenditures for transportation, by its weighted pupils or its computed instruction units adjusted for necessary cost differentials. This measure might be further refined if the unit cost so obtained could be further adjusted for differences in the cost of living among the

districts of a state. However, accurate methods for determining real differences in cost of living among the districts of a state have not yet been developed.

Variations among the districts of a state in comparable unit costs can be measured in terms of total range, range between the

TABLE 1.—RANKING AND EQUALIZATION SCORES OF THE STATES BASED ON THE NEFP TYPOLOGY FOR THE SCHOOL YEAR, 1968-69

Rank	State	Score	Rank	State	Score
1	2	3	1	2	3
1	Hawaii	8.400	26	South Carolina	5.235
2	Utah	7.143	27	Maryland	5.092
3	Rhode Island	6.862	28	Virginia	5.085
4	Alaska	6.628	29	Texas	4.963
5	Wyoming	6.543	30	California	4.841
6	Washington	6.368	31	Montana	4.810
7	Idaho	6.318	32	Maine	4.804
8	Alabama	6.220	33	Massachusetts	4.536
9	Delaware	6.202	34	Oregon	4.535
10	North Carolina	6.148	35	Tennessee	4.521
11	Georgia	6.103	36	Minnesota	4.433
12	Kentucky	6.042	37	Arizona	4.355
13	Florida	5.995	38	Iowa	4.042
14	New York	5.957	39	North Dakota	3.931
15	Louisiana	5.929	40	Missouri	3.852
16	Nevada	5.917	41	Michigan	3.844
17	New Mexico	5.915	42	Kansas	3.820
18	Ohio	5.882	43	New Jersey	3.754
19	Pennsylvania	5.870	44	Indiana	3.704
20	Vermont	5.834	45	Oklahoma	3.691
21	Wisconsin	5.781	46	Arkansas	3.647
22	Mississippi	5.744	47	Colorado	3.571
23	West Virginia	5.578	48	South Dakota	3.420
24	Illinois	5.398	49	New Hampshire	3.091
25	Nebraska	5.378	50	Connecticut	2.295

ninetieth percentile and tenth percentile, range between the highest and lowest quartiles, standard deviation from the mean, and other measures of dispersion as may be deemed appropriate.

These improved measures of variations in wealth and expenditures are far more accurate measures of whether a state's finance plan is in violation of the equal protection clause of the Fourteenth Amendment than the measures now being used by the courts.

An Alternative Measure of Equalization: Percent Deviation from Full Equalization

An objective measure of the average percent deviation of a state's finance plan from full equalization can be obtained by the following method:

1. From the total state and local tax revenues of all the school districts of a state, deduct expenditures for transportation.
2. Divide item 1 by the total number of weighted pupils (or adjusted instruction units) in the state.
3. Multiply item 2 by the total number of weighted pupils (or adjusted instruction units) in each district in the state.
4. From the state and local tax revenue receipts of each district in the state, deduct its expenditures for transportation.
5. Deduct item 3 from item 4 and divide by item 3. The quotient is the percent deviation of each district in the state from full equalization.[7]
6. The average deviation of the districts of a state from full equalization can be obtained by summing item 5, and ignoring signs and dividing by the number of districts in a state.

An advantage of this measure is that it can readily be programmed into a computerized model for testing alternative plans of state support that are under consideration by the legislature. The results obtained by this measure correlate very highly with the results obtained from the NEFP Typology already described in this paper.

Graphical Methods

Graphical methods can readily be used to analyze the impact of a state school finance plan on the districts of a state.[8] Following are instructions for making such an analysis.

The Basic State Program–

1. Determine the equalized value of property per pupil in

average daily attendance (or average daily membership) in each district in the state that is operating both elementary and secondary schools. If weighted pupil data are available, it is preferable to use a weighted pupil measure.

2. Arrange these districts in order, based on the *equalized value* of property per pupil, placing the highest at the top of the list and the lowest at the bottom.
3. Select 15 or 20 of these districts for the study beginning with the most wealthy, using for example, every third, fifth, or tenth district in decreasing order of wealth, and ending with the least wealthy (but include one or two of the largest city districts).
4. Calculate for each of these districts the amount of revenue available per pupil from (a) the uniform local required tax effort applied to all districts (even though such effort may not actually be required in some of the most wealthy districts), (b) any state flat grant and foundation or equalization program funds provided for current expense in the district, and (c) the total.
5. Develop a composite bar graph for each district, with the white portion, for example, to represent the funds available per pupil from the uniform local required effort, and a cross-hatched portion to represent the state funds available per pupil from flat grants and foundation or equalization program purposes. The districts and the bars for the chart, as in the table, should be arranged in order from the most wealthy to the least wealthy district.

This table will provide the basis for determining, and the chart will illustrate dramatically, the impact of the basic state provisions for financial support of schools. Some of the major implications then can readily be determined. In many states, it will be evident that *the laws and basic financial provisions,* probably unconstitutionally, *guarantee inequities for taxpayers and tend to promote* perhaps even to ensure, *inequalities in opportunities for pupils.*

Similar tables and charts can, likewise, be developed to determine and illustrate the impact of any important changes in the financial provisions that are *proposed for consideration.*

Additional Revenues Available for Support of Schools. This *basic* analysis does not include the amount available to each of these districts from: (a) state special purpose funds, (b) additional taxes voluntarily levied in the district to support the current school program, or (c) federal funds for current programs. As a next step, the amount per pupil available to each of these districts from each of these sources and the total should be given in new

columns added to the table, and each bar in the chart should be extended appropriately by using, for example, (a) horizontal lines for the portion showing the amount from categorical grants, (b) heavy dots for the portion showing the amount from voluntary local effort, and (c) vertical lines for the portion showing the amount from federal funds.

This additional information will provide the basis for further analyses that make it possible to determine the impact of funds in each district from each of these sources and from all sources combined.[9]

Evaluation of Tax Structures[10]

The determination of the relative desirability of alternative tax sources is an extremely complicated matter. Several criteria have come to be generally accepted by economists for use in evaluating tax structures.

Generally Accepted Criteria for Evaluation of Taxes

Following are the criteria listed by Due[11] which are commonly used for evaluating tax structures:

1. *Economic Distortions*—A major criterion is the establishment of tax structures in such a fashion as to minimize distorting effects upon the functioning of the economy, that is, effects that cause people to alter economic behavior in a fashion contrary to the objectives of the society.
2. *Equity*—The rule that governmental costs be distributed in a fashion regarded by contemporary society as equitable is generally accepted. What constitutes equity, however, is strictly a value judgment and there are wide differences of opinion. Usually equity is considered to require:
   a. Equal treatment of equals. People regarded as being in the same relevant circumstances should be taxed the same amount.
   b. Distribution of the over-all tax burden on the basis of ability to pay, as measured by income, by wealth, or by consumption.
   c. Exclusion from tax of people in the lowest income groups, on the grounds that they have no taxpaying capacity.
   d. A progressive over-all distribution of tax relative to income, on the basis that tax capacity rises more rapidly than income. This requirement is less generally accepted than the others. There is general agreement

that the structure should be at least proportional to income.

3. *Compliance and Administration*—Attainment of the objectives of society requires that taxes be collectible to a high degree of effectiveness with minimum real costs (money and nuisance) to the taxpayers and reasonable cost to the government for collection. Inability to enforce a tax effectively at tolerable costs will cause loss of both revenue and equity.
4. *Revenue Elasticity*—Governmental expenditures tend to rise at least in proportion to national income even if programs are not increased. If tax revenues do not keep pace at given tax rates, constant rate changes are required.

It is impossible to develop an instrument which would measure objectively the relative standing of the states on each of these criteria. However, it is possible to measure, at least with some degree of objectivity, the extent to which a particular tax is regressive or progressive with respect to income.

Measuring the Extent to Which Tax Structures Are Progressive or Regressive

Economists, as pointed out above, generally use rather comprehensive criteria to evaluate tax structures. However, the lay public generally considers a progressive tax to be a bad tax. This is especially true of taxpayers with average or less than average income. Since taxes are levied by political processes, the political acceptability of a tax is of great importance to those involved in obtaining tax revenues for a particular function of government, such as education. If a tax being used to finance a particular function of government is considered by the electorate as an excessively regressive tax, the electorate is likely to underfinance that governmental service, not because the electorate does not value that service but because the voters object to the type of tax being used to finance it. This is particularly true of the public schools. Although the property tax is generally considered to be the most regressive of any of the major types of taxes, in 1970 more than half of all public school tax revenue was still obtained from property taxes. Experts on school finance are generally agreed that many of the difficulties of financing the public schools can be traced to excessive reliance upon the property tax as the chief source of school revenue.[12]

Since the electorate is so greatly concerned about the regressiveness of taxes being used to support schools, the National Educational Finance Project developed a method by which the relative

see ERRATUM, p. i

progressivity or regressivity of the tax structure of the federal, state, and local governments can be measured. Space does not permit the description of that methodology in this paper. However, it is described in detail in Chapter 9 of Volume 5 of the National Educational Finance Project entitled *Alternative Programs for Financing Education.*

In its analysis of tax structure, the National Educational Finance Project found that graduated personal income taxes were the most progressive, followed in order by corporate income taxes, sales and excise taxes, and property taxes. It was also found that federal taxes were the most progressive, followed in order by state taxes, and local taxes. Therefore, increasing the percentage of school revenue provided by the federal government and the state governments increases the progressivity of school tax revenue. The states vary considerably in the progressivity of their tax structures. The states that derive high percentages of their revenue from state personal and corporate income taxes have more progressive state tax structures than states that derive little or no revenue from these sources. Increasing the percentage of school revenue derived from local property taxes increases the regressivity of the tax revenues for schools, and it also increases inequalities in educational opportunity in a state. *Therefore, increasing the percentage of school revenue derived from state and federal sources not only tends to equalize educational opportunities, but it also improves the equity of the taxing system used to support schools.*

Conclusions

It should be apparent from the analyses presented in this paper that the evaluation of school finance plans is an extremely complicated matter. Each measure and each criterion presented reveals some additional evidence which should be considered. If recent court decisions are upheld by the Supreme Court of the United States, all school finance plans will be full state funding plans, or fully equalized state-local funding, or nearly fully equalized financially. This will require that we develop far more equitable measures of educational needs and cost differentials than are now available. The following issues will undoubtedly become of paramount interest:

1. Will we equalize: (a) upward, (b) downward, or (c) in both directions?
2. Will centralized financing result in centralized control?
3. What provisions or incentives will be provided for educational innovations and changes?

It is beyond the scope of this paper to discuss these issues.

FOOTNOTES

[1] Adapted largely from *Alternative Programs for Financing Education,* Volume 5 of National Educational Finance Project. Roe L. Johns, Director, Kern Alexander, Associate Director, 1212 S.W. 5th Avenue, Gainesville, Fla.

[2] Fuller, Edgar, and Pearson, Jim B. editors. *Education in the States: Nationwide Development Since 1900.* Washington, D.C.: National Education Association, 1969. p. 200.

[3] *Ibid.*, p. 201.

[4] *Alternative Programs for Financing Education,* Volume 5 of National Educational Finance Project, Roe L. Johns, Director, Kern Alexander, Associate Director, 1212 S.W. 5th Avenue, Gainesville, Fla.

[5] *Ibid.*, p. 237-240.

[6] *Ibid.*, p. 246-251.

[7] This method was used in Chapter 10 of Volume 5, *Alternative Programs for Financing Education,* of National Educational Finance Project. Roe L. Johns, Director, Kern Alexander, Associate Director, 1212 S.W. 5th Avenue, Gainesville, Fla.

[8] Graphical methods were used by the National Educational Finance Project to analyze finance programs in Volume 4, *Status and Impact of Educational Finance Programs* and Volume 5, *Alternative Programs for Financing Education.*

[9] See: Johns, Roe L. and Morphet, Edgar L. *Planning School Finance Programs.* Gainesville, Fla. National Educational Finance Project, 1972. Also Volume 4 of the National Educational Finance Project entitled *Status and Impact of Educational Finance Programs.*

[10] This section is adapted from: Johns, Roe L. and Morphet, Edgar L. *Planning School Finance Programs.* Gainesville, Fla.: National Educational Finance Project, 1972.

[11] See: *Alternative Programs for Financing Education,* Volume 5 of the National Educational Finance Project. Gainesville, Fla. 1971. p. 252.

[12] *Ibid.*, p. 253.

Revising School Finance in New York State*

Joel S. Berke, Alan K. Campbell,
and *Robert J. Goettel*

REVISING THE SYSTEM of educational finance in a varied, industrialized, and populous state like New York is an immensely complicated undertaking. It requires a careful analysis of the interrelated defects in the quality, cost, and financing of education as they currently exist and development of a new system that will resolve the problems endemic to the old. This global task was the charge of the New York State Commission on the Quality, Cost and Financing of Elementary and Secondary Education (the Fleischmann Commission). To assist with that effort, the Commission contracted for a wide range of studies to research organizations, universities, and individuals throughout the country as well as in New York State. This paper summarizes three of those studies conducted by the Policy Institute of the Syracuse University Research Corporation that have direct relevance to the development of major reforms in the financing of public education.

The first Policy Institute study dealt with the system of school finance that determines how resources are raised and then distributed to individual school districts in New York State. The Commission asked for an exploration, through simulation techniques, of the effects of a number of modifications in the existing aid formula as well as the implications of regional and full state assumption models. Of particular importance was the Commission's interest in the development of measures of educational need that could be incorporated in the basic formula.

The second study we conducted for the Commission was addressed to the equitable distribution of educational services within school districts. Categorizing schools according to their level of educational need measured in terms of third-grade reading tests, we analyzed the distribution of resources for the regular instruc-

*A summary of three studies conducted for the New York State Commission on the Quality, Cost and Financing of Elementary and Secondary Education. The complete report will appear in *Financing Equal Educational Opportunity: Revising State Finance*, McCutchan Publishing Co., Berkeley, California.

tional program to individual schools by source of funding: local and general state, categorical state, and ESEA, Title I, and other federal funds. The information obtained from this analysis provided a framework for making judgments about the necessity for placing the state's resources for education on individual schools rather than school districts.

The third study focused specifically on the development of educational needs measures. We were asked to determine the extent to which a composite measure of socioeconomic status could predict the need for additional school services as measured by third-grade reading and mathematics tests. This was a critical element within the larger question considered by us, as well as other consultants to the Commission and Commission staff, concerning the selection of a needs index based on socioeconomic status—poverty—versus one based on readiness or cognitive achievement as measured at as low a grade level as possible.

Science, social or otherwise, cannot resolve the normative questions that underlie political decisions that must be made by governmental organizations such as the Fleischmann Commission. What it can do, however, is illuminate the problems that exist, develop a series of alternative solutions, discuss their advantages and disadvantages, and where appropriate, test them through simulation techniques to show what impact they are likely to have. This was our approach in assisting the Commission in its deliberations concerning recommendations that had to be made to the governor and the Board of Regents. But perhaps equally important, our project, particularly that portion dealing directly with the operational effects and reform possibilities inherent in the present system of school finance, provides a body of background information useful in the discussions that are certain to be generated among legislators, citizens, and interest groups in New York State while the Fleischmann Commission's recommendations are being considered and legislation to implement reforms in school finance are being formulated.

Within our scientific and impartial approach to answering the questions presented to us by the Commission, there was one broad area in which our values have been interjected. One of the underlying assumptions of this study was that greater educational resources should be focused on pupils who have greater educational needs. Foremost among such pupils are those who perform significantly below grade level or who begin schooling with substantial enviromental disadvantages. As yet the evidence from rigorous experimentation and aggregate analysis is mixed regarding the degree to which additional resources result in improved pupil achievement. While there are probably as many studies[1] which have not

established a positive relationship as there are those which have, we believe, with Jesse Burkhead, that the jury is still out:

> An incremental reduction in class size variation from 32 to 30 does not produce measurably significant gains in output, even as an increase in materials per pupil from $7.00 to $9.00 will produce no measurably significant gains in output. But these findings tell us nothing about outcomes over a larger range of variation. A reduction in class size from 30 to 10 may produce extremely significant gains. We will never know until we try.

Thus, much of our effort has been directed to the development of an equitable system of school finance that places more resources in schools and school districts in which educational needs are more pervasive.

The details of the three studies in this project are reported elsewhere; only the major research questions and findings in each study are reported here.

Study No. 1: Developing Alternatives for Revising School Finance

Our examination of New York's system of school finance and development of a range of alternatives began with an analysis of the problems that plague the current system of shared state-local responsibility for supporting education. Then, for each of the criticisms we raised we provide a new aid formula provision. Some of these are rather modest in the change they require in the current formula, such as counting pupils by enrollment rather than by weighted average daily attendance (WADA). Others are more extensive, such as weighting underachieving pupils twice as a means of focusing more funds in districts with more severe educational problems.

As a more extensive revision in the current system, we considered a regional approach to school finance, and tested a number of alternatives at the regional level. For example, the use of income measures of fiscal capacity and of adjustments for cost differentials were tried at the regional level.

As with a number of the formulas simulated at the school district level, these exercises have relevance to full state assumption models of state school finance. The educational need measures and the regional cost differentials, of course, would be possible components of resource allocation under state assumption. Finally, however, we turned our analysis directly to the question of state assumption and discussed some of the current fiscal and educational arguments.

School Finance in New York State: History, Theory, and Experience

New York State has a system of school finance characterized by local districts with revenue raising responsibility through real property taxation and a formula for general state aid based on a percentage equalizing grant. That type of aid formula is one of those most favored in theory by traditional reformers. In recent years, however, it has become increasingly clear that the New York version is not serving the educational needs of the state. Expenditure disparities of more than two to one are evident within individual counties,[2] and systematic discrimination in state aid against the areas with the greatest concentrations of disadvantaged pupils and the highest total local tax rates is apparent. How does a widely recommended and nominally equalizing formula produce such dysfunctional and inequitable results? In analyzing that basic paradox we raised the questions and reached the conclusions that follow.

Are there structural limitations within the formula or related state laws that inhibit the equalizing tendencies of the aid formula? At least three such inhibitions are apparent. First, the provision that all districts will receive a minimum flat grant regardless of the formula's provisions insures that some wealthy districts will receive aid to which the equalizing formula itself does not entitle them. Second, the save-harmless provision further inhibits the functioning of downward equalization. At the other end of the scale, the 90 percent ceiling on the aid ratio prevents some exceedingly needy districts from receiving assistance to the extent that the basic formula would provide.

Are the measures of educational need adequate to focus funds in areas with the most costly pupils? The formula has several provisions which fail to match resources with educational need. The pupil count based on attendance means that districts with dropout and low attendance problems associated with educationally disadvantaged pupils receive less state aid than districts with more stable, educationally cooperative, and thus more easily taught pupils. Secondary-school pupils are given greater weight in awarding aid, a practice which may reflect current expenditure patterns but which runs counter to much research which suggests that the early years may be the most efficient time for high resource investments in educational services. Most important of all, no provision exists for providing a higher level of services to pupils more in need of educational services to help them reach normal performance levels.

Is the financial ability of school districts accurately represented in the formula? The inability to take anything but property

valuation, e.g., income levels, into consideration in apportioning aid means that an unrealistic measure of the ability of districts to raise educational funds from their own resources is being applied. The unwillingness to consider total capacity, implicit in a per-pupil rather than a per-capita measure, further isolates education from the general fiscal picture of any given community. The failure to take tax effort into account for any purpose except for education also leads to unrealistic estimates of fiscal ability.

Are differences in cost in different areas of the state given consideration? There are no adjustments for the higher costs in different geographic regions or in central cities as opposed to suburban or rural school districts.

Is the state share of educational finance adequate? In light of the regressive and unequal operation of the property tax, strong arguments can be made that a greater than 49 percent share of finance ought to be borne by the state. The effect of raising the state share is, of course, to shift the burden of support for education to a broader base and, in the case of the income tax, to far more progressive taxes than those on property.

Given the nature of New York's school finance system, what is the relationship between district wealth and taxes, and per-pupil expenditures? Table 1 shows that state aid is distributed inversely to wealth, but wealthier districts still spend more to educate each pupil for comparable or lower school tax rates. The poorest districts would have to almost triple their tax rates to increase their expenditures to the level of the wealthiest districts. In short, as local property taxes for education increase, the rich get richer and the poor get comparatively poorer.

How do city districts compare with districts not in cities? Table 2 shows that cities consistently have lower school tax rates, but higher total school and municipal tax rates when compared within the same wealth groups. Cities receive less state aid and have lower expenditures than non-cities, including federal aid. Cities have up to double the number of low-achieving pupils and three to six times the proportion of AFDC pupils of non-city districts.

Simulation of Formula Modifications on a Sample of 119 School Districts

Following the analysis of the shortcomings in the current state aid system, we proceeded to test the effects of a series of modifications that can be made in that formula through computer simulations to demonstrate the precise dollar differences they make for illustrative groups of school districts. For that purpose we used a sample of 119 of the approximately 750 school districts in New

TABLE 1.—SELECTED DATA FOR 119 NEW YORK STATE SCHOOL DISTRICTS RANK ORDERED IN GROUPS BY DISTRICT WEALTH, 1967-68

Full value of property per WADA	Average full value of taxable property per WADA	School property tax rate	School and municipal total tax rate[a]	Additional taxes to raise to top expenditures per WADA	Total state education aid per WADA	Approved operating expenditure aid per WADA	Local, state and federal expenditures per WADA[b]	Percent of low-achieving pupils	Percent of pupils from families receiving AFDC payments
1	2	3	4	5	6	7	8	9	10
48,000 and above ..... N=9	$58,919	$16.23	$33.91	...	$319	$1,036	$1,306	19.6	6.7
47,999 - 36,000 ..... N=12	41,404	18.43	38.34	$3.04 (1.82)[c]	374	887	1,184	20.5	8.8
35,999 - 24,000 ..... N=37	28,393	19.22	35.69	8.65 (4.14)[c]	485	865	1,098	18.3	4.9
23,999 - 12,000 ..... N=56	17,971	18.24	36.60	17.54 (5.26)[c]	621	778	995	18.1	4.3
11,999 and below ..... N=5	9,928	14.96	39.37	29.22 (4.96)[c]	739	712	1,014	18.4	3.0

[a]Includes all local taxes and assessments.
[b]Percent below 24th percentile on state-wide reading test.
[c]Additional taxes required to raise expenditure level of wealthiest group of districts assuming a true percentage equalizing formula with no aid ceiling.

TABLE 2.—SELECTED DATA FOR 119 NEW YORK STATE SCHOOL DISTRICTS, CITY AND NON-CITY, WITHIN COHORT WEALTH GROUPS, 1967-68

Full taxable property value per WADA (city—non-city)	School property tax rate	School and municipal total tax rate[a]	Total state education aid per WADA	Approved operating expenditures per WADA	Local, state and federal expenditures per WADA	Percent of low-achieving pupils[b]	Percent of pupils from families receiving AFDC payments
1	2	3	4	5	6	7	8
$48,000 and above							
City - N=1	$11.84	$37.15	$351	$ 785	$1,187	34.0%	15.0%
Non-city - N=8	16.78	34.18	315	1,067	1,321	17.8	5.6
$47,999 - 36,000							
City - N=4	16.23	45.57	356	859	1,146	31.5	17.3
Non-city - N=8	19.53	34.73	383	901	1,203	15.0	4.5
$35,999 - 24,000							
City - N=9	16.43	37.80	463	795	1,011	27.8	12.7
Non-city - N=28	20.12	35.02	493	887	1,127	15.2	2.4
$23,999 - 12,000							
City - N=8	15.79	40.93	567	768	964	22.0	8.3
Non-city - N=48	18.64	35.88	630	780	1,000	17.5	3.7
$11,999 and below							
City - N=0	...	...	...	...	...	...	...
Non-city - N=5	14.96	39.37	739	7.12	1,014	18.4	3.0

[a]Includes all local taxes and assessments.
[b]Percent below 24th percentile on state-wide reading test.

SHORTCOMINGS OF NEW YORK STATE'S AID FORMULA

	Corrected by formula change at school district level	Corrected by formula change at regional level
I. Structural limitations to the basic equalizing tendencies of the formula		
Flat grant	X	X
Save-harmless	X	X
90 percent aid ratio ceiling	X	X
II. Inadequate measures of educational aid		
Pupil count is based on attendance rather than enrollment	X	
Secondary pupils are weighted more even though need may be greater at elementary level	X	
No consideration is systematically given to differential educational needs among schools or school districts (handicapped, vocational education, compensatory)	X	
III. Failure to integrate educational and municipal (noneducational) finances		
Property valuation is only capacity measure. No consideration given to income		X
To determine a district's capacity, property valuation is measured in terms of pupils to be educated rather than in population terms		X
Tax effort does not consider taxes for other municipal services, but only education; it also does not consider effort above the aid ceiling	X	X
IV. Lack of consideration of cost differentials among areas of the state	X	X
V. Too geat a reliance on the local property tax		
State share is too low to shift sufficient burden to income tax	X	

York State. That sample included approximately 60 percent of the enrollment and property valuation, 87 percent of low-achieving pupils and 90 percent of AFDC pupils.

With the exception of those formula modifications in which the foundation level (aid ceiling) or the state share was increased, the effects of each modification were examined in terms of (a) the extent to which dollars in aid were redistributed among districts, and (b) the types of districts that gained or lost aid. In short, we simply re-sliced the same sized pie and then looked to see who got larger pieces and who got smaller.

In summary form, the questions and conclusions for this task are as follows:

What is the effect of removing the impediments to more effective equalization in New York's formula? Removal of the flat grant, New York City borough aid, and the distribution of that aid throughout the state results in substantial reductions in aid to New York City, to two of the other big six cities, and to a number of wealthy suburbs. Aid to New York City drops from $289 to $222. Some former flat-grant districts receive no aid at all, and others, including Albany, Yonkers, and Rochester, lose only a few dollars.

What is the impact of counting pupils in terms other than weighted average daily attendance (WADA)? When enrollment or weighted enrollment are used as pupil counts, aid to those districts with lower attendance ratios, including most medium and large cities, is increased. New York City receives approximately $30 per pupil more than under a pure formula (no flat grant or borough aid), but still not equal to aid received under the current formula. Differences between the amount of aid distributed by enrollment and weighted enrollment are marginal in terms of number of districts affected as well as dollars received.

What are the redistributive effects of using measures of educational need in the basic formula? When differential levels of educational needs are considered, substantial redistribution occurs. A need measure reflecting poverty (the number of children from homes receiving AFDC benefits) brings about large gains to city school districts. New York City gains $50 to $80 per pupil, Buffalo approximately $80, and Syracuse approximately $100. If differentials in need are measured by the proportion of pupils below minimum competence on achievement scores, more extensive redistribution occurs, in terms of both the number of districts and the amounts involved. New York City gets $15 to $20 more per pupil than on a poverty measure. More suburban and rural districts benefit from the achievement measure to the extent that the number of gainers closely approximates the number of losers.

A formula combining enrollment and the achievement need measure is the most redistributive in dollars.

What happens when funds for categorical programs are distributed through basic aid formula? If the aid previously made available on a categorical basis, e.g., size correction aid, is included in the total amount of state funds to be distributed by the general formula, those gaining from the new formulas described above continue to gain, and those districts losing under the new approaches continue to lose.

What are the effects of adjusting for differences in total tax effort and costs? Adjusting aid payments to allow for differences in total school and municipal tax effort attacks the problems of supporting general governmental activities from the same tax base as education. Adjusting aid for cost differentials allows for higher costs of operations in some areas of the state. Districts in the New York City area gain state aid by a cost adjustment. When aid is adjusted for effort, New York City is the major beneficiary, while most other districts lose. This occurs because total taxes for New York City are substantially greater than the state average. Most Long Island districts gain from a cost adjustment, but have aid reduced when effort is used.

Which benefits when the aid ceiling is raised? When the aid ceiling is raised by $100, districts with low fiscal capacity and high expenditures benefit most.

Which districts gain when the state share of educational expenditures is increased? When the state share of approved operating expenditures is increased (from 49 to 70 or 80 percent), fiscal capacity becomes less important and the manner in which pupils are counted becomes more important. Thus, given two districts with the same pupil population characteristics, the high fiscal capacity district gains more. But when two districts have comparable fiscal capacity, the one with the greater proportion of educationally disadvantaged pupils receives more state aid.

What is the effect on tax rates of redistribution in state aid? In general, changes are small, even where more aid is received. Typical gainers have their taxes reduced by approximately $2 to $3 per $1,000 of assessed valuation, while those receiving less aid must increase taxes by approximately $1 to $2.

Regionalism in School Finance: The Concept, the Practice, the Analysis

We next examined the concept of regionalism in school finance in a discussion of its historical development and its current utilization by other states. A greater emphasis in regional organization should be considered as an important and viable aspect of the

state's role in education. As a means of eliminating fiscal disparities among districts, of providing specialized educational services such as training for vocational and handicapped children, of promoting racial integration, and of improving broad-based planning and evaluation functions in education, regionalism offers very real advantages. Even in the context of a system of full state assumption of the costs of education, a regional approach may provide a useful intermediary mechanism for the effective distribution and administration of state resources. For these reasons, we examined the implications of distributing aid to education by using the 12 New York State Geographic Regions as units of analysis.

The aid distribution approaches we utilized are designed to answer questions left unresolved by our simulations to the 119 districts, particularly those involving the relationship of educational finance to other governmental services. Education finance must be analyzed within the larger context of total local government finance. To emphasize that education is not the only governmental service supported by the local tax base, three departures are made from what has become traditional analysis. *First,* per-capita measures of fiscal capacity and effort are used in preference to per-pupil measures. *Second,* personal income and a composite income measure are used together with property value to establish capacity. *Third,* capacities are adjusted for tax effort. By analyzing the effort-adjusted capacities, both the diversity in taxable resources and the extent to which those resources are taxed by local government can be judged.

What is the effect of using per-capita (population) rather than a per-pupil measure of regional need in New York State? The use of per-capita instead of per-pupil measures generally benefits the New York City Region considerably more than the rest of the state. The Capital District is least affected by the choice because its relation to the state average is nearly the same whether measured in terms of population or pupils. While aid to the Nothern Region is about 10 percent less when using the per-capita measure, the aid received is still well above the state average.

Which regions benefit from the use of an income measure of fiscal capacity rather than property valuation? Different patterns of per-pupil aid allocation result from using income rather than property valuation as a capacity measure. Aid to the New York City Region decreased by approximately $15 to $20 to the $330-$335 range. The Long Island Region receives a nearly 20 percent increase, slightly more than $300. At the same time, aid to the Rockland-Westchester Region decreases by about 20 percent to about $200. Aid to the other regions is altered less significantly by the choice of capacity measures.

What happens when state aid to regions is adjusted for total tax effort? Adjusting capacity for tax effort causes a greater redistribution of aid than does the choice of capacity measures. An increase of approximately $50 to $100 per pupil may be made in the allocation to the New York City and Northern Regions by choosing a formula that recognizes their higher effort. At the same time, those regions not making an average effort receive less than the $353 state average. Aid to the Rockland-Westchester Region decreases approximately $75 to $100 owing to the comparatively low effort in that region.

What is the redistributive effect of using a poverty measure of educational need in the formula? New York City, the region with the greatest proportion of disadvantaged pupils, gains a substantial amount of state aid while each of the remaining 11 regions receives less.

Which regions benefit by adjusting state aid for regional cost differences? Long Island, Rockland-Westchester, and New York City gain between $15 and $26 per pupil as a result of cost adjustments. The remaining nine regions receive between $13 and $66 less per pupil.

State Assumption of Financial Responsibility for Elementary and Secondary Education

Only a few years ago the idea of full state financing of public elementary and secondary education was generally considered a radical and impractical concept. First suggested in the current debate on the issue by James Conant and later endorsed in principle by James Allen, then Commissioner of Education in New York, the idea increasingly has gained acceptance. At present, it has the explicit support of such widely respected organizations as the Advisory Commission on Intergovernmental Relations and the Committee for Economic Development.[3]

The public's willingness to consider the idea, however, is probably more related to growing local tax burdens than it is to the abstract merits of the plan as advanced by the individuals and groups mentioned above. Regardless of its origin, this public concern has permitted the serious consideration of the advantages and disadvantages of shifting the responsibility for financing education to the state level.

Although the arguments for state assumption of financing are often presented together, the key issues can best be understood under two headings: fiscal and educational. The questions we examined and the conclusions we reached may be summarized as follows:

What are the defects in a system of educational finance geared to the local property tax, and how would state assumption overcome them? Not only is the property tax regressive in its operation as it effects individual taxpayers in most communities, but it is also inequitable among jurisdictions because of the immense variations in the distribution of taxable resources. State aid systems geared to equalizing property value per pupil cannot solve the problem because aid formulas fail to send adequate funds to areas with the greatest need for educational services. This is particularly true of the urban areas, which tend to have relatively high levels of property valuation and which, as a result, receive considerably less state aid than their suburbs. This is doubly ironic, for cities have far higher demands for noneducation services and can thus devote a smaller proportion of their expenditures to education than can the suburbs. In addition, aid for education in the cities tends to be "replacive"; that is, local funds that would have been spent for education are freed by the state aid for noneducational purposes. In the suburbs, with their lower demands for noneducational services, state aid for education is additive: Suburbs spend their own tax funds plus their state aid for education. While state aid formulas could be devised to overcome these problems—and we suggested and tested several alternatives in earlier sections—political realities suggest that such formulas may be diluted. State responsibility for educational financing could end the inequities caused by the local property tax and would more easily permit focusing resources on educational needs.

In what ways may state assumption of educational finance serve to improve the quality of education? It is becoming increasingly difficult for local schoolmen to spend money in ways that improve educational quality largely because the ability of organized teachers to bid up salaries is at its height in an environment of competing local jurisdictions. State-wide bargaining with teachers unions might serve to slow down the rise in personnel costs and permit a higher proportion of educational resources to go toward nonsalary, more directly educational, purposes. Similarly, the ability to improve education for the disadvantaged might be easier under a state system since funds could be focused on educational problems without concern for local financial ability.

Is state assumption inconsistent with the rising demands for educational decentralization? While there may be a superficial contradiction between these two concepts, it may be easier to achieve decentralization within a state-wide system. One of the chief drawbacks, the inability of local units to provide the needed resources for the decentralized units, could be overcome through the greater ability of the state to focus resources as needed.

Is there a role for regionalism within a system of state-wide assumption? Regionalism could add an important dimension by providing regional educational leadership and specialized educational services under a system of full state financing. If there is to be a remaining proportion of local financing, regional units could be used as revenue sources, thus overcoming the problem of small units, with highly unequal tax bases.

Through what methods, and at what costs, could the state assume the share of educational finance currently borne by local school districts? The cost of full state assumption of the financing of public education in New York would amount to $1,907 million, based on 1969 figures, requiring a 26 percent increase in the total state tax system. Levying a state-wide property tax of $16.75 per $1,000 of full value would support full state assumpton. However, the state would not need to assume the entire burden all at once. A substantial decrease in local taxes for education could occur if the state assumed 50 percent of the burden. Under this approach only an additional 13 percent would be required from the state tax system. Likewise, a 50 percent assumption by using the income tax would require a 45 percent increase, and a 137 percent increase if sales and use taxes were utilized.

Study No. 2: School-by-School Expenditures and Educational Need in Three Urban Districts

The current intense interest in the equitable distribution of tax burdens and educational resources is based on a concept of fairness and on a belief that different levels of resources provide different levels of educational opportunity. Unfortunately, much of the research interest in these questions of equity has been restricted to analyses which look only at the final legal agency which distributes educational resources, the school district.

We believe, however, that both the general principle established in the *Serrano*[4] case (that the educational opportunities available to a pupil must not vary with the wealth of his parents or neighbors) and the well-established precept that different educational needs are criteria that can and should be examined at the level of individual schools, classrooms, and children. In short, the extent and impact of educational services can be determined only by understanding patterns of resource distribution to administrative units below that of the school district.

The basic purpose of this study was to provide the complete picture of resource allocation as it occurred in three large urban school districts in New York State in the 1969-70 school year. To accomplish this, we identified the actual resources, both monetary

and personnel, used in the regular instructional program[5] of 120 elementary, junior high, and senior high schools.[6] Resources are classified as personal services: administrators, supervisors, teachers, paraprofessionals, clerical employees; or other than personal services: textbooks, supplies, equipment, or transportation costs directly related to the instructional program. The source of funding—local and general state, categorical state, ESEA, Title I, other federal—provided one dimension in grouping the resource data. On the other dimension, schools were grouped according to the percentage of pupils scoring below minimum competence levels[7] on a state-wide standardized reading test.

Why is increased attention being focused on the resources available to individual schools within a single district? Citizens are showing increased concern about whether the schools their children attend are receiving a fair share of the educational resources of a school district. Similarly, guidelines for the administration of ESEA, Title I, funds require that comparable resources be allocated to both target and non-target schools from other than federal sources. There is also increased interest in questions of accountability and performance evaluation among schools, and benefit-cost analysis relies heavily on the availability of school-by-school and program-by-program data. Finally, the courts have recently been asked to adjudicate specific cases in which intra-district disparities have been an important consideration.

Are educational resources at the school level distributed on the basis of educational need, as measured by standardized test scores? All resources, including dollars and staff, from all sources of funding, are generally distributed on the basis of need. The resource differences among cohort groups of schools, however, are only mildly compensatory.

How does the allocation of local tax levy funds relate to educational need? Schools with the smallest proportion of disadvantaged pupils consistently receive a few more dollars per pupil in all three cities examined in this study from local tax levy funds than do those with higher proportions. The pattern is reversed, however, when the ratio of staff to 1,000 pupils is employed as the resource measure. The most disadvantaged schools receive slightly more staff than the least disadvantaged.

Are there differences in the characteristics of staff assigned to high- and low-need schools? Teachers in schools which have high levels of reading disadvantage are consistently younger and less experienced than teachers in schools with higher levels of pupil achievement, and fewer have attained tenure.

How should the states address themselves to intra-district disparities in resource allocation? States must exert aggressive leader-

ship in developing information systems that permit local citizens as well as education officials to routinely determine the resources in both dollars and staff from all sources of funding allocated and expended by each school and program within a district. In short, states should require local districts to maintain school-by-school and program-by-program budgeting and accounting procedures.

Study No. 3 Measuring Educational Need: Developing a Model for Predicting Achievement Levels from a Composite of Socioeconomic Characteristics

The idea that educational resources should be allocated in proportion to educational need is not new. Its effective implementation, however, would be. For although there have been limited applications of the concept of matching resources to differing educational requirements, no state has yet made that end an integral part of its pattern of allocating resources for education.

Reasons for this failure are not hard to find. High on the list is the difficulty of defining and identifying pupils with greater than average need for educational services. Some of the more obvious areas, like the mentally and physically handicapped and those enrolled in the costly vocational education curriculum, are already the subject of programs of special aid which do in fact provide added funds. Title I of ESEA is an even more ambitious attempt to recognize educational disadvantage for compensatory funding by using poverty measures as its major criteria of educational need. But generally, when it comes to pupils with no obvious physical or mental handicaps and not enrolled in special high-cost courses of study, state educational finance systems ostensibly treat all pupils alike.

In fact, as modern research has demonstrated, pupils are far from being alike in their ability to learn, and what is far more important for this study, it appears that a significant proportion of such differences are related to identifiable environmental influences and life situations. The major thrust of such research leads to the conclusion that those who begin school with distinct social and economic disadvantages are far less likely to succeed in school than are those whose early years are characterized by relative affluence and relatively high social status.

One possible implication for public policy—and one which we endorse—is that greater resources should be focused on the educationally disadvantaged to make up, at least partially, for the environmental and social handicaps they bring with them as they begin their formal education. The problem, however, is how to identify this kind of high need pupil. This section presents one approach to

such identification. It develops a simple set of socioeconomic criteria, or variables, which are closely linked with school performance.

More specifically, we have developed a composite measure of educational need which could be incorporated into a formula by which state aid might be allocated to school districts and individual schools. Additionally, the measure might serve in conjunction with an achievement measure to distinguish schools with pupils who have real learning disabilities from schools which may need to improve teaching techniques.

To fulfill this purpose, we collected socioeconomic data and achievement test results on almost 6,000 third-grade pupils from 301 elementary schools throughout New York State. When the data were aggregated by individual schools, our analysis suggested the following conclusions to the questions posed in the study.

Can the socioeconomic background of pupils predict their achievement in school? Almost two-thirds of the variation in reading and arithmetic achievement test scores aggregated by schools can be explained by the environmental background of pupils. The results of the achievement tests and the socioeconomic data for approximately 20 randomly selected third-grade pupils in each school were aggregated to represent that school.

The percentage of pupils scoring below minimum competence levels (24th percentile) on the achievement tests varied from school to school. Our analysis involved a search for an explanation of this variability. Taking the total amount of variation as 100 percent, we found that about 65 percent of that difference could be accounted for by 30 socioeconomic variables. Put another way, if we were to hold all the socioeconomic characteristics constant for all the schools in the sample, the percentage below the 24th percentile on the achievement tests would vary only about one-third as much.

Can only a few key socioeconomic variables be used to predict achievement with similar success? Approximately 62 percent of the third-grade reading and arithmetic achievement test results at the level of individual schools can be predicted by only three socioeconomic variables and their combinations:

1. Percent of children from broken homes
2. Percent of children living in overcrowded housing
3. Years of education of the mother.

How important are racial characteristics in predicting achievement? The percentage of black and Puerto Rican pupils adds very little (less than 2 percent) to our ability to predict school achievement on the basis of three SES characteristics noted above.

Does the location of the school in a rural, suburban, or urban area affect the relationship between the socioeconomic background of the pupils and their achievement? We grouped the schools throughout the state into five subgroupings according to their rural, suburban, or urban location, with one group for New York City alone. The location factor does not significantly affect the relationship except in the case of New York City. The complexities of New York City seem to make it a special case in this instance just as it is in many others.

Is the ability to predict 62 percent of the variation in achievement high enough to permit use of the composite of three SES variables as a measure of educational need in a state aid formula? If one believes that the composite SES measure must serve as a proxy for achievement, the answer is No. While the ability to predict 62 percent of the variation in any social phenomenon at one point in time is exceptional, it is not sufficiently high to make the choice of either an achievement or an SES educational needs measure inconsequential in the distribution of the state's resources to schools and school districts. On the contrary, the fiscal impact of using one measure would be substantially different in a number of schools from the use of the other.

But if the "fit" between achievement and environmental educational needs measures is not critical, that is, if one believes that in itself SES is a more suitable indicator of need, the relatively high relationship with achievement can reinforce a preference for such an environmental measure.

FOOTNOTES

[1] For a discussion of the relationship between resources and achievement see: Guthrie, James W., and others. *Schools and Inequality.* Cambridge, Mass.: Massachusetts Institute of Technology Press, 1971. Chapter IV.

Van Fleet, Donald S. and Boardman, Gerald. "The Relationship Between Revenue Allocations and Educational Need as Reflected by Achievement Test Scores." *Status and Impact of Educational Finance Programs.* Gainesville, Fla.: National Educational Finance Project, 1971. p. 293-317.

[2] New York State, Department of Audit and Control. *Financial Data for School Districts.* Albany: the Department, 1970. p. 15.

[3] Committee for Economic Development. *Education for the Urban Disadvantaged.* New York: the Committee, 1971. 86 p.

Advisory Commission on Intergovernmental Relations. *State Aid to Local Government.* Washington, D.C.: Government Printing Office, 1969. 105 p.

[4]*Serrano v. Priest,* 487 P. 2d 1241 (Cal. 1971).

[5]Dollars and personal time devoted to pupils in handicapped and vocational programs were not included in this analysis.

[6]This report is addressed only to our analysis of resource allocation to elementary schools in three cities.

[7]Minimum competence in reading is defined as the skills required for a pupil to effectively comprehend materials typically used at his grade level.

An Analysis of the Expenditure and Taxing Inequalities in Nine States*

Betsy Levin

THE PROBLEMS of financing public elementary and secondary education are several. First, in almost every part of the country, education revenues are inadequate and are becoming even more so at an alarming rate. Second, there are severe inequalities in levels of expenditure per pupil and in educational services among school districts within states as well as among states. Third, related to both of these problems, the tax burden for support of public education is unequally shared.

The first problem—inadequacy of school revenues—has, until recently, received most of the attention. There have been numerous reports of cutbacks in educational services, reduction of staff, and even the temporary closing of schools because of the loss of expected revenues.

The second problem—inequalities in the distribution of school revenues—has only just begun to receive wide recognition, largely because of the recent court decisions, particularly the California State Supreme Court decision in *Serrano v. Priest.*[1] Five courts, three state and two federal, have found that state school financing systems which depend substantially on local property taxes result in "wide disparities in school revenue" among school districts, and that this is in violation of the equal protection clause of the Fourteenth Amendment of the Constitution of the United States or similar provisions in state constitutions.

The focus of these cases has been not only on inequalities in the distribution of revenues, but also on the inequalities in tax rates as well. The courts found that often districts with low property values tax themselves at a much higher rate than wealthier districts, yet the level of expenditures per pupil in the poorer districts is still well below that of wealthier districts.

*The principal analyses discussed in this paper were undertaken by Dr. Thomas Muller, Senior Research Staff, the Urban Institute. This research was supported by grants from the Ford and Mellon Foundations and the President's Commission on School Finance.

Before turning to the details of the nature and extent of the disparities in expenditures and tax burdens as determined in an analysis of data from nine states, a brief summary of some of the reasons for the occurrence of intrastate inequalities is in order. In 49 states, Hawaii being the exception, the financing of the schools is a joint enterprise of the state and local districts. The financing system in most states relies heavily on the local property tax to fund education. Inequalities in revenues are generated by the use of this tax owing to differences among districts in property values per pupil, differences in tax rates, and inequitable property assessment practices.

Recognizing the basic inequalities in the capacity of different school districts to raise revenues and the difficulty that some school districts have in raising sufficient funds for even a "minimum" program, states have historically provided funds to school districts to supplement their locally raised revenues. Most states have distributed funds as a flat grant to school districts, which means that an equal dollar amount per pupil is distributed to every school district in the state, regardless of its wealth or poverty, through a formula which attempts to equalize on the basis of the fiscal ability or capacity of a district to raise local revenues, or as some combination of the two.[2]

The current state education aid formulas are inadequate from a number of standpoints:

1. The formula maintains heavy reliance on the local property tax resulting, as already noted, in inequalities owing to the differences in the underlying tax base, in assessment practices, and in tax rates.

2. Many of these formulas include a flat grant to all districts, regardless of fiscal capacity, and thus help to maintain the gap between wealthy and poor districts.

3. Most state aid formulas do not take into account differences in the costs among districts for the same service. State aid is generally a specified dollar amount per pupil, regardless of that pupil's location in the state.[3]

4. Inadequate measures of fiscal need are incorporated in the formulas. State aid equalizing formulas are usually based on property wealth. However, property wealth frequently does not correlate with individual income, an important factor in the ability of a district to tax itself.

5. The existing distribution formulas generally do not take into account factors relating to the higher cost of educating certain types of children.

Selection of States for Study

Essential to the development of alternatives to the present system of financing public elementary and secondary education is a precise understanding of the current system, how it contributes to the disparities, the nature of the disparities, and the populations affected by them. A detailed analysis of the disparities in per-pupil revenues and expenditures within states and of the combined state-local tax burden for the support of public education, therefore, was undertaken by the Urban Institute. As part of this analysis, an attempt was made to determine whether a general pattern by type of district is discernible not only among districts within a particular state, but also across state lines.

A major criterion in the selection of states for this study was level of state aid as a percentage of total nonfederal school funds. Of particular interest were high state-aid states, in view of the accelerating pressures from various public and private groups to have states assume a considerably greater share of fiscal support for elementary and secondary education.

Nine states providing broad regional representation were selected. The total enrollment in these nine states was 11.7 million, over 29 percent of the total national enrollment. These states were:

Full state funding:	Hawaii (Western Region)
High state funding:	Delaware (South Atlantic Region) North Carolina (South Atlantic Region) Washington (Pacific Region)
Moderate state funding:	California (Pacific Region) Michigan (North Central Region) New York (Middle Atlantic Region)
Low state funding:	New Hampshire (New England Region) Colorado (Mountain Region)

In addition to differences in level of state funding and geographic diversity, the states selected represented a cross-section of other economic, demographic, and fiscal characteristics related to education finance. Included in the study were the two states with the highest enrollment (California and New York) and the two with the lowest (Delaware and New Hampshire).

The study included the state with the highest per-pupil expenditures (New York) and one of the six lowest (North Carolina). The other states ranged from 5th highest (Washington and Michigan) to 30th (New Hampshire).

The states in this study were also broadly representative of the principal methods utilized in this country for distributing state education funds. Three states distribute funds based on a flat-grant personnel unit formula; two, through an equalizing grant formula; and three, through a combination of a flat grant per pupil and an equalizing formula.

Definitions

The standard unit used for comparing school districts both within and among states was pupils in average daily attendance (per pupil ADA).[5] All data, except where otherwise noted, are for the school year 1968-69.

Districts within each state studied were grouped according to the following categories: central cities, suburbs, small cities, and rural areas. Excluding Hawaii, the total number of districts in the sample was 649.

Central city districts comprised school districts with a city population in excess of 250,000. However, since there were no districts with a city population approaching this size in New Hampshire, Delaware, and North Carolina, for purposes of intrastate comparisons, the central city definition was broadened to include the seven districts in these states with a population over 50,000. These districts generally had the same characteristics as the larger central cities of other states.

Suburban school districts comprised all districts in built up areas close to the central cities in each state.[6] Suburban districts do not necessarily comprise all districts within the SMSA outside the central city, inasmuch as the metropolitan area frequently includes school districts with rural characteristics.

Midway through this study, it was observed that of the four categories of school districts, the greatest variation in per-pupil expenditures consistently occurred among suburban districts. It was decided, therefore, to subdivide these districts into two categories to see whether a consistent pattern could be ascertained. The criterion chosen, rate of growth between 1960 and 1970, proved to be a useful division. Rapidly growing suburban school districts consistently have lower expenditures compared with the per-pupil expenditures of older, more stable suburban school districts. The latter category comprises industrial areas contiguous to the central city and mature, wealthy residential communities, established in earlier decades, which have long since zoned out expansion.

Small city districts were defined as non-central cities with a population in excess of 10,000.

Rural districts were those which did not contain towns or cities with a population of 10,000 or more. Because of the lack of data for very small districts, and the fact that this study analyzed only unified districts (those including kindergarten or grades 1 through 12), the rural districts in the sample had an average enrollment of over three thousand pupils, considerably above the average of all rural districts in the states studies. It is important to note that as a result of this selection procedure, districts which had very low or very high expenditure levels had probably been excluded. This procedure resulted in considerably lower disparities in expenditures than would be expected if expenditures which included all school districts in a state were to be analyzed.

Intrastate Revenue Disparities

In the examination of revenues for education by school district, revenues were disaggregated by source of funding to ascertain the relative importance of local, state, and federal revenues on total funds available for elementary and secondary education and to measure the degree to which a particular source of funding increases or decreases revenue differentials between districts.

Revenues by Source of Funding—In the eight states examined in this part of the study, local revenues in the school year 1968-69 provided over half of the revenues for education from all sources. This share varied from less than 40 percent in rural areas to almost 60 percent in central cities.

In contrast, state revenues did not vary greatly from one type of district to another. Rural districts received the most state aid. Central cities received only a few dollars per pupil more in state aid than the suburban average, but the percentage of state aid relative to all education revenues was much *less* in central cities than the suburban average.

Federal funds amounted to only 5.7 percent of all education funds in the sample districts. Central cities received the most federal funds on a dollars-per-pupil basis, but as a percentage of total revenue, federal aid was a higher proportion of total revenues in rural districts than it was in other areas. Table 1 gives the distribution of revenues by source of funding by type of district both in absolute dollars per pupil and in percentages for all states in this study.

Disparities in Per-Pupil Revenues—The disparities in education revenues among districts within a state are attributable primarily to differences in the level of local revenues raised by individual districts. The disparities in local revenues were found to be greater among those states in this study which furnish a high proportion

TABLE 1.—REVENUES BY SOURCE AND TYPE OF DISTRICT - ALL STUDY STATES[a]
(1968-69)

Type of revenue	Revenue per pupil in ADA				
	Central cities[b]	Sub-urban	Smaller cities	Rural	All sample districts
1	2	3	4	5	6
Total	$1,054	$896	$773	$750	$902
Local	604	498	383	292	480
State	383	372	339	401	371
Federal	67	26	51	57	51
Percent					
Local	57.3%	55.6%	49.5%	38.9%	53.2%
State	36.3	41.5	43.9	53.5	41.1
Federal	6.4	2.9	6.6	7.6	5.7

[a]Delaware, North Carolina, Washington, California, Michigan, New York, Colorado, and New Hampshire. Excludes state payments for teacher benefits.

[b]Defined as cities with a population of 250,000 and over.

of the total amount of education support. By far the greatest disparities in local revenues occurred in Delaware and North Carolina, where state aid was so high that some districts needed to tax themselves locally at only a very low level. In both these states, some rural districts did not tax themselves at all for the general education program. On the other hand, some affluent suburban districts taxed property at a relatively high rate to supplement the state salary schedule and to add teacher positions.

However, when state and local revenues were combined, the disparities in these high aid states were appreciably lower than in the moderate and low state aid states. The only exception to this pattern was New Hampshire, which relied almost exclusively on local revenues yet exhibited the least disparity of all the states in this study. Despite the existence of differences in property wealth among school districts, there was relatively little difference in per-capita income in this state compared with any of the other states studied. Thus, districts with lower property values were able and willing to tax themselves at a higher level. In addition to little variation in local funds for education, state aid as it was distri-

buted in that state, even though such a small amount, tended to be concentrated in districts where local contributions were relatively low, thus further equalizing total education revenues. Table 2 illustrates the impact of each of the sources of revenue on disparities within the eight states.

In all eight states except Washington, federal funds tended to reduce over-all disparities. The impact of federal revenues on disparities was not significant in any of the states, however, because of the relatively small amounts involved.

Factors Affecting Disparities in Per-Pupil Revenues–In an attempt to understand why these disparities in education revenues occurred, the fiscal characteristics of school districts were examined.

Per-pupil property wealth in central cities exceeded the suburban average by about 35 percent. Per-pupil property wealth was high in the central city relative to suburbs (and to other types of districts) for several reasons, including the following:

1. A high concentration of commercial and, to a lesser degree, industrial property

TABLE 2.–COEFFICIENTS OF VARIATION BY SOURCE OF REVENUE–STATE-WIDE
(1968-69)

State	Local revenues only	Local and state revenues	Local, state, and federal revenues
1	2	3	4
HIGH AID STATES			
Delaware	.47	.13	.13
North Carolina	.54	.12	.10
Washington	.32	.11	.12
MODERATE AID STATES			
California	.32	.15	.14
Michigan	.33	.16	.16
New York	.31	.17	.13
LOW AID STATES			
Colorado	.29	.17	.16
New Hampshire	.13	.11	.09

2. A higher percentage of nonpublic school enrollment
3. A high rate of out-migration of households (primarily white) with children of school age.

The two latter factors were significant since property wealth was measured on a per-public-school-pupil basis. Rural areas had the lowest property wealth in all states examined with the exception of Colorado.

A comparison of effective school property tax rates showed that suburban areas had the highest tax rates for schools. Despite this, the suburbs raised less local revenue than central cities because of their lower property values. The lowest taxes for schools were paid in rural areas. In comparing tax rates, however, it should be noted that, where data were available, central cities included in this study were found to have higher *total* tax rates than those in suburban municipalities which included school districts, but a much larger share of the property tax in central cities was used for other public services.

As would be expected, the three states with high levels of state funding (Delaware, North Carolina, and Washington) had an average property tax which was less than half the average property tax for education in other states. New Hampshire, with minimal state education revenues, and New York, a moderate aid state, had the highest property tax rates for education.

TABLE 3.—PROPERTY VALUES, PROPERTY TAX RATES, AND PER-CAPITA INCOME BY TYPE OF DISTRICT (1968-69)

Type of district	Per-pupil property wealth[a]	Effective property tax rate per $100[a]	Per-capita income (1966)[b]
1	2	3	4
Central cities[c]	$48,837	$1.19	$2,741
Suburbs	36,136	1.38	2,944
Small cities	33,293	1.21	2,436
Rural districts	27,467	0.95	1,974
ALL SAMPLE DISTRICTS	$38,926	$1.22	$2,578

[a] Includes data from all eight states.
[b] Excludes New York.
[c] Cities with population over 250,000.

Rural areas which, with the exception of New York and New Hampshire, had both low per-pupil property values and low property taxes, were raising far less than the level of revenues raised in other types of districts. This may have been due to differences in income, as well as the higher cost of purchasing education resources in suburbs compared to rural areas. Table 3 shows average per-pupil property values, tax rates, and per-capita income by type of district.

There were some differences among the rural areas of the states included in this study. As noted earlier, most rural areas in Delaware and North Carolina showed little inclination to supplement state aid to any great extent. This was not the situation in New York or New Hampshire. In these states, the sample rural districts included in the study were found to tax themselves at rates close to the other types of school districts.

Since often a large share of the district's property base is comprised of industrial or commercial property, property wealth may not accurately reflect the income level of the district's residents. Because of this deviation between income and property wealth, income has frequently been suggested as an alternative criterion for distributing state revenues. This study examined per-capita and per-pupil income data on a school district level.[7] In general, average per-capita income in suburban districts is above that of central cities. This means that if state funds were distributed on the basis of fiscal need as measured by per-capita income rather than property value, central cities would have an advantage over suburbs. However, if per-pupil income is used as the measure of ability to pay, the central cities lose this advantage. Differences in per-capita and per-pupil income between central cities and suburbs are due to two factors: nonpublic school enrollment and demographic characteristics. Rural areas, with very low nonpublic school enrollment and larger household size than urban areas, would benefit from using a per-pupil income measure.

The proportion of poor families in a district, based on the percentage of federal joint income tax returns under $3,000 filed from that district in 1967, offered the most dramatic contrast with the other measures of fiscal capacity. Central cities and rural areas benefited substantially by using this measure of fiscal capacity.

In the case of small cities, all four of the fiscal criteria approximated the state average. Thus, with these districts, it made little difference which fiscal measure was used. All four measures of fiscal capacity are shown in Table 4.

Disparities in Tax Burden: Who Pays for Public Education?– This study also concerned the disparities in tax burdens among

TABLE 4.—FISCAL MEASURES OF ABILITY TO PAY[a]

Type of district	Per-capita income (1966)	Per-pupil income (1966)	Per-pupil property value (1968-69)	Percent low income (1966)
1	2	3	4	5
Central cities	$2,741	$14,152	$46,484	9.0
Suburbs	2,944	12,948	37,582	5.7
Small cities	2,436	10,337	34,283	8.4
Rural districts	1,974	6,855	28,070	14.0
ALL SAMPLE DISTRICTS	$2,578	$11,442	$37,079	8.6

[a]Based on seven states: Delaware, North Carolina, Washington, California, Michigan, Colorado, and New Hampshire.

TABLE 5.—STATE TAXES FOR PUBLIC ELEMENTARY AND SECONDARY EDUCATION AS PERCENT OF MONEY INCOME[a]

(1968-69)

State	Income groups							
	$2,000-2,999	$3,000-3,999	$4,000-4,999	$5,000-5,999	$6,000-7,499	$7,500-9,999	$10,000-14,999	$15,000 and over
1	2	3	4	5	6	7	8	9
Delaware	1.5	1.7	1.9	2.1	2.3	2.5	2.8	3.2
Hawaii	3.7	3.7	3.4	3.4	3.5	3.5	3.4	3.9
North Carolina	1.7	1.8	2.0	2.1	2.3	2.6	2.9	3.7
Washington	3.1	3.1	2.7	2.6	2.5	2.4	1.9	1.6
California	1.1	1.3	1.4	1.3	1.3	1.5	1.4	1.6
Michigan[b]	2.3	2.3	2.1	2.2	2.1	2.2	2.3	1.7
New York	1.4	1.8	1.7	2.0	1.9	1.9	2.1	3.2
Colorado	0.9	1.1	0.9	1.0	1.1	1.1	1.2	1.8
New Hampshire	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4

[a]Proportion of state general revenue taxes (and in some states, earmarked taxes) allocated for public elementary and secondary education.

[b]There may be some discrepancies in the Michigan analysis, since state income tax data were available in a form that could not readily be adapted to the methodology used in computing tax burdens for the other states in this study.

TABLE 6.—COMBINED STATE/LOCAL TAXES FOR PUBLIC ELEMENTARY AND SECONDARY EDUCATION AS PERCENT OF MONEY INCOME
(1968-69)

State	Income groups							
	$2,000-2,999	$3,000-3,999	$4,000-4,999	$5,000-5,999	$6,000-7,499	$7,500-9,999	$10,000-14,999	$15,000 and over
1	2	3	4	5	6	7	8	9
Delaware	4.2	3.7	3.6	3.6	3.6	3.6	3.7	4.2
Hawaii	3.7	3.8	3.4	3.3	3.5	3.5	3.7	3.9
North Carolina	5.5	4.4	4.0	2.9	3.7	4.0	4.2	5.1
Washington	7.1	6.2	5.2	4.8	4.3	4.1	3.2	2.9
California	8.4	6.7	5.5	5.9	4.2	3.8	3.6	4.3
Michigan	7.8	6.4	6.2	4.8	4.5	4.4	4.1	3.6
New York	12.9	10.4	8.9	7.9	6.9	6.2	5.4	6.2
New Hampshire	9.5	9.2	6.5	5.7	4.9	4.1	3.0	2.7
Colorado	7.7	6.4	5.2	4.5	3.3	3.9	3.7	4.5

various income groups for the support of public elementary and secondary education. The analysis consisted of two parts: (a) an estimate of taxes paid by households into the state general fund for elementary and secondary education or into state funds earmarked for education, and (b) an estimate of the local taxes for education paid by households.

State tax structures varied substantially. Two states had regressive tax structures at the state level (Washington and New Hampshire); Hawaii's was essentially proportional; two had proportional structures except at the highest income level, where the effect was progressive (Colorado and California); Michigan's was also proportional except at the highest income level, but at that level the effect was regressive. Three states had progressive state tax structures (Delaware and North Carolina strongly so and New York to a lesser extent). State taxes as a percent of income are depicted in Table 5.

Local taxes for education, primarily the property tax, are regressive in their impact. When combined with a regressive state tax structure, the regressivity is compounded.

The pattern for combined state/local taxes for education varied from a "U" shaped curve (lowest taxes for middle-income groups) in Delaware, Hawaii, and North Carolina, to a generally regressive pattern in the other states. Table 6 presents the combined state/local tax burden for elementary and secondary education in each of the states in this study according to income group.

TABLE 7.—CALIFORNIA: CURRENT OPERATING EXPENDITURES BY TYPE OF DISTRICT
(1968-69)

Type of district	Dollars per pupil
1	2
Central cities	$750
Suburban area average	709
Slow-growth suburbs	(787)
Fast-growth suburbs	(656)
Small cities	700
Rural areas	687
STATE-WIDE AVERAGE	$721

The state with the highest combined taxes for education, of the states included in this study, was New York, which also had the highest income among the states examined.

Expenditure Comparisons

Previous sections of this paper have concerned the disparities in per-pupil revenues for education and the factors affecting those disparities. This portion of the paper deals with expenditure differentials according to function. Only six states—Delaware, North Carolina, Washington, California, Michigan, and New York—were included in this aspect of the study.

Variations Among Districts in Dollar Expenditures—In all six states, except Michigan, total current operating expenditures per pupil were higher in central city districts than in suburbs. If federal funds were excluded, average expenditures in the the suburbs of the state of New York exceeded expenditures in the central cities of that state, but central city expenditures in the other four states still remained above the level of their suburbs. Rural areas spent less than any other type of school district, with the exception of those in North Carolina. In that state, the high cost of transportation in rural areas resulted in higher total expenditures in rural areas compared with small city districts, even though rural areas were spending $20 less per pupil for instruction. (Table 7 gives the expenditures per pupil for California, illustrating the sharp differences among low-growth and fast-growth suburbs.)

The average difference in expenditures between central cities and suburbs was $110 per pupil. Of this differential, 80 percent could be accounted for by differences in instructional personnel costs, excluding fixed charges. On the assumption that 60 percent of fixed charges (probably a conservative assumption) covered instructional personnel benefits, almost the *total* expenditure gap between central cities and suburbs could be explained by differences in both salary and benefit payments to classroom teachers, principals, and supervisors. In contrast, noninstructional expenditure differences between central city and suburban districts were relatively minor. There was a similar pattern discernible between central city and rural districts, as shown in Table 8.

Variation Within States in Proportion of Budget Allocated for Various Functions—While the dollars expended for specific functions varied considerably among districts, this study also attempted to learn whether the proportion of the budget that districts allocated for these functions varied among the four categories of districts. It was found that instructional expenditures as a proportion of the total budget do vary, with the rural districts in every state allocating a smaller proportion of the budget to in-

TABLE 8.–IMPACT OF INSTRUCTIONAL STAFF EXPENDITURES ON CENTRAL CITY-RURAL EXPENDITURE DIFFERENTIALS

(1968-69)

State	Differences in total current operating expenditures[a] between central cities and rural districts	Differences in instructional staff expenditures[b] between central cities and rural districts	Instructional staff expenditure differences as percent of total current operating expenditures difference
1	2	3	4
Delaware	$195	$192	98.5
North Carolina	31	55	177.4[c]
Washington	131	94	71.8
California	63	63	100.0
Michigan	182	125	68.7
New York	245	238	97.1

[a] Excludes employee benefits paid directly by the state.

[b] Includes teachers, principals and supervisors, other instructional personnel.

[c] Exceeds 100 percent owing to substantial differences in transportation costs between central cities and rural areas, amounting to $21 per pupil. Thus, the difference between the two types of districts in instructional staff expenditures is greater than the total difference.

struction than other districts. Dollar expenditures for instruction, as has already been noted, also varied substantially. On the other hand, while the proportion of the total budget allocated for noninstructional expenditures also varied, little dollar variation was found among districts within a state.

One aspect of noninstructional expenditures that is of interest is that, contrary to popular belief, administrative costs as a proportion of the total budget are not substantially larger in the central cities. Indeed, in most of the states examined, the proportion allocated for this function was smallest in central cities. On the other hand, plant maintenance costs, as a proportion of the budget, were consistently highest in central cities.

Teacher Expenditure Differentials—Since teacher expenditure differentials appear to be a major factor explaining over-all cost differentials among districts within a state, a more detailed analysis of the effect of teacher characteristics on expenditure differentials focusing on pupil-teacher ratios, teacher education and experience, starting salaries, and salary increments will contribute to a better understanding of the disparities in per-pupil expenditures.

TABLE 9.—AVERAGE TEACHER EXPERIENCE IN YEARS (1968-69)

State	Central city	Sub-urban	Percent difference between central city and suburb	Rural	Percent difference between central city and rural
1	2	3	4	5	6
Delaware	11.1	8.6	29.1	9.5	16.8
North Carolina	N/A	N/A	N/A	N/A	N/A
Washington	8.5	6.6	28.8	7.2	18.1
California.....	7.6	6.9	10.1	6.8	11.8
Michigan	11.0	8.5	29.4	11.2	-1.8
New York[a]	6.2	7.3	-15.1	6.1	1.6

[a]Data provided included experience only within school district.

Pupil-teacher ratios–In Delaware, New York, and North Carolina, central city districts had the lowest pupil-teacher ratios. This was not true in the remaining three states analyzed. Indeed, in Michigan, the central city had the highest pupil-teacher ratios of all four categories of school districts. Rural districts generally had high pupil-teacher ratios. Overall, however, there was relatively little variation in pupil-teacher ratios among districts. Thus, the differences in pupil-teacher ratios are not a significant factor in explaining differences in total teacher costs within a state.

Teacher experience–Central city teachers had more years of experience than those in any other type of district in almost all of the states studied. Since teacher salaries rise with seniority, this helps explain why per-pupil expenditures were higher in central cities than in other categories of school districts.

Teacher education–The differences in advanced degrees held by teachers in different types of districts presented a more erratic pattern. In Delaware and California, the proportion of central-city teachers with advanced degrees was smaller than in the suburbs, while in Washington, Michigan, and New York, the proportion of teachers with advanced degrees was higher in the central cities.

The difference in education levels between central cities and rural areas was more consistent. Central cities had over 60 percent more teachers with advanced degrees than rural areas. As a result of both the education and experience differences between central cities and rural areas, rural districts would have lower per-pupil expenditures even if a uniform state-wide salary schedule were imposed. Tables 9 and 10 illustrate differences in the distribution of teacher education and experience.

Teachers' salaries–In an attempt to assess the impact of teacher salary differences on total expenditure differentials, starting salaries were analyzed. (These are shown in Table 11). Central cities had higher starting salaries than suburbs in three states (Washington, Calfiornia, and Michigan) and lower salaries in two other states (Delaware and New York).

Starting salaries in rural districts were consistently lower than in either central cities or suburbs. The most startling figures were in Michigan and California. Rural teachers in Michigan had starting salaries 17.3 percent lower than in the central cities, while in California, they were 12.5 percent lower. These differences are no doubt attributable, at least in part, to cost-of-living differentials, prevailing wage rates for

other white-collar occupations, and possibly to such factors as the strength of the parties in salary negotiations and fiscal capacity with regard to the raising of local revenues.

Average teacher salaries for central cities in all states included in this study were 5 percent above the average of suburban districts. Average rural salaries were 19 percent below the level of central cities and 13 percent below the level of suburban districts. The urban-rural differences were primarily due to three factors: (a) lower starting salaries for both bachelor's and advanced degrees in rural areas, (b) smaller increments for education and experience in rural areas, and (c) a lower percentage of teachers with advanced degrees in rural areas. The average level of experience of teachers in rural areas did not appear to deviate significantly from the experience level of those employed in urban areas. (There were, however, sharp differences in level of experience between central city teachers and suburban teachers.) While a complete analysis of the salaries of other instructional personnel was not undertaken, preliminary data show that their

TABLE 10.–PERCENT OF TEACHERS WITH ADVANCED DEGREES

(1968-69)

State	Central city	Sub-urban	Percent difference between central city and suburb	Rural	Percent difference between central city and rural
1	2	3	4	5	6
Delaware	24.9	28.0	-11.1	16.0	55.6
North Carolina	N/A	N/A	N/A	N/A	N/A
Washington	19.8	15.2	30.3	13.1	51.1
California	22.6	23.8	-5.0	15.7	43.9
Michigan	36.0	32.6	10.4	18.8	91.5
New York[a]	19.4	13.6	42.6	5.4	259.3

[a]Master's + 30 or more credits, or doctorate. Inclusion of those with master's but less than 30 credits would undoubtedly make the percentages substantially higher.

salary patterns paralleled those of classroom teachers—central cities paid the highest average salaries and the rural districts the lowest.

Hawaii Expenditure Patterns

It is of interest to contrast the preceding findings regarding expenditure differentials with those in Hawaii. Hawaii is the only full state-funded school system in the country, and thus does not rely on local revenues. The state is divided into seven administrative units or districts with no fiscal powers whatsoever. Four of these districts are located in the city-county of Honolulu on the island of Oahu which, although the smallest in land area among the counties, includes over 80 percent of the total population in the state. The Honolulu school district, comprising the city limits of Honolulu, is the largest district in the state. While all four districts on the island of Oahu can be characterized generally as urban-suburban, portions of the three districts other than Honolulu are still rural-agricultural. The remaining three districts, located in the "neighbor-island" counties, and coterminous with county boundaries, are all rural-agricultural.

Hawaii distributes its education funds primarily on the basis of a personnel classroom unit formula similar to that in effect in Delaware and North Carolina, the difference being that in Hawaii, localities cannot supplement state funds with local revenues. Nonteaching positions are also allocated by formula as are funds for textbooks, equipment, and supplies, which are allocated in accordance with a formula based on enrollment.

By and large, an effort is made to distribute state education funds on an equal resource basis per child. (The method of resource allocation does not result in equal dollars per child, since the funds allocated per teacher position depend upon the education and experience levels of the particular teacher who fills that position.)

Variation Among Districts in Dollar Expenditures—Contrary to the popular notion, there *were* differences among the districts in the state of Hawaii in total per-pupil spending. The variation, however, was lower than in most of the other states in this study. Of further interest is the fact that the distributional pattern was the reverse of that found in other states—urban school districts had lower per-pupil expenditures than the rural school districts.

Again in contrast to the other states in the study, the principal factor contributing to the disparities was the difference in *noninstructional* costs among the school districts. The average per-pupil expenditure for noninstructional items in the urban districts was significantly lower than the per-pupil expenditures in the three

TABLE 11.–STARTING SALARIES FOR TEACHERS WITH BACHELOR'S DEGREES (1968-69)

State	Central cities	Suburbs	Percent difference between central cities and suburbs	Rural	Percent difference between central cities and rural
1	2	3	4	5	6
Delaware[a]	$6,400	$6,448	0.7	$6,108	4.8
North Carolina[a] ...	5,518	N/A	N/A	5,413	1.9
Washington	6,175	5,995	3.0	5,914	4.4
California	6,916	6,419	7.7	6,146	12.5
Michigan	7,500	6,930	8.2	6,393	17.3
New York	6,755	6,803	0.7	6,300	7.2

[a]Central cities defined as those over 50,000 in population, compared with over 250,000 in the other states.

predominantly rural districts. However, per-pupil expenditures for noninstructional items in the Honolulu school district (the only district approximating a central city district) were higher than the urban average, although still considerably lower than expenditures in the rural areas.

In contrast to the other states in this study, where per-pupil expenditures correlated postively with per-capita income, in Hawaii, as shown in Table 12, the lowest expenditures were in the county with the highest income.

Teacher Expenditure Differentials—The urban district average was below the rural average, although the district of Honolulu spent slightly above the rural districts. Teacher expenditures did not vary sharply, however, among the districts.

Teacher expenditure differentials, in contrast to the other states examined in this study, appeared to be influenced by differences in pupil-teacher ratios. While these differences were not great, the urban areas had higher pupil-teacher ratios than rural areas, contrary to the finding in the other states in this study.

There was a sharp difference in the years of teacher experience between the Honolulu school district, where the proportion was closer to that of central cities in other states studied, and the other six districts in the state. The same was true of teacher education. With the exception of the Honolulu district, where over 24 percent of the teachers had advanced degrees, the percentage of teachers holding such degrees was low throughout the state. (See Table 13).

Variation in Expenditures for Noninstructional Functions—There were considerable intrastate differences, as noted earlier, among noninstructional expenditures. Transportation was quite low in the urban areas compared with the rural districts. Administration was also low in the urban areas and high in rural areas. (This can be explained by the existence of the state salary schedule. Although one school district may have close to 40,000 pupils and another only 7,000, their superintendents get the same salary under a centralized system. This is not true on the mainland where rural superintendents are likely to be paid considerably below what their city counterparts within the same state are paid.) Plant operation was also lower in the urban districts and higher in the rural areas. The substantially higher noninstructional expenditure in the rural districts for every major function was the primary factor in the difference between urban and rural districts in per-pupil costs. Table 14 provides a breakdown of expenditures by function.

Tax Burden for Public Education—As noted earlier, Hawaii is the only state which depends exclusively on state and federal

TABLE 12.–PER-CAPITA INCOME AND PER-PUPIL EXPENDITURES BY COUNTY—HAWAII

County	Per-capita income (1966)	Total per-pupil expenditures (1968-69)
1	2	3
Honolulu	$2,669	$630
Maui	2,183	707
Hawaii	2,147	725
Kauai	1,877	656

TABLE 13.–TEACHER CHARACTERISTICS–HAWAII (1968-69)

Teacher characteristics	Honolulu school district	Average of urban school districts	Average of rural school districts	State-wide average
1	2	3	4	5
Percent of Teachers with advanced degrees	24.1	12.4	11.1	12.1
Average years of experience	10.4	7.2	7.7	7.3
Pupil-teacher ratios	21.6	22.4	20.8	22.0

funds to support elementary and secondary education. The total nonfederal burden on taxpayers for education is thus determined by the state tax structure alone. The state's general fund is derived primarily from three sources of revenue—a progressive personal income tax, a corporate tax, and broad-based sales and excise taxes. Approximately 45 percent of the state's general fund revenues are allocated for elementary and secondary education–the highest percentage of any state studied. The burden of the over-all state tax structure is "U-shaped" in effect, with the lowest-income class paying 3.7 percent of its income for education, the middle-

income group paying approximately 3.5 percent, and those earning $15,000 and over paying 3.9 percent of their income. In comparison with the other states in this study, Hawaii had the highest state taxes for education, but the highest total taxes for education were paid in New York.

Summary

The principal findings of this study can be summarized as follows:

Differences in local revenues among school districts are the primary cause for intrastate revenue differentials. Central cities, which have higher local revenues than other types of districts, also have higher per-pupil property values, largely because of the presence of a larger commercial-industrial base. However, central cities generally have lower per-capita income than suburban districts.

TABLE 14–PER-PUPIL EXPENDITURES BY FUNCTION–HAWAII

(1968-69)

Current operating expenditures	Honolulu school district	All urban districts	Rural districts	State-wide average
1	2	3	4	5
Total instructional . . .	$467	$440	$481	$448
Principals and supervisors	24	23	32	25
Teachers	377	346	371	350
Other instructional personnel	26	25	28	26
Total noninstructional	162	148	221	163
Administration	13	10	27	14
Transportation	7	7	24	10
Plant operation . . .	29	26	35	28
Plant maintenance .	42	43	52	45
Other noninstructional	71	62	83	66
Total current operating expenditure[a]	$629	$588	$702	$611

[a]Excludes fixed costs.

Central cities also have lower property tax rates for schools than do suburbs, although they have a higher total tax rate. Rural districts have the lowest proportion of local revenues, lowest average property values, and also a much lower per-capita income.

Central cities generally have higher total per-pupil expenditures. Much of this is absorbed by higher teacher salaries, resulting from a higher proportion of experienced teachers in central cities compared with the suburbs, as well as higher starting salaries and salary increments. However, there are sharp differences among the suburban districts in almost all states. When suburbs are classified according to rate of growth, the low-growth suburbs generally have higher per-pupil expenditures than the central cities in their states, while rapidly growing suburbs consistently have a lower level of expenditures. Rural areas spend less than other types of districts, primarily because of differences in salaries for instructional personnel, greater pupil-teacher ratios, a lower proportion of teachers with advanced degrees, and lower plant operation and maintenance costs.

The pattern in Hawaii is somewhat different from that found in the other states in this study. Full state funding in that state results in relatively low disparities in per-pupil spending. The disparities that do exist, however, favor the low-income, rural areas. Unlike other states examined, disparities in per-pupil spending are due to two factors: high *noninstructional* expenditures and *lower* pupil-teacher ratios in the low-income rural areas compared with urban areas.

Tax burdens for the support of education by income group vary sharply among the states examined. In three states, the combined state-local tax structure has a U-shaped effect, with the lowest taxes for the support of education being paid by moderate income groups. In the balance of the states, the combined tax structure is regressive. Expenditures for education as a percent of income appear to be lower in Hawaii than in the three large urban, industrial states in this study, but higher than Delaware, a high state aid state.

In conclusion, this study has shown that there are similarities in the education finance characteristics by type of district across states. However, despite the fact that this is a fairly representative sample of states, every state has some unique features. Thus, there are certain limitations in generalizing from the findings in these states to the country as a whole. Nevertheless, it is likely that these findings are applicable, at least in part, to the majority of states.

FOOTNOTES

[1] *Serrano v. Priest*, 487 p.2d 1241 (1971)

[2] Most states also have categorical aid programs, but these generally amount to only a small proportion of total state aid to education.

[3] The formulas of some states also include sparsity or density factors.

[4] National Education Association, Research Division. *Rankings of the States, 1970.* Research Report 1970-R1. Washington, D.C.: the Association, 1970. p. 59, Table 113.

[5] Where data were not provided directly by the state in terms of ADA, they were converted to this unit to allow for interstate comparisons. Where relevant, data were weighted by the size of school district ADA. This means that a large district was given more "weight" in calculating a state-wide average than a small district.

[6] Because of the county school district administrative structure in North Carolina, none of its school districts can be considered suburban.

[7] Data were derived from adjusted gross income data obtained from federal personal income tax returns for 1966.

Toward a National Framework for Federal Aid to Higher Education

Mel D. Orwig

SEVEN MONTHS after *Serrano*, at a conference on educational finance for persons concerned mainly with elementary and secondary education, it is perhaps surprising to see a program on the finance of higher education. Those of us who have been observing the maneuvering and debate of the issues related to financing higher education over the past two years have been inclined to view this period as turbulent, at times chaotic, but always crucial. Compared with the implications and aftermath of *Serrano*, however, our problems threaten to disappear into the shadows. Indeed, I feel somewhat akin to Senator McGovern or Senator Muskie who, while vying for voter attention in New Hamphsire, had to compete with the daily three-hour China travelogue covered by the elite of the country's press corps and purveyed during prime time on each of the major networks.

This is unfortunate. Not because *Serrano* is directed to an unimportant problem in the finance of elementary and secondary education, but because institutions of higher education, and students and their parents are experiencing severe financial problems. Even though tuition has increased much faster than the cost of living during the past 10 years, it still represents only 24 percent of educational and general revenue. Even though private philanthropy has increased significantly the amount it contributes to higher education, it represents a declining proportion. And even though state and federal governments have vastly expanded the resources provided to higher education, institutions find it increasingly difficult to balance the budget. Finally, though the standard of living continues to increase, the cost to the student and his family increases at a much faster rate.

It should be pointed out, however, that in many respects the crisis in the finance of higher education is unique. It is unlike that ever faced by any country. It does not derive from an inability or an unwillingness to provide the resources to educate the most able portion of society. Nor, for that matter, does it derive from an inability to provide a higher educational opportunity for the ma-

jority of high-school graduates. Rather, the crisis has developed as the country attempts to make the opportunity for higher education universally available by, among other things, removing the financial barrier as an obstacle to postsecondary education. That commitment is echoed in President Nixon's first message on higher education: "No qualified student who wants to go to college should be barred by lack of money. That has long been a great American goal; I propose that we achieve it now."

Unfortunately, however, Americans are finding universal higher education exceedingly expensive. It is expensive not only in terms of the mounting total costs, but also in terms of the increasing cost of educating an individual student. From 1957 to 1967 the cost of higher education increased from $5.2 billion to $17.2 billion, an increase of 231 percent.[1] Enrollment during this same period more than doubled—from 3.0 million to 6.3 million—so that much of this increase was due to expanding enrollment. But on a per-student basis the average cost of education increased from $1,700 to $2,700 so that it cost $1,000 more to educate a student in 1967 that it did in 1957.

A variety of factors contributed to the rising cost per student, including rising faculty salaries, needed capital expansion, expansion of more expensive graduate education, and a general inflationary trend. Machlup, however, points out that the reasons for the rising costs in higher education are more basic than an inflationary economy:

> The continual increase in costs is the inevitable result of two facts: (1) economic growth, that is, increasing productivity per worker in the production of physical goods and services, and (2) absence of technological improvement in the provision of education. If the technology of education remains unchanged—so that no more students than now can be taught per teacher—the cost of education per student must increase in perpetuity, and the rate of increase will vary directly with the rate of economic growth.[2]

It is not surprising, therefore, to find that although enrollment is projected to increase by 50 percent to 9 million students by 1976, the cost of higher education is projected to increase by over 120 percent to $41 billion in the same time period.[3] These projections, then, are the heart of the financial crisis, and the projections have produced a variety of responses most of which propose increased governmental support of higher education.

At the same time, however, governments are faced with competing cost pressures. Even though the costs of higher education are projected to be only 3 percent of the Gross National Product by 1976,[4] it is increasingly realized that the country cannot have more higher education without having fewer autos, fewer trips to the moon, less public housing, less money invested in elementary

and secondary education, and so forth. Unpleasant though it is, intuition tells us that a dollar invested in higher education is a dollar that cannot be invested elsewhere, and economic analysis provides a framework for evaluating the alternative investment decisions. Thus, the economist's response to the theme of this conference—Education: Who Benefits? Who Pays?—is the investment model. Even though the majority of higher education occurs in the public sector, the cost pressures are causing higher education to be increasingly regarded as a private good that must compete with other private and public goods for scarce resources.

A central concern in economics is how a system can be established with the correct incentives so that individuals acting in their own interest pursue a course of action that benefits the total society. Thus, the investment model suggests that an individual will enroll in college if the present value of the expected benefits (both monetary and nonmonetary, such as increased social, cultural, and intellectual interests) resulting from the education exceeds the present cost of the education (both monetary costs, in the form of tuition, fees, etc., and opportunity costs in the form of income foregone while enrolled in college). The role of a public subsidy then, is to adjust this equation to offset factors not included in the equation; such as benefits which accrue to the society that are in addition to those derived by the individual who goes to college (e.g., providing a more intelligent and better informed electorate).[6] The effect of the public subsidy is to reduce the cost of the education to students, thereby encouraging a greater number of students to participate in higher education than would do so without the subsidy. The important concept, however, is pointed out by Hausman:

> Fundamental to any decision about who should pay for higher education is the recognition that *society, as a whole, does nothing for an individual as an individual. Nor should it. What is done for the individual by society is done only as it is perceived to be necessary or beneficial to society as a whole.*[7]

A Complex System of Support for Higher Education

Before examining the implications of the investment model, it will be useful to review briefly the present system of higher education and the complex mechanism that has evolved to provide financial support. The sources of funds are many, the manner in which they are distributed and their uses are varied, and the institutions they support are diverse.

Table 1 shows the sources of educational and general revenues for institutions of higher education in 1967-68. Although the major source of revenue for all higher education is state governments

TABLE 1.—EDUCATIONAL AND GENERAL REVENUE OF INSTITUTIONS OF HIGHER EDUCATION, BY CONTROL AND BY SOURCE, 1967-68
(Amounts in thousands of dollars)

Source	Public and private		Public		Private	
	Amount	Percent	Amount	Percent	Amount	Percent
1	2	3	4	5	6	7
Tuition and fees from students	$ 3,393,602	24.4	$1,209,328	13.9	$2,184,274	41.9
Federal government	3,363,140	24.2	1,853,562	21.3	1,509,578	28.9
Research	(2,383,293)	(17.1)	(1,120,331)	(12.9)	(1,262,962)	(24.2)
Other revenue	(979,847)	(7.0)	733,231)	(8.4)	(246,616)	(4.7)
State governments	4,219,668	30.3	4,153,409	47.7	66,259	1.3
Local governments	503,661	3.6	482,576	5.5	21,085	0.4
Endowment earnings	364,046	2.6	35,842	0.4	328,205	6.3
Private gifts and grants	553,352	4.0	58,598	0.7	494,754	9.5
Other	1,522,284	10.9	913,678	10.5	608,606	11.7
Total	$13,919,754	100.0	$8,706,993	100.0	$5,212,762	100.0

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Education. *Digest of Educational Statistics, 1970.* Washington, D.C.: Government Printing Office, September 1970. p. 92.

(30.3 percent), no one source dominates all others. Tuition (24.4 percent) from students and the federal government (24.1 percent) are also important sources of revenue. Other identifiable sources include local governments, earnings from endowments, and private philanthropy from individuals, foundations, and private business.

Table 1 also shows that the relative distribution of these funds among different types of institutions is even more diverse than the sources. Thus, at private institutions student fees, endowment earnings, and private philanthropy are much more important fund sources than at public institutions where the revenue from state governments dominates. And when the eligible uses of the various funds are considered, the situation becomes even more complex. At both private and public institutions, for example, the vast majority of federal revenue is for research; i.e., it is project aid. As a consequence, these restricted funds contribute only indirectly to the undergraduate teaching mission of the institution by providing graduate research and teaching assistants, through the overhead funds connected with the projects, and by providing the faculty an opportunity to upgrade their skills. A small proportion of the revenue from state governments and much of the aid from private philanthropy, particularly foundations, is similarly restricted. The result is that the major source of unrestricted funds for undergraduate instruction at public institutions is state revenue and at private institutions it is student tuition.

In a sense, therefore, the relative role of tuition is a function of alternative sources of funds. At private vocational-technical institutes tuition charges may represent 100 percent of the cost of instruction; at private colleges and universities tuition may represent from 40 percent to 80 percent of the cost of undergraduate education; and at public institutions tuition charges vary from nothing at many public junior colleges to over 60-70 percent of the cost of instruction at public institutions in Vermont (which, incidentally, also has the largest per-capita state scholarship program in the country). It is against this background of a complex financial structure, varying as it does by institution, by sector, and by state, that any consideration of the finance of higher education must occur. Seldom does any one proposal address all aspects of the current and projected future financial crisis.

The Role of Tuition

Implicitly, if not explicitly, the debate in recent years about alternative strategies for financing higher education has been concerned with the role of tuition at public institutions. Should tuition be increased to a point more closely approximating the cost of providing a higher education? Or should public institutions con-

tinue their historic tradition of providing education at low tuition? Related to this are questions about the role of grants to students, the role of student loans, and the form of direct institutional assistance.

The debate, then, focuses on the outcomes of the investment model that was mentioned earlier. Do the benefits of higher education accrue mainly to the individual or do they accrue primarily to society? The evidence, although mounting, is inconclusive, as described by Bowen. There are two kinds of people, he points out, who will be disappointed by efforts to assess the economic contribution of education, "those who have already reached a firm conclusion as to what ought to be done without educational spending and who are looking for conclusive 'proof' to support their point of view" and "those who have an entirely open mind on the subject and are looking for purely 'scientific' evidence that will settle the matter one way or another."[8]

Evidence supports the existence of both substantial private benefits[9] and considerable social benefits.[10] Typically, those who are impressed with the private benefits to the individual are interested in a public subsidy of institutions of higher education only as a last resort and then only in the form of aid to students. The most efficient financial strategy, they maintain, is for institutions to set tuition at the full cost of providing the education so that the student can make a rational decision about the true costs of the education compared with the expected benefits. Those who find social benefits of greater magnitude counter that such a procedure will result in too few students enrolling in higher education, resulting in a loss to society that is greater than the governmental subsidies provided to colleges and universities. Thus, they favor increased public support of higher education and tend to be more favorably disposed to the direct support of institutions than to the increased financial support of students.[11]

Unfortunately we seemed to be stalled, balanced between an institution-oriented and a student-oriented strategy. With an institution-oriented strategy emphasis would be given to institutional flexibility, direct aid to the institution would be increased, and tuition would be kept low. A student-oriented strategy would increase aid to higher education via increased student aid rather than direct institutional aid. Institutions would then be forced to raise their tuition to gain needed revenue, student fees would become a larger proportion of institutional revenue, and, so it is argued, institutions would become more responsive to the students. The procedure would also tend to minimize the gap between tuition at private colleges and tuition at public colleges. But in the absence of evidence that convincingly supports one point of view to the

exclusion of the other, no policy framework has emerged. Thus, institutional aid increases slightly but not as fast as costs, tuition is consequently raised incrementally each year, student aid is increased slightly but not in proportion to the tuition increase, and higher education becomes more difficult for the individual family to finance.

Two interesting proposals that attempted to deal with this apparent dichotomy are the Pell Bill for higher education, that was passed by the Senate, and the Wisconsin Plan as proposed by Hansen and Weisbrod. Proposals for federal unrestricted direct aid to institutions of higher education have been before the Congress for many years, and this concept has won endorsement from most of the higher education associations. As a consequence, a considerable and powerful lobby has evolved in support of direct federal institutional aid. But despite the fact that several student aid bills have been passed by the Congress, they have never been even close to being fully funded, and they appear to have no strong, organized lobby supporting them.[12] The Pell Bill is written partially in reaction to this situation by tying the delivery of institutional aid to the funding of student aid. Thus, the law is written in such a way that no funds can be appropriated for direct aid to institutions *until* the student aid provisions contained in the bill are fully funded. The net effect of the bill, were it to become law, would be to force the leaders of higher education to lobby strongly for student aid in order to win the direct institutional aid that they have sought so long.

Another strategy that has gained widespread attention is the Wisconsin proposal that was authored by two University of Wisconsin economists, Hansen and Weisbrod.[13] Their proposal was based in part on their study of public higher education in California[14] in which they compared the income distribution of students in California junior colleges, state colleges, and universities with the per-student subsidy granted by the state to students at these three types of institutions. Hansen and Weisbrod found that although the highest per-student public subsidy went to students at the state colleges and universities, low-income students were concentrated in the public junior colleges. Based on this finding, the authors concluded that the system of financing higher education in California was regressive, that the poor were subsidizing the education of the rich.

It was in this context that the Wisconsin proposal was developed. This proposal would have tuition at public institutions increase to an amount approximating the average cost of undergraduate instruction at public institutions. The state revenue that was used by the institutions to keep tuition below cost would instead

be channeled into a student grant program. Students would then receive grants to attend institutions in Wisconsin with the amount of the grant a function of the student's financial need–the difference between the amount the student and the parent could provide and the cost of going to college.

Under this program students from high-income families who could not demonstrate financial need would find that they were forced to pay more for higher education because tuition had increased significantly, whereas low-income students would be paying less at public institutions because they would receive grants for the full cost of college if they met the criteria for financial need. The authors demonstrated that even if nominal $300 grants were given to all students in addition to the need-based awards, under their proposal the state of Wisconsin would save tax dollars that they were currently spending on public higher education while at the same time financing higher education on a more equitable basis. Although this proposal has not yet been enacted in Wisconsin, and perhaps never will be, it has received widespread attention and serious consideration among many other states.

Toward a Policy Framework

The problem, then, is to develop a financial strategy that will provide a framework for addressing the diverse problems among the states. The proposal discussed below outlines one approach that might help to accomplish this.

The proposal assumes that additional resources are needed for higher education to help alleviate the financial pressures of institutions, to help ease the fiscal burden of the states, and to help parents and students meet the rising costs.[15] My comments are based on a recognition of the complex financial structure that currently exists, varying as it does by sector, type of institution, region of the country, and within individual states. Implicit in my remarks is the belief that any federal program that speaks directly to the funding of institutions will successfully meet some of the financial problems in some of the institutions in some of the states, but that it will not solve many of the problems and it will not provide the flexibility to the states to enable them to deal with the remaining problems. The fundamental premise, therefore, is that the federal strategy should attempt to deal with problems of national concern while responding to the needs of the individual states; that is, to enable each state to find its own solution to the financial crisis that it is experiencing. My proposal is not designed to provide immediate solutions to all concerned, but rather to provide a framework for the evolutionary development of a workable structure over the next decade.

It assumes the continuation of the present federal categorical or project aid to higher education which, for the most part, can be construed as directed toward the development of programs in the national interest rather than to the finance of higher education. Further, it does not address the problem of capital expansion, although based on observation of the last decade, one might hypothesize a reverse of Say's Law in operation in higher education; i.e., that demand creates its own supply.[16]

The first step would be to provide federal grants to students, based on their ability to pay as measured by the student and his parent's financial resources. The maximum federal grant would be equal to the average cost for room, board, books and supplies, and other incidental living expenses (approximately $1,500 per year in 1971). The actual grant received by the individual student, however, would be equal to this amount minus the amount of money he and his family could reasonably be expected to provide. In other words, the grant would be based on the student's financial need. This basic grant would be guaranteed for the first two years to all students eligible for higher education, including vocational-technical education. The basic grant would be reduced in amount for juniors and seniors and would be eliminated for graduate students.

The second step would be to establish a national contingent loan program from which any student could borrow to supplement the basic grant. Under a contingent loan program the amount the student is required to pay back each year is a function of the amount he earns during the same year. Most proposals suggest a payback of 0.5 to 1.0 percent of annual income per thousand dollars borrowed extending over a period of 25-30 years. Students who experience above-average earnings pay back more than they borrowed, and those who have a below-average income over the period of the loan would pay back less than they borrowed. These loans would be used to supplement the basic grants provided by the federal government, by students who wish to go to private institutions, by upperclassmen who will receive a reduced basic grant, and by graduate students.

The question occurs as to why the basic grant is reduced for upperclassmen and eliminated for graduate students. The reason is that as a student progresses in higher education, he becomes more knowledgeable about his chances in successive years of college and more knowledgeable about his career choice and the income he is likely to earn. Thus, he can more rationally assess the benefits to be derived from continuing his education, and by reducing the subsidy or eliminating it in the case of graduate students, the student will have a more accurate cost figure against which to

judge the benefits. Thus, if the individual student expects the benefits to exceed the costs, he will borrow money to continue his education.

As mentioned earlier, however, the individual decisions of students may not result in the optimal mix for society. It may be desirable to encourage entry into, or education for, some occupations that are short of manpower. This would be accomplished by reducing or eliminating the payback rate for students entering the needed occupations which would tend to attract students to these occupations or to pursue educational careers that would lead them into the occupations. It is important, however, that only the principle and the authority be written into the law and not the specific occupations. Otherwise, we will have a replication of the teacher forgiveness clause in the National Defense Education Act where the incentive remains in spite of a growing surplus of teachers. Without being prescriptive about how to build this provision into the loan program, one approach might be to establish a semi-autonomous National Higher Education Incentive Commission with the authority both to recommend and remove subsidies for specific occupational categories or academic programs. Although the Commission could only recommend that Congress appropriate the funds for the subsidy (these funds would be paid to the loan fund to keep it solvent), it would have the authority to eliminate subsidies in the loan program when it was appropriate to do so.

The third step would be to establish a grant program to the states specifically reserved for higher education. Implicitly these grants would cover the tuition costs not covered in the basic grants although they would also serve to ease the fiscal burden faced by states and the financial crisis faced by institutions within the states. The only restriction on these grant funds would be that they not be used for capital expansion or for supplementary services. Each state would adapt these funds to the higher educational structure and financial problems that exist in the state. Some states, for example, would use the funds to increase the direct aid provided to the public institutions, thereby enabling them to lower tuition charges or maintain them at their present levels. Others might establish an institutional aid program for private institutions or they might establish or expand an already existing tuition equalization program by providing scholarships to students who attend private institutions. Still other states might move toward a system similar to the one proposed for Wisconsin by increasing tuition at public institutions to a level approaching the cost of instruction and using federal grant money to the states in a need-based student aid program to supplement the federal basic grant to students. The advantage of granting these funds to the

states rather than directly to the institutions is that the states would retain flexibility and control over the organization of higher education.

The fourth step would be to provide cost-of-education grants directly to institutions, similar to those recommended by the Carnegie Commission or included in the Pell Bill, based on the number of low-income students that an institution enrolls. The small proportion of low-income students enrolling and persisting in higher education is a problem of national concern and, as a consequence, is a responsibility that is appropriately shared by the federal government. The effect of these grants would be to provide institutions with increased general operating funds which could be used to upgrade the quality of their programs, to provide special programs for low-income students, or to hold the line on tuition increases. This program would also provide an incentive to institutions to actively recruit low-income students and provide for their continued education, thereby increasing the proportion who are enrolled and, more important, the number who graduate.

In summary, it should be pointed out that although the proposal outlined above was discussed in terms of four separate programs, it is more appropriately viewed as four interrelated components of a single program. Each component compliments the others, and it is their interdependence that provides the necessary framework. A contingent loan program without the basic grant program would undermine efforts to increase the proportion of low-income students enrolling in higher education. Thus, the federal basic grant program evolves out of the social goal to equalize educational opportunity by providing resources directly to the student. The cost-of-education allowances represent a further expression of this goal by providing an incentive to institutions to enroll low-income students and by providing resources directly to the institutions to enable them to adapt to the special educational needs of these students. The contingent loan program would provide a supplementary source of funds that would provide a broader range of choice to students and would enable them to continue their education beyond the bachelor's degree level. Finally, the direct aid to state governments would recognize the different financial structures that already exist, and it would recognize that each state has different financial needs and different political constituencies that will affect how these needs should be addressed. Together these four components of a federal program for financing higher education would provide a framework for the orderly development of different financial structures in the individual states.

FOOTNOTES

[1]Carnegie Commission on Higher Education. *Quality and Equality: New Levels of Federal Responsibility for Higher Education.* New York: McGraw-Hill Book Co., 1968. p. 3.

[2] Machlup, Fritz. *Education and Economic Growth.* Lincoln: University of Nebraska Press, 1970. p. 95.

[3]Carnegie Commission, *op. cit.*, p. 5.

[4]*Ibid.*, p. 6.

[5]Howard Bowen has provided a taxonomy of the social benefits of higher education in: "Finance and the Aims of American Higher Education." *Financing Higher Education: Alternatives for the Federal Government.* (Edited by M. D. Orwig.) Iowa City, Iowa: American College Testing Program, 1971. p. 155-70.

[6]For a discussion of this issue see: Singer, Neil, and Feldman, Paul. "Criteria for Public Investment in Higher Education." *The Economics and Financing of Higher Education in the United States.* Washington, D.C.: Government Printing Office, 1969. p. 124-34.

[7]Hausman, Louis. "Pressures, Benefits, and Options." *Universal Higher Education: Costs and Benefits.* Washington, D.C.: American Council on Education, 1971. p. 13.

[8]Bowen, William G. *Economic Aspects of Education.* Princeton, N.J.: Princeton University, 1964. p. 37.

[9]Becker, Gary S. *Human Capital.* New York: National Bureau of Economic Research, Columbia University Press, 1964. 187 p.

[10]See: Bowen, Howard. *op. cit.*, for a discussion of this issue.

[11]See: Orwig, Mel D. "The Federal Government and the Finance of Higher Education." *Financing Higher Education: Alternatives for the Federal Government.* (Edited by M. D. Orwig.) Iowa City, Iowa: American College Testing Program, 1971. p. 331-360.

[12]For a discussion of how the political process affects higher education legislation see: Mallan, John P. "Current Proposals for Federal Aid to Higher Education: Some Political Implications." *Financing Higher Education: Alternatives for the Federal Government.* (Edited by M. D. Orwig.) Iowa City, Iowa: American College Testing Program, 1971. p. 303-30.

[13] Hansen, W. Lee, and Weisbrod, Burton A. "A New Approach to Higher Education Finance.." *Financing Higher Education: Alternatives for the Federal Government.* (Edited by M. D. Orwig.) Iowa City, Iowa: American College Testing Program, 1971. p. 117-42.

[14]Hansen, W. Lee, and Weisbrod, Burton A. *Benefits, Costs, and Finance of Public Higher Education.* Chicago: Markham Publishing Co., 1969. 114 p.

[15]The financial crisis in higher education and the need for additional revenue is described in: Cheit, Earl F. *The New Depression in Higher Education.* New York: McGraw-Hill Book Co., 1971.

[16]Miller, Leonard S. *Demand for Higher Education in the United States.* Working Paper No. 34. Stony Brook, N.Y.: Economics Research Bureau, State University of New York, 1971. p. 26.

Schools and the Bond Market: Present and Proposed Federal and State Programs

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OVER THE PAST DECADE school capital outlay expenditures have increased by 43.5 percent. Between 1960-61 and 1968-69, over 450,000 additional classrooms were constructed, an average net addition of some 50,000 classrooms per year. Outstanding school indebtedness reached $28.1 billion in 1967-68, and projections of school capital needs indicate $5 billion per year in capital outlay through 1979.

Given the expansiveness of school indebtedness in the post-war period, and the steady over-all performance of the municipal bond market in buying up over $20 billion in municipal securities since 1967, it might be expected that a considerable portion of educational capital needs would be met by existing market institutions. Nonetheless, several facts point to the conclusion that the bond market is becoming relatively less important in meeting school capital needs. In 1950, for example, 84.2 percent of all school capital outlay was derived from bond sales; by 1969, this percentage had decreased to 61.8 percent. By the latter date, considerably more educational capital financing was coming from current taxation and short-term borrowing.

Related to this phenomenon has been the ever-increasing interest rates on municipal bonds. In 1950, average interest rates on municipal bonds ranged from 1.42 percent for Aaa bonds to 2.17 percent for Baa bonds. By 1970, these interest rates had risen to 6.50 and 7.23 percent, respectively. Consequently, school debt interest payments increased at a 50 percent greater rate than school capital outlays between 1961 and 1971. The increasing burden of interest payments may be at least one of the factors behind the defeat of close to half of all school bond issues in calendar years 1969 and 1970.

State and Federal Programs for School Capital Facilities

Several states, as well as the federal government, provide grant-in-aid programs to assist local school districts in financing their capital facility programs.

State Involvement—As of 1968-69, 26 states had enacted grant-in-aid programs for local school district capital outlays, and 17 of these states permitted these grants to be used for the offset of debt service expenditures. Another state—New Hampshire—permitted state grants to be used for the repayment of bond principal only. Total state grants of this nature totalled $632.9 million in 1968-69.[1]

Some 14 states have capital loan programs whereby they provide low-interest loans to selected school districts. Indeed, no interest rates were stipulated in California, Illinois, Ohio, and Wyoming. California further modifies its local program by forgiving payment of part of the principal. Consequently, California's program partakes of a partial grant-in-aid character. Total loans in the 14 states under consideration totalled $93 million in 1968-69. Two states—Indiana and North Carolina—had both operating grant and loan programs in 1968-69.

Two additional states—Maryland and Hawaii—assume all costs of school construction, and one state, Vermont, has adopted an Urbank law. Five or six other states appear on the verge of adopting a law similar to that in Vermont.

Federal Involvement—The National Educational Finance Project report on financing capital facilities for schools indicates that federal support for school construction is of a limited, special-purpose nature. Capital grants under PL 815 are available only to selected "impacted" districts. Other minor capital aid flows come through the National Defense Education, Elementary and Secondary Education, and Model Cities Acts.

While direct federal grants and loans play a negligible part in state and local school bonding, the tax-exempt status of municipal bonds represents an annual interest subsidy of $1.3 to $2.0 billion per year. Since school bonds generally comprise one-fourth of all annual issues, an indirect federal aid flow of about $300 to $500 million could occur in school financing.

Over-all Patterns of Support—Total state support of school bond issues in 1968-69 came to about $726 million in the form of grants and low interest loans. Federal support in the form of indirect aid through tax exemptions on municipal bonds ran anywhere from $300-500 million. State support, then, comprised about 24 percent of new bond issues in 1968-69. Indirect federal support accounted for a subsidy on the order of 10-17 percent. In sum, total external support was at a level of 35-42 percent of school bond issues in 1968-69.

State support in school construction costs ranged from 100 percent in Hawaii and Maryland to nothing in 14 states, most of which were in the Southwest, Central, and Rocky Mountain por-

tions of the country. States with relatively high levels of support included Arkansas, Connecticut, Indiana, and Virginia. Low support states were Michigan, Minnesota, Ohio, and West Virginia.

Reasons for Broadening the Bond Market

Despite these programs of outside financial assistance, the major source of local funds for school capital facilities is the local school district, and the prime source of these funds is the municipal bond market. Increasingly, however, there has been concern to broaden the access of state and local governments to this market for several distinct reasons. Among the most frequently heard are (a) the composition of present bond holders, (b) the differential access of jurisdictions to the market, (c) the state restrictions on local indebtedness, (d) the quality of bond rating systems, and (e) the recent Constitutional questions about the equity of present bonding practices.

Composition of the Market—The tax-exempt status of municipal bonds has been a key attraction to both high-tax bracket individuals and commerical banks who desire a tax shelter for some of their investments. This attractiveness has led to a situation where, by 1969, well over 90 percent of all municipal securities were in the hands of high-tax bracket individuals, commerical banks, and insurance companies. While the tax-exempt feature of municipal bonds has diverted capital funds into municipal securities that might otherwise have gone elsewhere, the lower interest rates on municipals as a result of tax exemption is not without its drawbacks. Morris,[2] for instance, notes that commerical banks regularly purchase considerable amounts of municipals in easy money periods, yet the onset of tight money conditions brings about sharp and rapid decreases in municipal bond purchases. Witness the fact that commerical banks bought 70 percent of all new securities in 1968 and only 17 percent in 1969. As a result of this volatile behavior of commerical banks—who are the key participants in the municipal bond market and also peculiarly vulnerable to Federal Reserve Board decisions on monetary policy—the entire municipal bond market is subject to relatively wide cyclical swings in interest rates.

Another concern relates to the high-tax bracket holder of municipal bonds. While the tax-exempt feature of municipals is an inducement for such investors to participate in the market, it is also true that the savings to state and local governments in reduced interest rates is exceeded by the revenue loss to the federal government.[3] Since that is the case, it seems preferable, on the grounds of efficiency alone, to tax municipals and return an interest sub-

sidy of state and local governments from this new source of revenue.

The narrow composition of the market, then, creates problems for school bonding. Commercial banks, after all, are in business to make loans; they use their "residual" funds to purchase municipal bonds. In periods of tight money, banks can be expected to sell off their bond holdings while easy money periods, when reserves are more plentiful, find banks aggressive purchasers. To some extent, the swings induced by the commercial banks' participation in the municipal bond market is offset by compensating, but not equal, swings on the part of private investors. Nonetheless, in periods of both tight and easy money the lost tax revenue to the federal government could have supplied a bigger capital pool for local bonds, if provided in a more efficient manner.

State Restrictions on School Debt—Most states levy some type of restriction on school indebtedness. Currently, 37 states place ceilings on the maximum interest rates that school bonds may bear. In 22 cases, school bond interest rates cannot exceed 6 percent even though Aaa bond issues in December 1969 commanded an average effective interest rate of 6.5 percent. Forty-nine states place limits on the aggregate amount of indebtedness that a school district can incur. Three states limit the amount of taxes that can be incurred for debt service, and 14 have requirements for extraordinary majorities in bond referenda.

These debt restrictions are clearly not examples of progressive state-local fiscal relations. Yet, they do represent an expression of genuine public opinion about the desired interest rates at which public capital outlays should be financed. When the market experiences sharp alterations as in 1968-69, interest rates may reach new highs on a temporary basis, but the effective rates suddenly bar local governments from the market and force them to more expensive means of financing. The NEFP report on school capital financing, for example, states that in 1968-69, revenue bonds were used for over 80 percent of school financing in Indiana, Kentucky, and Pennsylvania even though rates on such instruments were one-quarter to one-half percentage point higher than on general obligation bonds.

Random Quality on Bond Rating Systems—The major way of evaluating municipal bonds is through a commercial rating system. Recently, however, the utility of this rating system has been questioned. First, there is the question of the necessity of the ratings. In the post-war period there have been few, if any, defaults on school bonds. Ratings of bond quality, however, are frequently justified as an indication of the probability of default. This in-

TABLE 1.—MULTIPLE REGRESSION EQUATION OF VIRGINIA SCHOOL DISTRICT BOND QUALITY, 1970

Dependent variable: school district bond rating[a]

Independent variable	Regression coefficient	Standard error	Beta	"F" statistic
1	2	3	4	5
True school tax rate	61.72	15.10	.515	16.71*
Per-pupil property value	.001	.003	.127	1.25
Per-capita school indebtedness	—.08	.07	—.155	1.26
Debt service as a percent of total school budget ...	96.42	113.81	.111	.72
Pupil enrollment (000)	.0001	.0002	.031	.06
Multiple R for total equation	= .50159			
R^2	= .25159			
Multiple "F" for equation	= 4.17†			

[a]Bond ratings converted to "z" scores.
*Significant at the .01 level.
†Significant at the .05 level.

congruous situation has led one analyst to observe that such ratings, therefore, are "largely untested as an indicator of prospective [bond] quality."[4]

The nonsystematic and nonmechanistic qualities of bond ratings pose serious problems for school bonding. As Hempel has observed, the almost random character of ratings means that they are not subject to control by local jurisdictions and there is also no assurance that ratings will be consistent over time.[5] Both factors, then, may create windfalls for undeserving districts and undue hardships for school units that are in urgent need of lower interest rates.

To determine whether there were identifiable fiscal and demographic characteristics associated with bond ratings, a multiple regression analysis was performed for a stratified random sample of 68 Virginia school districts. The results of this analysis serve to bear out the lack of systematic relationships between bond ratings and selected school district characteristics. Of the five independent variables used, only one, effective school tax rate, was significantly associated with bond ratings. Moreover, the total regression equation explained only 25 percent of the variation in ratings. Variables, such as fiscal capacity, level of school indebtedness, debt service burden, and enrollment size, were not found to be significantly related to ratings. (See Tables 1 and 2.)

Bond rating systems may create unwarranted hardships for selected school districts. Certainly a system which places a Baa rating on bonds offered by Fairfax County, a high-income suburban growth jurisdiction, and Tazewell County, a low-income, rural area, leaves something to be desired.

TABLE 2.—SELECTED CHARACTERISTICS OF VIRGINIA SCHOOL DISTRICT BOND QUALITY CATEGORIES

Independent variable-mean value	Aaa 3	Aa (7) districts	A (32)	Baa and unrated (26)
1	2	3	4	5
Enrollment size	21,073	19,028	11,797	7,889
Per-capita indebtedness ..	$104	$83	$108	$84
Per-pupil capacity	$37,465	$28,153	$29,342	$29,982
True value school tax rate	1.34%	1.23%	1.09%	.92%
Debt service as percent of school budget	5.1%	7.4%	7.3%	6.0%

Differential Access to the Market—In general, it may be that smaller jurisdictions in particular have poor access to the municipal bond market. The small size of the issues of these jurisdictions, lack of managerial experience, and the absence of ratings for small issues all can combine to effectively bar the small jurisdiction from the market. Consequently, this type of jurisdiction has a limited capital pool from which to borrow. As a result, the jurisdiction may have to pay higher interest rates than its fiscal resources would in fact warrant.

In a similar manner, selected jurisdictions, because of low bond ratings, debt restrictions, and the like, may find their access to market impaired. In their case, access comes at too high a price and bond needs might be postponed or financed on a short-term or current basis. Reliance on these latter alternatives, however, creates the situation of (a) potential fiscal mismanagement or (b) denial of critical capital financing needs.

Constitutional Questions About the Bond Market—Successful court cases overturning school finance systems have occurred in four states–California, Minnesota, New Jersey, and Texas. All, to one degree or another, rely on the dictum that "the level of spending for a child's education may not be a function of wealth other than the wealth of the state as a whole."[6] These rulings dictate that fiscal neutrality be exercised in school finance systems, that is, that there be a one-to-one relationship between local school tax rates and resultant school expenditures.

Only the New Jersey case refers to this constitutional issue as it relates to bonding. Ruling that the state-local fiscal system in that state must be revised, the court held that this decision would not invalidate past or future obligations incurred under existing school and tax laws.[7] Until the system is changed, bond operations can continue as usual in New Jersey at least. The rulings in the other affected states were not explicit on this matter. Consequently, there is confusion in those areas about the legality of present operations.

It seems likely that changes in operating finances brought about by these cases will also ultimately affect capital financing. The probable outcome, therefore, would not be to prevent local districts from participating in the bond market but rather to increase state activity in providing interest rate subsidies to create a condition of fiscal neutrality between local taxes and debt service payments.

Issues in Broadening the Municipal Bond Market

Advantages of the Present System—It will be acutely apparent to anyone who followed the tax reform developments of 1969

that any proposal to broaden the access of state and local governments to the capital markets bears the burden of proving itself. While the 1969 experience, at least the early experience, was somewhat clouded with the specter of applying the federal income tax to interest-income derived from state and local security issues, subsequent discussion makes amply clear that the present system of bond finance has several features which state and local officials find extremely advantageous.

To begin with, it usually comes as a surprise to hear that general revenue sharing is not only a new intergovernmental fiscal technique but one that in fact has been inherent in the federal system since the federal income tax was initially adopted. Such, however, is the case. Since the interest income of state and local securities is exempt from the federal income tax, state and local officials have been receiving "federal aid" in the form of lower interest rates they must pay to sell their securities. While there is much controversy concerning the efficiency of the federal subsidy and its effect on the progressivity of the federal income tax, there is unanimous agreement that interest rates on tax-exempt securities are lower because of their exemption from the federal levy. Needless to say, these lower borrowing costs are one feature of the present system that state and local officials find attractive, particularly in times, such as today, when fiscal stringency at sub-national governmental levels has become a common theme.

The analogy with general revenue sharing, however, carries further than the financial assistance dimension. Indeed, if state and local officials like the amount of this federal assistance—somewhere in the neighborhood of $2 billion annually—they are equally pleased with the form this assistance takes. Like general revenue sharing, the federal aid received by the present bonding system is also unconditional in nature—there are no federal strings attached. Thus, any state and local official can issue a general obligation bond of any amount and for any purpose and receive the federal financial assistance in the form of lower borrowing costs.

Inherent in this situation is perhaps the single most appealing feature to state and local officials. Stated simply, but accurately, there are no federal controls. The initiative for issuing a new security lies solely with state and local policy-makers. There is no federal bureaucracy to supervise, regulate, or approve any aspect of the bond issue.

Because of these three critical pluses of the present system, state and local officials can be expected to view any proposed alternative largely in the light of its effects on these issues.

Adequacy of the Tax-Exempt Market: Past and Future—Of late, however, state and local officials have increasingly been hear-

ing that the present system of bond finance will not be able to handle the likely volume of new issues. In a technical sense, this is not true since all markets are cleared, at some price. In terms of the municipal bond market, of course, the price is the rate of interest that must be paid. The real issue, then, is not whether the market can handle the future demands of state and local governments for long-term finance, but whether the price that has to be paid for such finance will permit or prohibit socially useful projects to be undertaken.

Substantial evidence supports the view that the tax-free market difficulties of 1969 were more than a one-time aberration owing, in whole or in large part, to the tax reform scare. A long-run view of the future reveals factors that signal increased competition for long-term money. From their present $30 billion annual level, state and local capital facility requirements are projected to rise further to the $40 to $50 billion level by 1975. At the same time, savings and investment projections point to a slackening in the rate of national savings. Coupled, these projections lead inevitably to the conclusion that rates of interest will head upward. It must be emphasized that these estimates relate to long-term or trend movements; they are not to be confused with cyclical swings—to which the municipal bond market is peculiarly exposed—even though such cyclical movements may for short periods obscure the underlying trends.

If states and localities are going to have to compete more intensively for capital funds, however, they will continue to do so from a disadvantaged position. Municipal bonds lack the "sweetner" devices available to corporations, most notably the deduction of interest costs from their tax liabilities, and without an equivalent federal commitment such as that extended to the housing sector.

Broadening the Municipal Bond Market: Alternative Approaches

Considerations such as those delineated above have led to several proposals in the recent past, all of which seek to broaden the access of state and local governments to the long-term capital markets. Although these proposals have significant differences, they all share one feature. That is, they are presented as supplements to—and not substitutes for—the present tax-exempt market. As such, state and local officials possess a powerful bargaining position since if the proposed alternative is to be used, it must be offered on terms that will induce issues to the newer marketing channel and away from the existing municipal market.

Among the various proposals that have recently been offered, three stand out as claiming the lion's share of attention and interest. One such proposal–the "double-coupon" approach–calls for direct issuance of taxable state and local bonds, with the higher interest rates (owing to their taxable status) being offset by a fixed percentage subsidy from the federal government. The intent of this proposal is to preserve, free of federal review, state and local initiative in issuing all such securities. Under this proposal, then, no new borrowing "bureaucracy" is created by any governmental level, and the discipline of the market place is retained as the federal subsidy would be applied to market-determined rates of interest. Thus, this approach meets the advantages presented by the present bond system–federal aid would be substantial and unconditional, and initiative and control would be fully retained by the state and local governmental sectors.

Issuance of taxable municipal bonds, however, would entail decisive changes in the traditional sources of state and local bond holdings. Individuals and commercial banks subject to high tax rates, while the present mainstay of municipal bonds, would undoubtedly be less interested in taxable bonds than in tax-exempts. One of the functions of a market, however, is to meet the needs of changing demand. While there is no reason to presume that the municipal bond market cannot adapt eventually to changing circumstances, the need to search out new investors indicates that some period of difficulty in selling taxable state and local bond issues would result—at least as a "one-shot" effect but for an indeterminate period of time.

A second approach to the problem involves the creation of new lending institutions (development banks) to serve as intermediaries between state and local governments and the taxable market. The mechanics of this approach is relatively simple. The authority would borrow money in the private market and use these funds to lend to state and local governments at preferential rates of interest. The differential between the interest rates at which the authority borrows and lends would be made up by a subsidy in the form of an annual federal appropriation.

Many variations can be played on this theme. For example, the authority could be directed to only urban or only rural areas, or regional areas, or only specific federal programs which is, in fact, the case with the Environmental Finance Authority, recently proposed by President Nixon and recommended by the Advisory Commission on Intergovemmental Relations.

The one variation that has been played is to apply this approach at the state, rather than the federal level. Here the example is the Vermont Urbank. In Vermont, the Bank accepts the general

obligation bonds of any political jurisdiction and receives payments from the local governments to meet debt service requirements. The state, it should be noted, is not legally obligated to support the Bank, but legislators may feel some moral obligation should the Bank encounter difficulty. Judging by its first issue ($46 million at 5.80 percent), however, the Bank operation was a success, a saving of ½ to 1 percentage point in interest.

The chief advantage of the Vermont Urbank–and the Environmental Finance Authority–is that it can package in one issue many smaller issues which otherwise face market resistance because of uncertainty or lack of knowledge of the borrower. Because of its large size and good credit rating, the Vermont Urbank offers particular advantages to small communities whose ability to tap into national bond markets is not well assured. Owing to these advantages, then, the state Urbank approach is being considered in nine additional states—Alaska, Arizona, Connecticut, Illinois, Maine, New Hampshire, New York, Tennessee, and Wisconsin.

One persistent fear, however, is that the Urbank approach, whether state or federal, will at some future time lead to increased control of local finance by an upper governmental level. On this score, then, the Urbank technique is more vulnerable than the double-coupon technique since a new bureaucratic level is created to at least review local issues and to determine their eligibility. Proponents counter that if infringements do prove too severe, potential borrowers still retain unimpeded access to the tax-exempt bond market where such controls are absent. Nonetheless, such federal proposals, calling for a subsidized lending rate to state and local governments to be made up by a Congressional appropriation, raise the question of whether this federal appropriation will be adequate to carry out the intended program objectives. If not, credit rationing among projects and governments will be necessary, further sharpening the issue of controls.

A third basic approach to broadening the access of states and localities to the capital markets would offer a federal subsidy to certain institutions that currently do not find the tax-exempt status of municipal bonds attractive (because the institutions themselves are tax-exempt). By this technique, the federal subsidy is offered only to specific institutions, such as state and local retirement funds, as opposed to the general federal subsidy offered in the direct or indirect taxable approaches. This third approach would not require any significant change from the present system of bond finance (such as the use of taxable in place of tax-exempt bonds). It would simply alter the yield on municipal securities in such a way as to attract an existing pool of financial resources to the municipal bond market.

The special difficulty of this approach, however, is to build a case for restricting the special treatment to certain claimants. Once special consideration is given for the purchase of particular securities, additional special purpose claims seem bound to emerge. Moreover, once special consideration is given to particular institutional purchasers, comparable claims from other institutions are a logical expectation.

Prognosis

As noted, the present market system does have some distinct advantages over other institutional alternatives. It frees higher-level governments from having to make onerous decisions of who should and should not receive capital funds. The market may also have the effect of screening out excess and unwarranted capital expenditure programs on the part of undeserving school districts. Further, it avoids the perils of earmarking revenue for public purposes that may be important today but not in the distant future.

It cannot be denied, however, that the market has worked imperfectly on occasion. Volatile shifts in the buying of municipal securities, rapidly increasing interest rates, and unsystematic rating systems are facts that have caused the bond market to create difficulties in school capital financing. These features of the market most surely warrant some modification.

Given the various complex pros and cons that attach to the present operation of the bond market, it is all too apparent that no clear-cut consensus has as yet emerged as to the desirability of the alternative proposals to the market system. If mounting public pressure arises for some fiscal relief from extraordinary interest rates, however, it is likely that private interest groups will throw their backing to the "double coupon" proposal of fully taxable municipals with a federal subsidy. To such groups, this proposal may be the lesser of alternative evils.

FOOTNOTES

[1] National Educational Finance Project. *Financing Public Elementary and Secondary School Facilities in the United States.* Gainesville, Fla.: the Project, 1970. Chapter V, "State Provisions for Financing Public School Facilities," p. 137-85.

[2] Morris, Frank E. "The Case for Broadening the Financial Options Open to State and Local Governments–Part II." *Financing State and Local Governments.* Boston: Federal Reserve Bank, 1970. p. 127-129.

[3] Since the bonds are sold at one price, this must be sufficiently attractive to the marginal buyer, that is, the buyer who is just

induced by the price to purchase the municipal bond. If this individual is in the 30 percent tax bracket, as has been the case recently, all other buyers at higher tax rates receive more in after tax returns than was actually necessary to induce their purchase.

[4]Hempel, George. *The Postwar Quality of State and Local Debt.* New York: National Bureau of Economic Research, 1971. p. 113.

[5]*Ibid.*, p. 106.

[6]*Van Dusartz v. Hatfield* U.S. District Court, District of Minnesota, Third Division, Memorandum and Order, No. 3-71 Civ. 243, p. 2. (October 12, 1971)

[7]*Robinson v. Cahill* Hudson County Superior Court, Docket No. L-18704-69 (January 19, 1972), p. 75.

What Have We Learned from the Performance Contracting Experiments?

Alton B. Sheridan

THE SCHOOL YEAR 1970-71 was the year of several major efforts to improve learning for disadvantaged children. These experiments were entered into with much enthusiasm and little knowledge about using incentives for the improvement of learning. By the end of the year, there was a much more sober awareness of the problems associated with learning of the disadvantaged.

As all are aware, the first attempt at Performance Contracting was the Texarkansas experience. This experiment, despite its many shortcomings and questionable procedures, indicated that a different method of teaching learners who had not succeeded in a routine school situation could be a success. As a result the Office of Economic Opportunity (OEO) decided that the idea had merit and allocated over $3 million to a large experiment designed to assess whether the performance contracting idea would really work. The OEO experiment comprised 18 school sites and six contractors with various teaching techniques. These techniques ranged from heavy use of paraprofessionals to heavy use of programmed materials. Other contractors varied the use of these teaching procedures. Most contractors attempted to use incentives to some extent. Both pupils and teachers were rewarded for the pupils' learning, but the emphasis was on pupil rewards. These rewards varied, but most were designed to be immediate and tangible. The theory, which came from Texarkansas, was that these disadvantaged children will not accept the typical deferred goal (lifetime earnings) of the middle-class child. Rather, immediate rewards would work effectively with lower-class pupils.

In addition to the OEO experiment, two others received considerable attention. The first was the state of Virginia experiment which attempted to improve reading ability in seven separate sites. Second was the Gary, Indiana, experiment which was somewhat different in that it was for three years' duration and covered all subjects in a single elementary school. It was, in fact, a contract to operate a school. It will not be discussed here.

It might be advantageous to look at the results of the experiments to date and then discuss the problems connected with this type of educational program. First, there are some real problems connected with evaluation. All of the experiments attempted to assess pupil learning by standardized achievement tests. The design was simple—just a before and after or pre-test-post-test set up. Testing, however, is the most complicated and disputed area of performance contracting. Achievement tests do not give a clear indication of a pupil's ability to perform specific tasks, but they are very helpful for determining the average or mean performance of a group of pupils. This information is helpful in assessing the relative performance of a school system compared with the national norm. However, these tests must be interpreted with caution when assessing an individual pupil's ability.

Further, the standarized tests, because they deal with the total spectrum of a subject, often do not adequately test a specific skill. As an example, in the Virginia experiment the contractor decided after assessing the pupils' deficiencies, that word attack skills were a prerequisite to improved reading performance. The teachers involved as well as the contractor were convinced that they had helped children. However, because the standardized test does not emphasize word attack, except through improved reading performance, the pupils did not show large gains or improvement. As a result, the contractor lost money on the contract. Some testing experts have suggested that testing should be of the criterion-referenced type. In this type of testing the goals or performance desired is specific and clearly defined. As an example, the addition of three-digit numbers might be the assigned objective, and it is fairly easy for the teacher to determine whether the objective has been reached even before the testing exercise is attempted.

Another problem of the experiments was their short duration. Despite the fact that the experiments ran a year, most of them, after deductions for testing, snow days, or the like, lasted only slightly over 100 hours of instruction. Many authorities believe that this time span is too short to effect a major change in a pupil's performance, particularly as measured by a standardized test.

A third major problem was the newness of the performance contracting idea with resultant changes in program or materials as well as changes in personnel in the early stages of the experiments. Thus, there was some groping for techniques and difficulty in procuring the kind of personnel needed. In some of the schools, the contractor wanted the paraprofessionals to act as technical assistants only, but in actual practice the paraprofessionals tried to teach material which the contractor considered to be the role of

the carefully selected program material and teaching machines. Most persons hired for a learning situation attempt to teach as they were taught even though the new situation bears little resemblance to their own school years.

There are many other problems which could be mentioned, but in a conference on educational finance it might be well to look at some of the financial aspects of performance contracting. The original idea of performance contracting included at least two ideas, one that it would improve the performance of disadvantaged learners, and two, that it would provide a way of "costing out" the educational process if not reduce the cost itself. From such a costing process it should be possible to further improve the educational efficiency of schooling.

This latter idea gained much support from those efficiency "experts" who see education as a big morass in which it is almost impossible to get a financial "fix" on anything other than per-pupil costs per year. One of the basic claims for performance contracting was that it would bring up to grade level pupils who were behind or provide more than a year's education growth in one school year and provide this growth at a lower cost. Thus, various devices and arrangements were part of the experimental procedure. In the OEO experiments the two main items varied were the use of paraprofessional personnel and the use of teaching machines. The use of paraprofessionals varied from 35 percent of staff to 100 percent of staff, and materials ranged from mainly teacher instruction to almost complete reliance on teaching machines and programmed materials. The OEO experiment provides considerable information for those attempting to place prices on the instructional process.[1]

As would be expected, the cost of a unit of instruction varied widely from site to site and from program to program. Education Turnkey Systems, Inc., in the report mentioned above, reported costs in terms of a "student year" which is the cost of instruction in the subject for an entire year including all costs of plant and instruction. Time does not permit a detailed listing here, but the costs varied from a low of $147.50 to a high of $349.80 in the elementary reading program. In many cases the cost for the control program (the regular school program) was more than that of the experimental program.

The big difference for cost factors was the trading of regular teachers for paraprofessionals and equipment. Here the percentage devoted to each item showed wide differences. As an example (still in elementary reading) one control group showed 80 percent of cost for teachers, 18 percent for classroom space, and less than 1 percent each for instructional equipment, books, and audiovisual

materials. A contrasting experimental program showed 13 percent for teachers, 42 percent for paraprofessionals, 10 percent for classroom space, 9 percent for instructional equipment, and 4 percent for books and audiovisual materials. Some experimental programs spent as much as 27 percent for equipment, books, and audiovisual materials. The mathematics programs showed similar findings.

It is obvious that the contractors were attempting to add more equipment and materials and the only place that a sizeable amout of money could be garnered was from a reduction in teacher salary outlays. This change was accomplished mainly by substituting paraprofessionals and materials for teachers. In fact, the number of adults per classroom was higher in the experimental classes than in the control classes.

With the financial bind that school systems find themselves in, the reduction of teachers' salaries as a portion of the education cost is an intriguing idea.

What were the results? The OEO experiments showed some modest differences in pupil performance when control and experimental groups were compared. Some favored one, some the other, but where there were differences they were small. As a result, the OEO staff took the position that performance contracting is not a viable solution to the problem of educating the disadvantaged. These spokesmen suggested that a difference of at least a year in pupil performance would be necessary for the experiment to be rated a success. Actually the gains and losses were close to being equal. The gains and losses seemed to be uniformly distributed over the various groups. Thus, no type of educational approach seemed better than another. There was no clear-cut direction indicated by the data.

As a result of the 1970-71 experiments, performance contracting cannot be considered a successful way to aid disadvantaged children. There will probably be attempts to develop more carefully thought-out models, and we may well see performance contracts in the future on a small scale. However, we have learned some things. The main ones are that we must put more time and effort into the development of a program and a much better evaluation procedure before we can begin to concern ourselves with the "costing" of programs or a concept of accountability based on pupil achievement. We have not even touched on various other "costing" aspects. For example, is it easier to raise the achievement of a pupil who is two years behind grade level or two years above grade level? What is the difference and in what direction? We must find the answers to questions like these. Unfortunately, the 1970-71 year did not give us answers to these many similar ques-

tions. There was, however, a start in the direction of "costing" programs. Perhaps this can point the way to better assessment of educational programs.

FOOTNOTE

[1] Final report to the Office of Economic Opportunity. *Performance Incentive Remedial Education Experiment,* August 31, 1971, Contract B00-5114, Education Turnkey Systems, Inc.

The Real Issues in City School Financing

David S. Seeley

FOR YEARS, textbooks on school finance have argued the relative merits of fiscal dependence and independence for city school districts. Some have argued that the power of school boards to raise their own taxes is essential to their independence from political interference. Others have argued that such independence makes effective city budget planning impossible.

It is the thesis of my talk today that whatever importance this issue may have had in the past, it is now completely overshadowed by four other issues: (a) the level of financial support for schools, (b) the level of government that should provide this support, (c) the issue of collective bargaining, and (d) the issue of management. As we shall see, these issues are all interrelated.

Let me introduce these issues to you through a story from our experience in New York City: Last Friday morning the New York City Board of Education summoned together the representatives of parent groups, the teachers union, the 31 community school boards, and city-wide civic groups—several hundred people altogether—to alert them to the grave financial crisis facing the city schools because of cuts in the budget for the coming school year. The board, the chancellor, and all the hierarchy of the school system were arrayed before us in the Great Hall of 110 Livingston Street to relate how the mayor's proposed budget would cut more than half of the requested increases for next year, leaving us with the necessity of cutting back program and educational services for the second year in a row—at a time when it was clear to all of us that if this city wanted to survive it must increase, not decrease, its investment in education.

The meeting was called in the hope that all of the groups interested in public education in the city would find some way to make this impending disaster go away. We hoped it would, but I must report to you that the main reaction in the room as these dismal facts were laid before us, was numbness—not apathy because all of us knew how budget cuts would hurt children and hurt the city—but numbness, because all of us had been through this before. Every year, and sometimes twice a year, for the past two

or three years, we had been summoned for such briefings. We have had rallies, we have had letter-writing campaigns, and we have had trips to City Hall and Albany. These efforts have sometimes brought some restoration of funds, but it is clear that we are sliding backward despite all efforts. We are caught up with forces much larger than can be dealt with by annual pep rallies. I suggest that these forces revolve around the four issues I have set out for examination this morning: the level of financial support, the level of government to provide the support, collective bargaining, and management.

Let us look more closely at last Friday's meeting in terms of these issues. I think you will find that while the details of the story may relate only to New York City, the issues involved are harbingers of what will face us in school finance throughout the country in the decade to come.

Let us look first at the level of support we are talking about. We were wringing our hands and gnashing our teeth last Friday because the city was proposing to grant only 41 percent of the increases the board of education requested in the tax-levy budget. But let us look at the amounts involved. The increase requested was over $500 million or $.5 billion. I am not talking about a budget of $.5 billion; I am talking about an *increase* in the budget, in a single year, of $.5 billion. If granted, it would provide a total budget, with other federal and city agency funds, of almost $2½ billion or almost $2,200 per child.

The mayor proposed cutting the increase to $204 million. Twenty years ago the entire budget of the New York City school system was about this amount, and the enrollment was not much smaller than it is today. And now, in 1972, a proposed increase on only $204 million is viewed as a disaster. And what is more important, it *is* a disaster under present circumstances. Even with this Gargantuan increase in funds, programs will have to be cut back, children hurt, and the future of the city put in jeopardy.

Need I go any further with this example to make my point that the amounts we will be talking about in school finance in the 1970's are of an entirely different order from what they were two or three decades ago. We are not dealing merely with an issue of inflation; we are dealing with basically new levels of support for education, levels which we as a society have not yet faced up to.

Even the Fleischmann report, which has recommended a new system of school finance for New York State, has received more attention for its comments on busing and aid to parochial schools, than for its conclusions that over $700 million in additional funds will be needed to carry out its basic recommendations for equalization, without even mentioning the additional funds for improv-

ed teacher training, programs for the handicapped, and other improvements to be recommended in forthcoming volumes of the report. Again, it is as if the public is somehow numb, and cannot comprehend the magnitude of the amounts involved.

Let us now turn to the question of the level of government from which the necessary support will have to come. The meeting last Friday was called in the traditional context for fiscally dependent school systems: The school system was asking the city administration for money to run the schools; the city was proposing less than was asked for; and all of us who favor public education were supposed to pressure the city to restore the funds requested. Part of the unreality of the situation was due to the fact that we were all aware that even the $204 million increase being offered by the city was based on money it does not have. The proposed budget is dependent on receiving $800 million in additional funds from the state, which virtually no one expects to be forthcoming. To the extent that less money is received from the state, the $204 million increase, which is itself inadequate, will have to be cut back further.

The Fleischmann Commission recommends that the state take over the entire financing of public education, and perhaps from this example you can see one of the reasons why: The local financing of education has reached the breaking point. Local education budgets are being defeated across the country. School systems are closing early to try to stay solvent. There is little use for us in New York City to scream at the mayor for more funds. He does not have the funds we need. Nor, in my opinion, would it make much difference if we were a fiscally independent school district with the right to raise our own taxes. Local taxation has reached the point of diminishing returns, where added burdens will drive more of the existing tax base out of the city.

Clearly we have to move to state and federal financing to meet the fiscal crisis now facing us. But one thing must be made very clear about the fiscal effects for the cities of shifting to state and federal financing: The funds for state and federal financing must still come from taxable wealth, and to a large extent this wealth is in the cities, despite their large poverty populations. Unless extraordinarily high levels of state aid are provided for disadvantaged pupils, New York City taxpayers will undoubtedly pay more for state aid than they will get back, and the same is even more true for federal aid. The shift from local financing to state and federal financing is not some magic system for getting someone else to pay for education, but a shift in the taxing system so that the burden can be spread more equitably and so that the very large amounts that have to be raised do not become the burden of

individual local jurisdictions that must compete with one another for industry and population. In the final analysis it is still the taxpayer that must pay the bill, which brings us back to our first issue: that the taxpayer is not yet aware of, and certainly not accepting of, the size of the bill that is confronting him. It also brings us forward to our third issue: collective bargaining.

In our woeful Friday meeting, the Executive Director for Business and Administration had to point out not only that the proposed $204 million increase was a 59 percent cut from the request, and not only that even the $204 million was dependent on a miracle of unexpected state aid, but that $128 million (or almost two-thirds) of this insufficient, and yet not even likely, $204 million was "not real money." By "not real money" he meant that it was earmarked for pensions and salary increases, and, therefore, could not be used for restoring some of the services cut this year or for starting new programs being planned to meet the desperate needs of the children in our schools.

In other words, for all the parents and community representatives in the room the message was clear: Whatever money was raised for next year was going to have to go into increased salaries and pensions, and even then there would not be enough money to retain present staff levels–some staff, especially the younger and minority staff, as well as desperately needed programs, would have to be sacrificed to pay for increased salaries and pensions. The interesting thing about the revelation of these facts was that they were not presented as something that the board of education had decided or had any control over; they were presented as something one must simply accept, like an increase in enrollment.

At this point in the meeting, the head of the United Parents Association, with 450,000 members throughout the city, pointed out that perhaps if there were some way the school budget could show a 5.5 percent increase in programs for children as well as a 5.5 percent increase in salaries, parents might be more willing to fight for the additional funds.

The representative of the teachers union admonished her severely for expressing such a divisive attitude. "We must all stand together," said he, and fight for a restoration of the funds, or all of public education would be hurt. Just two days before the Friday meeting, however, the teachers union had announced its demands for next year. Among them were several costly items; for example, after seven and one-half years, teachers with a bachelor's degree must be paid $25,000 a year.

Everyone in New York City knows that in the final analysis the financial aspects of collective bargaining with the teachers is settled with the city administration, not the school system, since

the city is the source of the funds. But as one of the parents at the Friday meeting asked, "Where is the money going to come from?" It was already clear before these new demands were made, that the city did not have the funds to pay for children's schooling without cutting back educational programs and laying off teachers. The new demands could only increase the general sense of numbness.

But let us leave the financial aspects of collective bargaining for a moment and take up the last issue, the issue of management, before we come back and try to tie all these issues together in some observations about the future.

A small example from the Friday meeting will illustrate the point about management. The New York City Council during the current year became concerned about the safety of handicapped children traveling on buses and demanded that matrons be placed on the buses to help the children on and off and across the street. As is typical in such situations, however, it appropriated no money for this activity. The school authorities, therefore, had to curtail other activities to find the funds for this purpose, without having any opportunity to make judgments as to the relative priority of what was being cut in comparison to the new program.

This one small example, which the board itself complained of, is not unique. One gains the impression that to a very large extent the budget of the school system has grown and grown without any coherent system of planning and evaluation to determine how scarce resources can be allocated to have the maximum impact on the education of children. Boards of education for some years now have tried to get on top of this process, with PPBS and other techniques, but apparently to very little avail.

I can remember when Fred Hayes first came to the city from the federal Bureau of the Budget to become Mayor Lindsay's Budget Director. He was appalled by the budgeting process of the board of education, and believed that strong budget disciplines could be used to ensure the best use of an increasingly scarce educational dollar. He, too, gave up, finding the forces of bureaucratic budget escalation stronger than any tools the city had to deal with them.

As a result, not only is the public at large losing confidence in the ability of the school system to spend its money wisely, but even the city and school officials who have to persuade the public to put up the money have little faith in the management of the system.

The issue of management also arises in collective bargaining. When almost two-thirds of a proposed increase must be considered as "not real money," it means that school authorities do not want to be held accountable for its expenditure because it is in fact

outside their control. The same is true of the 25 percent extra expenditure in all disadvantaged schools in the city for five "preparation periods" a week to allow teachers to rest from the admittedly strenuous job of teaching. Preparation periods represent several hundred million dollars of expenditure which school authorities in effect have no opportunity to evaluate in terms of benefit to children. They then have to go to the public and say: "Please put up the money for this budget, even though we cannot be sure that, either in our judgment or yours, it is being spent in the best interests of your children."

The management issues of collective bargaining are becoming even more poignant with decentralization. If the central board wants to avoid responsibility for the funds allocated in the budget for contractual obligations, you can imagine that community board members would feel even more strongly that they cannot be held accountable if virtually all of their funds are tied up by a centrally negotiated contract. While local school boards in most communities have to take the lead in developing public support for school budgets, such leadership is greatly weakened in a decentralized system with centralized collective bargaining, if steps are not taken to restore public confidence in the budget process.

Now for some observations on where all this might lead for the financing of urban education and for city school district relationships in the future.

The first observation is that the financial crisis for city education is very real indeed. It is not based on temporary factors that we can hope will go away. It is based on factors whose influence is increasing, and, therefore, the crisis will deepen unless there is a fundamental reorientation of school financing.

One element of such reorientation will have to be much heavier reliance on state and federal financing, probably including full state assumption as is recommended by the Fleischmann Commission and as being considered in a number of other states.

A shift to state or federal funding will not, however, as already noted, shift the burden from the individual taxpayer. The city taxpayer will probably have to pay more than ever—in fact *certainly* will have to pay more—as costs continue to rise. This means that basic public confidence in and support for the public schools are essential no matter what level of government is involved in the funding.

This leads to my next observation: School management and the role of collective bargaining will have to be re-examined. As financing moves to the state level, will management of schools and collective bargaining also move to the state level? If they do, we must ask ourselves: Can a school system in which the bulk of

financing is funneled through a state bureaucracy and the bulk of the expenditures is tied down in a state-wide collective bargaining agreement maintain the kind of public support it needs to produce the new levels of spending required in the years to come?

I believe the experience in New York City may shed some light on these questions. For one thing, it is clear that collective bargaining in the city school system has reached some kind of limit beyond which it cannot continue, as in the past, without destroying the public school system. When salaries and fringe benefits were abysmally low, and the public in general could agree that increased salaries would benefit their children by improving teacher recruitment and teacher morale, collective bargaining brought about real benefits to education, whatever one might feel about the harm the accompanying series of strikes and strike threats brought to the educational and governmental process. In 10 short years a fantastic job has been done in redressing a severe exploitation of teachers that the regular channels of government seemed incapable of dealing with. There comes a time, however, when the momentum of the process which brought about these gains goes beyond any possibility of public support. If it has not reached that point this year, it surely must eventually. At that point, we will face a real problem, for the ultimate solution of the educational financial crisis, as we have seen, will depend upon the public's willingness to rise to a new level of tax support. As we are finding in New York City, that willingness is severely impaired once serious questions arise as to whether the funds are truly being spent for the benefit of children and their education.

The New York City experience points to problems concerning not only how much the public may be willing to put into salaries and fringe benefits, but also how much it may be willing to have management decisions removed from accountability. The city is only in the early stages of decentralization, but already we can see some of the issues that would arise on a state-wide level if we moved to state funding and state collective bargaining. Local boards are not necessarily going to buy the kind of detailed provisions on the management of schools and expenditure of funds that are now being put into collective bargaining agreements.

So far as state bureaucratic control is concerned, the Fleischmann Commission and many other advocates of state funding believe that state funds can be turned over to the local boards for local management and policy decision, but the matter is not so easy for collective bargaining. It seems to me there are only two paths open for dealing with this issue, both requiring fundamental reorientation of collective bargaining in education, and both fraught with many problems: Either many of these management

questions on how to expand limited resources must be taken out of the collective bargaining process, or else we shall have to develop a system of split-level bargaining, as in many industries, where matters such as salaries are settled on a state or regional level, and other matters, now falling in the confused area of management and "working conditions," are bargained at a local level. Such a process will enable the people who must pay the taxes to have a greater opportunity to determine how they are spent.

There is a third path that one can consider theoretically, and with this I shall conclude my observations. One can say that with state funding, there should be state collective bargaining, and it should go even further into management decisions, and the local population can either like it or lump it. There is a tendency, once drunk with the power of strike, to say, "The public be damned." Or if worried about public opinion, one can always try to manipulate it with issues of race or law and order. Such an approach might work in the short run to win a specific contract negotiation, but it will fail to face the real issues of financing urban education. It will not help us develop public acceptance for a new level of financial support for education. It will not help us develop a new structure for state and federal funding. It will not help us deal with the issue of collective bargaining constructively, and it will not help us face up to the crisis in school management. If anything, it will exacerbate all of these issues, and, therefore, whatever its short-term attractions, it will only contribute to the destruction of public education in the cities. There is no cheap way out. Only new thinking, and thinking in collaboration with all the forces behind public education, can meet the present crisis and deal with the real issues that confront us. I hope New York City, further along in this crisis than most other school systems, can show the way toward new solutions.

System for Pupil and Program Evaluation and Development (SPPED)*

Charles F. Adams

SPPED is an acronym for System for Pupil and Program Evaluation and Development. Essentially, SPPED is a computer-based system designed to provide information that will enable more effective management of the instructional process by school administrators, teachers, and pupils. For the pupil, the system provides detailed feedback on all important learning events. This information allows the pupil to manage his own program and progress. The teacher is supported in several related functions, including basic program design, program refinement, and the management of the learning progress of individuals through such functions as diagnosis and prescription. For the school administrator, SPPED provides a means to conduct district evaluations of new, potentially more effective programs and further provides procedures for monitoring any important program at virtually any level.

What is SPPED?

SPPED is the most comprehensive information management system available for application in the schools. It is composed of five basic parts:

1. The BOIR (i.e., bank of instructional objectives, test items, and instructional resources) is a computerized storage and retrieval system which provides the basis for (a) program design; (b) test construction and evaluation; (c) program installation; and (d) establishment of a local bank of objectives, test items, and instructional resources
2. Computer based reporting systems known as Comprehensive Achievement Monitoring (CAM) and Mastery Testing (MAST-T) which provides, respectively, the basis for monitoring, and the progress of programs and individuals

*A Project of the New York State Education Department, Bureau of School and Cultural Research, in conjunction with Staff from School of Education, University of Massachusetts at Amherst, Department Operations Research, Stanford University, State University of New York, Stony Brook.

3. Supplementary computer programs, known as Test Construction (TC) and Test Scheduling (TS), which provide an automated basis for the construction of tests and their assignment to pupils
4. An extensive training program which provides information to parents and develops in local program managers, school administrators, teachers, and pupils the behaviors needed to operate the system
5. Extensive "paper banks" of instructional objectives and test items in mathematics, reading, language arts, social studies, and science.

Purpose of the SPPED

Though it is more than an application of testing concepts, a significant part of SPPED is designed to greatly up-date conventional and standardized approaches to achievement testing through the broad scale application of *criterion referenced testing*.

Standardized testing of achievement, another form of measurement, has been tried as a means of evaluating pupil performance and the success of instructional programs, although it has been shown as not applicable to those tasks. Incredibly, this situation persists though it is abundantly clear that such tests are useful primarily for ranking or classifying pupils in what is often an arbitrary manner. Thus, standardized achievement testing typically classifies half our pupils below grade level or average; this is frequently construed as failure. Standardized testing further classifies pupils into deciles such as lower 10 percent. By doing this it is then possible to tell a pupil that he is in the lowest 10 percent of his class or to tell a teacher that half her pupils are below grade level. Unfortunately, the ability of these tests to support such classification has no relation, whatsoever, to the educational needs of pupils and school personnel. Thus, standardized testing relates one child's performance to another; it does not relate his performance to what has been taught.

Criterion referenced testing relates the pupil's performance to what has been taught. This is far more useful since it presents to the pupil a detailed accounting of the specific skills he has learned and those he has yet to learn—irrespective of where anyone else stands on these same skills. Similarly, the teacher obtains useful information on where a pupil stands specifically in relation to achieving a given set of skills, allowing him to then plan his instruction. This type of testing also enables the teacher to receive data which show some aspects of the instructional program enabling

most or all pupils to achieve desired skills, while other parts of the program are in need of apparent improvement or adjustment.

These types of functional decisions are possible only where the decision criteria are *absolute,* as with criterion referenced testing as opposed to standardized or norm referenced testing. Within the SPPED project, such criteria are termed objectives, and consist of statements such as the following:

> Given a manual of instructions for a common office machine (such as a Xerox machine) and an example of an inappropriate method of operating the machine (such as loading paper incorrectly) the pupil will DESCRIBE in writing the inappropriate behavior and its appropriate alternative.

Such objectives specify in detail what it is the pupil should be able to do in a given course of instruction. Testing system, such as CAM and MAST-T, include test items specifically designed to determine whether this objective (or any other) has been achieved. Such testing applications remove the arbitrary elements of failure inherent in standardized achievement testing. In this testing situation the goals are specified and *every pupil is expected to achieve certain important or universal objectives.* Since the testing yields information about performance on these objectives, it supports efforts to attain the objectives and makes achievement of them more probable.

How is SPPED Applied in Instruction?

Typically, the state education department and associate personnel work with the district to install the system on a gradual basis over a three-year period. In this amount of time, without any tumultuous changes, the local district will have achieved a state of management capability, which can be described as one in which information systems, such as CAM and MAST-T, are regularly used by the staff to:

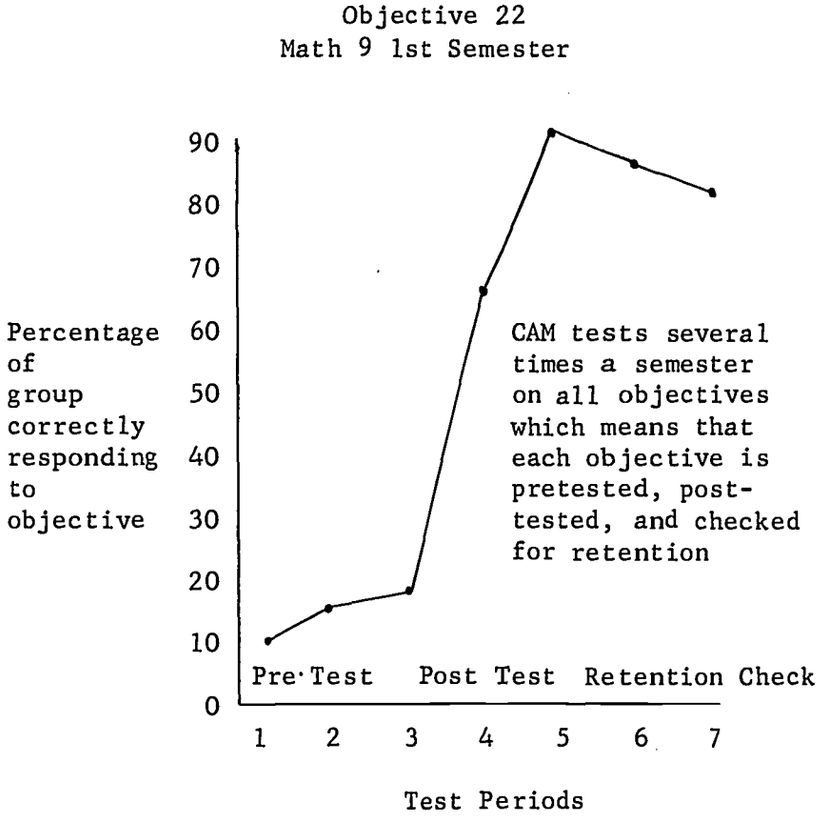
1. Continuously refine and adjust instructional programs at all levels
2. Systematically prescribe instruction for all pupils
3. Diagnose and correct pupil learning problems
4. Improve the efficiency of instruction through curriculum development in which the educational needs of pupils are explicitly taken into account.

The basic steps involved in a beginning application of SPPED include the following:

1. Select, develop, or modify instructional objectives for basic programs such as reading or mathematics

2. Select and develop test items coordinate with instructional objectives
3. Apply CAM as a device for monitoring program effectiveness, level by level
4. Train personnel in the CAM application and in coordinate instructional decision making
5. Begin program refinement activities, based on the longitudinal analyses resulting from CAM.

The resultant decision making power from this level of application is represented briefly by the portrayal of CAM type data showing achievement on a single objective in the figure below.



The information upon which this graph is based is derived from pupil performance on the objectives that have been selected by the staff of the school district by utilizing CAM. Pupils are tested only on material for which they have received instruction or will receive instruction. The testing which assesses pupil perfor-

mance across all objectives occurs at several points during the semester and is congruent with the school's instructional process and can, therefore, be utilized to make a number of important management and instructional decisions. For example, this figure shows that instruction on objective 22 was very effective (compare pretest and post-test points), and that performance was basically maintained over time (compare post-test and retention points).

Typically, district personnel move from the CAM application (program monitoring) to the computer monitoring of individual pupils by using MAST-T. With MAST-T, computer-generated reports enable the teacher to conduct the following functions:

1. Pretest and place each pupil in a program, usually prescribing the instruction to be received
2. Monitor pupil performance through a program segment (unit, module, etc.)
3. Post-test the pupil upon completion of a program segment and assign to remediation, enrichment, next segment, etc.

The completion of the steps for MAST-T application in important instructional areas has brought the district to computer-based management of both instruction and the individual. To maintain these applications, the application may further involve

1. Development of a local bank of instructional objectives
2. Development of a local bank of test items
3. Coding and banking of local instructional resources.

The first of these steps enables the district to

1. Store and index all objectives, coordinate with a local paper file
2. Create a data base for curriculum development (e.g., store data on performance expectancies for objectives—second-graders typically achieve this objective at the 20 percent level).

The second step creates the basis for

1. Centralized automated test construction
2. Test item refinement; storage of data on test items.

The third step supports

1. Indexing of all instructional resources, cross-indexed by objective
2. Storage of effectiveness data on instructional resources
3. Provision of the basis for listing prescriptions in MAST-T.

What Resources Are Provided To Install SPPED?

Although SPPED is still a developing system, the state education department is prepared to make installation possible for any district in the state. Support for computer processing and other functions, such as teacher training, must be derived from local funds or categorical grants. The basic components of the system, however, are provided free of charge. Supplies are limited and are generally available to districts with the capability of initiating some phase of installation of the SPPED project. This free package includes

1. Sets of instructional objectives
2. Sets of coordinated test items
3. Consultant services (limited)
4. Teacher-training packages
5. Data processing package to support such functions as banking, CAM
6. Visitations to model programs.

The most advanced support is available in reading and mathematics (e.g., instructional objectives are available for complete programs, K-12).

The Use of Training Materials in PPBS Implementation

Frank Ambrosie

THE WESTERN New York PPBS model contains the component parts of a comprehensive program budgeting system and specifies the various processes which a school system must make operational if it is serious about managing its educational program. It is only illustrative because we do not really believe that all schools in the eight-county western New York area could generalize from the model. Individual school districts should identify their specific needs, and adopt and modify the flowscript procedures that will enable them to systematically carry out various planning, program development and assessment, and budgeting activities.

The Model and Training Materials

At the end of the second year of development the model contained the "what to do" aspects of program budgeting. It also contained definitions of various roles and role behavior, within various levels of an organization, needed to carry out the flowscript procedures. The model also specified the various end products (documentation) and benefits which would result from making the various model components operational.

Suggestions were made for revising the model subsequent to an on-site visit and evaluation of the project by a team of officials from the New York State Education Department. One of their recommendations led to the implementation of Comprehensive Achievement Monitoring (CAM) as the evaluation vehicle in the model. A second recommendation was to undertake the development of training materials that could be incorporated into the model, thus making it a more readily reproducible document. The materials were to contain the "how to do" activities of carrying out the various procedures in the model.

It was pointed out that several benefits may be derived from the use of the training materials; for example, the extent to which school districts must depend upon outside assistance when implementing PPBS can be substantially reduced. This should significantly reduce the cost of implementation. Our suggestion for implementation in the first year is to train a cadre of teachers and

administrators in the use of the training materials in carrying out specific PPB activities, for one-site consultation with PPB staff members would be necessary during the first year of implementation. A school district should make use of the cadre of trained personnel and the self-instructional PPB materials to train additional staff in the second and succeeding years of operation. Reliance on outside consultant aid should be minimized.

Nature of the Materials

A subcontractor, specializing in the development of performance problem-solving systems, agreed to develop and provide for implementation materials designed to instruct teachers, administrators, board members, and citizens in the functions related to understanding PPBS. In addition, the instructional materials would aid school districts in making the PPBS procedures in the western New York model operational.

The over-all package includes the following components:

PPBS Training Components

Document	*For use by*	*To achieve*
1. Large self-instructional lesson on PPBS concepts, to include the four areas we are involved with	All major roles in model; district and school decision-makers	Overview of PPBS to a "talk about" level of learning
2. Individual self-instructional modules on ISAS, Special Planning, Program Analysis, Program Budget	Roles charged with performance in each specific area	Higher "understand" level of learning in specific performance areas
3. Individual guidance systems on ISAS, Special Planning, Program Analysis, Program Budget	Roles charged with performance in each specific area	Development of all interim PPBS products; communication; documentation
4. Quick Access Index to all recall and guidance materials	All roles in the model as needed	Immediate access by role, task, or product to appropriate lesson, guide.

Each component will consist of the following materials:

1. *Self-Instructional Overview Lessons*—These materials will result in learning on part of the population. As a rule, the lessons deal with the cognitive requirements to facilitate the performance of the roles.
2. *Self-Instructional Topic Lessons*—These materials also result in learning by the population; they are more specific than Overview materials. The rationale for them lies in the fact that the PPBS Manual requires performance of different roles on different kinds of tasks. Segmenting the instruction makes it possible to prescribe only the relevant instruction of a particular individual role.
3. *Guides and Worksheets*—The product of the guides is performance—not necessarily learning. As a rule, there will be one guide for each performance task within the topics selected. For example, large decision-making tasks usually require Decision Tables or Decision Trees. Procedural tasks, with no remarkable discrimination, require step-by-step directions.

The product of a worksheet is also performance. Typically, a worksheet is accompanied by a guide. Worksheets are employed in tasks that require one or some combination of arithmetical computation, gathering of facts, preparing objectives, and the like.

Materials Development

Without going into any great detail about the research design for training material development let me say that it is important to note that the contractor depends heavily on input from the western New York PPB staff. Frequent on-site visitations are made by the subcontractor for the purpose of developing draft copies of the materials and for the revision work which follows assessment of the original drafts. Two kinds of evaluative procedures are being utilized:

1. *Developmental Testing*—The developmental testing procedure is cyclic: training material is drafted; approximates of trainee population are selected and the lessons are administered to them; the experimentor observes the behavior of the subject, recording errors and questions; the training material revised.
2. *Validation Testing*—Representatives of the actual target population are selected for real-world use of the materials. Pre- and post-tests on the "recall" portions are administered. Performance evaluation checklists and criteria are

then used to validate the guidance portions of the training system.

Perhaps one of the flaws in our approach is that we are attempting to develop and implement the training materials all in the same year. Although many problems exist, the outstanding difficulty seems to be the demands made on project staff time. The futility of attempting to "kill two birds with a single stone" was never more apparent. Nevertheless, we optimistically believe that we shall produce complete training packages and PPB documents which will be the products of our implementation year.

New Developments in Western New York PPBS Project

Chester Kiser

THE PURPOSES of my remarks are to (a) review briefly the nature of our Western New York PPBS (Planning-Programming-Budgeting Systems) Project, and (b) outline four new developments which have occurred since I reported to you last year at this conference. Other panelists will describe those new developments in detail.

Review of Project's First Two Years

The aim of the Western New York PPBS Project is to invent and field-test an operational model for the application of planning-programming-budgeting systems in local school districts. The Project was funded through ESEA, Title III, beginning July 1, 1969; subsequent grant renewals have afforded the Project a three-year life and total funding of $316,000. The initial grantee was the Maryvale school district outside Buffalo, which subcontracted developmental work to the Western New York School Study Council. The Project's target area comprises the 106 school districts in the eight-county region of western New York.

Year I of the project was devoted to inventing an operational model for the application of a comprehensive PPBS to local school districts. Systems theory provided the conceptual framework for model development. Further guidance was accorded model invention by posing 12 R&D questions, as follows:

1. What is the nature and extent of the commitment of the governing board needed to implement a planning-programming-budgeting system?
2. What are the boundaries of a PPB system?
3. What sensory devices are required to monitor the community's educational needs for the purpose of translating them into educational objectives?
4. What arrangements for organization and staffing are needed to design and operate a PPB system?
5. In what manner must school district objectives be stated for the effective implementation of PPBS?

6. How can a school district's objectives be translated into program objectives and a program structure?
7. How can cost-benefit analyses be conducted by a school district to propose alternative methods for accomplishing program missions?
8. What administrative arrangements are required to choose the optimum method for accomplishing program missions?
9. How are approved programs translated into long-range (5 year) and short-range (1 year) financial plans?
10. How is the short-range (1 year) financial plan implemented?
11. What is the nature of a PPB system's cybernetic—or feedback—mechanisms?
12. What is a useful format for the PPBS model?

The format of the illustrative operational PPBS model turned out to be that of a systems manual, i.e., a set of integrated systems documents: Policy Statements, Flowcharts, Organization Charts, Functions Lists, Flowscript Procedures, and Job Outlines. In contrast to some other PPBS models, the Western New York model emphasizes systematic planning procedures (virtually absent in most school districts) and curricular decision-making more than budgeting. We assumed, thus, that budgeting was a function of a well-conceived educational plan.

Year II of the Project initiated the field test of the PPBS operational model in four pilot school districts in the suburbs of Buffalo. The present, third, year continues this field testing. Another panelist will describe our tentative findings from this PPBS implementation phase of our activities.

New Developments in Project

So much for the background of the Western New York PPBS Project. Now let me mention a few current developments in this third, and final, project year.

1. We moved the Project from the Maryvale School System to a regional educational service organization known as the Board of Cooperative Educational Services (BOCES). Accordingly, Erie County BOCES No. 1 is now the grantee. The strategy for the move, recommended by our funding agency, was that (a) a BOCES (similar to intermediate units in other states) could better disseminate the Project's final product to other interested school districts in future years through, for example, shared consultants; and (b) the tryout of PPBS might be encouraged by the fact that a significant proportion of district expenditures for BOCES ser-

vices, such as PPBS orientation and implementation help, is reimbursable through state aid. Thus, the direct costs for technical assistance in getting started with PPBS would be relatively low for individual school districts.

2. We are developing numerous self-instructional PPBS learning materials. They augment our original systems manual (the PPBS operational model). The aim of these learning materials is to help school systems which desire to implement PPBS, after our Project staff disbands June 30 of this year, to do so with a minimum of outside technical assistance.

3. We are pilot-testing as a subsystem of PPBS what is known as a Comprehensive Achievement Monitoring (CAM) system, developed in the New York State Education Department. Its aim is to provide to classroom teachers a computerized tool for periodically monitoring individual student progress in learning specific concepts and skills in the various academic subjects. Accordingly, it helps to operationalize the cybernetic concept of feedback-control at the basic classroom level.

4. Finally, we are learning through hard knocks what it is like to implement a major innovation as far-reaching as is a comprehensive model for PPBS. It is difficult to modify the entrenched behaviors of human beings, educators included. But it is also rewarding when, sometimes, you see the cognitive lights blink on and observe the consequent improvement of educational practices. We have identified some tentative findings from our pilot districts' implementation experiences.

Implementation of the Western New York PPBS Model

John Murphy

THE AIM of the Western New York project has been to develop a model for the application of Planning-Programming-Budgeting Systems (PPBS) to local school districts which provides practical guidance to school officials who want to do PPBS. Our experience has been that presentations on PPBS are of two varieties. One variety is conceptual and exhortative, arguing for the implementation of PPBS after extolling the virtues of its concepts. The other suggests the application of sophisticated analysis techniques such as regression analysis or one of a number of operations research methodologies. We do not quarrel with these points of view; however, we do believe that they represent two extremes of the application of PPBS, neither of which promises much in the way of immediate improvement in the management practices of local school districts. The former simply provides no guidance, and the latter overestimates the technological capabilities of the typical local school district. In New York State, for example, 80 percent of all local school districts have fewer than 5,000 pupils and severe staffing limitations.

Our model was intended to be a middle ground between the approaches noted above. We hoped to design a model which could be applied to local school district operations without first requiring the hiring of new breeds of analysts and without the necessity of having access to large and expensive computer installations. We do believe that new breeds of analysts and computers can lead to vast improvements in school district decision making; however, we are concerned with the interim period, that period while decision technologies are being designed, evaluated, and redesigned and while school districts are gearing up to use them. In fact, we hope that successful implementation of our "interim" model will lead to increased readiness for more sophisticated approaches.

Implementation of the Western New York PPBS Model

Our model is designed to help school district officials bring about change in their operations which is congruent with the con-

cepts of PPBS, but which does not require massive inservice training or expensive infusions of new staff members. We hoped to design a model which would facilitate a school district's use of the considerable human resources which it already has. For this reason, we hoped that our pilot school districts would be the scenes of such changes. I will report to you now some of the activity which is under way in our pilot school districts and which can, at least in large part, be attributable to their use of our model and training materials.

Currently, in our four pilot school districts 148 teachers, 24 principals, 37 other administrators, 17 supportive staff members, 15 citizens, and 13 students are directly involved in carrying out plans for the implementation of PPBS. Our model was used as a guide by each of the four districts as each developed its own plan. In addition to this PPBS implementation, 1,600 students, 30 teachers, and 5 principals are involved in implementing CAM (Comprehensive Achievement Monitoring) in 16 separate courses. CAM will serve as a valuable evaluative tool in its own right, but it also will provide information directly pertinent to the preparation of documents of the PPB system.

Since time does not permit a detailed description of activities in all four pilot school districts, I will describe events in only one district. For purposes of illustration, I have picked our exemplary district; however, most of the same activities are under way in two of the other three plots.

Planning Component–The planning component of the Western New York PPBS Model is designed to provide basic planning information to school district decision makers. This information will be useful to program directors as they plan and evaluate their activities, and it will also be useful to policy level decision makers as they attempt to develop goals, objectives, and priorities for the system as a whole. The planning component is designed to provide basic planning input information. In our exemplary pilot district the following activities have occurred as the model was used as a guide:

1. To gain information about community perceptions of how well the district was performing and on what the community's most pressing educational problems were, a stratified random sample of households was drawn, a questionnaire was drafted, a survey team was trained, a survey was conducted, data were analyzed, and a report was drafted. This report is now being used as one important source of information by a variety of decision makers.

2. To obtain a more continuous input of information from and about the community, a community advisory committee was created and is meeting on a regular basis to discuss specific school district problems. Influential people in the community were identified and are on this committee.
3. The following kinds of demographic information about the community have been collected and reported to various staff members: percent of population by age groups, percent of population owning homes, level of education in the community, current level of unemployment in the community, and percent of homes in district falling in specified ranges of value.
4. Revenue and pupil projections were made to establish a parameter for planning the future.

Programming Component–Procedures of the programming component of the model were used as guides to plan and carry out the following activities:

1. A school district program structure was developed last year and was revised this year. This structure serves as a basis for setting objectives, describing activities, allocating resources, and evaluating programs.
2. Each program director has completed and documented a program analysis. Program analysis documents contain the following: program goals, program objectives, evaluative criteria, a description of proposed activities, and requests for resources needed to implement those activities.
3. Two special studies are under way in program areas that were identified as being high priority areas. These are music and counselling. The music study has progressed as follows:

    a. A study team consisting of three students, three parents, nine members of the music department, one administrator, three regular teachers, and one consultant (evaluation specialist) was formed.
    b. The team was trained in the methods of doing a special curricular study detailed in the model.
    c. A description of the current music program was drafted. It contains the following information: basic statistics (e.g., number of students, costs), current goals, and current evaluation results.
    d. A music needs analysis was conducted: students, staff, community, parents, and teachers were surveyed; and a variety of music curricula were studied.

e. Goal statements for music were drafted and approved.
f. Two hundred and fifty measurable music instructional objectives were drafted.
g. Alternative music programs to achieve those goals and objectives were described.
h. These alternatives are currently being costed out and their potential benefits are being estimated.
i. The study team will prepare a document recommending future directions for the music program to the superintendent, and the document will have as supportive evidence a summary of the data generated by steps a through h above.

Budgeting Component–Program analysis documents and the special studies will be studied by a committee representing all district programs. This group will, with reference to district goals, objectives, and priorities, draft a district plan for the next five years. Year I of this five-year plan will be presented to district residents in the form of a program budget.

Feedback–A review of this year's activities will be conducted late this spring, and current goals, objectives, and priorities will be evaluated. This will be the beginning of the process of next year's cycle of PPBS activities. All documents produced this year will be reviewed and updated next year. Objectives set this year for next will be evaluated, and another year will be added to the long-range plan.

Conclusion–The activities described above can take place in a school district even if that school district's officials never hear of PPBS. We do believe that conducting them within the framework of a PPB system facilitates relating them to each other, makes information collection more reliable and rational, and gives district staff members a more nearly complete perspective of how their responsibilities contribute to the solution of district problems. We believe that by using our model as a guide to plan and to implement the activities above, our pilot districts can accomplish more in a given period of time than they could without such guidance. We believe that the model permits them to more effectively plan the use of the considerable human resources already employed in the district. And lastly, we believe that our model makes it possible for an average district to undertake the activities above without relying on outside consultant help to the extent formerly required. The model and its training materials serve the function of consultant for many of the steps related to the implementation of PPBS.

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