After summarizing the philosophy behind the financing of public schools, this document reviews the division of legal responsibility for education between the state and federal governments; outlines the state's responsibility for providing an equal educational opportunity for its residents; and summarizes the use of federal revenues, state revenues, and local tax revenues, with emphasis on property taxes, to fund public education. Current and recent issues surrounding the equity of school finance formulas are described, including taxpayer equity, the taxpayer's ability to pay, and horizontal and vertical equity. Following a brief history of school finance plans, an overview of three methods used to allocate funds is provided. These are: (1) Flat Grant, Categorical, or Entitlement Programs; (2) Full State Support or Funding Programs; and (3) Equalization Aid Programs. Information on the latter programs includes descriptions of foundation plans, percentage equalizing and guaranteed tax base plans, and district power equalization programs. Included are three figures and three tables. (CLA)
How public schools are financed
How public schools are financed
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Introduction

Most people consider themselves to be reasonably knowledgeable concerning public education. This is perhaps explained by the fact that the vast majority of people attended public schools, were transported by school buses, experienced countless school lunches, participated in extra-curricular events, and ultimately graduated to become productive citizens in our society. However, the American public is far less knowledgeable concerning the financing of public schools than they would care to admit.

This publication is intended for policy makers, parents, school board members, local school patrons, concerned citizens, and teachers. It will not answer every question, nor will it attempt to answer in-depth technical questions. Readers who wish to pursue advanced technical study in the area of financing public education will find the list of readings within this booklet to be of benefit.

This brochure is being published under the auspices of the Association of School Business Officials International, Reston, VA, and its Board of Directors which represents 7,500 school business officers. It is intended to help inform the public about school finance. A better educated citizenry will help ensure that better financial decisions are made by local leaders in public school districts throughout the nation.
Philosophy

Compared to the rest of the world, the United States' public educational system is unique. The American public educational system is an open system with the intent of educating all individuals. This system has evolved over the years and is highly reflective of the values and aspirations of our society. But, American society does not finance education for the benefit of an individual; it finances education for the benefit of society as a whole. Benefits that occur to the individual are secondary in nature. The primary purpose is to benefit society through increased productivity and increased standards of living for the people of that society. Having an educated populace and greater economic and social gains for society far outweigh those benefits that may occur for the individual.

The founders of our government wrestled with this burden at length. An examination of the Madison Papers and other such documents reveals a burden faced by the framers of the Constitution who realized that, over time, without an educated population our democratic form of government would never succeed. Again, it must be stated that an examination of these documents reveals concern only for the educated whole, not a concern for the educated individual.

Everyone in society benefits from having an educated citizenry, therefore, the responsibility to fund education is that of society as a whole. Even those individuals who do not have children benefit because their neighbors' children grow up to become productive, educated citizens who contribute to the overall quality of life. Every reputable economic study confirms that expenditures for public education are in fact investments, rather than merely expenses, which yield sound, cost-effective economic and social returns for society as a whole.

Background

As reflected in the American Constitution, public education is a state function. Those items not specifically mentioned in the Constitution are the responsibility of the states. The Tenth Amendment states:

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

Within this state system of education, it is important to note that, without exception, education is a state function and not a local function. Although local control is certainly important, it is not a legal doctrine. State legislatures have delegated the implementation of rules and regulations to state departments of education and other state agencies. Legislatures have also created school districts as managerial organizations for the efficient operation of public education within each state. School districts are responsible for the day-to-day operations of the educational program.

The legal and administrative parameters which control education vary from state to state. Regardless of the scope of these parameters, the local school board operates within the guidelines established by the state constitution, state statutes, administrative rules and regulations as well as the courts. It is the responsibility of the
local school board, with the advice of the administrative team, to operate successfully within these parameters. A school board may not exceed these parameters. Equally important, the school board may not divest itself of any of these responsibilities. In summary, under most circumstances, a school board may neither accept additional responsibilities nor shed any current responsibilities.

Notwithstanding the state's responsibility for education, Article I, section 8 of the Constitution allows Congress to tax and to "...provide for the common defense and general welfare of the United States." The U.S. Supreme Court has ruled on numerous occasions that public education is within the purview of the general welfare doctrine. This has enabled Congress to pass numerous laws and funding packages for public education. The federal laws must be followed by the states and the local school districts. Thus, education is a federal concern of a state responsibility for a local operation.

Equal Educational Opportunities

Regardless of any specific state arrangements, the state has a legal obligation to see that all residents, between certain ages, are afforded an equal educational opportunity and a basic educational program. Further, this opportunity must be evenly distributed so as not to be a function of the wealth or lack of wealth of a local community. Hopefully, children, regardless of where they live in a given state, will be afforded an equal opportunity to engage in educational programs. Limitations should be only those relating to the individual's ability and desire to achieve within our society. This concept, or goal of equity, is in the best interests of the individual, the community, the state, and the nation as a whole.

Because the state legislature is responsible for the education of the residents of the state, it has many powers. In striving for a sound educational system for its residents, the state legislature may create, combine, or dissolve school districts. While the local school board is charged with the responsibility of the day-to-day activities of the educational process, the state legislature must meet its responsibilities of ensuring basic educational opportunity for all the residents of a state.

States define a minimum educational program that must be extended to all residents by the local district. However, the wealth of any given state is not distributed in any uniform pattern. The ability of local districts to offer the state mandated educational program will vary greatly from community to community. It is not atypical to see the wealth of the poorest and the most affluent community to vary by a factor of two or three. In a few states, data reflect a hundredfold difference in ability of poor versus wealthy school districts to fund public education.

Given these economic realities, if each community were responsible for the total financial costs of offering a public education to the children of the community, then one of the following situations would most likely occur:

- Certain communities would not be able to offer a basic educational program;
- The residents of the poorest district would be taxed at exorbitantly high rates in order to offer a basic instructional program.

Compounding this dilemma, the wealthiest districts would be able to offer vastly superior public educational programs with little, if any, taxing effort. Because a child's educational offering cannot be a function of the wealth or lack thereof, within a local community, the state taxes the wealth of all its residents and provides assistance to the poorer school districts.

Throughout history, our system of public education has been attacked and various alternatives have been proposed. Presently, there are many people who argue for tax vouchers and credits. Under such a scheme a state or the federal government would financially subsidize the parent's choice in sending their child to a private or religious school.

The financial subsidy most often mentioned takes the form of a tax credit. Critics have long pointed out that under such schemes the wealthy always benefit more than the poor by virtue of their tax status. The tax voucher proponents are essentially proposing that their indi-
individual economic benefit outweighs the benefits that occur to society.

This issue is essentially an argument of private versus public benefits. American education has never been financed based on the private benefit principle. It has historically been financed, and continues to be financed, based on the need for benefits to accrue to society as a whole, and not based on those residual benefits that may occur to an individual.

**Taxes**

The raising of revenue is essential for the operation of the public schools of the United States. Many sources of revenue are available, and vary from state to state. The three major sources of revenue, income, sales and property taxes, account for nearly all the revenues used to fund public education.

**Federal Revenues**

Federal funds, amounting to approximately 7 percent of the total expenditures for public education, are generally confined to such areas as school lunch, block grants, vocational, special education, and federal impact aid associated with military installations. In many instances these moneys are awarded on a need or a competitive grant basis.

For 1987, the average level of state support for public education was approximately 47 percent. That is, 47 percent of all moneys expended on behalf of public K-12 education were state moneys as opposed to local funds. Generally, states make an appropriation to support public enterprises based on a number of projections. These projections include such things as: state income tax revenues, state sales tax revenues, state financial reserves, number of public school children, the cost of the previous year’s program, and the fiscal health of the state at large. Obviously, these projections are highly interwoven and interdependent and are based on the best available data at various points in time.

**State Revenues**

Most states support public education through a number of taxes. The bulk of state tax support is generated from a combination of state income and sales tax. Several states do not have a state income tax. In these states, the bulk of the state support is generated from the state sales tax.

States vary as to the specific taxes they utilize to support public education. It is not uncommon to see taxes on motor vehicles, utilities and mining properties, inheritances, licenses, fines, as well as a host of other goods and services. Although certain funds may be earmarked for public education, the bulk of funds are general revenues. Various other taxes support public education but are relatively small compared to income and sales taxes. In certain states, revenues from lotteries and the interest from common school funds are designated to be used for public education.

As a generalization, any state revenues collected in support of public education will be broader in their base than local collections. Anytime the tax base is increased, the likelihood of unfair taxation is diminished. Hence, state income and state sales taxes, in a sense, are thought to be superior to any local property tax. This is due to the fact that state income and state sales taxes rely on the wealth of the state as a whole, rather than the wealth of a local community, to fund public education.

Much disagreement exists as to whether the income or sales tax is the fairer methodology for raising revenues to support necessary services. Some argue that the income tax is fairest in that every taxpayer pays according to his or her ability, that is, the individual’s income. Others argue that because everyone consumes, the sales tax is fairest in that it is directly proportional to one’s level of consumption. However, as a general rule the poor will pay a higher percentage of their income in taxes through a sales tax. This is based on the fact that although the wealthy consume more than the poor, they also...
have greater capacity or ability to pay a given tax. It is not the purpose of the authors to present a detailed discussion of these points, merely to point out that the discussion is highly interwoven within the particulars of a given state.

Local Tax Revenues

Generally, once all federal and state moneys have been determined, school boards are responsible for raising the local effort to support the public schools. Without exception, the local board of education is bound by either statutory or other governmental body directive, or a formula that determines how much and to what extent the local share may increase from the previous year's budget. It is with rare exception that a board of education may unilaterally set the local tax levy without approval from the electorate, town meeting, state agency, or other governmental agency. Most states allow the local levy to be set within budgetary parameters as determined by a specific formula set forth by the state legislature.

Nearly all local funds that support education are generated through local property taxes. Certain user fees, book rentals, site rentals, etc., may exist, but they support public education to a small extent.

The property tax is perhaps disliked more than any other tax in America. It is perceived to be an unfair tax, one which is heavily burdensome, and one that is unfair to most taxpayers. Certainly, many of these concerns are valid. Nonetheless, the property tax is stable, it is relatively easy to administer, and it generally taxes wealth.

There is a direct relationship between one's wealth and the value of one's property. Everyone pays property tax in some form. For the farmer it may serve as a tax on his capital investment; for the renter it is included within the rent payment; for the merchant it is part of the overhead that is ultimately passed on to the consumer in the price of the goods or services.

Once the local school board, or other governmental body, determines the local share, it establishes the total dollar amount to be raised through taxes. This total dollar amount is referred to as the levy. The levy is raised by taxing the total property value that is within the boundaries of the school district.

The total value in dollars of the property is generally referred to as the assessed valuation. Frequently, due to state constitutional limitations, the assessed valuation is actually a percentage of the assessed value (or the retail value) of the property. The assessed valuation may be referred to by a number of names, for example, the grand list, the total and true cash value, the adjusted assessed value, etc. Although these terms may vary from state to state, they represent the legal terms for the total taxable property within the school district.

The school taxes can be determined by the following formula:

The levy is divided by the assessed valuation to produce the rate. Again, the rate may be expressed as a mill rate or a hundred rate. Once the rate is determined, the rate is applied to the individual assessed value of each parcel of real estate and improvements thereon to determine the individual taxes each property owner must pay.

Using this formula, note the following example. A school district determines that its local levy is to be $900,000 pursuant to state regulations and local need. The assessed valuation is, for purposes of illustration, $60,000,000. In this example, the tax rate would be 15 mills or $1.50 per hundred. Thus, a home with an assessed value of $50,000 would pay $750 per tax year.
Equity

The complex array of issues that surround school finance decisions dominate many state legislative sessions each year. Legislators, educators, and members of special interest groups spend many hours debating the equity of school finance to account for changing social, political, and economic situations. The education budget which emerges from these discussions generally continues to be the largest, annual expenditure for state governments.

During the 1970s, equity was the preeminent theme in school finance. Under pressure from the courts, states re-evaluated the methods used to distribute moneys to local school districts. For the most part, states increased their share of the cost of educating elementary and secondary students in an attempt to equalize the burden of financing schools. What emerged were a variety of formulas that attempted to distribute state funds in order to balance local dependency on the property tax as a source of revenue for school operations. School districts with low property values (wealth) would receive additional support so that taxpayers were not overburdened in their attempt to fund quality educational programs.

However, in the 1980s the costs of providing educational programs continued to rise. Many states were confronted with decreased financial resources including a diminished level of support from the federal government and taxation limitations imposed by voters. Changing economic conditions forced changes in the methods that states used to support public education.

Those who engage in the process of determining what is equitable in school finance approach the problem from different perspectives. Some individuals argue the need to reduce the tax burden by altering the distribution of state funds. Others call for increased state participation, while others call for a redefinition of wealth in order to shift the burdens of the cost of education to other taxpayers. Although many agree that their current system needs to be changed, rarely do they agree how it should be done.

The issues that surround the equity of school finance formulas may be generalized as follows:
- Who should pay for what?
- How much should be paid?

As previously discussed, public education is a public good supported by public funds generated through a variety of tax mechanisms. As a public good, education should benefit each member of society, be non-exclusive, and non-rival in its consumption. Active participation in education by young people in this country contributes to the development of more responsible citizens, as well as maintaining social stability and national cohesion. Additionally, measurable economic benefits derive from education that help moderate against income inequalities. The benefits that one individual receives from education do not diminish the benefit that others may receive, and in effect the education of one benefits all.

When individuals, whether home owners or corporations, are asked to support education, there is a natural avoidance and lack of desire to
pay. This results from a common misconception that those directly receiving services should be the ones who pay.

If none but those parents with children in school pay, insufficient funds will be generated in support of local education. At this junction the state is justified in balancing educational expenditures in an attempt to maintain the social-welfare function. By distributing the costs of educational programs across the widest range of taxpayers, the state may ease the burden of support found at the local district level and ease inequity.

In that the responsibility for supporting public education should be equitably distributed throughout a state, the next question concerns what are taxpayers being asked to support? Simply stated, the taxpayers pay for imputed outcomes and benefits of the educational experience over a child’s lifetime. However, measuring these benefits is difficult.

As an alternative, most states employ formulas that measure either the financial resources made available to children in a school district or the amount actually spent on the education of each child. Such analyses look at the issue of the cost of education in order to monitor the equality of the educational process. However, little analysis of the outcomes of this process are ever performed by state officials.

In the study of fiscal equity, several questions emerge:
- Are equals receiving equal resources?
- Are unequals receiving unequal resources?
- Does each child have an equal opportunity to acquire the benefits of the educational process regardless of the wealth available to the local school?
- How much should taxpayers pay?

While questions concerning the education received by children are important and continue as a focus for extensive discussion and litigation, a complete understanding of the equity of the tax mechanisms that are used to support schools is equally important.

Taxpayer equity has been treated by the courts since the first schools were supported by public funds. Historically, issues have centered on determining who should pay for what kind of education, the fairness of the tax levy and distribution of those tax revenues to local school districts.

Recently, discussions have focused on the states’ responsibility to provide an appropriate financial mechanism to guarantee the delivery of equitable education programs. It is important to remember that all moneys in support of public education are derived from either federal, state and local taxes. Balancing these tax sources involves examining how much taxpayers can afford (their ability to pay), and compares that with the amount they have actually paid (their effort). What emerges is a system that provides equality of educational opportunity for students regardless of the fiscal capacity of a community.

Ability to Pay and Effort

Regardless of the formulas currently being used in each state, wealthy school districts will always be able to spend more money, per pupil, than poor districts. Whether their buses are newer, their buildings better landscaped, or their computers more powerful, rich districts are in a position to provide a diversity of educational programs with less local effort than poor districts.

Although different states use a variety of measures to determine the local ability to pay (wealth) or the required local effort ratio (mill levy), combinations of property valuation, income, and sales tax measures are usually present in these equations. These variables are then manipulated within the school finance formula to balance the local share of the cost of
education according to one or all of the following:
- The wealth (ability to pay) of the district;
- The effort that local taxpayers agree to support; or
- A combination of the two.

For example, in Kansas the determination of a local effort rate (also referred to as an ability to pay ratio) and the ensuing process used in the calculation of state aid to local school districts includes such factors as state income taxes paid by patrons of the school district, state and local sales tax revenue, and annual adjustments to the assessed valuation based on the sale of property that year within the school district's service area.

**Horizontal and Vertical Equity**

As a principle of equity in taxation, horizontal equity is expressed as equal effort exerted by taxpayers with equal abilities to pay. For example, two individuals with the same income and the same value of housing should pay at the same property tax rate and support equivalent property tax burdens. Vertical equity, as a second principle, states that taxpayers with different abilities to pay should exert different efforts in support of tax burdens.

To continue the property tax example, under the principle of vertical equity, the effort required for each homeowner would be indexed according to their level of income. The homeowner with the higher income would have a higher tax rate to pay on property and would support a higher tax burden.

It is equally important to consider the equity of expenditures per pupil. Concerns for horizontal and vertical equity at the point of taxation are directed at the process of generating revenues. However, states must also try to reasonably balance expenditures such that there are equitable expenditures for all pupils being educated under similar circumstances with similar educational abilities (horizontal equity). Likewise, allowances should be made for dissimilar expenditures for special, often disadvantaged, populations, operating in different situations. Such expenditures would be vertically equitable.

Horizontal and vertical equity can be monitored. As a state monitors the costs of education as expenditures per pupil (or budget authority per pupil) the equity concerns dominate the process of determining the burden that taxpayers must bear in support of public education.

Equity is a philosophical construct which governors, legislators, and educators must understand. The complex formulas used by each state to maintain equity have evolved through long political processes and attempt to balance the distribution of financial resources throughout the state. Education is a state responsibility for a local operation. As social, economic, and political events continue to change, school finance policies must be altered in order to assure equity for all students and the taxpayers that support their education.
From the earliest days, states required localities to operate schools. Today, each state has a constitutional provision that calls for a system of funding public schools. Presently, the methods used to allocate funds are varied and often complex.

The colonial history of school finance plans centered on a need to maintain religious orthodoxy. As early as 1642, the Massachusetts General Court required parents to educate their children and in 1647 mandated that towns establish schools with local funds. Between the years 1785 and 1790, a variety of ordinances were passed by the Congress of the Confederation that reserved certain sections of property for the support of public schools and universities.

When the federal government was established, individual states developed school finance schemes focused primarily on the sale of land as a source of funds. In 1802, the new Congress of the United States admitted Ohio and continued the policy of setting aside public lands for education. In all, 29 of the 48 states, excluding Hawaii and Alaska, received in excess of 70 million acres in support of public schools.

It was the intent of the federal government that states would sell the land and use the proceeds to establish and maintain public schools. The federal government had made these land grants available to states but exercised no control over the management or distribution of those funds. As a result, states used various plans for selling land and distributing the proceeds. For example, by 1812 New York had established a permanent school fund and distributed money to local districts based on population. Gradually, permissive tax legislation allowed local school districts to raise their own funds and assume greater fiscal responsibilities.

In the latter part of the 1800s, the expansion of educational programs placed extensive financial burdens on local school operations. Other sources of revenue were sought through taxes, and the primary source of funds was the property tax. Early in the 1900s localities continued to retain primary responsibility for the financial operation of public schools.

The Depression years found many taxpayers unable to meet their property tax commitments, and state governments were forced to intervene and contribute state resources for the operation of local schools. What evolved from this process were state finance formulas that shared the costs between the state and local educational agencies.

Formulas and Equalization Plans

School finance studies performed during the early 1900s focused attention on several new and important issues: What level of education is "appropriate?" What share of the costs should be borne by the state? How much control should the state exert over the operation of local schools? And, what is meant by the "equalization" of educational opportunity?

By the mid 1930s theoreticians such as Cubberly, Mort, Strayer, Haig, and others studied these questions. Their findings indicated that balancing the financial support among all school districts within a state would balance the educa-
tional opportunities available to students. In general, the results of these studies indicated the need for the use of formula distribution plans coupled with fair systems of taxation to attain a balance between state and local funds used in support of public schools.

Gradually, states began to assume a greater share of the costs of operating schools. From 1930 to 1980, the state share in support of public schools throughout the United States increased from 17 percent to approximately 48 percent. By 1979, all states, except Hawaii, used some type of a formula program to determine the exact amount of that share. Today, the distribution plans most frequently used by states include: combinations of flat grants with variations of a foundation program, the percentage or power equalizing program, and the guaranteed yield or guaranteed tax base plan programs.

Although there are many variations of each formula used by states to calculate their share of the cost of education, the authors classify these formulas as follows:

- Flat Grant, Categorical or Entitlement Programs;
- Full State Support or Funding Programs; and
- Equalization Aid Programs.

A general overview of each of these formulas is discussed. It is important to remember that each state operates with a unique set of guidelines and no single explanation of a formula or a plan is appropriate for every situation.

### Flat Grant Programs

Flat grants are commonly defined as warrants paid to a local school without concern for the ability of the local patrons to pay for the services funded by the grant. There are two forms that flat grants follow:

1. A grant based on some uniform measure of need, that is, dollars per pupil, dollars per mile, or dollars per teacher unit; and
2. A grant based on variable or weighted units of need which are adjusted to prescribed local or instructional needs, that is, rural or urban geographical problems, enrollment sizes, additional costs for students with certain exceptionailities, etc.

By the beginning of the 1900s, states were funding an increased share of the costs of public schools. The plans most frequently used were variations of flat grant plans. By the 1920s approximately 38 states allocated funds in support of public schools in the form of flat grant formulas. The number of school-age children in a district was the primary criteria for determining the level of state aid. Other states used average daily attendance, general enrollment, and school membership, alone or in combination, to determine aid.

By 1971, only 10 states continued to use flat grants as their primary funding mechanism: Arizona, California, Connecticut, Oregon, Arkansas, Delaware, Nebraska, New Mexico, North Carolina, and South Carolina.

Today, various forms of flat grants are used by most states to distribute supplemental aid to assist with the costs of several special operations and programs. Included in these special pro-

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**FIGURE 1**

*Effect on Tax Rates (Mills) with the Use of Flat Grants*
grams are transportation, the excess costs of special education, food services, textbooks, vocational education, and driver's education.

When the flat grant was used as the primary method for distributing state funds, the assumption was that each district deserved a given amount of financial support. However, states were reluctant, and often unable, to fund the entire costs of education and additional revenue was needed from local sources. Additionally, these flat grants did not consider the capacity of the local district to support the needed additional revenues.

These grants and payments violated many of the principles of equity and fiscal neutrality, that is, the wealth of the community shall not determine the education of a child. As such, rich districts received the same payment per unit of measure as did poor districts. Rich districts could then raise additional revenue from the local property tax base with minimal tax rates. Poor districts were then forced to impose higher tax rates in support of similar programs or forego such programs at the expense of their students, as shown in Figure 1.

Figure 1 shows two school districts -- A and B. Assuming that property assessments are uniform throughout the state, the wealth in B ($20,000 per pupil) is much greater than in A ($10,000 per pupil). If the state’s share of the expenditures for operating a particular program is $500/student, and both districts need $1000/student to cover the costs of the program, the residents of A must be taxed at greater rate than their counterparts living in B (50 mills compared to 25 mills).

### Full State Funding Plans

In the early 1930s Henry Morrison, an early education finance theorist, observed in several states that the support for public school provided by the plans that were then being used were ineffective and underfunded. He proposed that the only distribution plan which could guarantee equity throughout a state was one in which the state assumed all responsibility for both taxation and fiscal administration for schools. His model called for full state support of education.

Although the exact methods used for the distribution of funds under full state funding plans are often complex, the concept of full state funding is relatively easy to note. Full state funding exists when a state uses flat grants, or some other uniform distribution plan, which funds the entire cost of educational programs. Today, Hawaii is the only state using full state support for public schools. Within its seven

<table>
<thead>
<tr>
<th>Primarily State Set</th>
<th>Primarily Locally Set Programs</th>
</tr>
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<tbody>
<tr>
<td><strong>General</strong></td>
<td><strong>Percent Equalizing</strong></td>
</tr>
<tr>
<td><strong>Descriptive Terms</strong></td>
<td><strong>Guaranteed Tax Base</strong></td>
</tr>
<tr>
<td><strong>Common Types</strong></td>
<td><strong>Power Equalizing</strong></td>
</tr>
<tr>
<td>Foundation</td>
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<tr>
<td>Fixed-Unit Equalizing</td>
<td>Variable Ratio Matching</td>
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<tr>
<td>Stayer-Haig-Mort Grant</td>
<td>Recapture Plan</td>
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<td>Minimum Foundation Plan</td>
<td>Guaranteed Tax Yield</td>
</tr>
<tr>
<td>Guaranteed Valuation</td>
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</tbody>
</table>

**TABLE 1**

Summary of Equalization Plans
taxing jurisdictions, local schools submit budget requests that are evaluated for funding by the legislature.

**Equalization Plans**

As previously discussed, there are many variations of equalization formulas in use today. All operate on the assumption that the state and the local school district must share the costs of operating public schools. However, two philosophical questions may be asked to help explain the way in which the costs and the shares will be decided:

- Does the state set the cost of education throughout the state and the local effort tax rates required to meet some stated minimum cost?; or
- Does the state allow local districts to determine their own costs of education and balance the wealth of the local districts such that the patrons of each district have an equal opportunity to fund their programs?

The names given to various equalization plans are summarized in Table 1.

The general form of each equalization plan is illustrated within this brochure. The reader is cautioned that the discussion and accompanying examples have been simplified for the purposes of clarity. Each state operates with one of these formulas and has modified each formula extensively over the years.

**Foundation Plans**

The basic premise underlying the use of the foundation plan, and any of its variations, is that the state sets the minimum local property tax rate to be used for education, the costs of delivering educational services which the local districts can spend, or some combination of the two.

The foundation plan is currently the most popular form of equalization used by the states. Approximately 30 states use some form of the foundation plan for the distribution of funds. First advocated in the early 1920s for the state of New York, the intent of the plan was to guarantee that districts would spend at least the minimum level required by the formula.

Although the early formulas contained provisions that proved to be inequitable, their use attempted to require local taxpayers to contribute a fair share to the operation of local public schools. The state would then contribute to equalize the ability of local school districts to provide educational programs without forcing some localities to "over-tax" in order to fund to the minimum level.

However, in the early applications of the foundation plan, districts were allowed to tax in support of programs exceeding the minimum standards set by the state. Additionally, the state's share in the cost of education was limited.

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**FIGURE 2**

*Description of Foundation Plans*

<table>
<thead>
<tr>
<th>District A</th>
<th>District B</th>
<th>District C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Required Expenditure Per Pupil</td>
<td>$1,200</td>
<td>$1,200</td>
</tr>
<tr>
<td>State Share ($1,200)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Tax Rate</td>
<td>100 mills</td>
<td>100 mills</td>
</tr>
</tbody>
</table>

*Minimum required local tax rate for all districts = 40 mills*
and extensive variations in local effort above the minimum were allowed. Thus, wealthy districts with a modest effort could support programs above the foundation level. It was the intent of such allowances to permit certain districts to develop new innovative "lighthouse" programs. In theory, the state would determine the extent to which the successful programs would be included and funded within the foundation plan.

The basic concept of the foundation plan is illustrated in Figure 2. It shows the relationship between the tax base, the tax rate, the cost of education, and optional expenditures for three districts: A, B, and C. In this example, the state requires a local effort of 40 mills. Districts A and B have the same local tax rate (100 mills) but District B has a higher assessed valuation. (assessed valuation per pupil is used for these examples). Districts A and C have the same valuation but District C has elected to tax only to the level required by the state.

As Figure 2 indicates, all districts are funded at the minimum level and the state's share of that level is in direct relationship to the district's assessed valuation. District B, with its higher valuation, generates more revenue per pupil than District A, although the two districts have the same tax rate. Both Districts A and B earn more than District C because they support higher tax rates. In practice, most states limit the extent to which a district may exceed the mini-

### Variables Used in the Calculations

<table>
<thead>
<tr>
<th></th>
<th>District A</th>
<th>District B</th>
<th>District C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expenditure Level</strong></td>
<td>$2,400</td>
<td>$2,400</td>
<td>$2,400</td>
</tr>
<tr>
<td><strong>Assessed Valuation</strong></td>
<td>$10,000/pupil</td>
<td>$20,000/pupil</td>
<td>$10,000/pupil</td>
</tr>
<tr>
<td><strong>Number of Pupils</strong></td>
<td>100</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total Valuation</strong></td>
<td>$1M</td>
<td>$4M</td>
<td>$1M</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td>$240,000</td>
<td>$480,000</td>
<td>$180,000</td>
</tr>
<tr>
<td><strong>Ratio of Local State Assessed Value</strong></td>
<td>0.0066</td>
<td>1.3333</td>
<td>0.0066</td>
</tr>
<tr>
<td><strong>Required Local Share</strong></td>
<td>$800/pupil</td>
<td>$1,600/pupil</td>
<td>$800/pupil</td>
</tr>
<tr>
<td><strong>Required Mill Levy for Local Share</strong></td>
<td>80 mills/pupil</td>
<td>80 mills/pupil</td>
<td>80 mills/pupil</td>
</tr>
<tr>
<td><strong>Total Local Share</strong></td>
<td>$80,000</td>
<td>$160,000</td>
<td>$80,000</td>
</tr>
<tr>
<td><strong>Total State Share</strong></td>
<td>$160,000</td>
<td>$160,000</td>
<td>$120,000</td>
</tr>
</tbody>
</table>

*Required local share = state set share x local state ratio x expenditure level

**FIGURE 3**
Power Equalizing Plans in Three Districts
mum requirement. By controlling the local tax leeway, the revenue differences between rich and poor districts are minimized and equity is maintained.

It must be noted that if local tax revenues are reduced as a result of mandatory caps or increased competition from other tax-supported operations, for example, fire and police protection, an increased state share may be required. For example, the more that the local share is eroded and replaced by state funds, the closer that state approaches full state funding.

Such a situation is currently occurring in California. The tax limitations imposed by Proposition 13 are forcing local districts to fund less of a share of the cost for providing educational programs. The additional burden of other local responsibilities supported by taxes has resulted in a further decrease in the amount of money available for schools, and the state share of funding has increased greatly.

**Percentage Equalizing and Guaranteed Tax Base Plans**

The theoretical premises underlying these plans is that the state shares in the support of education at a level that is determined appropriate by the local district. In order to accomplish this, the formula attempts to balance the wealth or ability to pay, for each district. The difference between percentage equalization (PE) and guaranteed tax-based equalization (GTB) is simply whether the plan adjusts the expenditure side of the equation, PE, or the taxing side, GTB. They are basically two sides of the same coin.

Classic explanations of PE plans detail the fact that a district decides to fund education at some percentage increase above the previous year's expenditure. The state then contributes its share based on the relative wealth of the district. There are no minimum controls on the expenditure levels set by the state but the state does set the percentage of the total cost it is willing and able to support. Figure 3 reflects a percentage equalization plans in three hypothetical school districts.

In this example of a PE plan, the state has set their share of the total cost at 50 percent. The formula compares the wealth of Districts A, B, and C with the total wealth available within the state and determine the amount that will be supported by the locality. Poor District A and rich District B have the same tax levy because each has funded education at the same level - $2,400. The tax rate in District C, which is also poorer than District B, is lower because they have elected to fund at a lesser amount. However, the state share of the total cost of education for the three districts remains at 50 percent - $900,000/$4,400,000 (rounded figures).

The GTB plan is essentially the same in operation as the PE plan. Like the PE plan described, each locality sets an expenditure level and the state determines the state guaranteed tax base. The levels of state and local dollars are

| GTB Formula: State Aid = Local Effort x Guaranteed Valuation - Local Valuation |
| State Guaranteed Valuation = $30,000/pupil |

<table>
<thead>
<tr>
<th>District A</th>
<th>District B</th>
<th>District C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locally Set Mill Levy</td>
<td>$80 mills/pupil</td>
<td>$80 mills/pupil</td>
</tr>
<tr>
<td>Locally Set Expenditure Level</td>
<td>$2,400</td>
<td>$2,400</td>
</tr>
<tr>
<td>Assessed Valuation</td>
<td>$10,000/pupil</td>
<td>$20,000/pupil</td>
</tr>
<tr>
<td>GTB Difference</td>
<td>$800</td>
<td>$800</td>
</tr>
<tr>
<td>Required Local Share</td>
<td>$16,000/pupil</td>
<td>50% of $2,400</td>
</tr>
<tr>
<td>State Share</td>
<td>$16,000/pupil</td>
<td>50% of $2,400</td>
</tr>
</tbody>
</table>

**TABLE 2**

Guaranteed Tax Base Plans in Three Districts
adjusted as a result of the differences between the state guaranteed wealth and the wealth of the local district. As seen in the PE plan, the state adjusts this guaranteed wealth factor according to the funds available to support public schools. A diagram of a GTB plan is shown in Figure 3, but the calculations are different. These calculations are shown in Table 2. As shown in Table 2, in order to determine the state and local shares, it is the assessed valuation that is adjusted by the state rather than the expenditure levels. Although districts A and B are taxing at the same rate (80 mills) their local shares differ according to their wealth. Thus, A and C differ due to the lower tax rate chosen by the taxpayers in C.

District Power Equalization Plans

The last of the equalization plans to be discussed is the district power equalizing plan (DPE). A product of the late 1960s and early 1970s, DPE plans are basically the same as either the GTB or PE plans previously discussed. As such, DPE plans were implemented in only a few states that had a few extremely wealthy school districts and a few extremely poor districts.

Under DPE plans, the state would require wealthy districts to support poor districts via a wealth recapture operation. Every district with an assessed valuation greater than that set and guaranteed by the state would pay back the difference. In the example shown in Table 3. If there were a fourth district with an assessed valuation greater than $30,000, money would be returned to the state and that district would effectively support poorer school districts.

District D

<table>
<thead>
<tr>
<th>Locally Set Mill Rate</th>
<th>70 mills/pupil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locally Set Expenditure Level</td>
<td>$3,500</td>
</tr>
<tr>
<td>Assessed Valuation</td>
<td>$50,000/pupil</td>
</tr>
<tr>
<td>GTB Difference</td>
<td>-$20,000</td>
</tr>
<tr>
<td>Required Local Share</td>
<td>$3,500 plus $1,400 to state</td>
</tr>
<tr>
<td>State Share</td>
<td>$0</td>
</tr>
</tbody>
</table>

TABLE 3
Example of Recapture in the Power Equalization Plan

District D has the onerous task of paying the state for excess revenues generated as a result of its wealth. An additional 28 mills (.028) would have to be assessed to account for the $1,400 recapture share. Convincing local taxpayers to pay additional revenues to the state, or shift their wealth to a poor district, would be an improbable task. As such, the recapture aspect of DPE does not work like this in most instances.

The intent of DPE programs is to equalize the spending power of the mill, not the level of actual spending or the ability to pay of each district. Where assessments are not uniform throughout the state, the same property, a warehouse, farm, and so on, may have a different assessment in each locality. As a result, the ability of the mill to generate revenue would be determined by the assessment procedures used in each locality rather than the uniform, "true" value of the property being assessed.

The consequences of these nonuniform assessments make equalization plans difficult to enact. To rectify the inequities in assessments, complex formulas are utilized to adjust local assessed valuations according to current market values, or the income earning capacity of the property itself. It is the potential for this adjustment and subsequent loss in state aid to other school districts that differentiates the power equalizing plans from the other education finance equalization plans.
The financing of public education in the United States is a huge and complex industry. The allocation and determination of the amount of local and state revenues to be raised, shared, and expended is laden with value judgments and complexity. The authors have attempted to display the most common mechanisms for the distribution of state revenues to local educational agencies. This state distribution then determines, or at least highly influences, the local taxes used to support local education.

Public education finance is a dynamic and ever-changing function of the 50 states and the value systems of our society. Public education finance will continue to change, and important refinements and modifications will occur constantly. The goals of financing public education is such that taxpayers should be treated differently based on their ability to support public education.

Concurrent with this goal is the goal that where a child lives, or her or his community's lack of wealth should not determine the quality and quantity of the educational program offered by the local public schools. By providing this equal educational opportunity, our society will benefit, and the individuals within our society will achieve their fullest potential.
Further Readings


Authors

R. Craig Wood is Professor and Chair of the Department of Educational Leadership at the University of Florida in Gainesville, Florida. Additionally, he is co-director of the Center for Education Finance. Previously he was with Purdue University as chair of educational administration. He has served as the assistant superintendent for finance and plant planning for school districts in Wisconsin and Connecticut. He has also served as a public classroom teacher. Dr. Wood has served as consultant to numerous agencies in public education finance. He has conducted research and published more than 80 scholarly studies in the area of public education finance and has presented his research at major scholarly conferences.

David S. Honeyman is Associate Professor of Educational Leadership at the University of Florida in Gainesville, Florida. Additionally, he is co-director of the Center for Education Finance. Previously he was an associate professor with Lehigh University in Bethlehem, Pennsylvania and served as an Assistant Professor at Kansas State University. He has also served as a public classroom teacher as well as a building level administrator. He has conducted numerous scholarly research studies in the area of public education finance and facilities as well as presented his research at major scholarly conferences. Dr. Honeyman has served as consultant to numerous school districts and other agencies in the area of public educational finance.
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