ALTERNATIVE FUNDING MODELS FOR PUBLIC SCHOOL FINANCE IN TEXAS

DISSERTATION

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements For the Degree of

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By

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This study examined different funding methods for financing public education in order to solve the problems associated with large numbers of school districts and great disparities in property wealth without abandonment of property tax as the major revenue source. Using enrollment and State Property Tax Board data for the 1,061 school districts in Texas in 1986-87, four alternative funding plans were studied to compare the equity and fiscal impact of each on public school finance in Texas. The state and local shares of the total cost of education were computed using a combination of three per-pupil expenditure levels and four funding formulas. The per-pupil expenditure levels used were $3,850, $4,200, and $4,580. The formulas used were representative of a full state funding plan, a percentage equalization plan, a power equalization plan, and a foundation school program plan.

Since each of the four plans used significantly higher per-pupil expenditure values, all required a greater monetary investment on the part of the state. However, all plans were found to be equalizing in nature if set per-pupil
expenditure values were maintained and no local enrichment was permitted. In addition, each of the four plans, as studied, met the fiscal neutrality standard of the 1987 Edgewood v. Kirby case. The percentage and power equalization plans required less monetary investment on the part of the state than either full state funding or the foundation school program.

As a result of the study, it is recommended that the state consider a combination of plans. For example, the state could employ a full state funding model up to the $3,850 per-pupil expenditure level with added permissible local millage being limited and power equalized. In addition, while each of the plans studied reduces inequity, the increased cost of an adequate public school education suggests that the state consider other sources of revenue to fund public education. These could include personal or corporate income taxes.
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CHAPTER I

INTRODUCTION

In 1970, James S. Coleman wrote:

The history of education since the Industrial Revolution shows a continual struggle between two forces: the desire by members of society to have educational opportunity for all children, and the desire of each family to provide the best education it can afford for its own children. Neither of these desires is to be despised; they both lead to investment by the older generation in the younger. But they can lead to quite different concrete actions. The conflict between the two forces is most evident in the decision about the means by which a child's education is to be financially supported. If there is to be educational opportunity for all children, then a child's education must not depend on his family's economic resources. But if a family is to be able to provide its children with the best education it can afford, then it must be able to employ its economic resources to do so. These two requirements are in direct opposition (Coons, Clune and Sugarman 1970, vii).

Coleman's words, though written eighteen years ago, are still pertinent. The struggle between those who consider individual rights paramount and those who believe equality should be preponderant began as early as the turn of the century and continues today.

Although charged with the responsibility of education, early state governments appeared unwilling to assume this function (Coons, Clune and Sugarman 1970). Pleas for equality reform went directly to the state but the state's response came in the form of delegation of the
responsibility to the smallest possible unit which was the local community. This may have occurred because from an ideological standpoint, education was thought to be a highly personal issue and any related acts of government, a potential intrusion (Coons, Clune and Sugarman 1970). Legislators compelled to carry out the function of education and yet faced with powerful constituent opposition thus sought and found the smallest workable unit, the community, as compromise.

This compromise has continued and has been repeatedly challenged, altered, and complicated through the years. We have attempted to address the problems associated with equal educational opportunity from legislative and judicial perspectives at both the state and federal levels. To complicate the situation even more, as education has become an even larger component of the public budget, interest has grown in the short-run and long-run effects of expenditures for education. Between 1980 and 1984, public school revenue grew from approximately $81.8 billion to more than $120.4 billion, an increase of 47 percent (Augenblick 1984). Thus, the economics and the politics of educational finance have become as much an issue as equality of opportunity. Financial issues are complex and resistant to adjustment or reform. Changes, though potentially beneficial, do not come about easily and the sheer size and bureaucratic nature of public education makes any reform difficult.
Reform, for the most part, has concentrated on acquisition of equal educational opportunity. Judicially, a number of cases have questioned the methods various states have used to provide equal opportunity for all students. Following the U.S. Supreme Court decision in Brown v. Board of Education of Topeka (1954 and 1955), which held that segregated schools violated the equal protection clause of the Fourteenth Amendment (Arrington 1986) and proposed that opportunity for education was a right which must be made available to all on equal terms (Johns 1973), a debate arose concerning the scope of the power of the judiciary. This debate has continued to intensify over the last thirty years as the courts have ruled on cases concerning desegregation and its parent concern of equal educational opportunity. Although never so heated an issue as desegregation, school finance reform has also developed as a public policy issue through court involvement (Arrington 1986).

Since the 1960s, the constitutionality of school finance schemes has been a source of intense litigation (Connelly and McGee 1987). Judicial challenges have been brought into both state and federal courts with mixed results. In 1973, the Supreme Court of the United States determined the constitutionality of state school financing schemes under the Federal Constitution. In San Antonio Independent School District v. Rodriguez, the Court ruled that the Texas school finance system did not violate the
Equal Protection Clause of the Fourteenth Amendment in the Federal Constitution. The Court declared that education was not a fundamental right deserving of strict judicial scrutiny. Justice Powell stated:

Education, perhaps even more than welfare assistance, presents a myriad of "intractable economic, social, and even philosophical problems." The very complexity of the problems of financing and managing a statewide public school system suggests that "there will be more than one constitutionally permissible method of solving them," and that, within the limits of rationality, "the legislature's efforts to tackle the problems" should be entitled to respect (Connelly and McGee 1987, 578).

Following this decision, school financing schemes were challenged in state courts using individual state constitutions. Since the 1968 McInnis v. Shapiro (Illinois) case when the Illinois Supreme Court held that the Illinois system of school finance was not unconstitutional because there were no "discoverable and manageable" standards (these standards refer to measures of educational need) by which a court can determine when the Constitution is satisfied and when it is violated (Johns 1973, 4), there has been considerable litigation at the state level concerning the financing of public school education.

The highest state courts in six states have ruled that the financing systems of their respective states are unconstitutional. Five states, Maryland, New Jersey, California, Connecticut, and Wyoming, have ruled that education is a fundamental right under the provisions of their state constitutions (Arrington 1986; Connelly and McGee 1987). A
Washington court decided that while education is not a fundamental right, there had been a violation of both the equal protection and public education clauses of that state's constitution (Arrington 1986).

Conversely, six states have upheld the constitutionality of their states' public school finance systems (Arrington 1986). The Pennsylvania Supreme Court interpreted the "thorough and efficient" clause of the Pennsylvania constitution as a positive mandate that should be interpreted broadly in order to allow legislatures to exercise discretion concerning educational policy (Arrington 1986, 41).

Nine court cases spoke to the standards to be applied in determining the constitutionality of school finance schemes. Eight courts agreed that the rational basis test was the appropriate standard to be applied and one court applied the compelling interest standard (Connelly and McGee 1987). The rational basis test demands that a state's actions, in this case a school finance scheme, be reasonably conceived and free from discrimination. The compelling purpose or interest standard is more strict. The government must show a compelling purpose based on a fundamental right for the existence of something, in this case, a state school finance scheme.

Specific issues addressed over the last twenty to thirty years, while philosophically important and legally
binding, need not be detailed here to view the pattern of continued conflict between local control and equality of opportunity. Careful study of the relevant court cases of the last twenty years reveals decisions which are complex and individualized. As a result, there is no clear delineation of either side of the conflict as victor.

Since 1980, a significant number of court cases appear to uphold state financing systems. In 1981, the Supreme Court of Georgia found that Georgia's financing scheme bore a rational relationship to a legitimate state purpose and it was not incumbent upon the Georgia Assembly to equalize educational opportunity between districts (Connelly and McGee 1987). In 1982, the Supreme Court of Colorado reversed a district court's ruling and found that the Colorado state system of financing public elementary and secondary education was constitutionally permissible. Upon finding the finance system constitutionally permissible, the court stated that its only purpose was to determine the system's constitutionality and that "...whether a better financial system could be devised (was) not material to this decision. ..." (Connelly and McGee 1987, 579-580). In 1982, both the New York Court of Appeals and the Maryland Court of Appeals upheld the constitutionality of each of the state systems for financing public school education.

In 1984, the Sixth Circuit Court of Appeals upheld the Michigan State School Aid Act as constitutional. The court
ruled that the act, which provided for a reduction in state aid to school districts receiving federal impact aid, did not deny equal protection to students in those districts (Connelly and McGee 1987).

In 1984 and 1985 respectively, similar cases in Michigan (East Jackson Public Schools v. State of Michigan) and Connecticut (Horton v. Meskill) found state financing systems to be constitutional. In Michigan, the Court of Appeals determined that the legislative mandate to establish a system of free public education was not synonymous with providing equal per-pupil funding between school districts (Connelly and McGee 1987).

Yet, in April of 1987, in the 250th District Court of Travis County, Texas, Judge Harley Clark found that under the Texas state constitution education is a fundamental right of each citizen (Edgewood v. Kirby, 1987). The court cited Article 1, sec. 3, 3(a) 19, and 29 as violated, as well as Article VII, sec. 1 (Walker 1988). Although Judge Clark's decision was reversed in December 1988 in a two to one decision by the Texas 3rd Court of Appeals, it contained substantial data Judge Clark felt supported the court's holding that the current system of funding public education in Texas is unconstitutional. His decision was based on legal conclusions concerning fundamental rights, lack of compelling state interests, lack of rational state interest
and lack of efficiency (Clark 1987). The facts were summarized by Judge Clark in categories relating to:

1. education as a fundamental interest in Texas;
2. an overview of the school finance system;
3. wealth disparities;
4. variations in expenditures;
5. variations in tax rates and ability to raise funds at certain tax rates;
6. effects of wealth differences on expenditures and taxes;
7. effects of insufficient funds;
8. facilities;
9. concentration of low-income students in low-wealth districts;
10. historical inequities;
11. how the foundation school program (FSP) formulas deny equality of access to education funds; and
12. district boundaries.

With respect to the subsidiarity issue (the power of localities to decide how much education they desire and how much they are willing to spend to reach their goals) versus equality of opportunity issue, Clark responded at length:

The differences in expenditure levels throughout the state are significant and meaningful in terms of the educational opportunities offered to students and the effect of these differing levels of expenditure is to deprive students within poor districts of equal educational opportunities (Clark 1987, 17). The denial of educational opportunity for equal tax effort is also illustrated by the fact that the tax rates required to raise the local share of Foundation School Program Allotments, including the 30% add-on for
enrichment vary widely across the wealth spectrum under the state's current funding formula:

a. The average rate required for the 150,000 students in the bottom range of wealth is approximately two times as much as the average rate required for the 150,000 students in the top range of wealth.

b. The average rate required for the 300,000 students in the bottom range of wealth is approximately one and two-thirds times as much as the average rate required for the 300,000 students in the top range of wealth (Clark 1987, 19).

The state has proffered the preservation of local control as a justification for the state's funding scheme. This justification is not embodied in statute or Constitution. The Court, based on the findings, concludes that the claim of local control is factually insufficient to justify the discrimination found in the State's system of funding public education (Clark 1987, 40-41).

The Court concludes that local control, as it exists in Texas, is not a compelling interest sufficient to support the state's school finance system. This conclusion is based on the testimony at trial as well as the partial list of state requirements on local districts. The Court does not find these requirements unconstitutional, but only illustrative of the lack of effective local control in Texas. State statutes, regulations, interpretations and monitoring intrude on every aspect of school district operation (Clark 1987, 43).

There are obvious concerns regarding Judge Clark's ruling in the Edgewood v. Kirby case. The issue is emotional. Some opponents of the decision argue that Judge Clark's ruling cannot be satisfied unless the state's 1,061 districts are consolidated into as few as five to twenty super districts (Pruitt 1987). Media coverage of the court decision focused on changes in district boundaries as a feasible and even probable remedy. Even school administrators overreacted to Judge Clark's findings which declared that "there is no underlying rationale in the district
boundaries of many school districts" (Cardenas 1987, 6). However, fiscal discrepancies between poor and wealthy districts may not be addressed most efficiently through consolidation or redistricting.

Financing of public education in Texas has as its basis, district property wealth. Wealth disparities in 1985 ranged from $14 million per student of taxable property wealth in the richest district to $20,000 per student in the poorest district. This produces a disparity of 700 to 1 (Cardenas 1987). The basic system of school finance in Texas, the Foundation Program, is equalizing in nature. However, it is the local enrichment factor (which is currently not equalized) that may be the basis for the excessively large discrepancies in per-pupil expenditures. Local enrichment refers to the ability of a local school district to supplement a state grant of revenue from its own source of taxation. It would seem reasonable then to look for an alternative which modifies the existing system and perhaps, addresses the local enrichment factor. Regardless of the course of action chosen, success is dependent upon the resources available for implementation. Unfortunately, this issue must be addressed at a time when the entire state is caught up in a financial crunch. Whether the timing is acceptable or not, however, the judicial system has once again brought the issue of subsidiarity versus equality of
opportunity to the forefront, and this time the real issue is clearly identified as one of money.

In 1971, a federal district court ruled that the Texas school financing system was unconstitutional. However, on appeal, the United States Supreme Court, in 1973, ruled in favor of the state in the case of Rodriguez v. San Antonio Independent School District (Texas), but pointed out that the school financing system was in need of reform (Arrington 1986). Since that time the Texas Legislature has considered the matter of equality of opportunity. In 1975, the Sixty-Fourth Legislature passed HB 1126 which restructured the existing state foundation program and considered the concept of equalization. Senate Bill 1, passed in 1977, further addressed school finance laws. In 1978, Wells found evidence that the inequities of the Texas school finance system that were present in the Rodriguez litigation had never been resolved. These inequities were primarily due to disparities in property values available to each school district. Thus, HB 1126 and Senate Bill 1 failed in the attempt to bring about equalization (Arrington 1986).

In a comprehensive study of the most recent reform effort, HB 72, Arrington attempted to determine the effect of its passage on equalization of educational opportunity. His research questions and answers were as follows:

1. To what extent does the current state school finance system meet the criteria of equal resource availability or fiscal neutrality?
The evidence presented revealed that the Texas school finance system of 1986 (following HB 72) did not satisfy the court criteria of equalization of finance resource availability. A significant correlation (.6299) existed between property index values and total revenues per district.

2. To what extent does the current state school finance system meet criteria of elimination or reduction of disparities in per-pupil expenditures?

The Texas school finance system of 1986 did not eliminate the vast inequities in per-pupil expenditure variations in school districts across the state. A significant correlation (+.6129) existed between property index values and total expenditures. Total per-pupil expenditure varied from $2,057 to $18,720. Though the FSP attempted to equalize expenditures, Unequalized Local Enrichment by districts upset any balance.

3. To what extent does the current state school finance system have an impact on eliminating or reducing local initiative?

It was shown statistically in this study that the ability of a wealthy school district to raise large sums of unequalized local revenue at low effective tax rates is the main source of inequity between Texas school districts. A significant negative correlation (-.3224) existed between property index values and effective tax rates. This provides an indication that the current Texas system does have an impact on reducing initiative.

4. To what extent does the current state school finance system meet the criteria of an educational needs differential or special costs inputs by distributing state aid according to the measurement of needs?

The Texas Foundation School Program recognizes the needs of special education, bilingual, vocational and compensatory students through its weighted-pupil method of state aid distribution; however, the system does not provide any allowance to urban districts for the extra costs they bear through municipal overburden. The Price Differential Index does make an attempt to provide some relief for districts with high numbers of hard-to-educate students and the increased cost of wages but the amounts which are provided do not come close to the actual costs (Arrington 1986, 152-154).

On June 6, 1987, Judge Clark said inattention by the Texas Legislature had allowed the school districts to drift into a condition of very substantial and constitutionally
significant property wealth disparity (Stutz 1988). From 1969 to 1976, the state of California found itself in a similar position with Serrano v. Priest. The state postponed addressing the problem until the appellate process had been exhausted. The result was a problem that was exacerbated in the intervening years and the commitment of millions of dollars that could have been used for reform to other purposes (Cardenas 1987). Reliance on litigation often retards movement toward school finance reform because it provides legislatures an excuse for inaction (Clark 1984).

Though reversed in December, 1988, and now on appeal to the Texas Supreme Court, the recent judicial mandate which charged the current Texas school finance system with the failure to achieve equity, together with the questions raised by the analysis of the current funding formula following HB 72, indicate that a comprehensive study of alternative programs for financing education and their relationship to equitable standards would seem beneficial.

Those charged with the formation and implementation of educational policy should have access to data ascertaining the impact of one or more models for the financing of public school education. This appears of value from an equalization, fiscal, and even political perspective.
Statement of the Problem

The problem of this study was to determine the potential impact of four finance models on the funding of public school education in Texas.

Purpose of the Study

The purpose of this study was to determine the impact of four alternative finance models. These include (1) full state funding, (2) the foundation school program (3) the percentage equalization formula, and (4) the power equalization formula using data from each of Texas' 1,061 school districts in 1986-87.

The specific purposes of the study were (1) to determine the fiscal impact at the state and local district level of each model using set per-pupil expenditure levels; and (2) to provide valid information for those charged with the formation and implementation of public school finance policy in Texas.

Definition of Terms

**Average Daily Attendance (ADA)** is the average number of students attending school each day of the school year. In Texas, a refined ADA is determined by the best four weeks of eight weeks of attendance. The State Board of Education by rule shall prescribe the eight weeks for which attendance records must be maintained by all districts for this purpose, except that the records must be kept for four weeks of
each regular semester *(Texas School Law Bulletin Section 16.006, 112).*

*Educational Effort* is manifested as the willingness of a district to sacrifice (tax itself) for education. Effort is most conveniently measured in terms of the rate of property tax levied for educational purposes (*Coons, Clune and Sugarman 1970, 42).*

*Educational Need Unit* is a specific measurement used in school finance programs for the measurement of educational need or task. Most states employ some form of pupil unit (*Funk 1980, 9*). In Texas the ADA is the measure of educational need.

*Educational Wealth* is the ability per unit of task (*Coons, Clune and Sugarman 1970, 44*) or in Texas, the district assessed property valuation per pupil as determined by the state property tax board.

*Effective Tax Rate* (ETR) is the combined debt service and current operations tax rate which would have been needed to raise the same amount of money as was raised in a local school district if all property had been assessed at 100 percent of its true market value (*Arrington 1986, 7*).

*Equal Opportunity* is a principle of equity stating that the goal of equity is for all participants to have equal access to the resources of the district or state (*Thompson 1985, 9*).
to the resources of the district or state (Thompson 1985, 9).

**Equalization** is the process of compensation for differences in order to make equal. Wealth equalization compensates for differences in a school district's ability to support education in order to achieve student equity or taxpayer equity. Need equalization compensates for differences in the level of service or programs among school districts in order to achieve student equity (Funk 1980, 9).

**Equity Principles** are measures that are used to assess equity in a distribution of resources or services to either students or taxpayers. The equity principles identified are (1) the equal treatment of equals, (2) the unequal treatment of unequals, (3) equal educational opportunity, and (4) equal yield for equal effort (Funk 1980, 9).

**Fiscal Neutrality** is a principle that holds that a student's education should not be a function of local property wealth. It should be a function of the wealth of the state as a whole (Thompson 1985, 10).

**Foundation School Program** (FSP) is a program funding level that a state guarantees will be available to every school district. It is assumed that the foundation amount is the amount necessary for an adequate education. The foundation plan also establishes the level of fiscal obligation which must be undertaken by the state in combination with the local district.
House Bill 72 is a legislative bill which was passed in the summer of 1984 with the intent of bringing about educational reform in the state of Texas (Arrington 1986, 7). Local Fund Assignment (LFA) is the portion of the cost of the foundation school program in Texas that a local district must raise. The local district is required to raise this amount as a condition of receiving the state's share of the cost of the FSP (Arrington 1986, 7).

Percentage Equalization is a formula for school finance in which a district's taxable wealth is compared to the tax wealth of a "key" district. The derived percentage is used to calculate the amount of school expenditures that should be financed by local property taxes. The remainder is funded by state aid. The "key" district may be the most affluent district, the average wealth district or some multiple of the state average. All districts that have property values per student above the cutoff level theoretically would receive no state aid and could be subject to a recapture clause which would return additional monies to the state for redistribution.

Power Equalization is a formula for school finance in which the state guarantees a certain amount per student for each one cent of the tax rate levied by a local school district. It employs use of a combination of state and local monies. Recapture Provision is a concept which mandates that very wealthy school districts which raise funds above a certain
revenue limit will have to pay the extra back into a central state education fund for redistribution to other school districts (Johns, Morphet and Alexander 1983, 256).

Resource Equity is a school finance equity standard which holds that all children within a state should have equal access to the economic resources necessary for the provision of educational programs suited to their individual needs (Funk 1980, 12).

School Finance Equity is a concept dealing with the fairness or impartiality of a state school finance system as related to students and taxpayers. Standards of school finance equity include fiscal neutrality and resource equity (Funk 1980, 12).

State Aid is monies paid to local school districts by the state for local use in funding programs (Thompson 1985, 13).

Taxpayer Equity is a concept that all taxpayers in a certain group will be treated alike and any variations in treatment are not due to local wealth (Funk 1980, 12).

Significance of the Study

This study focused on a comparison of alternative school finance funding formulas. There are an infinite number of alternative models of state school financing. No two of the fifty states are using exactly the same model in all respects. Furthermore, some change in each state's school finance plan is made in practically every general
session of the legislature of that state. Although there are an infinite number of variations in plans of school financing, it is possible to make certain useful broad classifications of alternative models and to compare the impact of these models assuming each is applied to the same total revenue from state and local sources (Johns 1971, 3).

The states vary in the percentage of all revenue they provide. In 1982-83, twelve states provided more than 60 percent of the revenue for their schools. That same year, thirteen states provided less than 40 percent of all public school revenue; the remaining twenty-five states provided between 40 percent and 60 percent of all revenue (Augenblick 1984).

The Texas public education system in 1985-86 was funded at approximately $11,000,000,000; 42 percent of which was provided by the state and 49 percent of which was provided by local district taxes (Clark 1987). In the face of current state fiscal capability in Texas, the magnitude of such an economic investment, together with recent judiciary and legislative constraints on school funding, suggests a careful study of finance options. According to Billy D. Walker in a recent edition of the Texas Lone Star:

The likely result of the fiscal neutrality standard imposed by Edgewood v. Kirby will be a change from the foundation program model of state aid distribution to either of two other models: (1) percentage equalizing, also known as equalized percentage matching and guaranteed tax base yield in variant forms; or (2) power equalization also called district power equalization (Walker 1987, 13).
In addition, since the formulas which will be compared utilize similar approaches and identical revenue sources as the current system, polarizing alternatives such as redistricting or consolidation may not be necessary. As Walker continued his review of the Edgewood v. Kirby decision he pointed out:

> Although the creation of large regional taxing authorities is hinted at, it is unlikely that another level of bureaucracy in public education would provide a logical solution to school finance equity. Instead, the state must "go to school" on prior studies and create organizational units that are less disparate in wealth per pupil while maintaining a modicum of local control and citizen interest (Walker 1987, 12).

Thus, it was thought that the Court's concern about existing district boundaries as discussed in Edgewood v. Kirby could be alleviated if alternate formulas proved workable.

At the time of this study, there had been no comprehensive studies of other finance formulas using Texas data which could provide fiscal impact data. Fiscal impact data is that which detail the effect of one or more alternate formulas on the state and the local shares of educational expenditures. This study was significant for the following reasons:

1. It is the first detailed comparison of the current Texas school finance formula with recognized alternative models.
2. It provides information which could bring about financial reform in light of the *Edgewood v. Kirby* case.

3. It could provide information regarding structural inadequacies of one or more formulas.

4. It provides information of state versus local expenditure levels in Texas. State contributions for public school funding have grown in importance in recent years. Between 1977-78 and 1980-81 only ten states provided more than 75 percent of the new funds for schools; this number grew to eleven states for the period from 1980-81 to 1981-82, fourteen states for the period from 1981-82 to 1982-83, and sixteen states for the period from 1982-83 to 1983-84 (Augenblick 1984, 198).

**Basic Assumptions**

The basic assumptions of this study were:

1. In 1985-86, a $3,600 per-pupil expenditure level (excluding federal funding, debt and facilities) was determined as necessary to provide an adequate educational opportunity, including basic and enrichment programs (Clark 1987). In *Edgewood v. Kirby*, the court stated that the Texas Foundation Program does not cover the real costs of education. An acceptable, valid definition of the costs of a state mandated program is difficult to compute in all funding models. However, Judge Clark's decision does establish a rationale that a state-supported program should
be based on real costs, not revenue availability alone (Walker 1987) and he offered the $3,600 per-pupil expenditure level for 1985-86 as a standard (Clark 1987). This study assumed Judge Clark's rationale and proposed expenditure level.

2. Since the $3,600 per-pupil expenditure rate was proposed using data from 1985-86, it was assumed some adjustment for inflation should be considered. When considering changes in per-pupil expenditures from year to year, the Texas Education Agency Accountable Costs Advisory Committee used an inflation adjustment factor employed by the State Comptroller in the 1986 economic forecast of sales tax revenues. Between 1986 and 1988 the compounded inflation differential was projected at 7.5 percent (Pruitt 1987). A 7.5 percent inflation allowance would assume a per-pupil expenditure increase of $270 or a $3,870 per-pupil expenditure requirement for 1988. In a letter dated July 14, 1988, the Associate Deputy Comptroller, Mr. Ben W. Lock, indicated that the following inflation figures were being used by the State Comptroller's Office (Lock 1988).

<table>
<thead>
<tr>
<th>Year</th>
<th>Inflation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>2.89%</td>
</tr>
<tr>
<td>1988</td>
<td>4.05%</td>
</tr>
<tr>
<td>1989</td>
<td>4.68%</td>
</tr>
<tr>
<td>1990</td>
<td>4.29%</td>
</tr>
<tr>
<td>1991</td>
<td>4.39%</td>
</tr>
<tr>
<td>1992</td>
<td>4.42%</td>
</tr>
</tbody>
</table>

Thus, using Judge Clark's $3,600 per-pupil expenditure level in 1986 as a reference point, it could be determined
that in 1988 the per-pupil expenditure cost would be approximately $3,850 ($3,854), in 1990 it would be approximately $4,200 ($4,204), and by 1992 the per-pupil expenditure level would be expected to rise to approximately $4,580 ($4,586). This study assumed these three projected expenditure levels. A recent publication of the *Texas Education News* suggested that the per-pupil expenditure cost by 1995 could reach $4,780.00 (*Texas Education News* 1988).

3. The range of local tax rates in 1985-86 was from $0.09 to $1.55 per $100 valuation. The one hundred poorest districts had an average tax rate of 74.45 cents per student compared with the one hundred wealthiest districts of 47.19 cents (*Clark* 1987). In 1987, 611 of approximately 1,060 school districts had a tax rate of seventy-four cents or higher. Another 217 districts were within ten cents of this rate (*Texas Education News* 1988). If the state guaranteed $50 per student for each one cent of local tax effort (power equalization), a seventy cent tax rate would raise $3,500, a value near the assumed cost per-pupil expenditure for a quality program in 1986. Therefore, it seems reasonable to assume a $50 per student state guarantee for each one cent of local tax effort at each expenditure level. This study reflected tax rates for each expenditure level as follows:

- $3,850 - $0.77
- $4,200 - $0.84
- $4,580 - $0.916
4. Revenue can be substituted for expenditures in the assessment of equity.

Limitations of the Study

The study was restricted by the following limitations:

1. It represented only the public school systems of Texas.

2. Data for the study was collected primarily through the Texas Education Agency located in Austin, Texas, and were limited to budget data for expenditures and revenues from two sources: the Official Budget for Texas Public Schools and the applications for state educational funds for fiscal year 1986-87.

3. There was a limitation concerning property values. This study used State Property Tax Board values for 1986-87. The values used for the 1986-87 academic year are State Property Tax Board Index Values based on the 1985 tax year. It is recognized that while there was an adjustment for inflation in per-pupil expenditures, there was no similar adjustment in property values for each expenditure level.

4. This study compared only the per-pupil expenditure levels as outlined in the list of assumptions. The two generally accepted judicial standards of equity in school finance systems are (1) expenditure or resource equality, which requires districts to spend similar amounts per pupil to demonstrate equity; and (2) fiscal neutrality, which
requires that district expenditures be independent of district wealth; that is, actual expenditures may vary, but all districts should have the same ability to generate similar revenues per pupil at similar levels of effort. The decision in *Edgewood v. Kirby* is based on the latter standard (Walker 1988). This study limited itself to the fiscal neutrality issue.

**Design of the Study**

**Procedures**

**Fiscal Impact of Each Model**

This study used the $3,850, $4,200, and $4,580 per pupil expenditure levels to determine the variations in magnitude of state and local contributions with each formula. The formulas which were used are outlined below:

**Full State Funding**

$$SA = ADA \times EL$$

where

- $SA =$ State allocation for the district
- $ADA =$ Total refined average daily attendance for the district
- $EL =$ Proposed per pupil expenditure level ($3,580, $4,200, or $4,580)

**Percentage Equalization**

$$SA = ADA \times (EL - \text{District Portion per ADA})$$

District portion per ADA = $$[(DPV/ADA)/KPV] \times EL$$
where

\[ SA = \text{State allocation for the district} \]

\[ ADA = \text{Total refined average daily attendance for the district} \]

\[ EL = \text{Proposed per-pupil expenditure level ($3,850, $4,200, or $4,580).} \]

\[ DPV = \text{Total local district property value as determined by the State Property Tax Board} \]

\[ KPV = \text{Key district property value per ADA (set at $500,000)} \]

**Power Equalization**

\[ SA = [(GTY \times TR) \times ADA] - (\text{Set tax rate} \times DPV) \]

where

\[ SA = \text{State allocation for the district} \]

\[ GTY = \text{Guaranteed tax yield per one cent of tax (set at $50 per penny)} \]

\[ TR = \text{Proposed tax rate per $100 of property value (set at 77, 84, or 91.6)} \]

\[ ADA = \text{Total refined average daily attendance for the district} \]

\[ \text{Set tax rate} = \text{The tax rate set by the local district (set at $0.77, $0.84, or $0.916 per$100 of assessed valuation)} \]

\[ DPV = \text{Total local district property value as determined by the State Property Tax Board} \]
Foundation School Program

This study accepted the current Texas foundation school program plan as written changing only the procedure for the calculation of local share (LFA):

\[ LFA = \left( \frac{DPV}{SPV} \right) \times (N \times FSP) \]

This study assumed the total foundation school program cost (FSP) to be equal to the product of the proposed expenditure levels and the total state ADA.

The formulas used to determine the fiscal responsibility of the state under the current foundation system but at the three increased expenditure levels were computed as follows:

\[ SA = (ADA \times EL) - LFA \]

\[ LFA = \left( \frac{DPV}{SPV} \right) \times [N \times (SADA \times EL)] \]

where

- \( SA \) = State allocation for the district
- \( ADA \) = Total refined average daily attendance for the district
- \( EL \) = Proposed per pupil expenditure level ($3,850, $4,200, or $4,580)
- \( LFA \) = Local fund assignment for each district
- \( DPV \) = Total local district property value as determined by the State Property Tax Board
- \( SPV \) = State property value as determined by the State Property Tax Board in 1985. The value is $532,700,000,000
\[ N = \text{Percentage of the Foundation Program to be divided among all districts as a local share (0.30 in 1984-85, 0.333 in 1985-86, and thereafter)} \]

\[ \text{SADA} = \text{Total refined ADA for the state} \]

*The statewide local share of 30 percent of the foundation school program entitlements in 1984-85 was equivalent to an average tax effort of 26.3 cents per $100 compared to the 11 cents per $100 rate used in 1983-84. This feature was calculated to bring more equalization to the state aid distribution system. The statewide local share increased to 33.3 percent in 1985-86 and thereafter (Walker 1985, 510).*

**Population Sample**

This study used the 1,061 school districts in the state of Texas as the population sample as identified by the Texas Education Agency for the 1986-87 school year.

**Data Collection**

Financial data were obtained from the Texas Education Agency for each school district in the state for the 1986-87 school year. These data included: (1) refined ADA values; (2) effective tax rate for local maintenance, debt service, and total combined effective tax rate; and (3) 1986-87 SPTB preliminary taxable values of districts ranked on wealth.

Information for the selection and definition of the formulas for full state funding, percentage equalization, and power equalization came from the publications of known

**Organization of the Remainder of the Study**

The remainder of this study is organized into four chapters. Chapter II provides a review of the literature associated with the development of school finance formulas in the United States. Chapter II is divided into four sections. Each section reviews a specific aspect of public school funding: Section 1 is the history and development of school finance research; Section 2 is a review of selected equalization models; Section 3 outlines property tax and school finance; Section 4 presents the cost versus quality issue in educational finance.

Chapter III outlines the procedures used in the collection and analysis of data.

Chapter IV details the analysis of the data with fiscal comparisons at the state and local levels.

Chapter V discusses the findings of the study and suggests ideas for further related research studies.
CHAPTER II

REVIEW OF RELATED LITERATURE
AND RESEARCH STUDIES

The History and Development of School Finance Research

The financing of public schools did not earn respectability as an acceptable research issue until the early years of the twentieth century. At that time, educational theorists began to look at issues such as student and taxpayer equity, local versus state fiscal capacity, taxation as a revenue source, and the relationship between cost and quality in education. As a consequence of research and writings, perspectives changed and state legislatures were made aware of the problems associated with public school finance. It was during this time that the debate concerning the appropriate percentages of state versus local support began in earnest.

Prior to the 1900s, state support for public schools was limited and varied. Although charged with the responsibility of education, early state governments were reluctant to intrude on the rights of an individual community to provide the education its constituency deemed appropriate. In addition, no proven theories had been developed to guide
the distribution of state school funds. In 1890, states provided only 23.8 percent of the total school revenue in the United States (Johns, Morphet and Alexander 1983). The majority of this revenue came from income generated from land grants awarded to the states by the federal government. These land grants, provided in the Ordinance of 1787 and through the action of Congress in 1802, were offered to states newly admitted to the Union for support of public education. Variation in the value of specific grants caused those townships with worthless grants to seek additional aid. Thus, the concept of financial equalization for the purpose of equalization of educational opportunity had its beginnings.

The early theorists in school finance were university professors, and research in the field originated at Teachers College of Columbia University (Johns, Morphet and Alexander 1983). Much of the work centered around equalization of both the benefits and the financial responsibilities of education. A brief summary of some of the emergent theories of school finance is presented below.

Ellwood P. Cubberley

It is now believed that with the publication of School Funds and Their Apportionment in 1906, Ellwood P. Cubberley introduced the study of educational finance to the research
Cubberley noted a difference in the quality of education between rural and city school districts. City districts with large numbers of people and adequate wealth had better schools than smaller districts (Townley 1970). His solution to the problem was basic education for all through increased state aid to all. His remedy was a flat grant based on the number of teachers employed and the number of pupils in attendance (Jones 1975). In addition, he also advocated establishment of educational services such as trade schools, high schools, and kindergarten.

Cubberley's ideas were reviewed in depth in a book entitled Private Wealth and Public Education by John E. Coons, William H. Clune III, and Stephen D. Sugarman. They suggest that in substance Cubberley's practical proposals (a flat grant plan for each district which would distribute aid on the basis of the number of teachers employed) would improve wealth imbalance in a state only incidentally.
Although superficially appealing (state money would insure that all districts could afford enough teachers to provide a basic education), a flat grant per unit is not based upon the relative need of the poorer districts (Coons, Clune and Sugarman 1970). In addition, while he did not advocate changing the way taxes were levied on property nor changes in the source of state aid, Cubberley believed that the goal of public education from a state perspective should be to insure that a poor community with a maximum effort on its part and a minimum effort on the part of the state should have an adequate budget; in other words, a reward for effort approach. Coons, Clune and Sugarman considered this idea defective "if only because it is not fair to tell poor districts that the way to prevent wealth from being an obstacle to equal opportunity is for them to try harder" (Coons, Clune and Sugarman 1970, 55).

Overall, however, Cubberley's findings were insightful, particularly when it is realized they were offered in 1906. A few are detailed below:

1. In attempting to meet the minimum standards prescribed by the state, unequal burdens of taxation in local districts resulted. What one community can do with ease is often an excessive burden for another community.
2. A state school tax equalizes the burdens best and is the most desirable form of general taxation for schools. State taxes, however, constitute the chief means of support for all of the schools of a state.
3. Any form of taxation or endowment for schools fails to accomplish the ends for which it was created unless a wise system of distribution is provided.
4. Very few states have a just and equitable plan for the distribution of funds.
5. The property valuation basis and the "taxes-where-paid" basis for the distribution of funds have no educational significance and do not tend to equalize either the burdens or the advantages of education.
6. The use of the school census basis for apportionment of funds is one of the worst and most unjust bases of apportionment we have in use.
7. The use of total population as a basis of apportionment, while an improvement over "taxes-where-paid" or property valuation, is at best only a rough and unreliable method for distribution.
8. The real unit of cost is the teacher who must be employed to teach school, and not the children who may or do attend. The teacher actually employed should accordingly occupy a prominent place in any general apportionment plan, the remainder being given on a basis which considers regularity of attendance at the school (Townley 1970, 18-19).

Harlan Updegraff

Although his ideas were not favorably considered for a number of years, Harlan Updegraff may have been one of the first to actually address the impact of local wealth on public school funding. He accepted Cubberley's principles in theory, but attempted to add a dimension. He sought to eliminate a district's wealth as a factor of the district's funding and advocated the distribution of state aid in inverse proportion to local ability. In 1921, after a survey of the financial support system(s) in rural New York state, he developed a plan in which state aid increased as the tax rate was increased, and decreased as the tax rate decreased (Townley 1970). To achieve even greater equity, he recognized the need for establishing a maximum tax rate above which the state would provide no additional funds.
Thus, Updegraff's proposals suggested that the quality of a child's education be more a result of local tax effort than a factor of total taxable wealth of a district, and therefore represented an attempt to put Cubberley's ideas into practice.

It is interesting to note that Updegraff's model for state support was rediscovered by John E. Coons, William H. Clune III, and Stephen D. Sugarman and named "power equalizing" some fifty years later (Johns, Morphet and Alexander 1983, 208).

George D. Strayer and Robert M. Haig

The pioneer effort to translate the philosophy of equal educational opportunity into a viable state finance program adjusting for district wealth variation was made by George D. Strayer and Robert M. Haig in 1923. The program came to be known as the foundation plan and was later refined by Paul R. Mort. Modified, scrutinized, criticized as it was, the program remained the paradigm of state aid to education until after 1960 (Coons, Clune and Sugarman 1970).

Strayer and Haig worked, as did Cubberley, to equalize both the tax burden and the educational benefit. However, they felt Cubberley and Updegraff's reward for effort ideas were contradictory:

Any formula which attempts to accomplish the double purpose of equalizing resources and rewarding effort must contain elements which are mutually inconsistent. It would appear to be more rational to seek to achieve
local adherence to proper educational standards by methods which do not tend to destroy the very uniformity of effort called for by the doctrine of equality of educational opportunity (Johns, Morphet and Alexander 1983, 209).

It is important to note that the equalization principle as outlined by Strayer and Haig applied only to the basic minimum foundation program and did not discourage any school district from exceeding the minimum program with local funds. In fact, they warned against any program of state aid which would dull local interest and initiative (Townley 1970). Thus, many argue that the foundation program was not a truly equalizing program.

The principles of Strayer and Haig's model are outlined below:

1. A local school tax in support of the satisfactory minimum offering would be levied in each district at a rate which would provide the necessary funds for that purpose in the richest district.
2. The richest district then might raise all of its school money by means of the local tax, assuming that a satisfactory tax, capable of being locally administered, could be devised.
3. Every other district could be permitted to levy a local tax at the same rate and apply the proceeds toward the cost of schools, but
4. Since the rate is uniform, this tax would be sufficient to meet the costs only in the richest district and the deficiencies would be made up by state subventions (Johns, Morphet and Alexander 1983, 209).

Though Strayer and Haig did not define the components of a satisfactory minimal program, their work did provide the framework for one of the most widely used formulas today.
Paul R. Mort

As Updegraff had done with Cubberley's ideas, Paul R. Mort assumed the task of further refining Strayer and Haig's basic premise. As his doctoral problem, he attempted to define the components of a satisfactory minimum program. He wanted to determine the elements which should be included in a minimal program, decide upon and compute the units of educational need, and convert both into dollars. To accomplish this, he developed criteria for establishing minimal program elements and offered the concept of "weighting pupils" (making allowance for necessary cost variations beyond the control of local boards) as a means of assessing educational need.

Mort's contributions were farsighted. He was able to recognize the problems associated with a foundation plan yet also capitalize on its benefits. As a result of his work, he became concerned with the inability to measure local taxing ability accurately:

Obtaining an accurate measure of the equalized or market value of taxable property in each district is a problem in many states. In fact, the equalizing valuations is the most difficult part of the foundation program, since assessors vary so widely in their assessment policies. Some states use estimated market value for distribution of funds and a few states use an economic index of taxing ability (Townley 1970, 25).

As he continued to struggle with taxpayer and student equity concerns, Mort pointed out that if the welfare of the wealthy districts was not considered, there could be a
tendency in a state utilizing a foundation plan to "level-down" rather than "level-up." He suggested that it was unreasonable to withdraw aid from rich districts once it had been granted, merely to supplement the equalization fund (Townley 1970).

Henry C. Morrison

A radically different position regarding equalization of state funds was espoused by Henry C. Morrison in 1930. Morrison contended that education was developed as a state responsibility, and thus, a state must make it available to all of its children on an equal basis (Garms 1978). He reasoned that local school districts together with various state attempts at equalization were not achieving the desired equity and proposed the return of management of education to the state itself with the elimination of all school districts and the establishment of a taxing and governance system unified at the state level. Morrison's model of state support abolished all local school districts with the state becoming both the unit for all taxation for the support of schools and the unit responsible for the administration thereof (Townley 1970).

Full state funding as we know it today does not necessarily imply state operation of schools, but merely a state guarantee of equal amounts of money per pupil. As of 1976, few states approached full state funding. Since Hawaii has
only one school district, all schools are operated by the state. Only four to five other states approach de facto full state funding (Garms 1978).

Full state assumption sounds deceptively simple and workable. However, such a high degree of equity can come with increased state control. As pointed out earlier, the fundamental idea of local control and decision making is deeply rooted in American society. This political fact, together with the establishment of the foundation program in a prominent place in the mainstream of political thought at that time, indicate why Morrison's ideas were not well received.

Aside from its aspect of full state funding, however, few contemporary educators would approve of Morrison's plan for philosophical reasons alone. He believed in a very narrow "back to basics" curriculum excluding even such subjects as vocational education and modern, foreign languages (Jones 1975).

Roe L. Johns and Edgar L. Morphet

Continuing the practice of refinement of existing plans, Roe L. Johns and Edgar L. Morphet further adapted the Strayer-Haig-Mort foundation plan to meet the equity principle of "unequal treatment of unequals." They recognized the need to simplify research terminology for legislators, lay citizens, and even some educators (Townley 1970). While
the "weighted pupil" concept is a valid and useful measure of need, it is often difficult to explain. Therefore, Johns and Morphet developed a concept they termed the "services-and-facilities-needed" method of measuring educational needs funded through the foundation plan. In this plan, "all the foundation program costs, except for transportation, are computed on the basis of adjusted classroom or instructional units. These units are, in effect, derived from weighted pupils" (Johns and Morphet 1975, 237).

Johns and Morphet were also interested in the acquisition and distribution of funds. Much of their later work in educational finance research dealt with taxation and measurement of local ability and may have represented the pioneering effort in this area. Briefly, they recognized, as did Paul Mort, that local ability and assessment practices for property valuation varied widely. As a result, they suggested that a standard method for determining local taxpaying ability had to be developed before equity could be determined. They suggested the sales-ratio method supplemented by appraisals as the best plan for measuring local tax-paying ability (Townley 1970).

The sales-ratio plan is a measure of the sales price of property when compared to its assessed valuation. The most significant weakness of this plan may be that unless considerable sums are invested in an ongoing study of the relationship of sales price to assessed value of property, and
in appraisals of types of property not frequently sold, and unless there is an adequate sampling, the ratio may not be fair and equitable (Johns, Morphet and Alexander 1983).

However, when sales-ratio studies are properly made and supplemented by competent appraisals, especially for commercial and industrial properties, Johns and Morphet felt they could be considerably efficient. They suggested the following procedures to determine local ability and prescribe uniform local effort to finance schools:

1. The state agency responsible for making this study should certify to the state board of education, at a designated time each year, the ratio for each county.
2. The state board of education should use this ratio as a basis for determining the funds that would be available if a uniform tax levy were made in each county on property assessed at full value or at a designated percentage of value.
3. The ratio can be applied to the school districts in the county by finding the percentage of the county's total valuation that the assessed valuation of the district represents, and multiplying this by the amount of funds that would be available if equalized valuation and a uniform levy were used.
4. The districts in each county would be required to make whatever levy was necessary in order to provide the funds required from a uniform effort (by levying either a higher or a lower millage than the rate based on uniform assessment practice) until the county brought its assessment in line with the state standards (Johns, Morphet and Alexander 1983, 176).

In 1968, Roe L. Johns was responsible for the organization and direction of one of the most comprehensive and ambitious studies in school finance. Funded by the United States Office of Education, the National Education Finance Project studied school financing schemes across the country. Using data collected during previous evaluation studies,
which concluded that only Hawaii was exempt from findings of inequality, the National Education Finance Project committee contemplated recommendations for improvement and developed several alternative models for public school finance. These recommendations concerned equalization of educational opportunity, equity of tax structure, and future directions for school financing. It is interesting to note that Johns advocated a significant share of the cost of education be the responsibility of the federal government:

... unless the federal government provided approximately 30 percent of the school revenue, the local district no more than 10 percent, and the states the remainder, it would be extremely difficult to develop a satisfactory model which would equalize educational opportunity among the states, substantially assist the states to equalize educational opportunity within each state, and also significantly improve the progressivity of school taxes (Arrington 1986, 20).

Later Research Efforts

In the 1960s, research in educational finance broadened to include the issue of equity in the acquisition and distribution of funds from a taxpayer (burden of expense) standpoint as well as from a student (benefit of education) standpoint. Townley's study of 1970 offers an excellent summary of the research involving taxation and sound practices of business management with respect to public school finance.

John E. Corbally in 1962 and Jackson Salisbury in 1967 conducted studies concerning the relationship between
taxation and school finance. Corbally's main concern appeared to be the use of an index of local tax-paying ability or locally assessed valuation procedures as valid measures of local financial ability. The final solution, according to Corbally, is a central state tax assessing agency where property valuations would be equalized. He proposed that the office of assessor be on a professional level and that assessments at statutory levels of value be conducted annually (Corbally 1962).

Jackson Salisbury, in his *Theory of Taxation as Related to School Finance*, explored at length the different kinds of taxes. Outlining the theory of taxation from a benefit perspective and an ability to pay perspective, Salisbury found the income tax as the most equitable tax with respect to ability to pay. However, he also recognized that, based on the amount of revenue generated, the property tax was the most important tax support for schools (Townley 1970).

Charles S. Benson and Robert Garvue felt distribution of state funds should be in inverse proportion to ability to pay and also should bear some relationship to need. Both Benson and Garvue discuss at length the differences between rural and urban school districts and point out the problems associated with "municipal overburden." Municipal overburden refers to the extra costs urban areas must address that are not a factor in rural or suburban areas. These include the cost of public safety, welfare, sewage disposal, control
of air and water pollution, transportation and other services to name just a few.

Garvue reviewed the various methods of state distribution of school funds. In his critique of state-local financing schemes, he concluded that most of the school finance formulas at the time of his study (1969) were obsolete. He proposed that distribution formulas should be based on equalized assessed value and that state funds should be distributed inversely with respect to ability to pay (Townley 1970).

Benson approached the problems associated with educational finance from the perspective of industrial productivity and recommended that effectiveness in education should be measured as it is in business by indexes of productivity (Townley 1970).

With respect to distribution of funds, Garvue offered suggestions for the modification of the foundation program. However, Benson proposed a percentage equalizing system of state aid based upon a district's average wealth (Coons, Clune and Sugarman 1970). Coons, Clune, and Sugarman offer an interesting appraisal of Benson's plan:

... he proposes a system of state aid that would in effect raise the slum schools to an average level but leave the richer districts in a position of unaffected privilege. Is this really an advance over the foundation plan? As a tactic in a thirty-year legislative war, it may be; as a relevant current answer, it is not (Coons, Clune and Sugarman 1970, 177).
From a business perspective, Victor W. Doherty suggests that "equalization has less to do with improving education than with reorganization or informed and capable management of the local school district" (Doherty 1961, 21). His comments are definitely an interesting premise in light of Judge Clark's recent remarks which suggest inefficiency in local control of school districts in Texas (Clark 1987).

In light of his statement regarding the importance of reorganization and efficient management practices, Doherty reviews a proposal made by Nelson Rockefeller to the legislature of the state of New York during his term as Governor. In short, then Governor Rockefeller recommended consolidation of school districts for taxing purposes only. School districts were to retain their administrative rights and responsibilities. In addition, Rockefeller suggested new local nonproperty taxes and a new state equalization rate (Doherty 1961).

Rockefeller's proposal bears some resemblance to the suggested plan for creation of large, regional taxing authorities in Texas today. However, it is questioned whether or not another level of bureaucracy in public education would provide any type of solution to our school finance equity dilemma.

In summary, since the early 1900s, educational finance researchers and theorists have struggled with questions of student and/or taxpayer equity. As the struggle has
developed, the question of the appropriate state and local support formula has maintained a prominent position. In addition, issues such as the significant dependence of educational fiscal policy on the property tax and the ability of local school systems to function efficiently have been brought forward. To date, little significant change has occurred with respect to our basic funding models. However, as the twenty-first century approaches, it is apparent those same issues are demanding more significant reform measures.

A Review of Selected Equalization Models

There are numerous conceivable plans for financing public education as is evidenced by the first section of this chapter. It should not escape notice, however, that the majority of references for public school finance deal with local and state aid plans. The federal share is rarely mentioned; perhaps this is because education was originally determined to be a function of state government. At least one recent analysis of financing systems, however, suggested that the Federal share of the cost of education should be at least one-third, a long way from the current 7 to 8 percent (Talbot 1984), and as mentioned previously, Roe L. Johns felt that unless the federal government were willing to provide approximately 30 percent of school revenue, the
equalization of educational opportunity among the states
would be extremely difficult (Arrington 1986).

Because the federal share is largely insignificant,
broadly speaking, proposals for the future of school funding
in the United States fall into one of three categories:
(1) full state funding, (2) vouchers or tax credits, or
(3) a continuation of current state-local funding models
(Jones 1975). Most people agree that the ultimate source of
revenue for education is the people, whether it be individ-
ual, group or corporate taxation; but the percentage of
each, and the best method for extracting the money from that
source continue to remain elusive (Talbot 1984). Primarily
the states have chosen to use both state and local revenues.

All states, with the lone exception of Hawaii, have
chosen to finance public schools by using both state
and local tax revenues. States have historically
placed substantial reliance on local funding even
though it is a well-established legal principle of our
government that the whole state is responsible for
education of all children of the state. Use of local
tax revenues marked the first step toward a sound
financial base for the public schools in America.
While local taxation gave a stable means of support, it
nevertheless created vast equalization problems,
especially in those states with large numbers of school
districts. As a result, it has been necessary for
states to design various types of state-aid formulas
which redistribute money from areas with above average
wealth to areas with below average wealth (Johns,

One of the most striking facts about school finance is
that its basic structure has remained so much the same for
so long a time despite changed social conditions (Jones
1975). Thus, assuming radical changes in current practice
are not eminent, this section will discuss various equalization programs which, for the most part, incorporate state and local revenues. The use of vouchers and/or tax credits will not be discussed.

It is difficult to specify one school finance model as "the best." The literature abounds with criteria to consider when evaluating alternatives. Local value systems, goal development processes, political issues, and management theory could all be considered relevant pre-requisite issues to be settled prior to fiscal policy formation. A few of these, as they relate to education, will be discussed below.

In 1968, the United States Office of Education initiated the National Education Finance Project. One of the purposes of the project was to construct alternative school finance models, both state and federal, and analyze the impact of each. The committee in charge of the project believed certain values or goals should be determined before a fiscal policy is formulated. They suggested consideration of the following philosophical points of view for school finance:

1. If one believes that educational opportunities should be substantially equalized financially among the districts of a state, but that districts should be left with some local tax leeway for enrichment of the foundation program, an equalization model is the best model. However, the higher the priority one gives to equalization, the more he will prefer the model that provides the most equalization.

2. If one believes that educational opportunities should be completely equalized financially, among the districts of a state, the complete state support model
is the preferred model. If the decision of the Supreme Court of California in August, 1971 is upheld by the United States Supreme Court, complete state and federal support of the public schools or complete equalization of local ability by a Strayer-Haig model will be the only legal alternatives. The California Supreme Court ruled that the use of property taxes to finance schools violated the 14th Amendment to the federal constitution.

3. If one believes that all children regardless of variations in ability, talent, health, physical condition, cultural background, or other conditions which cause variations in educational needs, have a right to the kind of education that meets their individual needs, he will select school finance models which incorporate the programs needed and which provide for necessary cost differentials per unit of need.

4. If one believes that educational opportunity should be substantially equalized among the states, he will support a revenue model which provides a substantial percent of school revenue in general federal aid apportioned in such a manner as to tend to equalize educational opportunities among the states.

5. If one believes that the taxes for the support of the public schools should be relatively progressive rather than regressive, he will prefer revenue models which provide a high percent of school revenue from federal and state sources.

6. If one believes that publicly financed education should tend to remove the barriers between caste and class and provide social mobility, he will oppose any plan of school financing which promotes the segregation of pupils by wealth, race, religion or social class.

7. If one believes that all essential functions of state and local government should be equitably financed in relation to each other, he will oppose any finance model for any function of government, including education, under which either federal or state funds are allocated to local governments on the basis of "the more you spend locally, the more you get from the central government," rather than on the basis of need.

8. If one believes that the educational output per dollar of investment in education should be maximized, he will support finance models that will promote efficient district organization and efficient organizations of school centers within districts.

9. If one believes in a federal system of government, he will support finance models which will not require a decision governing public education to be made at the federal level when it can be made efficiently at the state level, and will not require a decision to be made
at the state level when it can be made efficiently at
the local level, regardless of the percent of revenue
provided by each level of government.
10. If one believes that education is essential to the
successful operation of a democratic form of government
in a free enterprise society and if he believes that
education is essential to the economic growth of the
nation and to the fulfillment of the legitimate aspira-
tions of all persons in our society, he will support
revenue models sufficiently financed to meet educa-
tional needs adequately (Johns and Alexander 1971, 346-
347).

Believing that once a philosophy has been established
an appropriate plan can be chosen, the NEFP committee
developed several methods for evaluating state school
finance plans. Techniques were presented for (1) evaluating
the extent to which the school finance plan equalizes
educational opportunity within a state and (2) evaluating
the relative progressivity of the tax structure of a state
for financing the public schools (Johns and Alexander 1971).
The study focused its attention primarily on an evaluation
of the various state and local financing plans that were in
use in 1969 through 1971 in the fifty states. These
included flat grant systems, equalization grants such as the
Strayer-Haig formula, percentage-equalizing, and guaranteed
valuation or tax yield per unit of need plans. The conclu-
sions derived from these analyses might also provide insight
for those charged with formulating school finance policy.
They include:

1. State funds distributed by any model tested provide
for some equalization but some finance models provide
more equalization than others. Even the flat grant
model provides for some equalization despite the fact
that under this model each district, regardless of wealth or necessary variations in unit costs, receives the same amount of state money per pupil or other unit. This is due to the fact that the less wealthy districts receive more state aid per pupil than the revenue per pupil they contribute to the state treasury.

2. The flat grant model by which state funds are apportioned on the basis of a flat amount per pupil unit or other unit which does not take into consideration necessary variation in unit costs or variations in wealth per unit of need of local districts provides the least financial equalization for a given amount of state aid of any of the state-local support models tested.

3. The flat grant model under which necessary cost variations per unit of need are provided for but variations in the per pupil wealth of local districts are ignored provides for more equalization than the flat grant model described in 2 above but it does not equalize financial resources as well as the equalization models providing for cost differentials and variations in wealth.

4. Equalization models under which necessary unit cost differentials are provided for in computing the cost of the educational programs and which take into consideration differences in the wealth of local school districts in computing state funds needed by a district are the most efficient models examined for equalizing financial resources in states which use a state-local revenue model for financing schools.

5. In equalization models the greater the local effort required in proportion to the legal limit of local taxes for schools, the greater the equalization.

6. In equalization models the greater the local tax leeway above the required local tax effort required for the support of the foundation program, the less the equalization.

7. Complete equalization is attained only under full state funding or under an equalization model which requires school districts to contribute the full legal limit of local taxes to the cost of the foundation program.

8. The higher the percent of school revenues provided by the state, the greater the equalization of financial resources under both flat grant and equalization models but there is always more equalization under an equalization model than a flat grant model for any given amount of state aid apportioned.

9. As full state funding is approached (100 percent of school revenue provided by the state) the difference between the equalizing potential of flat grant models
and equalization models begins to disappear, assuming that the cost differentials are provided for under each model. For example, with 90 percent or more state funding of schools, the differences between flat grant models and equalization models in equalizing financial resources would not be significant but the equalization models would always be slightly superior until full state funding is reached.

10. As the percent of local revenue is increased, the possibility of equalizing financial resources decreases.

11. A complete local support model provides for no equalization whatsoever.

12. The higher the percent of state funds provided, in relation to local revenue, the greater the progressivity of the tax structure for school support.

13. The higher the percent of federal funds provided in relation to state and local revenues the greater the progressivity of the tax structure for school support. This is due to the fact that federal taxes are on the average more progressive than state taxes and state taxes more progressive than local taxes.

14. Many states can increase the progressivity of state taxes by increasing the proportion of state revenue obtained from relatively progressive taxes (Johns and Alexander 1971, 346-348).

Continuing to evaluate criteria to be used in the selection of a plan, Johns, Morphet, and Alexander in their book *The Economics and Financing of Education* offer that state school finance programs must have three primary structural elements: measurement of educational needs, of costs, and of local fiscal capacity (Johns, Morphet and Alexander 1983). In addition, they point out that a comprehensive state school finance plan must deal with at least three major kinds of public policy issues. These include:

1. the scope, content, and quality of the public school program;
2. the organizational arrangements for providing public schooling; and
3. the level and method of financing the public school program (Johns, Morphet and Alexander 1983, 266-267).
The complexity of school finance policy decisions is further characterized by political influence. Augenblick (1970) suggested that each system of school finance regardless of the history, the economics, and the political issues of each state must reflect a political alliance among:

the availability of state support and local support;
the achievement of statewide equity and local control;
the need to fund "basic" services and special, high-cost services; the need to support personnel costs and non-personnel costs; the desire to reimburse districts for actual expenditures and to provide incentives to improve quality or efficiency; the need to support current expenditures and capital expenditures; the desire to support public and private schools; and the desire to support elementary/secondary education and higher education (Augenblick 1984, 201).

Thomas Jones (1975) further suggested that three major additional criteria should be applied in the design of state school finance plans. These include (1) wealth, (2) reward for effort, and (3) inclusiveness. He defines wealth as the value of taxable property in a school district and reward for effort as the school district tax rate applied to the assessed valuation. Inclusiveness refers to whether or not some locally raised school funds fall outside the state's expenditure plan.

Elaborating, Jones suggests that consideration of wealth, reward for effort, and inclusiveness is an attempt to reduce inequity in per-pupil spending. His rationale is that low wealth districts should receive more aid than high wealth districts, reward for effort plans should tie per-pupil expenditures to the tax rate chosen by each district
(identical tax rates should yield identical per-pupil spending), and additional revenues raised outside of the state plan are the result of a local decision not the decision of the state as a whole and thus, could be considered inequitable (Jones 1975).

Six types of state/local spending plans were classified using Jones' criteria. While it is recognized that the six plans he reviewed are only prototypes and that each state usually further modifies or adapts a particular plan to suit its needs, most any system in use today could be considered a variation of one of the six prototypes considered (Jones 1975).

State aid should be based on:

<table>
<thead>
<tr>
<th>PLAN NAME</th>
<th>LOCAL WEALTH?</th>
<th>REWARD FOR EFFORT?</th>
<th>INCLUSIVENESS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat Grant</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Full State Funding</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Foundation Plan</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Guaranteed Tax Base</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Percentage Equalizing</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Power Equalizing</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

In 1975, Roe Johns and Edgar Morphet attempted to relate management and organizational theory to the issue of public school finance. They determined that historically states have responded to financial needs in a "band-aid" or "piece-meal" fashion dealing with special problems as they arise. Solutions developed as measures superimposed on an old system. They go on to suggest, however, that this trend could be changing:
During recent years several states have seriously attempted to consider education as a social system, to determine appropriate goals and identify needs, and to develop a system for financing education that is designed, insofar as practicable, to ensure equality of appropriate opportunities for all students as well as equity for all taxpayers.

On the basis of systems theory and what is currently known about its implications and applications, there seems to be no reason (other than traditional political considerations and procedures) for any state or the federal government in the future to develop or revise its provisions for the financial support of schools on a haphazard or piecemeal basis. In fact, in the light of recent court decisions and other developments, no state can afford to do so (Johns and Morphet 1975, 48-49).

Continuing the application of systems theory to educational finance, the authors suggest some assumptions which should be made when considering financial inputs for the educational system:

1. If additional financial inputs will increase the individual and social benefits of the educational system more than the amount of the investment, the financial input should be increased.
2. If the same individual and social benefits of the educational system can be produced with a smaller financial input, then the financial input should be reduced accordingly.
3. If the school administrative unit itself or the individual schools within that unit are too small to achieve the economics of scale necessary to maximize the educational benefits per dollar of input, the school system or schools should be reorganized appropriately.
4. If the organizational structure does not function efficiently and effectively to maximize the educational benefits per dollar of input, it should be modified.
5. If any educational policy, program, or operation is dysfunctional, ineffective, or inefficient, it should be changed (Johns and Morphet 1975, 49).

It should be apparent by now that no one set of valid criteria or assumptions for the establishment of public
education fiscal policy has been developed. The decision of which method of finance best suits an entity is based on the goals, values and prominent political philosophy of the current decision makers and their constituency.

Whether one chooses a type of management theory, taxpayer equity, student equity, a combination of one or more of the previous three, or another basis for funding, it is clear much time must be spent prior to a fiscal policy's development working on the philosophy and assumptions unique to a state, a school district, or another governmental body. Only then can the mechanics of a formula be established and the implementation and the evaluation of the policy begin. What may be even more important is the realization that once developed, such a policy is never static and never 100 percent satisfactory.

This section will continue with a discussion of four of the most common school revenue plans. These include full state funding, the foundation plan, percentage equalization, and power equalization. Three of the four represent state and local revenue sharing plans. Full state funding is self-explanatory.

The organization of the remainder of this section is as follows. First, the philosophy and/or rationale of each plan will be discussed. Then any assumptions inherent to the plan will be listed. Finally, each plan will be
evaluated with respect to its objectives and proposed inadequacies and any additional comments will be noted.

Full State Funding

Full state funding was first advocated by Henry C. Morrison in 1930.

Philosophy

Proponents of full state funding believe that education is a state responsibility and must be made available to all of a state's children on an equal basis. There should be no geographical variation in school expenditure, however, full state funding does not preclude adjustments for differing educational needs or differences in the cost of producing education of equivalent quality (Garms, Guthrie and Pierce 1978). Other things being equal, however, students should be recipients of equal monetary provision.

Rationale

Most advocates of full state funding support the plan from an equity perspective suggesting that it is fair for both the student and the taxpayer. They offer that a local property tax with varying tax rates and bases is inherently unequal (Jones 1975) In addition, those in favor of the plan also recommend it as efficient. Local financial control is suggested as unproductive for society as a whole since one or more communities may not have a high regard for
education and thus, fail to fund it properly. A full state funding plan would place more of the responsibility for educational accountability on the state level and thus, benefit all of society. In addition, full state funding would allow comparisons of special programs and pupil achievement based on parallel levels of funding (Jones 1975).

Assumptions

1. Local school districts may not spend any extra state funds for education above the state mandated amount.

2. All state and local funds become exclusively state funds and are distributed evenly among the state's student population.

3. Any tax or spending disparities that exist (handicapped students would receive more funding than other students) would be based on educational need (state-wide) not local wealth or effort (Jones 1975).

Evaluation

The greatest concern regarding full state funding is the fear of the loss of subsidiarity or local control. In addition, there is concern that there could be a loss of funding for innovative local programs. The counter argument, however, implies that local school districts would have maximum time to devote to the accomplishment of curriculum and instruction goals within their budgetary range
since they would no longer have to deal with revenue collection and the bureaucracy of the taxation process.

As one reads evaluations of a full state funding option, it is important to keep in mind the author's definition of the term and remember that state politics would still have a significant effect. Many modern proposals for full state funding are not truly "full" in that funding from the state is not 100 percent. Provisions are usually made for funds from local taxation to be laid on top of state support. The crucial point to keep in mind is that local "add ons" should be relatively small and strictly supervised. An example could be a flat rate such as 10 percent of the state grant (Hickrod and Chaudhari 1972). Regardless of the specific components of a model, however, the most obvious result of complete state support or of state operation of schools would be equalization of school tax burdens (Johns, Morphet and Alexander 1983).

Proponents

The arguments for full state funding are largely fiscal. In February 1972, the New York State Education Department summarized some of the more commonly accepted reasons for the adoption of a full state funding plan:

1. Equalization of the fiscal provision for education
2. Property tax relief
3. Improvement of property tax administration

If a state collects a tax (since it is assumed some property tax would have to be levied in order to raise sufficient revenue to support education), improvements
in administration would be almost inevitable and inequalities in assessments, lack of effective administration, and tremendously varying rates would have to be corrected.

4. District reorganization
Since the concern of local governments is to achieve a size which is adequate for efficient operation, statewide assumption would provide a strong impetus for a more efficient reorganization.

5. A more productive tax base
Since increased revenues will be needed in the future as public education continues to assume a variety of functions, the incorporation of income and sales taxes (difficult to levy on a local scale) could be necessary. Collection of these would be more productive on a state level.

6. Need for competition for tax resources
The decision to increase spending should rest at the level which ultimately provides the funds.

7. Accountability
Educational needs should be weighted alongside the needs of other services by officials accountable for the full range of services (educational accountability currently rests with local boards). This can best be done at the state level.

8. Statewide salary schedules
Former Commissioner of Education for the state of New York stated: "Fixing salaries on a statewide base will provide an additional incentive to teachers to remain in the cities or in rural areas rather than migrate to wealthier districts."

9. Racial integration to be accelerated
Equal property taxes, and especially lower property taxes, would slow down middle class flight from the city.

10. Regional and metropolitan development
One of the barriers to present regional development is the tax advantages in one community as opposed to another. Statewide financing of education would eliminate such advantages and contribute to the quest for efficiency in operation through encouragement of regional development.

11. Program accountability
Provisions for accountability are currently confused by the fact that funds are raised locally. If funding shifted to the state level, there would be great pressure for development of instruments to measure accountability and insure all programs are effective.

12. More local control
If boards of education no longer have to pay close attention to local taxes and determination of salaries,
they should be able to devote energy to important program considerations which could be planned and developed with a maximum of local citizen input (New York State Education Department 1972, 18-23).

Other proponents of full state funding offer:

1. With the burden of taxation decision lifted, school districts would have maximum time to devote to the issues of curriculum and instruction (Jones 1975).

2. Political factions would maintain a quality expenditure level (Jones 1975).

3. All educational funds would be raised by statewide taxes (which could include property taxes), and that money would be spent equally on similarly situated students (Graves 1988).

4. Full state funding does not necessarily imply state operation of schools, but merely a state guarantee of equal amounts of money per pupil to each district (Graves 1988).

5. Full state funding eliminates local wealth and reward for effort as bases for funding (Jones 1975).

6. Full state funding is a means of bringing equality of educational opportunity and a shifting of tax burdens from the local property owner to a broader base available at the state level (Talbot 1984).

Opponents

As mentioned previously, arguments against full state funding are mainly concerned with the desire of people for
local control. Arguments against full state assumption as offered by the New York Department of Education in 1972 included:

1. Regression toward mediocrity
   There is a wide range of expectations concerning education across a state. With the implementation of full state funding, education might well be improved in one community but seriously hampered in another.

2. Local control versus big government

3. "Lighthouse" school system concept
   The chief argument for providing aid which is not earmarked for special purposes is to enable communities to make their own decisions and in turn insure that the best decisions for their children in the way of education will be attainable at least in some communities. The "lighthouse" school concept has resulted in many well supported and high quality school systems. The loss of them could change the character of education in a state.

4. Redistribution of resources
   The high expenditures which now exist in many suburban communities for their own children's education might be reduced and some of the money which is spent in these communities used to support education in other communities.

5. Flexibility
   Although theoretically not necessary, centralized financing formulas could lead to rigid allocation formulas. Rigid allocation and bureaucratic red tape hamstring local innovation. The educational community is already accused of not being responsive. Without the necessity of raising revenue locally, another line of communication and source for ideas would be lost.

6. Effect of state aid on local financing
   Researchers at Syracuse University have proposed that state aid is, to a considerable degree, additive to local effort. If this is the case, a shift to full state funding might well reduce the future total of available funds for education. From observations, it is clear that high income areas tend to increase expenditures even with large infusions of aid to a greater degree than do poorer areas (23-25).

In conclusion, the 1972 report of the New York Department of Education suggested that there are also practical problems associated with the implementation of full state
funding. These include determination of the appropriate level of funding, the handling of transportation and building costs, the district-by-district effects of a given level of funding, and the development of the most appropriate sources for funding. The study also suggested that the level of federal, state, and local funding which is desirable was unknown at that time since little concrete evidence from experience was available.

Other arguments against full state funding include:

1. Full state assumption would bring increased state control over education (Garms 1978). It is the forerunner to one single school district and the final death blow to local control and to basic public interest in their schools (Talbot 1984).

2. Local initiative is removed (Garms 1978).

3. Full state funding is not necessarily fair and efficient. Residents of wealthy suburban districts pay more for housing because of the school district's reputation. When suburban children receive a superior education, their parents are not getting "something for nothing" (Jones 1975).

4. There is a question about whether or not state rather than local accountability will improve pupil achievement (Jones 1975).

5. The middle class will take their children out of the public schools and parents in the richer suburbs will
come to make greater use of privately purchased supplementary services, such as tutoring. Once this occurs in visible measure, it is probable that demands will be made to make such supplementary services available free on call in inner city areas thus adding another responsibility to an already overburdened public school system (Benson 1971).

6. There will no longer be enough money to run the schools properly (Benson 1971).

7. Statewide bargaining will impede innovations in personnel practice (Benson 1971).

Whether or not full state funding is a reasonable approach is largely speculative since only Hawaii has this type of funding system currently. Other states approach full state funding depending upon how the term is defined. These include, but may not be limited to, New Mexico, Florida, Minnesota, and North Carolina. New Mexico, Florida, and Minnesota have foundation plans with a required local tax effort and a spending ceiling (Garms 1978). North Carolina fully funds its basic support program, which consists of a state teacher-salary schedule and an administrators' salary schedule in addition to several programs for pupil targeted instructional programs and pupil support services (Jones, Morphet and Alexander 1983).

Full state funding may or may not be a philosophy whose time has come. It is not difficult to see the validity in both the arguments for and the arguments against the plan.
Thus, as the property tax base shrinks in relation to other sources of taxation, and as inequalities in the ability to support education locally continue, pressure for a different method of financing education will grow. Greater state assumption of costs could, therefore, be inevitable.

Additional Comments

In May 1987, Jose A. Cardenas wrote an article for the newsletter of the Intercultural Development Research Association of San Antonio, Texas (Cardenas 1987). The article reviewed various remedies for educational finance equality in the state of Texas. In the article, Dr. Cardenas suggested that full state funding was so simplistic and impractical that it should receive no consideration in the courts or the legislature of Texas (Cardenas 1987). From a practical standpoint, he suggested that since local funds comprise one-half of the funds currently being expended for education in Texas, to expect doubling of the state share when the state is already having difficulty is not realistic. He pointed out that the only way the state could possibly adopt full state funding would be to collect all property taxes at the state level and distribute them on an equitable basis, and this action, currently prohibited by the State Constitution, would require a constitutional amendment.

In his concluding remarks concerning full state funding, he suggested that the worst aspect of the plan could be
the establishment of maximum levels of education which could not be exceeded at local cost and initiative. He argued that the achievement of equity should not constrain the level of education which can be attained (Cardenas 1987).

The Foundation Program

The foundation program was described initially by George D. Strayer and Robert M. Haig in 1923. It was later refined by Paul Mort. The original concept was simple yet revolutionary: the state and the local districts would share costs in a local partnership calculated to provide a specified minimum educational program in every district in a state with each district remaining free to enrich the equalized minimum program in keeping with its ability and willingness to tax itself (Walker 1984).

Philosophy

Minimum local property tax rates and minimum spending levels should be established for all students in a state to provide an adequate educational level without overburdening taxpayers. However, each school district could exceed the minimum if it chose to do so (Jones 1975).

A certain amount of basic education should be provided on an equal basis for all. Any amount of fiscal resource beyond that provided by the foundation guarantee is a local luxury not to be provided by the state (Garms 1978). The state should ensure equal educational facilities to everyone
within its borders at a uniform rate of taxation in relation to ability to pay, and the provisions of schools should be uniform in relation to the educable population desiring education (Coons, Clune and Sugarman 1970). In short, the foundation program was designed to provide certain minimal education offerings for all children in a state while striving not to impede local initiative.

The philosophy of the foundation program might best be summarized using ten characteristics Robert Garvue suggested in 1969.

1. A foundation program should be designed to assure that a high quality program of education can be provided for every child regardless of where he lives, the color of his skin, his creed, his intellectual level, his parents' economic status, or any other factor.

2. The plans and provisions for a foundation program should place major emphasis on local leadership in the organization, administration, and operation of effective schools, and thus provide strong encouragement for the development and exercise of local leadership and responsibilities.

3. A foundation program should provide for a joint effort involving financial resources and other resources of both the state and the local community.

4. A foundation program should make provisions for the required local financial participation in public school programs to be calculated on a fair and equitable basis in relation to local financial resources as compared to those of other local school districts.

5. In order to ensure an adequate equalized opportunity for every child, provisions should be included in a foundation program to require local school districts to meet their required effort.

6. A foundation program should provide to the local school district the opportunity, encouragement and incentive to go beyond the required local effort.

7. A foundation program should include all essential school costs that determine the level of quality to be achieved under the program. Those costs are (a) instructional salaries, (b) other current expenses, (c) capital outlay, and (c) transportation.
8. The formula for determining the ability of any funds to be provided by a local school district should be included in the foundation program and based on measurable factors that are common to all school districts in the state.

9. A foundation program must allow a reasonable degree of leeway and flexibility in order to provide for changing needs, desires, and resources. Evaluations of major aspects should occur periodically.

10. A foundation program should be designed to encourage sound and efficient organization, administration, and operation of school districts and schools (Townley 1970, 47-48).

Rationale

The foundation plan is designed to address four broad educational and financial problems:

1. equalization of expenditures, given scarce state resources;
2. establishment of statewide minimum school tax and spending standards (minimum rather than absolute standards);
3. demarcation of political authority between local school districts and the state; and
4. provision for perpetual improvement of the educational process (Jones 1975, 105-106).

Assumptions

1. The state specifies a dollar amount per student that each school district is to receive. Implicitly, this represents the amount of money that is necessary to guarantee a minimally adequate education. The state computes each district's contribution at a fixed rate and provides only the difference between the computed and the guaranteed expenditure level (Garms 1978).
2. For the plan to work as conceived, the minimum spending level set by the state must be raised every year or so (Jones 1975).

3. A property poor district will raise very little with the tax at the specified rate and the state will provide generously. A district rich in property will raise almost as much as the dollar guarantee and will receive very little equalization aid from the state. A very rich district will raise more than the guarantee and will receive zero funds from the state (Garms 1978).

4. The fiscal equalization of the foundation program can be increased or decreased by adjusting the level of required local effort. If required local effort is increased, the revenue from the local tax leeway decreases, reducing the disparity between rich and poor districts (Johns and Morphet 1975).

Evaluation

One of the main concerns regarding the foundation program is whether or not the principles incorporated into the design are actually practiced. Advocacy of the program is sometimes based not on the alleged perfection of the plan but on the belief that the alternatives are worse (Jones 1975).
Proponents

1. The foundation plan provides a partnership between the state and local districts to support the aspects of the educational program which are deemed essential (Johns, Morphet and Alexander 1983).

2. Local districts may provide funds to finance additional or higher quality services in accordance with the desires of the board and the citizens of a district (Johns, Morphet and Alexander 1983).

Opponents

1. Districts rich in property have more money to spend from levying the required tax than do property poor districts. If the "required tax" is indeed a state tax, the money raised above the guarantee should be returned to be used elsewhere. This concept of "recapture" or "recycling" is rarely employed (Garms 1978).

2. The assumption that the foundation amount is the amount necessary for a minimally adequate education cannot be accurately determined (Garms 1978).

3. If the tax rate for the mandated required local effort is set low, the money required from state sources may be more than the state can afford (Garms 1978).

4. If the required tax rate is high, so that less money is required from the state, there will be a substantial number of districts that will raise more than the
foundation guarantee at the required rate and, thus, will not be eligible for state aid. This is politically unpopular. As a result, states frequently give districts a minimum state amount per student regardless of the amount raised locally. This is the equivalent of a flat grant for rich districts only (Garms 1978).

5. The problem with the plan lies within the part of the formula which guarantees local incentive. The plan radically exacerbates disparities between rich and poor districts with every tax increment above the foundation level (Coons, Clune and Sugarman 1970).

6. The plan, designed around a certain number of dollars per student, lends itself from outset to political compromise (Coons, Clune and Sugarman 1970).

7. The static nature of the support level presents problems. The needs of education have steadily outgained support levels:

   a. the fast growing cost of education (formula reflects only population increases); and
   b. school expenditures have shown great "expansibility" or a tendency to branch into new areas (Coons, Clune and Sugarman 1970, 69).

8. There is a lack of flexibility in the foundation plan for meeting local needs since, at basic levels of spending, districts are far less free to experiment and diversify (Coons, Clune and Sugarman 1970).

9. Districts which employ the foundation plan usually continue to use flat grants of specific or general purpose
as well. These grants often reduce the equalizing nature of the foundation plan, usually obscure the realities of district needs, and always contribute to the vulnerability of the program to political compromise (Coons, Clune and Sugarman 1970).

10. Often, an adjustment of the required local tax effort upward (since the state does not increase its contribution and the value of the total program remains the same) becomes a process of "leveling down" in order to increase equalization (Jones 1975).

Additional Comments

In 1970, Coons, Clune, and Sugarman determined that the three part Utah foundation program was the best embodiment of the philosophy of the foundation plan as well as being the most efficient in practice. At that time, the Utah plan was designed to allow the rich to take advantage of their wealth and reflected the belief that local incentive was a condition to be promoted. Yet, it also included programs that were fully, partly, and slightly equalizing (Coons, Clune and Sugarman 1970)

In 1974, using National Education Finance Project criteria, Utah's plan was rated number one, second only to Hawaii in terms of equalization. The main facets of the program included:

a local leeway program (with balloting, the people of a district may increase the program's revenue by ten
mills); a state guarantee of the leeway program with four dollars per pupil per mill; a state guaranteed school building program; an equalization program for school transportation (Talbot 1984, 9).

Walter D. Talbot presented a paper at the 1974 annual convention of the American Association of School Administrators in which he offered the following evaluation of the foundation program:

Foundation programs have served an extremely useful purpose: providing minimum educational programs to every child in a state has been a goal worthy of attainment; yet, minimum state-supported programs have been recognized by many communities as perpetuating inferior educational programs. Grossly oversold, some of the problems with the foundation school program lie in low local standards and expectancy of education, unsatisfactory school district structures, unimaginative budgetary decisions and inept management. But foundation programs have been subsidized by special grants and categorical programs to overcome inherent deficiencies. Specialized programs have eroded the foundation concept and generated inequality among districts (Talbot 1984, 3).

In summary, all states have some type of system for providing aid for current operating revenues. They differ only in regard to what expenditures are included in the system: some include only what are defined as basic instructional expenditures, while other include expenditures for special programs, transportation, and others. In 1984, twenty-two states used a foundation program (Augenblick 1984).

The Foundation Program in Texas

Texas adopted the foundation program concept in 1949. In that year, the Gilmer-Aikin Laws were passed by the
Fifty-First Legislature. Senate Bill 115 reorganized the state administration, establishing the elective State Board of Education, providing for a commissioner appointed by the Board, and creating the State Department of Education (commonly referred to as TEA). Senate Bill 116 established the Minimum Foundation Program (Walker 1988). The history and development of Texas school finance since that time (1949) is summarized below:

1965: Governor John Connally appoints the Governor's committee on Public School Education, charging it with development of a long-range plan to bring Texas into national leadership in education. It is the first official body in the history of the state to address itself to the issues of inequalities in public school finance.

1968: The Governor's Committee published its report, The Challenge and the Chance, which recommends sweeping changes in education. In regard to school finance, the committee recommends massive injections of state funds through a broader Minimum Foundation Program and widespread consolidation of school districts. Most of the committee's recommendations are ignored by the Texas Legislature in 1969 and 1971.

1971: On December 23, the federal district court in San Antonio rules the Texas system of school finance is unconstitutional in the case of Rodriguez v. San Antonio ISD. It is held that the system violates the equal protection clause of the Fourteenth Amendment because of its excessive reliance upon disparate local property tax wealth. The state is granted two years to devise a new system based on no-wealth-discrimination principles.

1972: On appeal, arguments are heard in the U.S. Supreme Court in the Rodriguez case.

1972: The most comprehensive plan for no-wealth-discrimination school finance reform is formulated by the Joint Interim Senate Committee to Study School Finance. The preferred approach is a district power equalization (DPE) model.

1973: The U.S. Supreme Court reverses the Rodriguez decision on the principal basis that education is not a fundamental right protected by the Fourteenth Amendment. The Texas Minimum Foundation Program is
constitutional, but Texas legislators are given strong encouragement to develop a more equitable system. A number of study groups are appointed to prepare school finance recommendations for the 64th Legislature.

1975: The Texas Legislature passes Bill 1126, hastily constructed in the waning hours of the session. Significant changes in the state's financing structure are (1) increased funding of the renamed Foundation School Program, (2) equalization aid to certain property-poor school districts, and (3) abandonment of the county economic index method of determining local fund assignments, with a shift to actual market value of property as a rationale.

1977: In a special session in July, the 65th Legislature passes Senate Bill 1, which offers a few alterations to the financing structure: (1) increased FSP aid, (2) a local fund assignment rate in two different configurations, (3) equalization aid in two different configurations, and (4) inclusion of special and vocational education costs in the FSP instead of as categorical aid.

1979: The 66th Legislature passes Senate Bill 350, which (1) expands FSP aid again, (2) adjusts local fund assignment rates again to use index values, (3) revamps transportation aid through the use of linear density formulas, (4) establishes personnel unit floors for necessary small districts, (5) adds a fast growth adjustment, (6) adds a minimum aid adjustment, (7) provides for support services for small school districts for accreditation purposes, and (8) adjusts state equalization aid again to a single formula. In addition, House Bill 1060 enables the Tax Relief Amendments of 1978, and Senate Bill 621 establishes central tax appraisal districts for purposes of property tax appraisals.

1981: The 67th Legislature adds approximately $1.5 billion to the FSP, with the largest increases coming in teacher pay raises, maintenance and operation allotments, and state equalization aid. The local fund assignment rate is lowered, transportation aid is increased, the minimum aid feature of the FSP is retained, and bilingual education support is expanded. Reimbursement for tax revenue losses due to mandated exemptions is dropped, and Governor Bill Clements vetoes the fast growth adjustment portion of state aid.

1981: In a special session, the Legislature passes House Bill 30, which attempts to clarify previous property tax legislation, postpones for two years mandatory school district participation in central appraisal districts, and adds several features to the Property Tax Code, including (1) stiffer penalties and
interest on delinquent taxes, (2) less stringent rules governing tax rollback elections, (3) revised "truth-in-taxation" provisions, and (4) mandatory reappraisal of property at least every four years.

1981: In November, a constitutional amendment is passed allowing local taxing jurisdictions to grant additional homestead exemptions (over those authorized in 1978) on a local option basis.

1983: The 68th Legislature is confronted by fiscal constraints caused by the leveling of state revenues, particularly from taxes on oil and gas and the state general sales and use tax. Legislators address the unfamiliar dilemma of either raising state taxes or curbing state spending increases by providing only enough funds for public education to carry on current law. The local fund assignment rate is lowered to 11 cents per $100.00 of equalized taxable value, and the Legislature lowers its contribution rate to the Teacher Retirement System from 8.5 percent to 7.1 percent of gross earnings of system participants (with a reversion clause for the succeeding biennium).

1983: Governor Mark White appoints the Select Committee on Public Education to be chaired by Dallas computer magnate H. Ross Perot. The committee is to study the financing of education with a view toward reform of the system in a special session of the Legislature.

1984: The Select Committee on Public Education reports its findings and recommendations, including suggestions pertaining to (1) an appointed State Board of Education (2) a more equalized school finance structure, (3) increased teacher salaries, (4) a career ladder program for teachers based partially on performance, (5) class size maximum, (6) restrictions on extracurricular activities, and (7) numerous other matters, including new programs.

1984: In a special session in June, the 68th Legislature enacts House Bill 72, a comprehensive law touching nearly all aspects of public education. The state system of distribution of aid is moved from a weighted personnel unit approach to a weighted pupil (ADA) method. An overall increase in state aid of approximately 20 percent is granted, with emphasis on equalized features such as (1) increased local fund assignment rate (a statewide local share of the FSP of 30 percent, later 33 percent); (2) increased equalization aid for property poor school districts (with an effort factor added); and (3) elimination of hold harmless provisions in local share computation. In addition, the Legislature increases the state minimum salaries of teachers in a new step schedule and removes from the state salary index schedule all paraprofessionals and
all minimum salary designations for counselors, supervisors, administrators, and other support staff. A career ladder program for classroom teachers is enacted.

1984: Among major new programs to be funded are (1) pre-kindergarten classes for disadvantaged four-year-olds, beginning in 1985-86; (2) class size maximums of 22 in grades K-2 (beginning in 1985-86) and grades 3-4 (beginning in 1988-89); and (3) movement of some Teacher Retirement System contributions from state responsibility to local responsibility.

1984: To fund increases in state aid resulting from House Bill 72, the Legislature raises state taxes sufficient to generate $4.9 billion in additional revenue over a three year period. The principal increases revolve around the state general sales and use tax, which is increased from 4 percent to 4.125 percent, but many exemptions to the tax are removed. Numerous other taxes are increased, and the value of bank stock is moved from the local ad valorem tax to a state franchise tax, effective January 1, 1985.

1985: The 69th Legislature makes few changes to the reform act of 1984. State funds for education of gifted and talented students are provided as a special allotment under the FSP instead of as categorical aid.

1986: In two special sessions, the Texas Legislature tackles budget problems resulting from shrinking state revenues. A combination of budget reductions and a temporary sales tax increase result, with elementary and secondary education monies left relatively unscathed. State reimbursement for mandated sick leave program is eliminated, and community education funds are reduced.

1987: In a special session required to adopt a state budget, the Legislature makes the temporary general sales tax and gasoline tax increases from 1986 permanent and expands the sales tax. Among the reductions required to balance the state budget is a non-specific 0.65 percent decrease in the FSP. That portion of the appropriations bill aimed at assisting districts with rapid decreases in local taxable values is vetoed by the Governor.

1987: In Edgewood v. Kirby, state district court judge Harley Clark rules the Texas school finance system unconstitutional under the state constitution.

Percentage Equalization

The percentage equalization formula is an older version of what is now often referred to as the guaranteed tax base. The adoption of this method of funding was first proposed by Harlan Updegraff and Leroy King in 1922 and popularized by Charles Benson in 1961. It has never been widely used, but a number of states have recently adopted an equivalent alternative termed power equalization (Garms 1978).

With a percentage equalizing formula, the state responds to local financial initiative for support of the public schools. Each local district establishes its own expenditure level within state limits and the state equalizes the expenditure by providing state funds based on a district's relative fiscal capacity (Johns, Morphet, and Alexander 1983).

Philosophy

The percentage equalizing formula is designed as a matching plan in which the state guarantees to match local districts' prior year spending levels with revenues from state sources. The match is at a variable ratio, depending upon district wealth (Jones 1975). It is important to note that under percentage equalizing, the state pays a percentage of the total cost of education while under the foundation program, the state shares only in the minimum cost (Johns 1973).
In theory, the percentage equalizing formula does not mandate a minimum level of effort (as does the foundation program), but instead simply equalizes the level of effort reflected by each local district's expenditure level (Johns, Morphet and Alexander 1983). The plan emphasizes that a local district should decide the size of its budget and the state should hereafter guarantee equal access to funds. There is no restriction on the size of the budget (Garms 1978). It is assumed that a state's percentage or share will be large in poor districts and relatively low in wealthy districts. Thus, a poor school district with a high level of effort will be able to maintain the same quality educational program as a wealthy school district putting forth the same effort. Use of this formula assumes that equity is defined as access to education on the same terms and that the amount of education to be purchased by a community should be determined by that community (Garms 1978).

**Rationale**

If implemented in its unrestricted form, the percentage equalizing formula fully neutralizes differences in fiscal capacity, while giving incentive for increasing local tax effort. Under this approach, the dollar level of the local educational program is a function of local tax effort but not of fiscal capacity (Johns, Morphet and Alexander 1983).
The beauty of the plan is, by focusing on the local budget, it preserves local incentive but ties results solely to extra effort rather than greater wealth (Coons, Clune and Sugarman 1970). Coons, Clune and Sugarman suggest that the plan:

equates equal opportunity with taxable wealth per district; aims to create clusters of equal financing power not a utopian equality of persons; and is designed to make subsidiarity meaningful to all districts (1970, 164).

Assumptions

1. Percentage equalizing, in effect, makes all districts equally able to raise tax revenues. A mill on the tax rate, combined with state aid, will raise the same amount in any district (Garms 1978).

2. The state guarantees to match local district's prior year spending levels with revenues from state sources (Jones 1975).

3. A "key" district is chosen in the state. State aid received by a locality depends upon the ratio of the wealth of the locality to that of the "key" district. The key district is the tool by which a state can strongly influence how much money is to come: (1) from traditionally state resources; (2) from redistribution of excess property tax revenues collected locally by rich districts and paid into a state fund; and (3) from local revenues to be retained and spent locally (Coons, Clune and Sugarman 1970).
Evaluation

It is difficult to determine the number of states which employ a type of percentage equalizing formula. According to one source, between 1922 and 1983, only seven states had adopted it as their basic aid formula. These included Iowa, Massachusetts, Maine, New York, Pennsylvania, Rhode Island, and Vermont (Johns, Morphet and Alexander 1983). Jones (1975) suggested that the mathematical equivalent of percentage equalizing, the guaranteed tax base, was used in only two states as recently as 1970. Yet, in 1984, Augenblick suggested that ten states utilized some form of a "guaranteed tax base" approach. He explained the guaranteed tax base formula with the following statements:

- The state specifies a rate in which it will match local taxes; the rate varies inversely with the wealth of the school district.
- The state essentially allows school districts to behave as if they had the wealth of some designated district; typically, the district of average wealth (199).

Augenblick went on to point out that fourteen states combine the percentage equalizing plan and the foundation plan into multiple tiers, usually by providing a guaranteed tax base on top of a foundation plan. The purpose of this combined approach is to specify a minimum spending level, with an associated requirement of a minimum tax effort, while helping to equalize the ability of districts to provide funds beyond the minimum level. Multi-tiered systems permit the state to meet its objectives of adequacy
and equality while also promoting local control, at least over spending (Augenblick 1984).

Various researchers speculate on the reasons for the lack of enthusiasm on the part of state legislatures when considering a percentage equalizing plan:

It places a state in a reactive rather than a proactive mode. State appropriations must respond to local tax effort in each district and such uncertainty makes legislatures uncomfortable (Johns, Morphet and Alexander 1983, 255).

Percentage equalization carries the possibility that some districts will get no equalization money. This is politically unpalatable unless a minimum amount per pupil is established as aid for all districts (equivalent to a flat grant) (Garms 1978, 195).

No education plan is prescribed at the state level and no attempt is made to measure local educational needs or costs. Advocates of local control are comfortable with such a scheme but legislators tend to want to exercise more authority over the use of funds. A system of full fiscal equalization is extremely difficult to implement because of the great state expenditures which would be required to bring the poorest district up to the level of the richest. Consequently, limitations have been placed on the percentage equalizing formula where it has been adopted. This changes its nature to something resembling a foundation program.

The formula does not mandate a required level of local effort. Low financial effort for the public schools may result from a myriad of social and economic issues; some districts may have less aspiration for education than others and in many cases, it may be necessary for the state to intervene to demand a uniform level of effort for education. Percentage equalization does not lend itself to such state action (Johns, Morphet and Alexander 1983, 255).

There is a political risk that a district with a very high aid ratio will spend a large amount of money because it is known that an additional dollar of local taxes will bring in an additional ten to twenty dollars of state money. Thus, legislatures want to specify a maximum state aid ratio (Garms 1978, 195).
Proponents

1. The percentage grant offers an automatic fiscal incentive to local authorities, while the Strayer-Haig plan requires legislators to go through the exercise periodically of determining what "good education" costs, on the average, in districts in their state (Funk 1980).

2. The percentage equalizing plan reduces the price of educational services more uniformly in all districts, and hence, offers a more widely distributed type of financial incentive (Benson 1971).

3. Since we live in an age of educational experimentation, and it is always difficult to determine what the cost of certain new practices is going to be in different types of districts; percentage grants allow state governments to share in the financing of new services even before costs become standardized (Benson 1971).

Opponents

In addition to the ideas offered with respect to legislative reluctance to adopt percentage equalizing plans, the following concerns are offered by opponents:

1. No change or provision to recognize reward for effort will be enough to raise the educational requirements of poor districts to bring as great a proportion as possible of their students over the rising threshold of educational prerequisites for employment (Funk 1980).
2. Situations can develop wherein locally set spending levels get larger and larger beyond the capacity of the state to finance its "slice of the pie." At that point, the state can impose tax and spending limits on localities (loss of local control), or it can fail to match some local revenues with state aid (thus, allowing tax yields/mill to vary among districts and restore inequality) (Jones 1975).

The percentage equalization plan incorporates both district wealth and reward for effort criteria, thus, according to Thomas Jones, it offers a more equalized approach than the basic foundation plan. The main concern regarding use of this plan, however, may be the choice of the key district. In a state where districts have radically different property values, choice of the richest district as the key district may skew the process (since the richest district may be an outlying district) and make use of the plan fiscally impractical. Choice of a district of average wealth, which could force downward equalization of richer districts, would also be a difficult choice since politically this would be unpalatable.

**Percentage Equalization in Texas**

Texas has adopted the percentage equalization concept into a guaranteed tax base and maintains a combination foundation school program and percentage equalization plan. Enrichment equalization aid is provided to property poor
districts above the foundation program level. This aid is intended as surrogate local tax revenue to allow low-wealth districts to approach expenditure equality with more affluent districts, given reasonable tax efforts in the poorer districts (Walker 1984). Every district in the state can behave as if it has the same tax base as some set-state level (110 percent of the average equalized property wealth per ADA). A school district chooses its own tax rate. This locally selected rate is then applied to the guaranteed tax base and the state insures a district at least that resulting level of revenue. Currently, the model is complicated and easily misunderstood (Walker 1988).

Power Equalization

Most states have a small number of school districts that are very wealthy. The power equalization concept requires that these extremely wealthy districts pay a portion of the school taxes they collect back to the state. The state may then use the money from wealthy school districts to increase the aid to poorer school districts. This scheme of financing was developed by John E. Coons, William H. Clune III, and Stephen D. Sugarman in 1970 as an alternative during the era when state school-aid formulas were under increasing judicial scrutiny (Johns, Morphet and Alexander 1983).
Philosophy

In theory, district power equalization is no different from either the foundation program or percentage equalizing. It advocates the removal of wealth as a determinant of local school revenues to completely equalize tax resources among all school districts. If the foundation school program and percentage equalization used the wealthiest district in the state as the key district, then full equalization would take place. The practicality of financing, though, has never allowed this to happen in either case, since to level up to the richest district requires an inordinate amount of tax resources in most states. District power equalizing attempts to provide the same resources per pupil with a formula that guarantees all districts a resource base of equivalent value (Johns, Morphet and Alexander 1983).

The basic philosophy of district power equalization is the same as that of percentage equalization: the ability to raise money should be equalized, but the decision as to how much money to raise should be left to the local district (Garms 1978).

Rationale

Power equalization accomplishes several strict criteria that are violated in practice by percentage equalizing. It permits full local spending control and thus meets the reward for effort criterion Thomas H. Jones discusses in his
book *Introduction to School Finance*. He points out, however, that it also achieves inclusiveness simultaneously by not allowing local education agencies full control over their own local revenues (Jones 1975). Power equalization requires that state to set a guaranteed wealth level and then "recapture" some revenues from school districts that have a local wealth higher than the state guarantee.

**Assumptions**

1. Power equalization will reduce the disparities due to property values.

2. Power equalization removes the dilemma of choosing between subsidiarity and equality because equality in this case means equality of power. Subsidiarity will be meaningful for all districts not only those which are wealthy (Coons, Clune and Sugarman 1970).

3. The state share of a budget for an individual district can vary with differing efforts so long as, at any specific effort, all subunits are fully equalized. Percentage equalizing assumes that the state share for any individual district will be the same at every level of spending and effort (Coons, Clune and Sugarman 1970).

4. The relationship between effort and offering of every district will be the same irrespective of wealth and a district will determine its own effort (Coons, Clune and Sugarman 1970).
Evaluation

Coons, Clune, and Sugarman were influential. In 1975, twenty-two states had adopted some form of power equalization (Garms 1978). However, only Wisconsin adopted a plan that could be characterized as complete district power equalization. The Wisconsin plan, enacted in 1973, included a negative aid or recapture provision with a "kinked" schedule (in a kinked schedule, the relationship between the tax rate and expenditures per pupil flatten out at the higher expenditure levels producing a "kink" in the relationship. Districts with tax rates below the kink gain substantially as they move up to that predetermined point, but those above, gain revenues at a more reduced level per increase in tax levy. Expenditures are not allowed to rise as fast as the revenues a tax rate would produce above a given point). The Wisconsin experiment was short-lived because the recapture provision was held to be unconstitutional by the Wisconsin Supreme Court before the law became effective (Johns, Morphet and Alexander 1983).

Proponents

1. District power equalization preserves the right and duty of local districts to play "catch-up" with the rules of the game strongly to the disadvantage of the property-rich districts (Benson 1973).
2. District power equalization offers a path toward major reform while preserving the general direction of development of American education (Garms 1978).

3. District power equalization contemplates that districts will value education differently and therefore offerings throughout the state will differ (Coons, Clune and Sugarman 1970).

4. District power equalization cultivates the freedom of parents to live in areas having the kind of commitment to education which they prefer. Local incentive is stressed to the exclusion of statewide equality of offering. Statewide uniformity would mean:

   all children would receive the same compromise level of education; and termination of opportunity and responsibility associated with working at the local level (an important political option) (Coons, Clune and Sugarman 1970, 203).

5. Total financial resources of the state are equally available to all public school children in the state.

6. Subunits of the state (local districts) are free, through the taxing mechanism, to choose various amounts of the state's wealth by deciding how much they are willing to tax themselves (Coons, Clune and Sugarman 1970).

7. District power equalization resolves the problem (associated with matching grants) of insufficient funds on the part of the state to match every locality at the level of the richest (Jones 1975).
8. Power equalization allows a school district to spend an amount per pupil that it chooses while not having to tax itself higher than any other school district in the state to do so. This would suffice to meet any test of equality with respect to the taxpayer (National Center for Educational Communication 1971).

Opponents

1. District power equalization, to a large extent, abdicates the state's responsibility to establish an efficient and uniform basic educational program throughout (Johns, Morphet and Alexander 1983).

2. Legislatures like to know what they are funding. In many instances, the legislative concern is for specific educational needs—the handicapped, compensatory education, vocational education or teachers' salaries. This type of identification is not feasible with district power equalization (Johns, Morphet and Alexander 1983).

3. The recapture provision, which is a prominent difference between percentage equalizing and district power equalizing, in its idealized form, is not popular. Politically, it is difficult to restrict state aid to wealthy school districts and practically impossible to enact legislation which forces them to pay their excess revenues into a state general education fund (Johns, Morphet and Alexander 1983).
4. A child's education should not be a function of wealth of the locality, but neither should it be entirely a function of tax effort. The philosophy of minimal local restraint, which supports district power equalization, does not recognize the state's responsibility to assure children that their education will not be a function of the whims of local politics or of general community disregard for the value of education (Johns, Morphet and Alexander 1983).

5. To allow local school districts nearly complete autonomy in setting their own tax rates and fully equalizing the fiscal disparities places state legislatures in a reactive mode when allocating state revenues (Johns, Morphet and Alexander 1983).

6. The main distinguishing feature of district power equalizing, the almost limitless local effort and the recapture provision, are so widely objectionable that it may well never be enacted in its original intended form (Johns, Morphet and Alexander 1983).

7. Power equalizing would apparently reduce the disparities due to property values but not the differences associated with socio-economic status. School districts with more income, educated adults, and professional workers show a persistent propensity to tax themselves more heavily for public schools (Stern 1972).

8. Power equalization would produce a pattern of taxing and spending in which per-pupil expenditures remained
substantially higher, on average, in wealthier school districts (Stern 1972).

9. Power equalization would allow school district expenditures to rest upon tastes of voters in a particular district, and this arrangement could be construed to make the quality of a child's education a function of his geographic location (National Center for Educational Communication 1971).

In its generic form, the power equalization plan cultivates the idea of local autonomy to a maximal level, while also guaranteeing a responsive state support plan. In addition, it also reduces disparities due to property values. However, the built-in recapture provision may render it ineffective or even void of consideration since it is difficult to conceive of political and/or legislative support.

Additional Comments

In response to the Edgewood v. Kirby decision, Cardenas (1987) found district power equalization the most feasible response. He suggested that flexibility and local initiative could be maintained with the creation of several guaranteed tax levels from which a local district could select a single tax rate deemed most appropriate for them. Flexibility and local initiative could also be maintained with the development of several taxation increments also
allowing a local district to choose the most appropriate level.

Cardenas points out that although the enrichment provision of House Bill 72 has a guaranteed yield, it is too limited to be of value (Stutz 1988). He continues with the identification of two major problems associated with power equalization and its implementation in Texas. These include the large disparities in taxable wealth among the school districts and the lack of state funds to match an extensive local enrichment effort (Cardenas 1987).

One of the most interesting points Cardenas makes is that the inability of the state to match extensive local effort (i.e., a $1 tax effort in the wealthiest school district in the state in 1987 would have produced a tax yield of $140,000) may have been a non-issue had the Texas Legislature addressed the problem of school finance prior to the court order. The issue of disparities by extremely wealthy school districts could have been disregarded by limiting equalization efforts to the bulk of the school districts and exempting some 5 percent of the districts as simply being too wealthy for effective equalization. Now such a decision would be subject to the constitutional tolerance the court would allow and should the guidelines include all school districts, the Legislature would have to resort to caps on enrichment (Cardenas 1987).
In July 1988, nine members of the fifteen member Select Committee on Education appointed by Governor Bill Clements indicated that placing a cap on educational expenditures was considered an unsatisfactory alternative to the current funding plan (Graves 1988).

Although research has shown that district power equalization is the most promising state aid model for providing equalization aid, the model has been resisted in Texas and most other states because it is considered too radical a departure from the traditional state equalization programs (Walker 1988).

The negative aid, or recapture provision, is the most controversial point for opponents for DPE. Except for this provision, which captures local tax dollars from wealthy districts and redistributes them along with state aid to less affluent districts, DPE is essentially the same in its effects as percentage equalizing (Walker 1988).

Current Texas Climate for Funding Options

Select Committee Proposals

In July 1988, the fifteen member Select Committee on Education indicated full state funding of public education or limits on school expenditures were the only known options available that fully met the equity guidelines mandated by Judge Clark. Although both plans were judged unsatisfactory by one or more members, the committee agreed to list the two
options as the only ones that fully comply with Judge Clark's ruling in their final report to be submitted to the legislature in January of 1989. However, committee chairman Larry Jenkins suggested that exclusion of the state's richest districts could make other funding systems more feasible (Graves 1988).

State Comptroller Proposals

The comptroller's financial report begins with the contention that Judge Clark's decision indicates that there are two basic issues that must be addressed for any new finance plan to meet the standards of fairness and equity: (1) all students must have a substantial equal opportunity to access the funds needed to provide a quality education (equal access is the key—not equal dollars); (2) the state must recognize that school facilities are an essential part of any educational program, and must begin sharing the cost of facilities with local school districts (Texas Education News 1988). The comptroller suggested a two-part plan to be phased in over a five-year period. Part One addressed the cost of a quality education and the means for ensuring that all students have equal access to funds. Part Two addressed the need for the state to participate with local school districts in providing facilities.

Under Bullock's proposal in Part One of the plan, the state would equalize each student's access to funds—either
from local or state sources—at the level established by the state's accountable cost study estimated to be $3,600 in 1985-86. The equal access would be based on: (1) the level of tax effort taxpayers are willing to make, and (2) the level of tax effort local tax payers are able to make based on the size of their tax base.

If a school district is willing and able to raise local funds at the legislative target rate, the state will still provide the funds, but will reduce the amount of state aid proportionally. Assuming a five-year phase-in of this plan beginning in 1991, the additional cost to the state can be estimated for the first two years at around $600 million. To meet the costs of the plan, the legislature might set a target tax effort of something near 74 cents per $100 valuation in the first year (Texas Education News 1988).

Bullock suggests that his plan is workable not only because it meets the main tests of Edgewood v. Kirby but also because it:

1. does not require school consolidation;
2. preserves the existing structure of the state's system of education;
3. does not take local funds from wealthy school districts;
4. preserves and promotes local control by school districts;
5. allows the legislature to address the problem;
6. does not require a constitutional amendment;
7. recognizes that a quality education requires a partnership between the state and local districts; and
8. meets the test of fiscal responsibility (Texas Education News 1988).
Critics of Bullock's plan note that the $3,600 figure to be used in 1995 (in fiscal year 1991, the first year of the plan, Bullock estimates the cost of a quality education at $3,200 per student) should be adjusted for inflation and that the amount per student could reach $4,780 by 1995 (Texas Education News 1988).

Alternative Taxation Proposals

With respect to the continued use of the property tax in Texas, some modifications were suggested during the Edgewood trial. Using the existing Regional Educational Service Center structure as an example, twenty unitary taxing districts, with an average of fifty school districts in each could be created. The existing foundation school program could then be maintained, but enrichment funds would be raised through these supplemental, large taxing districts on a regional basis. It has been offered that the wealth disparities among these twenty taxing entities would be approximately nine to one, a much more manageable disparity than that which currently exists (Cardenas 1987). Critics of this plan cite the bureaucracy and lack of sensitivity in governance of these entities as reason enough to abandon the idea.

Another alternative would be to employ a system of state industrial taxation. This plan would consist of the elimination of large industrial taxable property from the
tax rolls of local districts and collection of this property tax by the state. The rationale behind such a plan is that location of industrial complexes with respect to school districts is quite by accident. The Texas constitutional prohibition against a statewide property tax would require a modification of the concept, with the taxes on industrial property collected and distributed on a regional basis (Cardenas 1987).

Other sources of state revenues include sales taxes, personal income taxes, corporate income taxes, and miscellaneous taxes such as excise, estate/inheritance taxes, and severance taxes. Texas uses the sales tax and other types of consumption taxes moderately. In 1986, the sales tax rate was increased to 5.25 percent temporarily as a result of state revenue concerns (Walker 1988). This increase may need to be maintained.

Although Texas has resisted implementation of personal and corporate income taxes to date, both exist as a potential source of state revenue in the 1990s. Personal and corporate income taxes comprise about 30 percent of all state revenues in the United States, thus Texas could be in a favorable position for utilizing these sources for additional revenue (Walker 1988).
Consolidation or Redistricting Proposals

Other concerns brought out during the recent reform movement include the possibility of district consolidation or redistricting. The number of school districts in Texas has declined steadily since 1949. In 1950, there were some 6,000 school districts. In 1971, that number had declined to 1,600, and in 1987 there were 1,061 districts (Cardenas 1987). Proponents of consolidation cite benefits of equity and efficiency as well as the elimination of duplicated services. Opponents suggest that "largeness" in school districts is a liability rather than an asset since community support is needed to achieve effectiveness, and the measure of this support is a function of the distance between the community and decision making by the district board and administration. In summary, opponents maintain that the creation of huge districts is not conducive to the development of a close relationship with the community and is too high a price to pay for the limited equalization it would provide (Cardenas 1988).

Redistricting and consolidation plans which address student equity and/or revenue availability have been proposed. Redistricting based on equalization of tax bases has been offered as a potential solution for both equalization and resource availability. However, as in the case of consolidation, the various segments of the state are so different in wealth that the creation of a proposed one
thousand new districts would do little to rectify the wealth disparity of the existing system. In order to effectively neutralize geographic wealth disparities, a much smaller number of districts encompassing a larger geographic area or an area with somewhat equal numbers of students would have to be established (Cardenas 1988). Problems would exist in the sparsely populated areas of west Texas, however, where a grouping of 150,000 students would encompass a potentially unmanageable geographic area. In addition, the management of each local district's bonded indebtedness obligations could become overwhelming in consolidation or redistricting.

Property Tax and School Finance

The property tax is the basis for public school financing in forty-nine of the fifty states (Garms 1978). Although most states rely less on the tax today than they did in the past, it still provided more than 40 percent of all public school support in 1985 (Jones 1975). In 1890, the earliest year for which adequate national statistics are available, local property taxes accounted for 67.9 percent of all public education revenues in the United States. This percentage peaked in 1930 at 78.8 percent of all public education revenues and 82.7 percent of all school tax revenues. Since 1930, the ratio of local property taxes has dropped consistently to a 1984 estimate of 42.5 percent of all tax revenues for public schools (Walker 1984). Since
each of the school finance formulas examined in this study use the property tax as the major source of revenue, a review of the characteristics of property taxes as well as the history of their association with school finance would seem of value.

Use of the property tax to support public education had its beginnings with the Massachusetts Act of 1647. One of the principles of that Act allowed that public funds, including local property tax levies, could be used to support public schools. The practices of the Massachusetts Act became well established during the common school movement of the early 1800s (Walker 1988).

Following the development of a number of theories of school finance in the early twentieth century, it was realized that extensive state/local input of monies would be necessary to guarantee the minimum program levels suggested in one or more of the theories. As time passed, the property tax continued to be a major contributor to school finance since it was felt it was too productive to be abandoned. In addition, it was argued that it was highly visible, amenable to small incremental changes in rate, and tended to increase application of resources to something which yielded a high return on human investments (Walker 1984).

General usage of the term property tax may refer to tangible personal, intangible personal, or real property.
Real property is defined as land, buildings, and other improvements to land—for example, in-ground swimming pools and driveways (Jones 1975). The primary source of revenue for public schools comes from the tax on real property. This tax is sometimes called an ad valorem tax, meaning a tax levied on a percentage of the value of the property. The tax levied on property may be expressed in terms of mills or as a percent of the value. A mill is a unit of monetary value amounting to .001 of a dollar or one-tenth of a cent (Johns, Morphet and Alexander 1983).

Proponents for the use of property taxes in school finance point out that its characteristics identify it as a fair and reasonable source of revenue. These characteristics include:

1. **Equality**—If properly administered, the property tax is a fair and equitable tax.
2. **Certainty**—Unless everyone is required to pay at stated intervals, there is no equity and a tax is an unfair tax. Under appropriate laws for enforcing the tax it is difficult, if not impossible, for the taxpayer to avoid payment of the property tax unless he elects to forfeit his property.
3. **Convenience of Payment**—While the payment of the property tax is not as convenient as the sales or certain excise taxes, it is as convenient as the income tax. In most states it is payable in two installments, but the amount of the tax is generally known well in advance and the taxpayer can budget and save for the payment of the tax.
4. **Economy of Administration**—The property tax is economical to administer. While valuation on property does require considerable expense and the assessor must maintain records to provide an inventory of all real property within his jurisdiction, he can efficiently obtain a complete inventory of all personal property. There is the expense of inventorying and appraising all properties, but there is no costly checking of returns.
and no detailed auditing of accounts such as is true in
the case of certain income and excise taxes. The
property tax is as economical to administer as other
taxes and, in some cases, is being administered at less
cost than other taxes.
5. Simplicity—The property tax is relatively easy to
understand and comparatively simple to apply. The
rates of the tax are not progressive and the taxpayer
does not face the task of making out a complicated tax
return and maintaining substantial records in the case
of an audit.
6. Stability—The property tax represents a stable
source of revenue for the financing of fundamental
tasks of local government and is not subject to the
same degree of fluctuation as income and excise taxes.
Property tax revenue does not move up and down in the
manner characteristic of other taxes that are closely
related to the ebb and flow of business activity.
7. Elasticity—By simply raising or lowering annual
tax rates, the flow of revenue can be easily adjusted
to meet the needs of the local taxing jurisdictions.
The inherent nature of the tax and the levies provide
the elasticity.
8. Adaptability—The property tax is adaptable to
small units of government like cities, school dis-
tricts, and special districts which provide services
for small economic areas. A listing of the amount of
property available within a jurisdiction is currently
available, and a fair and equitable tax levy can be
made for the area to pay for the public services
required. This adaptability is one reason why the
property tax has become universally used for the smal-
ler units of government (The Texas Research League
1988, 3-4).

Over the years, there has been much criticism of the
property tax. The tax is said to be regressive, requiring
poor people to pay a greater portion of their income tax
than the well-to-do. In addition, social scientists suggest
that the tax fosters neighborhood segregation by socio-
economic class and isolates business areas from residential
areas (Johns, Morphet and Alexander 1983). Another
criticism of the property tax is that it is difficult to administer fairly and efficiently:

Within the "system" of property tax administration—determining fair property values, carrying out equitable assessment procedures, establishing rates of taxation, and collecting taxes—there are many variations throughout the nation (Johns, Morphet and Alexander 1983, 98).

Inequality with respect to one's ability to pay may be the strongest criticism of the property tax. In 1973, Allan R. Odden offered the following assessment of the property tax with respect to equity:

1. Today, property ownership is no longer a good indicator of one's ability to pay taxes.
2. Also, when considering the economic relationship between a landlord and tenant: the landlord owns the building and is responsible for the property tax levied against it, however, he can deduct the full amount of that tax from both state and federal income tax. the question is does he pay the tax or shift it to the renter? If it is shifted, the renter pays 20-25% of his rent to tax but enjoys no tax benefit.
3. The poor tend to spend a greater portion of their income on shelter than the rich. Since part of anyone's housing cost is used for property taxes, the poor tend to spend a higher portion of their income on property taxes.
4. Poorer taxation districts tend to have higher tax rates than richer districts. Thus, even if all other things are equal, which they are not, the poor would still be paying proportionately more property tax than the rich (Odden 1973, 42).

Although the use of property taxes is widely criticized, several authors either defend its current usage from a yield perspective or point out some positive characteristics. It has been suggested that the principal reason why the extensive use of the property tax continues is not as the politicians would have one believe, the independence of
local governments, but that no tax which yields greater than $40 billion annually could or should be eliminated (Odden 1973). In an article comparing full state funding with power equalization, Austin Swanson agrees with Odden's assessment:

It is highly unlikely that the property tax will be replaced in the near future since it presently produces over $2 billion per year for schools in New York state alone. The economic displacement that would result from suddenly raising this amount from non-property taxes is too great to contemplate. For this reason, it is imperative that the property tax resource be used as effectively as possible (Swanson 1972, 6).

Others agree that one must assume the continued existence of the tax and pursue reform. In 1965, John Shannon examined the property tax with three of the major criticisms of its use in mind: (1) from a revenue standpoint the property tax is sluggish and unresponsive to economic change, (2) the property tax does not lend itself to equitable and efficient administration, and (3) it is highly regressive at the lowest income levels because there is no relationship between property ownership and ability to pay. He summarized his findings as follows:

1. There is growing recognition that the rise in property values is roughly in line with the growth in national income.
2. Measured in terms of assessment uniformity, the performance of many local assessment offices can now be related as superior. What is feasible for this representative group would seem to be within the reach of all.
3. There is widespread agreement on what has to be done to achieve an acceptable degree of assessment uniformity for all assessment districts.
4. There is growing demand that property owners be fully informed about fractional assessment practices. Implementation of a full disclosure policy should expedite the enactment of far-reaching assessment reforms.

5. There appears to be growing public recognition of the fact that the household income-property tax ratio stands out as the most effective device for detecting the presence of excessive residential tax loads. Gearing property tax relief programs to household income criteria can radically reduce the regressiveness of the property tax (Shannon 1965, 143).

John Augenblick, in 1984, pointed out that two major fiscal problems which face American schools in the 1980s may, by necessity, continue our reliance on property taxes.

1. The expenditures necessary to maintain and improve our educational system are likely to increase (i.e., schools are beginning to take advantage of emerging technologies and these are expensive; school districts may have previously deferred the maintenance of physical plants until now; and the decrease in enrollment may be over, thus, there will be an absolute and immediate need for new revenue).

2. States which have assumed an important role in funding are unlikely to be able to maintain that high level of support. Between 1977-78 and 1982-83, state support grew by 62% from $36.1 billion to $58.4 billion. An important indicator of a state's fiscal condition is the size of its general fund balance. If the balance exceeds 5% of the general fund spending, the state is regarded as fiscally prudent. In January of 1983, forty-four states were projected to have balances below 5%; nineteen were expected to face deficits (Augenblick 1984, 390).

In conclusion, Augenblick suggests that the viability of educational finance depends upon diverse sources of revenue. Instead of doing away with property taxes, we should improve assessment practices, collection systems, and the tax rate setting process. He warns that while it may be fiscally important to seek more local support for schools
now, continuing to employ our current tax collection procedures is likely to be accepted only for a short time, followed by continued attacks on the use of property tax for school finance. In light of this, several policy questions are posed with respect to continued use of the property tax as a revenue source:

1. Should certain types of property, such as power plants, be assessed and taxed by the state?
2. Should property be assessed by the state even if property tax rates are determined locally?
3. Should periodic increases in property assessments be limited?
4. Should property be differentiated by class for assessment or tax rate purposes?
5. Should property taxes be limited to a specified proportion of family income or a specified proportion of property value?
6. Should property tax be collected over a period of time rather than at one time (Augenblick 1984, 393)?

It is important to recognize another issue Augenblick felt had tremendous impact. He questioned the very process of linking school improvement to school finance:

to the extend that certain taxes are earmarked to support improvement, future support would depend on the revenue made available by the taxes which are sensitive to the strength of the economy rather than to the cost of school finance (Augenblick 1984, 197).

Property Tax Reform

Reduction of property taxes proved to be one of the major stimuli to school finance reform in the 1970s (Augenblick 1984). In 1973, Governor Tom McCall of Oregon initiated a program of massive tax relief and a new system for
financing the public schools through virtually complete state funding. The components of the plan were as follows:

Property tax support of public schools would be cut by more than 2/3 to 25%. State support would rise from approximately 21% to 95% with higher progressive income tax rates contributing more than 40% of school costs as compared to 15% (Oregon's income tax in 1973 raised 56% of the total state revenues. The state had no sales or statewide property tax at that time. Local school districts relied primarily on local property taxes). Personal income tax rates were to increase from the 4-10% range to the 5-13% range. In addition, only the first $2,000 of federal taxes could be deducted from a state tax return. Business taxes were to rise. There would be constitutional limitations on the use of local property taxes and on the statewide property tax (Pierce 1973, 120).

The McCall plan was defeated by voters on May 1, 1973.

In an analysis of the defeat, the following points were made.

Too much emphasis was placed on property tax relief. Other issues such as local control were important. There was not enough consideration of both the political resourcefulness of the minority whose taxes would have been raised and the costs of change and uncertainty to the majority. Programs designed to benefit large majorities of people do not necessarily receive majority support. The larger the total amount of tax relief for some, the larger must be the increase for others and the greater the probability that those whose taxes would increase will work against such an increase. Defeat of the McCall plan raises doubts about the efficacy of tying tax reform to changes in the structure of public service. Tax relief was important to Oregonians, but other issues such as local control and political credibility overwhelmed the voters' concern for tax relief. If the issues of property tax relief and full state funding for schools could have been separated, both reforms would probably have been more acceptable.
The McCall plan runs counter to the tendency of state and local governments to select new taxes that are painless rather than fair (Pierce 1973, 128-130).

Other states soon followed suit. In 1978, California voters declared war on property taxes with the approval of Proposition 13 by an astonishing two-to-one margin. Heralded by the national media as the beginning of a modern tax revolt, Proposition 13 propelled a variety of tax reform movements in almost every state (Tacker 1985).

In November 1978, Massachusetts voters authorized cities and towns to tax residential property at a lower rate than commercial property. Missouri voters authorized the legislature to require local governments to reduce property tax rates. Alabama voters restricted increases in any type of property taxes in a county to 20 percent, and amendments requiring a two-thirds vote of the legislature in order to raise selected taxes were approved in North and South Dakota (Tacker 1985).

Texas was no exception. However, despite numerous well-documented problems with property tax administration, efforts at reform were not successful until 1979. With public sentiment against the property tax system on the rise and the possibility that the system might be found unconstitutional, the state legislature took action in 1978 to reform tax administration. In that year, a "tax relief" amendment was passed and submitted to the voters. The major elements of this amendment were:
1. a mandatory $5,000 exemption from local school
district taxes;
2. additional tax relief for elderly and disabled home
owners;
3. a provision requiring that land devoted to agricul-
tural uses be assessed only on the basis of its "pro-
ductivity;" and
4. an exemption of individually owned household goods,
the local option exemption of individually owned
automobiles, and language that permitted the legisla-
ture to deal with the taxation of intangible property
in a number of ways (The Texas Research League 1988,
ix).

In November 1978 voters approved this amendment and
property tax statutes were revised by the legislature in
1979. Revisions of the statutes included an enforceable tax
base (intangibles with a few minor exceptions were removed
from the tax base), the creation of the State Property Tax
Board to assist local tax administration, the creation of
central appraisal districts and appraisal review boards, and
the abolition of the practice of fractional assessments (The
Texas Research League 1988).

In the few studies that have been undertaken to deter-
mine the impact of school finance reform, it has been shown
that taxpayer equity tended to improve more than pupil
equity. The success of the effort to reform property
taxation, primarily through the reduction of reliance on
property taxes as a source of school district revenue rivals
that of any recent educational reform with the possible
exception of school district consolidation (Augenblick
1984).
The Cost Versus Quality Issue

The question of whether more money for schools means better education for students has long been of concern to educational leaders in the United States. In 1980 a study was undertaken to examine the relationship between expenditures for educational services and materials and student performance in New Jersey public school districts. The study attempted to identify those types of school district expenditures that had a demonstrable relationship to student performance. The financial variables selected for examination included total current expenditures, total day school expenditures, teacher salary expenditures, expenditures for other instructional staff, textbook expenditures, and expenditures for school libraries and audio-visual materials. The measure of student performance was reading attainment on the Minimum Basic Skills tests administered to students in grades three, six, nine, and eleven in New Jersey public schools (Steffero 1980).

In a review of prior studies, Steffero reported that findings were mixed, and that this area of research was one in which the various experts could not agree. It is important to note here that Steffero's study paid particular attention to those variables readily controllable by school leaders. Most prior studies focused on variables which could not be controlled by school personnel.
Prior to the early 1970s, the consensus of research examining the relationship between educational cost and quality was that higher expenditures led to higher quality (Steffero 1980). In a review of twenty-six studies conducted prior to 1960, the state of research on the cost-quality issue was summarized as follows:

1. Regardless of the method of measuring quality, a relatively strong relationship holds through all levels of expenditure as yet experienced in public education, from the lowest as exemplified by West Virginia, Maine, Rhode Island, Illinois, and Pennsylvania, to the highest as exemplified by New York and New Jersey.

2. Even the highest expenditure public schools do not begin to approach the point, if there is one, where the relationship drops off, and no school is so poorly supported as to be lacking in important values.

3. The relationship appears to be an accelerating one. Those who spend more tend to add to the range of education, on the one hand, and on the other, to do a better job of focusing on the needs of children and young people throughout the range of ability (Steffero, 1980, 6).

More recent reviews, however, present a somewhat cloudy picture of the overall research findings concerning the relationship between educational expenditures and outcomes. In 1971 it was pointed out that "research had not identified a variant of the existing system that is consistently related to students' educational outcomes" (Steffero, 1980, 4). The only two factors that consistently related to educational outcomes were background factors and the socio-economic status of a student's family and community. The impact of this conclusion was summarized as follows:

Increasing expenditures on traditional practices is not likely to improve educational outcomes substantially
and . . . there seem to be opportunities for significant redirection and in some cases reductions in educational expenditures without deterioration in educational outcomes (Steffero, 1980, 5).

It was also observed that since inequities in the allocation of educational resources continues to be a problem brought before state courts, the various issues raised in this body of research merit further study (Steffero 1980).

Perhaps, the real perspective or issue from a governmental standpoint was best expressed in a 1972 report by the New York State Department of Education:

It is not necessary to test the relationship between some measure of school performance and financial variables to determine whether educational quality is related to educational expenditures; it is only necessary to show that some resources which have to be purchased in the market place are related to performance. . . . In order to optimize the results obtained by the money available, the school administrator needs to know the relationships between the resources he can buy and student performance. To the extent these relationships can be known and he can act accordingly, additional expenditure can result in better performance (Steffero 1980, 7).

The findings of Stefferos' 1980 study indicated the following:

1. For certain expenditure per pupil variables there were significant correlations with MBS test performance after controlling socio-economic status and district size and type. However, where significant correlations were found, some were negative and some were positive.
2. Those expenditure variables for which some significant correlations with MBS test performance were found included total current expenditures, teacher salary expenditures, and expenditures for salaries of other instructional staff. No significant correlations were found for expenditures for library and audio-visual materials.
3. The significant correlations that were found for a given expenditure variable tended to vary based on
grade, socio-economic status, and district size and
type (Steffero 1980, 75).

In 1971, a National Education Finance Project study
compared the finance programs local, state, and Title I ESEA
in eight states with statewide uniform achievement tests.
Some conclusions of the study are listed below:

1. Local educational revenues do not equalize educa-
tional opportunity for the culturally different pupils.
In general, the districts with the lowest achievement
levels, and the greatest concentration of culturally
disadvantaged have the least revenue available per
pupil.
2. Local and state revenues combined were not reaching
those districts with the greatest educational need as
reflected by mean achievement test scores.
3. Achievement test scores appear to be adequate
identification criteria for defining those school
districts with a high concentration from low-income
families (Jones 1971, 189-190).

The recent effective schools research provides no
assurance that spending more money will result in a more
effective school. However, neither does it suggest that
school expenditures are of no importance. What does appear
clear is that whether or not spending more money will
improve school effectiveness depends primarily upon how the
additional funds are used; that is, money is a necessary but
not a sufficient requisite to more effective schools. The
research to date is not clear as to what level of spending
marginal returns stop (Rossmiller 1987). Adequate
facilities, equipment, and instructional materials all
contribute to school effectiveness, but exceedingly state-
of-the-art facilities and equipment will not alone ensure
school effectiveness. Recent research does, however, provide a basis for being attentive to how resources are used in the education process.

Excellence Versus Equity

Although excellence and equity do not appear mutually exclusive, serious tensions exist between the two concepts in education. There are differences in the focus, goals, and impact of excellence and equity (Odden 1984). The equity movement is concerned with fiscal fairness and thus, with the amount and the distribution of dollars. The excellence movement is concerned with the quality of schools and thus, with the expenditure of dollars in the educational process. It has not yet been established that equity is a precursor for excellence in any one school district, however, it would seem reasonable that pursuits aimed at excellence should be merged with those aimed at equity and both should be considered in the formation of fiscal policy.
CHAPTER III

RESEARCH DESIGN

Introduction

There is no perfect school finance formula; in fact, no one approach is universally accepted (Augenblick 1984). Recently, states have struggled to modify their school finance systems to make them more equitable in terms of the resources they provide and the tax burdens they impose. These actions appear to reflect a belief in a direct correlation between expenditure and school quality. Yet, it is recognized that no amount of money, no matter how large, and no expenditure pattern, no matter how fair, can absolutely ensure school quality. Finance is a necessary, but not sufficient, condition for educational excellence (Jones 1975).

In the face of Texas' current fiscal capabilities and the recent judicial mandate of the Edgewood v. Kirby case, this study was designed to review alternative school funding schemes for public education. As offered by Billy D. Walker, an authority on Texas school finance, in the August 1987 publication of the Texas Lone Star, some immediate questions are raised by Judge Clark's decision in Edgewood v. Kirby. These include:
1. Can the very stringent dictates be accomplished at all?
2. What will be the effect on the organizational structure of school districts in Texas?
3. What changes will have to occur in the public school finance system?
4. How will the reforms, once decided upon be afforded (Walker 1987, 12)?

This study attempted to address question three. Three funding schemes were compared with the current Texas foundation plan using three proposed levels of per-pupil spending.

Data for the study were collected for the 1,061 school districts in the state of Texas in the school year 1986-87. It was collected primarily through the Texas Education Agency in Austin Texas, and included information from the following reports: 1986-87 Fall Survey Campus Report (enrollment); 1986-87 Per Pupil Expenditure Report; and 1986-87 State Property Tax Board Report of Taxable Value Per Refined Average Daily Attendance (ADA) For Each District.

As mentioned above, three funding schemes identified from the literature as accepted grant-in-aid schemes were compared with the current Texas foundation program model. These included (1) full state funding, (2) percentage equalization, and (3) power equalization. The major objective of the study was to determine what impact the use of each formula would have on the state and local funding shares of educational expenditures in the state of Texas.

Three levels of per-pupil expenditure were studied using each model. These included (1) $3,850 per pupil,
(2) $4,200 per pupil, and (3) $4,580 per pupil. These levels had as their basis the $3,600 per-pupil expenditure allotment Judge Clark cited in *Edgewood v. Kirby* as the amount needed per student to fund an adequate educational opportunity for students in the Texas public schools in 1985-86 (Clark 1987).

The figures for per-pupil expenditures were projected from Judge Clark's $3,600 figure using inflation adjustment factors. These factors are projected on a fiscal year basis and were taken from the Comptroller of Public Accounts April 1988 economic forecast. They are listed below for fiscal years 1987-1992.

1987 - 2.89%
1988 - 4.05%
1989 - 4.68%
1990 - 4.29%
1991 - 4.39%
1992 - 4.42% (Lock 1988, 1).

No data could be found concerning long-range predictions of state property values for the same period. Neither the State Property Tax Board nor the Texas Research League conduct research to project these values. Thus, only the State Property Tax Board index values for the 1985 tax year were used in the study.

**Full State Funding**

Full state funding is the only plan designed to eliminate all local differences in both spending and taxing. All
school funds are collected at the state level and distributed to school districts on an equal basis (Jones 1975).

Using the per-pupil expenditure rates of $3,850, $4,200, and $4,580, the total state expenditure per district was computed as follows:

\[ SA = ADA \times EL \]

where

\( SA = \) State allocation for the district

\( ADA = \) Total refined average daily attendance for the district

\( EL = \) Proposed per-pupil expenditure level ($3,850, $4,200, or $4,580)

If the state was to continue funding through use of local property taxes, a full state funding plan would not allow variances in property tax rates. Thus, the state would either abandon the property tax system as it exists today as a source of revenue for education or impose a uniform statewide property tax. However, it should be noted that after nearly thirty years of legislative and judicial maneuvering, the Texas state legislature in 1982 passed a constitutional amendment to repeal the state property tax which had been in existence in one form or another since 1837 (The Texas Research League 1988). This amendment was approved by voters in November 1982.

If the state was to abandon property taxes, another source of revenue such as sales, income, business taxes, or some combination of these would have to be incorporated.
While information on one or more of these relationships would prove valuable, it was beyond the scope of this study.

**Percentage Equalization**

A percentage equalization formula has as a major component a factor reflecting local initiative. A "key" district is chosen in the state, and state aid received by a district depends upon the ratio of the wealth of the district to that of the key district. The key district is an effective tool by which a state can strongly influence how much money is to come from: (1) traditionally state resources; (2) redistribution of excess property tax revenues collected locally and paid into a state fund; and (3) local revenues retained and spent locally. An important point regarding the key district is that in order to achieve equalization, it must be the richest district in the state, or the rich districts must be equalized down to the key district (Coons, Clune and Sugarman 1970).

In Texas in 1986-87, total taxable property value per Average Daily Attendance (ADA) ranged from under $23,000 to greater than $6,000,000. Approximately 59 percent of the districts (623 of 1,061) had a total property value per ADA of less than $200,000. The state average wealth per refined ADA in 1986-87 was $233,141.07. Approximately 11 percent of the districts (119 of 1,061) had a total property value per ADA above $500,000.
Since the range of taxable property values was quite large, and the majority of districts appeared clustered at the lower end of the scale, use of the richest district in the state as the key district seemed inappropriate since it would place much of the burden of fiscal equalization, if a recapture provision in the formula was used, on districts with less than 1 percent of total state ADA. Therefore, this study chose to examine the impact of using as a key district one with taxable value per ADA of $500,000. Approximately 97 percent of the students in Texas public schools in 1986-87 attended classes in districts with $500,000 or less in total taxable value per ADA.

Using the per-pupil expenditure levels defined previously ($3,850, $4,200, and $4,580), the state expenditure level per district for the percentage equalization formula was computed as follows:

\[ SA = ADA \times (EL - \text{District portion per ADA}) \]

\[ \text{District portion per ADA} = \left(\frac{DPV}{ADA}\right)/KPV \times EL \]

where

\( SA = \text{State allocation for the district} \)

\( ADA = \text{Total refined average daily attendance for the district} \)

\( EL = \text{Proposed per-pupil expenditure level ($3,850, $4,200, or $4,580)} \)

\( DPV = \text{Total local district property value as determined by the State Property Tax Board} \)


KPV = Key district property value per ADA (set at $500,000)

**Power Equalization**

District power equalization attempts to provide the same resources per pupil with a formula that guarantees all districts a resource base of equivalent value (Johns, Morphet and Alexander 1983). Under the formula, the state guarantees a certain amount per student for each one cent of the tax rate levied by a local school district. Similar to percentage equalization in concept, the power equalization formula establishes a guaranteed tax yield as opposed to use of a key district's property value. Neither model results in the same dollars per student, but both are designed to provide "fiscal neutrality" on the part of the state. The actual dollars available depend upon how much the local community wishes to tax itself for educational purposes.

This study chose as its guaranteed tax yield $50 for each penny of tax rate levied. Local tax rates in 1985-86 ranged from $0.09 to $1.55 per $100 of valuation. The one hundred poorest districts had an average tax rate of 74.45 cents per student per $100 valuation, while the one hundred wealthiest districts had an average tax rate of 47.19 cents per student per $100 valuation (Clark 1987). The five hundred poorest districts had an average tax rate of 75.40 cents, while the wealthiest districts had an average tax...
rate of 68.64 cents. Since there are approximately one thousand districts in the state, the average tax rate for the state in 1985-86 was approximately 72 cents per pupil per $100 valuation.

If the state guaranteed $50 for each one cent of local tax effort, a 70 cent tax rate (close to the approximated average tax rate per student in the state in 1985-86) would yield $3,500—a value near the assumed cost per pupil expenditure level Judge Clark cited as necessary to provide an adequate educational opportunity in 1986 (Clark 1987).

Using the proposed pupil expenditure levels of $3,850 (1988), $4,200 (1990), and $4,580 (1992), and the guaranteed tax yield of $50 per penny, the following tax rates were determined:

- $3,850 = 77 cents ($3,850 divided by $50)
- $4,200 = 84 cents ($4,200 divided by $50)
- $4,580 = 91.6 cents ($4,580 divided by $50)

State aid per district using the power equalizing formula was determined as follows:

\[
SA = \left[ (GTY \times TR) \times ADA \right] - (Set\ Tax\ Rate \times DPV)
\]

where

- \(SA\) = State allocation for the district
- \(GTY\) = Guaranteed tax yield per one cent of tax (set at $50 per penny)
- \(TR\) = Proposed tax rate per $100 of property value (set at 77, 84, or 91.6)
ADA = Total refined average daily attendance for the district

Set Tax Rate = The tax rate set by the local district (set at $0.77, $0.84 or $0.916 per $100 of assessed valuation)

DPV = Total local district property value as determined by the State Property Tax Board

The Foundation School Program Plan

The present approach to financing public school education in Texas originated with the Gilmer-Aiken Committee in 1942. The foundation program approach to state aid distribution was adopted by Texas in 1949 and remains the basic model utilized in the state today (Walker 1985).

Over the years, the program has developed into a vast array of formulas to calculate local districts' share. These formulas are designed for achievement of greater equalization and include calculation of components such as the Price Differential Index, a district's local share, an adjustment for small districts in terms of ADA and area, an Experienced Teacher Allotment, an Enrichment Equalization Allotment, and a formula for equalization transition.

This study accepted the foundation school formulas as written changing only the procedure for the calculation of local share (LFA). The current formula for calculation of a district's local share is:
The formulas used to determine the fiscal responsibility required of the state under the current foundation system but at the three increased expenditure levels were computed as follows:

\[ SA = (\text{ADA} \times \text{EL}) - \text{LFA} \]

\[ \text{LFA} = \left( \frac{\text{DPV}}{\text{SPV}} \right) \times [N \times (\text{SADA} \times \text{EL})] \]

where

- **SA** = State allocation for the district
- **ADA** = Total refined average daily attendance for the district
- **EL** = Proposed per-pupil expenditure level ($3,850, $4,200, or $4,580)
- **LFA** = Local fund assignment for each district
- **DPV** = Total local district property value as determined by the State Property Tax Board
- **SPV** = State property value as determined by the State Property Tax Board in 1985. This value is $532,700,000,000.
- **N** = Percentage of the foundation school program to be divided among the districts as a local share (.30 in 1984-85, .333 in 1985-86 and thereafter)*
- **SADA** = Total refined ADA for state

*The statewide local share of 30 percent of the foundation school program entitlements in 1984-85 was equivalent to an average tax effort of 26.3 cents per $100 compared to the 11
cents per $100 rate used in 1983-84. This feature was calculated to bring more equalization to the state aid distribution system. The statewide local share increased to 33.3 percent in 1985-86 and thereafter (Walker 1985, 51).

Summary of Research Design

The purpose of the study was to review alternative methods for providing the state and local shares of the cost of education in the state of Texas. Assumptions were made concerning the projected costs per pupil for providing an adequate educational opportunity for students in 1988 through 1992, and the revenues generated by each simulation were compared to one another and analyzed from the perspective of state versus local capacity.

Collection of Data

Data for this study were collected for the 1,061 school districts in the state of Texas in the school year 1986-87. The primary source for the data was the Texas Education Agency in Austin, Texas and included information from the following reports: 1986-87 Fall Survey Campus Report (enrollment); 1986-87 Per Pupil Expenditure Report; and 1986-87 State Property Tax Board Report of Taxable Value Per Refined Average Daily Attendance (ADA) For Each District. The Agency provided the data on a magnetic tape to facilitate analysis.
Presentation of Data

Specific district ADA values, State Property Tax Board estimates and calculated state expenditure figures for each of the four spending plans which were studied are presented in the Appendix. Total state and local expenditure amounts using each plan and consideration of a recapture provision are presented in Tables 1 through 8. The percentage increase for state contributions above that which was expended in 1987 are available for each formula and include reference to recapture in Tables 8 and 9. Comparisons of the state's portion of the total monies required for public education at each of the three proposed expenditure levels and for each of the studies plans are available in Tables 12 and 13 with and without benefit of a recapture provision. Tables 10 and 11 illustrate the percentage decline for local district contributions when compared with the 1987 figure for each expenditure level and spending plan. Again, comparisons are made with and without benefit of a recapture provision. Figures 1 and 2 illustrate the total revenue required of the state for each spending plan without and with benefit of a recapture provision in percentage and power equalization and in the foundation school program plan.
CHAPTER IV

PRESENTATION OF FINDINGS

The purpose of this study was to compute the state's fiscal responsibility at each of three proposed per-pupil expenditure levels using three generic formulas for full state funding, percentage equalization, and power equalization. Calculations were also made using the current Texas foundation school program formula for determination of each district's local share at each of the proposed expenditure levels. All values were then compared with the expenditures (both state and local) for the fiscal year 1987. The results are reported in two sections. Data analyses are presented in Section I under separate headings corresponding to the four alternative models: full state funding, percentage equalization, power equalization, and the foundation school program. Comparisons of the state's total fiscal responsibility using each formula are made in Section II.

Financial data for the 1,061 school districts included in the study were generated by the Texas Education Agency and provided detailed information regarding state funding amounts and calculations. Specific calculations involving each formula were generated by a statistical analysis package entitled SPSS (Statistical Programs for the Social
Data generated for each school district in the state in 1987-87 are located in the Appendix. Specific components are identifiable as follows:

DISTID—a specific district's identification number.

ADA—a refined average daily attendance figure for a district.

SPTB—State Property Tax Board estimates of the total property wealth for a district in 1985.

TOTAL—total foundation program aid for a district in 1986-87. This figure includes the total foundation grant plus the state available amount for each district. It does not include a district's local fund assignment for 1986-87.

SA3850, SA4200, and SA4580 represent full state funding values at each of the three proposed expenditure levels of $3,850, $4,200, and $4,580.

SAKV1, SAKV3, and SAKV5 represent percentage equalization values at each of the three proposed expenditure levels of $3,850, $4,200, and $4,580.

SATAX77, SATAX84, and SATAX91 refer to power equalization values at $3,850, $4,200, and $4,580 proposed per-pupil expenditure levels, respectively.

F03850, F04200, and F04580 refer to values computed using a modified version of the current Texas foundation school program formula and the three expenditure levels of $3,850, $4,200, and $4,580 per pupil.
LF3850, LF4200, and LF4580 refer to the Local Fund Assignment portions of the Texas foundation school program using each proposed expenditure level.

For the fiscal year 1987, the total amount expended for public school education in Texas was $10,957,305,995. The table below illustrates the state, local, and federal shares of that total (Walker 1988).

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>$4,681,346,615</td>
<td>42.7</td>
</tr>
<tr>
<td>Local</td>
<td>5,594,747,158</td>
<td>51.1</td>
</tr>
<tr>
<td>Federal</td>
<td>681,212,222</td>
<td>6.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$10,957,305,995</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

These figures were compared with the state and local fiscal responsibility values generated using each formula. Since federal revenues vary widely among districts and are dependent upon local policies, the extent of poverty in the district, the amount of federal tax-exempt property in the district, and numerous other factors, they were not included in the total expenditure amounts for each formula and therefore, are not reflected in the figures that follow.

It is important to note that the figures which represent the total cost of public education for the fiscal year 1987 reflect the state's present goal of "equalizing" minimum spending per student at about $2,700 per year. The
per-pupil expenditure values used in this study were $3,850, $4,200, and $4,580.

Section I

Analysis of Full State Funding

The formula used to determine the fiscal responsibility required of the state under a full state funding plan was computed as follows:

$$SA = ADA \times EL$$

where

SA = State allocation for the district

ADA = Total refined average daily attendance for the district

EL = Proposed per-pupil expenditure level ($3,850, $4,200, or $4,580).

The calculated amounts for state and local allocations are shown in Table 1.

To meet the $3,850 per-pupil expenditure level using a full state funding plan, the state's fiscal responsibility would increase from approximately $4.7 billion to $11.4 billion; an increase of $6.7 billion. However, since local funding currently accounts for $3.6 billion of the total needed, the state could continue to collect this amount and not increase the total tax burden of the people. At the current local expenditure rate, the state would have to increase the total monies going to public school education.
TABLE 1
STATE, LOCAL, AND TOTAL EXPENDITURES USING FULL STATE FUNDING

<table>
<thead>
<tr>
<th>Proposed Per-Pupil Spending Levels</th>
<th>1987 Funds</th>
<th>$3,850</th>
<th>$4,200</th>
<th>$4,580</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Expenditure</td>
<td>$ 4,681,346,615</td>
<td>$11,423,266,982</td>
<td>$12,461,745,799</td>
<td>$13,589,237,085</td>
</tr>
<tr>
<td>Local Expenditure</td>
<td>5,594,747,158</td>
<td>- 0 -</td>
<td>- 0 -</td>
<td>- 0 -</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>$10,276,093,773</td>
<td>$11,423,266,982</td>
<td>$12,461,745,799</td>
<td>$13,589,237,085</td>
</tr>
</tbody>
</table>
by only $1.1 billion to provide the $3,850 expenditure level per student.

At the $4,200 per-pupil expenditure level, the state's fiscal responsibility would increase approximately $7.8 billion. Assuming again that the state would continue to collect the $5.6 billion in local funds, the increase needed to fund public education in the state would be reduced to $2.2 billion.

At the $4,580 per-pupil expenditure level, the state's fiscal responsibility would increase approximately $8.9 billion. This would require an increased state investment in total monies for public education of $3.3 billion if present local funds were also included.

Excluding the federal share and maintaining the current revenue from local sources, the state's share of the total monies for public education would increase by 23 percent ($1.1 billion is 23 percent of $4.7 billion) at the $3,850 expenditure level, 47 percent ($2.2 billion is 47 percent of $4.7 billion) at the $4,200 expenditure level, and 70 percent ($3.3 billion is 70 percent of $4.7 billion) at the $4,580 expenditure level.

Analysis of Percentage Equalization

The formula used to determine the fiscal responsibility required of the state under a percentage equalization plan was computed as follows:
SA = ADA x (EL - district portion per ADA)

District portion per ADA = [(DPV/ADA)/KPV] x EL

where

SA = State allocation for the district
ADA = Total refined average daily attendance for the district
EL = Proposed per-pupil expenditure level ($3,850, $4,200, or $4,580)
DPV = Total local district property value as determined by the State Property Tax Board
KPV = Key district property value per ADA (set at $500,000)

The calculated amounts for state and local allocations are shown in Table 2.

Using a percentage equalization plan with a key district property value of $500,000 per student, the state's fiscal responsibility at the $3,850 per-pupil expenditure level would increase approximately 62 percent (from $4.7 billion to $7.6 billion) or $2.9 billion above the Texas foundation school program's 1987 figure. The $7.6 billion figure represents approximately 66 percent of the total monies required for public education in the state at the $3,850 expenditure level and is a significant increase over the 46 percent required of the state using the Texas foundation school program as it existed in 1987 excluding federal monies.
<table>
<thead>
<tr>
<th>Proposed Per-Pupil Spending Levels</th>
<th>1987 Funds</th>
<th>$3,850</th>
<th>$4,200</th>
<th>$4,580</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Expenditure</td>
<td>$4,681,346,615</td>
<td>$7,643,187,659</td>
<td>$8,338,022,901</td>
<td>$9,092,415,449</td>
</tr>
<tr>
<td>Local Expenditure</td>
<td>5,594,747,158</td>
<td>3,780,079,323</td>
<td>4,123,722,898</td>
<td>4,496,821,636</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>$10,276,093,773</td>
<td>$11,423,266,982</td>
<td>$12,461,745,799</td>
<td>$13,589,237,085</td>
</tr>
</tbody>
</table>
At the $4,200 per-pupil expenditure level, the state's fiscal responsibility would increase approximately 77 percent (from $4.7 billion to $8.3 billion), or $3.6 billion above the 1987 figure. The $8.3 billion figure represents 66 percent of the total monies required for public education in the state at the $4,200 expenditure level excluding federal monies.

If the per-pupil expenditure level was set at $4,580, the state's fiscal responsibility would be $4.4 billion greater than the 1987 foundation school program figure. This increase (from $4.7 billion to nearly $9.1 billion) of approximately 94 percent would represent 67 percent of the total monies required for public education in the state at the $4,580 expenditure level excluding the federal share.

In comparison with the 1987 figures, local district expenditure amounts declined $1.8 billion or 32 percent at the $3,850 expenditure level, $1.5 billion or 26 percent at the $4,200 expenditure level, and $1.1 billion or 20 percent at the $4,580 expenditure level in comparison with the $5.6 billion figure of 1987.

The total amount the state would be responsible for could be lessened if a recapture provision was used. At each expenditure level, 144 of the 1,061 districts were found to receive no state aid, and, in fact, based on the calculations, would actually owe the state money since the revenue raised was in excess of the specified level. The
recapture values at each expenditure level are outlined below:

<table>
<thead>
<tr>
<th>Expenditure Level</th>
<th>Total Cost to the State</th>
<th>Amount Available for Recapture</th>
<th>Total Cost to State Following Recapture</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3850</td>
<td>$7,643,187,659</td>
<td>$321,685,916</td>
<td>$7,321,501,698</td>
</tr>
<tr>
<td>4200</td>
<td>8,338,022,901</td>
<td>350,930,140</td>
<td>7,987,092,761</td>
</tr>
<tr>
<td>4580</td>
<td>9,092,415,449</td>
<td>382,680,962</td>
<td>8,709,734,487</td>
</tr>
</tbody>
</table>

The figures for the amount available for recapture represent approximately 2.8 percent of the total amount required for public education in the state at each expenditure level. The calculated amounts for state and local allocations are shown in Table 3.

The state's fiscal responsibility at the $3,850 per-pupil expenditure level would increase approximately 55 percent (from $4.7 billion to $7.3 billion) or $2.6 billion above the Texas foundation school program's 1987 figure. The $7.3 billion figure represents approximately 64 percent of the total monies required for public education in the state at the $3,850 expenditure level.

At the $4,200 per-pupil expenditure level, the state's fiscal responsibility would increase approximately 70 percent (from $4.7 billion to $8.0 billion) or $3.3 billion above the 1987 figure. The $8.0 figure represents 64
<table>
<thead>
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<th>Proposed Per-Pupil Spending Levels</th>
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percent of the total monies required for public education in the state at the $4,200 expenditure level excluding federal monies.

If the per-pupil expenditure level was set at $4,580, the state's fiscal responsibility would be approximately $4.0 billion greater than the 1987 foundation school program figure. This increase (from $4.7 billion to $8.7 billion) of approximately 85 percent would represent 64 percent of the total monies required for public education in the state at the $4,580 expenditure level excluding the federal share.

Use of a recapture provision would increase the total local expenditure values by 7.8 percent at each of the three proposed per-pupil spending levels.

Analysis of Power Equalization

The formula used to determine the fiscal responsibility required of the state under a power equalization plan was computed as follows:

\[ SA = [(GTY \times TR) \times ADA] - (\text{Set Tax Rate} \times DPV) \]

where

- \( SA \) = State allocation for the district
- \( GTY \) = Guaranteed tax yield per one cent of tax (set at $50 per penny)
- \( TR \) = Proposed tax rate per $100 of property value (set at 77, 84, or 91.6)
ADA = Total refined average daily attendance for the district

Set Tax Rate = The tax rate set by the local district
(set at $0.77, $0.84, or $0.916 per $100 of assessed valuation)

DPV = Total local district property value as determined by the State Property Tax Board

The calculated amounts for state and local allocations are shown in Table 4.

Under a power equalization formula without benefit of a recapture clause, the state's fiscal responsibility at the $3,850 per-pupil expenditure level would increase approximately 62 percent (from $4.7 billion to $7.6 billion) or $2.9 billion above the known 1987 figure. The $7.6 billion figure represents approximately 66 percent of the total monies required for public education in the state at the $3,850 expenditure level and is a significant increase over the 46 percent required of the state in 1987 excluding federal monies.

At the $4,200 per-pupil expenditure level, the state's fiscal responsibility would increase approximately 77 percent (from $4.7 billion to $8.3 billion) or $3.6 billion above the 1987 foundation school program figure. The $8.3 billion figure represents 66 percent of the total monies required for public education in the state under the $4,200 expenditure level excluding federal monies.
### TABLE 4

STATE, LOCAL, AND TOTAL EXPENDITURES USING
POWER EQUALIZATION WITHOUT BENEFIT OF
A RECAPTURE PROVISION

<table>
<thead>
<tr>
<th>Proposed Per-Pupil Spending Levels</th>
<th>1987 Funds</th>
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<td>State Expenditure</td>
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If the per-pupil expenditure level was set at $4,580, the state's fiscal responsibility would be $4.4 billion greater than the 1987 figure. This increase (from $4.7 billion to nearly $9.1 billion) of approximately 94 percent would represent 67 percent of the total monies required for public education in the state at the $4,580 expenditure level excluding the federal share.

Just as in percentage equalization, local district expenditure values declined $1.8 billion or 32 percent at the $3,850 expenditure level, $1.5 billion or 26 percent at the $4,200 expenditure level, and $1.1 billion or 20 percent at the $4,580 expenditure level in comparison with the 1987 figure of approximately $5.6 billion.

The total amount the state would be responsible for could be lessened if a recapture provision of power equalization was used. At each expenditure level, 144 of the 1,061 districts were found to receive no state aid, and, in fact, based on the calculations, would actually owe the state money since the revenue raised was in excess of the specified level. The recapture values at each expenditure level are outlined below.

<table>
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<tr>
<th>Expenditure Level</th>
<th>Total Cost to the State</th>
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<td>7,987,092,761</td>
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<tr>
<td>4580</td>
<td>9,092,415,449</td>
<td>382,680,962</td>
<td>8,709,734,487</td>
</tr>
</tbody>
</table>
The figures for the amount available for recapture represent approximately 2.8 percent of the total amount required for public education in the state at each expenditure level. The calculated amounts for state and local allocations are shown in Table 5.

The state's fiscal responsibility at the $3,850 per-pupil expenditure level would increase approximately 55 percent (from $4.7 billion to $7.3 billion) or $2.6 billion above the Texas foundation school program's 1987 figure. The $7.3 billion figure represents approximately 64 percent of the total monies required for public education in the state at the $3,850 expenditure level.

At the $4,200 per-pupil expenditure level, the state's fiscal responsibility would increase approximately 70 percent (from $4.7 billion to $8.0 billion) or $3.3 billion above the 1987 figure. The $8.0 billion figure represents 64 percent of the total monies required for public education in the state at the $4,200 expenditure level excluding federal monies.

If the per-pupil expenditure level was set at $4,580, the state's fiscal responsibility would be approximately $4.0 billion greater than the 1987 foundation school program figure. This increase (from $4.7 billion to $8.7 billion) of approximately 85 percent would represent 64 percent of the total monies required for public education in the state at the $4,580 expenditure level excluding the federal share.
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<td>$11,423,266,982</td>
<td>$12,461,745,799</td>
<td>$13,589,237,085</td>
</tr>
</tbody>
</table>
Use of a recapture provision would increase the total local expenditure values by 7.8 percent at each of the three proposed per-pupil spending levels.

In this study, the values for the percentage and power equalization formulas were identical. The tax rates used in power equalization were established to reflect the $50 per one penny of tax on $100 of property value. Thus, when multiplied by the same proposed expenditure levels as used in power equalization, the resulting values were identical.

Analysis of the Foundation School Program Plan

In the foundation school program plan used in this study, the calculation of LFA or local fund assignment is:

\[ LFA = \frac{DPV}{SPV} \times (N \times FSP) \]

This study assumed the total foundation school program cost (FSP) to be equal to the product of the proposed expenditure levels and the total state ADA. The formulas used to determine the fiscal responsibility required of the state under the current foundation system but at the three increased expenditure levels were computed as follows:

\[ SA = (ADA \times EL) - LFA \]
\[ LFA = \frac{DPV}{SPV} \times [N \times (SADA \times EL)] \]

where

\[ SA = \text{State allocation for the district} \]
\[ ADA = \text{Total refined average daily attendance for the district} \]
EL = Proposed per-pupil expenditure level ($3,850, $4,200, or $4,580)
LFA = Local fund assignment for each district
DPV = Total local district property value as determined by the State Property Tax Board
SPV = State property value as determined by the State Property Tax Board in 1985. This value is $532,700,000,000.
N = Percentage of the foundation school program to be divided among the districts as a local share (.30 in 1984-85, .333 in 1985-86, and thereafter)*

*The statewide local share of 30 percent of the foundation school program entitlements in 1984-85 was equivalent to an average tax effort of 26.3 cents per $100 compared to the 11 cents per $100 rate used in 1983-84. This feature was calculated to bring more equalization to the state aid distribution system. The statewide local share increased to 33.3 percent in 1985-86 and thereafter (Walker 1985, 51).

The calculated amounts for state and local allocations are shown in Table 6.

Assuming that the FSP (foundation school program) figure in the Local Fund Assignment formula of the current Texas foundation school plan is equal to the product of the state's total refined ADA and each particular expenditure level, the $3,850 per-pupil expenditure level would require an investment of nearly $7.9 billion by the state. The
<table>
<thead>
<tr>
<th>Proposed Per-Pupil Spending Levels</th>
<th>1987 Funds</th>
<th>$3,850</th>
<th>$4,200</th>
<th>$4,580</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Expenditure</td>
<td>$4,681,346,615</td>
<td>$7,895,851,897</td>
<td>$8,613,656,615</td>
<td>$9,392,987,452</td>
</tr>
<tr>
<td>Local Expenditure</td>
<td>5,594,747,158</td>
<td>3,527,415,085</td>
<td>3,848,089,184</td>
<td>4,196,249,633</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>$10,276,093,773</td>
<td>$11,423,266,982</td>
<td>$12,461,745,799</td>
<td>$13,589,237,085</td>
</tr>
</tbody>
</table>
state's share was determined by subtracting the LFA from a
district's total expenditures. The $7.9 billion figure
represents an increase of $3.2 billion or a 68 percent
increase over the funds required in 1987. Of the total
$11.4 billion required, the state's contribution would
increase to 69 percent up from the 46 percent investment in
1987.

At the $4,200 per-pupil expenditure level, the state's
portion of the $12.5 billion total would be $8.6 billion or
69 percent. This represents an increase of $3.9 billion or
83 percent over the amount required of the state in the 1987
Foundation School Plan.

At the $4,580 per-pupil expenditure level, the amount
required to finance the total public school education
program would be $13.6 billion, of which the state would be
responsible for $9.4 billion or again, 69 percent of the
total expenditure. The $9.4 billion figure represents an
increase of $4.7 billion over the state's known 1987
responsibility. This is a 100 percent increase in the
required state investment.

Using the foundation school program plan as outlined in
this study, the local districts' contribution decreased from
54 percent of the total required expenditure for education
in the state in 1987 to 31 percent at each of the proposed
expenditure levels. As in percentage and power Equaliza-
tion, these figures do not represent the federal share.
One hundred twenty-two or 11.5 percent of the districts received no state aid under the formula and, in fact, exhibited negative totals in the calculations. This would indicate that although not usually found in combination with one another, if a type of recapture provision was to be used in conjunction with the current foundation plan, an even greater achievement of equity might be realized. At each expenditure level, the following amounts could be considered available for recapture.

<table>
<thead>
<tr>
<th>Expenditure Level</th>
<th>Total Cost to the State</th>
<th>Amount Available for Recapture</th>
<th>Total Cost to State Following Recapture</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3850</td>
<td>$7,895,851,897</td>
<td>$276,509,472</td>
<td>$7,619,342,425</td>
</tr>
<tr>
<td>4200</td>
<td>8,613,656,615</td>
<td>301,646,697</td>
<td>8,312,009,918</td>
</tr>
<tr>
<td>4580</td>
<td>9,392,987,452</td>
<td>328,938,541</td>
<td>9,064,048,911</td>
</tr>
</tbody>
</table>

The figures listed above under the heading "Amount Available for Recapture" represent 2.4 percent of the total amount required for public education in the state at each expenditure level. The calculated amounts for state and local allocations are shown in Table 7.

The state's fiscal responsibility at the $3,850 per-pupil expenditure level would increase approximately 62 percent (from $4.7 billion to $7.6 billion) or $2.9 billion above the Texas foundation school program's 1987 figure.
<table>
<thead>
<tr>
<th></th>
<th>Proposed Per-Pupil Spending Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1987 Funds</td>
</tr>
<tr>
<td>State Expenditure</td>
<td>$4,681,346,615</td>
</tr>
<tr>
<td>Local Expenditure</td>
<td>5,594,747,158</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>$10,276,093,773</td>
</tr>
</tbody>
</table>
This $7.6 billion figure represents approximately 67 percent of the total monies required for public education in the state at the $3,850 per-pupil expenditure level excluding federal monies.

At the $4,200 per-pupil expenditure level, the state’s fiscal responsibility would increase approximately 77 percent (from $4.7 billion to $8.3 billion) or $3.6 billion above the Texas foundation school program’s 1987 figure. The $8.3 billion figure represents 67 percent of the total monies required for public education in the state at the $4,200 expenditure level excluding federal monies.

If the per-pupil expenditure level was set at $4,580, the state's fiscal responsibility would be approximately $4.4 billion greater than the 1987 foundation school program figure. This increase (from $4.7 billion to $9.1 billion) of approximately 94 percent would represent 67 percent of the total monies required for public education in the state at the $4,580 expenditure level. This again excludes the federal share. Use of a recapture provision would increase the total local expenditure values by approximately 7.8 percent at each of the three proposed per-pupil spending levels.

Section II

Since the per-pupil expenditure values increased regardless of the formula used (from approximately $2,700
under the 1987 foundation school program to $3,850, $4,200, and $4,580), state contributions could also be assumed to increase no matter the formula. Actual dollar figures are available in Tables 1 through 7. The percentage increases at each expenditure level and for each formula are outlined in Tables 8 and 9.

It is important to note, however, that in comparison with the 1987 foundation school program amounts as state contributions increased, local district contributions declined with the use of percentage equalization, power equalization, and the foundation school program plan. These figures are outlined in Table 10 and Table 11.

The state's portion of the total monies to fund public education in Texas excluding federal monies was 46 percent in 1987. Tables 12 and 13 illustrate the required increase in percentage of state funding at each of the three proposed expenditure levels and for each formula.

The state contributed 46 percent of the total revenue required for public education using the 1987 calculations of the Texas foundation school plan and excluding federal funds. At each of the three proposed expenditure levels the state's percentage of contribution increased. It is important to keep in mind, however, that all three expenditure levels require at least the sufficient revenues per student as defined in the Edgewood v. Kirby litigation and all assume increases for inflation.
### TABLE 8

PERCENTAGE INCREASE FOR STATE CONTRIBUTIONS ABOVE THE 1987 VALUE OF $4.7 BILLION WITHOUT BENEFIT OF A RECAPTURE PROVISION

<table>
<thead>
<tr>
<th></th>
<th>$3850</th>
<th>$4200</th>
<th>$4580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full State Funding</td>
<td>23*</td>
<td>47*</td>
<td>70*</td>
</tr>
<tr>
<td>Percentage Equalization</td>
<td>62</td>
<td>77</td>
<td>94</td>
</tr>
<tr>
<td>Power Equalization</td>
<td>62</td>
<td>77</td>
<td>94</td>
</tr>
<tr>
<td>Foundation School Program</td>
<td>68</td>
<td>83</td>
<td>100</td>
</tr>
</tbody>
</table>

*This figure assumes continued collection of the identical amount of local funding as in the 1987 Texas foundation school program.

### TABLE 9

PERCENTAGE INCREASE FOR STATE CONTRIBUTIONS ABOVE THE 1987 VALUE OF $4.7 BILLION WITH THE USE OF A RECAPTURE PROVISION

<table>
<thead>
<tr>
<th></th>
<th>$3850</th>
<th>$4200</th>
<th>$4580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full State Funding</td>
<td>23*</td>
<td>47*</td>
<td>70*</td>
</tr>
<tr>
<td>Percentage Equalization</td>
<td>55</td>
<td>70</td>
<td>85</td>
</tr>
<tr>
<td>Power Equalization</td>
<td>55</td>
<td>70</td>
<td>85</td>
</tr>
<tr>
<td>Foundation School Program</td>
<td>62</td>
<td>77</td>
<td>94</td>
</tr>
</tbody>
</table>

*This figure assumes continued collection of the identical amount of local funding as in the 1987 Texas foundation school program.
### TABLE 10

PERCENTAGE DECLINE FOR LOCAL CONTRIBUTIONS IN COMPARISON WITH THE 1987 VALUE OF $5.6 BILLION WITHOUT BENEFIT OF A RECAPTURE PROVISION

<table>
<thead>
<tr>
<th></th>
<th>$3850</th>
<th>$4200</th>
<th>$4580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full State Funding</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td>Percentage Equalization</td>
<td>32</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Power Equalization</td>
<td>32</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Foundation School Program</td>
<td>36</td>
<td>31</td>
<td>25</td>
</tr>
</tbody>
</table>

*This figure assumes continued collection of the identical amount of local funding as in the 1987 Texas foundation school program.

### TABLE 11

PERCENTAGE DECLINE FOR LOCAL CONTRIBUTIONS IN COMPARISON WITH THE 1987 VALUE OF $5.6 BILLION WITH USE OF A RECAPTURE PROVISION

<table>
<thead>
<tr>
<th></th>
<th>$3850</th>
<th>$4200</th>
<th>$4580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full State Funding</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td>Percentage Equalization</td>
<td>27</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Power Equalization</td>
<td>27</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Foundation School Program</td>
<td>32</td>
<td>26</td>
<td>19</td>
</tr>
</tbody>
</table>

*This figure assumes continued collection of the identical amount of local funding as in the 1987 Texas foundation school program.
TABLE 12

STATE PORTION OF THE TOTAL MONIES REQUIRED FOR
PUBLIC EDUCATION IN TEXAS EXCLUDING FEDERAL
CONTRIBUTIONS AND WITHOUT BENEFIT
OF A RECAPTURE PROVISION

<table>
<thead>
<tr>
<th></th>
<th>$3850</th>
<th>$4200</th>
<th>$4580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full State Funding</td>
<td>51%*</td>
<td>55%*</td>
<td>59%*</td>
</tr>
<tr>
<td>Percentage Equalization</td>
<td>66</td>
<td>66</td>
<td>67</td>
</tr>
<tr>
<td>Power Equalization</td>
<td>66</td>
<td>66</td>
<td>67</td>
</tr>
<tr>
<td>Foundation School Program</td>
<td>69</td>
<td>69</td>
<td>69</td>
</tr>
</tbody>
</table>

*This figure assumes continued collection of the identical amount of local funding as in the 1987 Texas foundation school program.

TABLE 13

STATE PORTION OF THE TOTAL MONIES REQUIRED FOR
PUBLIC EDUCATION IN TEXAS EXCLUDING FEDERAL
CONTRIBUTIONS BUT WITH USE OF
A RECAPTURE PROVISION

<table>
<thead>
<tr>
<th></th>
<th>$3850</th>
<th>$4200</th>
<th>$4580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full State Funding</td>
<td>51%*</td>
<td>55%*</td>
<td>59%*</td>
</tr>
<tr>
<td>Percentage Equalization</td>
<td>64</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>Power Equalization</td>
<td>64</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>Foundation School Program</td>
<td>67</td>
<td>67</td>
<td>67</td>
</tr>
</tbody>
</table>

*This figure assumes continued collection of the identical amount of local funding as in the 1987 foundation school program.
Using a full state funding plan but continuing to collect the $5.6 billion in local funds, the state's percentage of the total revenue required would be 51 percent at the $3,850 per-pupil expenditure level, 55 percent at the $4,200 per-pupil expenditure level, and 59 percent at the $4,580 per-pupil expenditure level. If the state did not continue to collect similar local property tax revenues, the contribution would increase to 100 percent of the total revenue under a full state funding plan.

As illustrated in Table 12, the state's share of the total revenue required to finance public education would be 66 to 67 percent regardless of expenditure level using either a percentage or power equalization formula. Using the foundation school program plan, the state's percentage of the total contribution to fund public education in the state was 69 percent at the $3,850, $4,200, and $4,580 expenditure level. These figures do not reflect the federal share.

As illustrated in Table 13, employing the recapture provision of the percentage or power equalization formulas would lower the state's share of the total cost of public education (excluding the federal share) to 64 percent at each of the three proposed expenditure levels. Using the foundation school program plan, the total required contribution of the state to fund public education at each of the
three proposed expenditure levels was 67 percent. Again, these figures exclude the federal share.

Regardless of the proposed expenditure level, the foundation school program plan as used in this study indicates a greater fiscal response would be required of the state than that with the percentage or Power Equalizing models. At the $3,850 per-pupil expenditure level, the foundation school program plan would cost the state approximately $253,000,000 more than the percentage or Power Equalizing formulas without benefit of the recapture provision. At the $4,200 per-pupil expenditure level, the foundation school program plan would cost the state approximately $276,000,000 more than the percentage or Power Equalizing formulas without benefit of recapture, and at the $4,580 per-pupil expenditure level, the cost would be approximately $301,000,000 greater.

Figures 1 and 2 illustrate the total revenue required of the state for each spending plan without and with a recapture provision being taken into consideration. With or without the recapture provision, both percentage and power equalization require less monetary investment on the part of the state than either the foundation school program plan or full state funding. Percentage or power equalization with recapture could reduce the state's fiscal responsibility even further. However, at 2.8 percent for all expenditure levels, the reduction may be insignificant.
Comparisons were made of the calculations for the state allocation between districts with identical ADA values but varying property values. Table 14 outlines three sets of comparisons at the $3,850 per-pupil expenditure level.

Comparisons can be made of one or more districts using Appendix A. The full state funding values may differ with identical ADA values since ADA figures are rounded to the nearest whole number in the printout but were not rounded when calculations were made.
**TABLE 14**

_A COMPARISON OF STATE ALLOCATION VALUES FOR EACH FUNDING PLAN BETWEEN DISTRICTS WITH IDENTICAL ADA VALUES BUT VARYING PROPERTY VALUES AT THE $3,850 PER-PUPIL EXPENDITURE LEVEL_

<table>
<thead>
<tr>
<th>District Number</th>
<th>ADA</th>
<th>SPTB</th>
<th>Full State Funding</th>
<th>Percentage Equalization</th>
<th>Power Equalization</th>
<th>Foundation Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>001909</td>
<td>250</td>
<td>$56.1 mil</td>
<td>$960,960</td>
<td>$528,813</td>
<td>$528,213</td>
<td>$560,192</td>
</tr>
<tr>
<td>119901</td>
<td>250</td>
<td>129.5 mil</td>
<td>961,460</td>
<td>-36,219</td>
<td>-36,219</td>
<td>36,225</td>
</tr>
<tr>
<td>074911</td>
<td>270</td>
<td>74.5 mil</td>
<td>1.4 mil</td>
<td>466,969</td>
<td>466,969</td>
<td>508,626</td>
</tr>
<tr>
<td>084903</td>
<td>270</td>
<td>119.4 mil</td>
<td>1.4 mil</td>
<td>121,701</td>
<td>121,701</td>
<td>188,457</td>
</tr>
<tr>
<td>076904</td>
<td>500</td>
<td>80.3 mil</td>
<td>1.9 mil</td>
<td>1.3 mil</td>
<td>1.3 mil</td>
<td>1.4 mil</td>
</tr>
<tr>
<td>016901</td>
<td>500</td>
<td>106.3 mil</td>
<td>1.9 mil</td>
<td>1.1 mil</td>
<td>1.1 mil</td>
<td>1.2 mil</td>
</tr>
</tbody>
</table>
Figure 1

The Total Amount of State Revenue Required Without Benefit of a Recapture Provision

<table>
<thead>
<tr>
<th>Billions of Dollars</th>
<th>$3,850</th>
<th>$4,200</th>
<th>$4,580</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full State Funding</td>
<td>11.4</td>
<td>12.5</td>
<td>13.6</td>
</tr>
<tr>
<td>Percentage Equalization</td>
<td>7.6</td>
<td>8.3</td>
<td>9.1</td>
</tr>
<tr>
<td>Power Equalization</td>
<td>7.6</td>
<td>8.3</td>
<td>9.1</td>
</tr>
<tr>
<td>The Foundation School Program</td>
<td>7.9</td>
<td>8.6</td>
<td>9.4</td>
</tr>
</tbody>
</table>
Figure 2

The Total Amount of State Revenue Required for Each Formula with Use of a Recapture Provision

Per-Pupil Expenditure Level

- Full State Funding
- Percentage Equalization
- Power Equalization
- The Foundation School Program
CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary

In April 1987, Judge Harley Clark of the 250th District Court of Travis County, Texas declared that education is a fundamental right in Texas (Edgewood v. Kirby). Citing the differences in per-pupil expenditure levels throughout the state as significant and meaningful in terms of educational opportunity, Judge Clark declared the state's public school finance system unconstitutional and inequitable. He went on to suggest that a statewide per-pupil expenditure level of at least $3,600 be established to ensure an adequate educational opportunity for all students.

In an effort to compare the equity and fiscal impact of various alternative funding formulas, this study computed the state's proportionate share of the total cost of education using three per-pupil expenditure levels ($3,850, $4,200, and $4,580), and four generic funding formulas representing full state funding, percentage equalization, power equalization, and a foundation school program plan. The study focused on the state's proportionate share since the higher the percentage of school revenues provided by the
state, the greater the equalization of financial resources (Augenblick 1984).

Enrollment and State Property Tax Board data for the 1,061 school districts in Texas in 1986-87 were used to make the necessary computations for each formula at each expenditure level. These values were then compared with those available for the fiscal year 1987 under the Texas foundation school program in use at that time. The study represented an attempt to examine alternative methods for financing public education in order to solve the problems associated with large numbers of school districts and great disparities in property wealth without abandonment of the property tax as the major revenue source.

In 1987, the total cost of public education in the state excluding federal revenues was approximately $10.3 billion. Of that amount, the state share represented approximately 46 percent. Using a $3,850 per-pupil expenditure level, the total expenditure required for public education in the state would be $11.4 billion. At $4,200 per student, the total required expenditure would be $12.5 billion, and at $4,580 per student, it would be approximately $13.6 billion. At each of the three proposed expenditure levels for the 1986-87 fiscal year and excluding federal funding, the state share increased to 66 to 67 percent of the total required for public education under percentage equalization, and 66 to 67 percent of the total
required for public education under power equalization. If a recapture clause was implemented with either formula, the state share was reduced to 64 percent of the total monies required for public education in the state regardless of which of the three expenditure levels used.

Using a full state funding plan but continuing to collect the $5.6 billion in local funds which were available in 1987 under the foundation school program plan in operation at that time, would require the state's proportionate share to increase to 51 percent at the $3,850 per-pupil expenditure level, 55 percent at the $4,200 per-pupil expenditure level, and 59 percent at the $4,580 per-pupil expenditure level. Obviously, a full state funding plan would require the state to be responsible for 100 percent of the total cost. However, a portion of that amount could continue to be funded using local property taxes as a revenue source.

Modifying the current foundation school program plan to reflect the identical per-pupil expenditure levels of $3,850, $4,200, and $4,580 in all districts, the state's proportionate share of the total required expenditure for public education increased to 69 percent at each expenditure level; an increase of 23 percent over the 1987 figure. If a recapture clause was implemented using the foundation school program plan, the state share was reduced to 67 percent of
the total amount required for public education in the state regardless of expenditure level used.

Under the conditions imposed by the study, the recapture provision of the percentage and power equalization formulas yielded approximately 2.8 percent of the total revenue required for public education at each expenditure level. For the foundation school program plan, the recapture provision yielded approximately 2.4 percent of the total revenue required for public education at each expenditure level. With or without benefit of recapture, however, the state's proportionate share of the total contribution increased with each expenditure level and each formula above that of the foundation school program in 1987. The percentage increase was less for Power and percentage equalization than full state funding or the foundation school program plan at each expenditure level, yet, each formula ensured identical per-pupil expenditure levels for all districts.

All formulas were equalizing in nature if the set per-pupil expenditure levels were maintained and no local enrichment was included. However, all formulas, with the increases in per-pupil expenditure amounts, required a greater monetary investment on the part of the state.

In terms of state funding, percentage and power equalization may be economically more feasible than either the foundation school program plan or full state funding, thus,
However, the 2.8 percent yield of the recapture provision of the percentage and power equalization formulas did not represent a significant amount in terms of the total expenditure required for public education in the state, nor did the 2.4 percent yield of a recapture provision of the foundation school program plan.

In summary, the state may find it necessary to seek alternative funding sources other than the reliance on the property tax system that is currently employed at the local district level and supplemented with the state sales tax, and/or it may be necessary for the state to examine other funding schemes such as percentage or power equalization.

Findings

The findings of the study are detailed below.

Full State Funding

1. At the $3,850 per-pupil expenditure level without continuing to collect the property taxes that local districts presently collect, full state funding would cost the state approximately $11.4 billion. At the $4,200 per pupil, the total cost of public education in the state would be approximately $12.5 billion, and at $4,580 per pupil, the total cost would be $13.6 billion. These figures represent an increase of $6.7 billion (143 percent increase), $7.8 billion (166 percent increase), and $8.9 billion (189
billion (166 percent increase), and $8.9 billion (189 percent increase), respectively, over the 1987 foundation school program total cost excluding federal funding.

2. In 1987, the state contributed approximately $4.7 billion to the total public school expenditure. The local districts contributed approximately $5.6 billion. The state could continue to collect the same local property tax revenue as in 1987 and increase its proportionate contribution by only $1.1 billion at the $3,850 per-pupil expenditure level (a 23 percent increase); $2.2 billion at the $4,200 per-pupil expenditure level (a 47 percent increase); and $3.3 billion at the $4,580 per-pupil expenditure level (a 70 percent increase).

Percentage Equalization

1. The state's required expenditure using the percentage equalization plan without a recapture provision was approximately: (a) $7.6 billion at the $3,850 per-pupil expenditure level; (b) $8.3 billion at the $4,200 per-pupil expenditure level; and (c) $9.1 billion at the $4,580 per-pupil expenditure level.

2. In comparison with the 1987 foundation school program under percentage equalization without benefit of recapture, the state's contribution to the total required for public education increased 62 percent at the $3,850 per-pupil expenditure level, 77 percent at the $4,200 per-pupil
expenditure level, and 94 percent at the $4,580 per-pupil expenditure level.

3. Under a percentage equalization plan and at each expenditure level, the state's share of the total revenue required for public education increased to 66 to 67 percent; up from the 46 percent required of the state under the foundation school program plan of 1987, excluding federal funds.

4. The state's required expenditure using the percentage equalization plan with a recapture provision was approximately: (a) $7.3 billion at the $3,850 per-pupil expenditure level; (b) $8.0 billion at the $4,200 per-pupil expenditure level; and (c) $8.7 billion at the $4,580 per-pupil expenditure level.

5. In comparison with the 1987 foundation school program, the state's contribution to the total required for public education increased 55 percent at the $3,850 per-pupil expenditure level, 70 percent at the $4,200 per-pupil expenditure level, and 85 percent at the $4,580 per-pupil expenditure level using the percentage equalization plan with a recapture provision.

6. Under a percentage equalization plan with use of a recapture provision, the state's share of the total revenue required for public education increased to 64 percent, up from the 46 percent required of the state under the
foundation school program plan of 1987. Again, federal funds are excluded.

7. The recapture provision of the percentage equalization plan yielded approximately 2.8 percent of the total expenditure required for public education using the 1986-87 data. Approximately $322 million was available for recapture at the $3,850 per-pupil expenditure level, $351 million was available at the $4,200 per-pupil expenditure level, and $383 million was available at the $4,580 per-pupil expenditure level.

8. At each expenditure level, 144 or 13.6 percent of the 1,061 districts were found to receive no state aid, and, in fact, based on the calculations, would be required to return monies to the state if the recapture provision of the percentage equalization formula was utilized.

Power Equalization

1. The state's required expenditure using the power equalization plan without a recapture provision was approximately: (a) $7.6 billion at the $3,850 per-pupil expenditure level; (b) $8.3 billion at the $4,200 per-pupil expenditure level; and (c) $9.1 billion at the $4,580 per-pupil expenditure level.

2. Using a power equalization plan without a recapture provision, the state's contribution increased 62 percent, 77
percent, and 94 percent as outlined for percentage equalization in number 2 above.

3. Under a power equalization plan without a recapture provision, the state's share of the total revenue required for public education was 66 to 67 percent as outlined for percentage equalization in number 3 above.

4. The state's required expenditure using a power equalization formula with a recapture provision was approximately: (a) $7.3 billion at the $3,850 per-pupil expenditure level; (b) $8.0 billion at the $4,200 per-pupil expenditure level; and (c) $8.7 billion at the $4,580 per-pupil expenditure level.

5. The recapture provision of the power equalization plan yielded approximately 2.8 percent of the total expenditure required for public education using the 1986-87 data. Approximately $322 million was available for recapture at the $3,850 per-pupil expenditure level, $351 million was available at the $4,200 per-pupil expenditure level, and $383 million was available at the $4,580 per-pupil expenditure level.

6. At each expenditure level, 144 or 13.6 percent of the 1,061 districts were found to receive no state aid, and, in fact, based on the calculations, would be required to return monies to the state if the recapture provision of the power equalization formula was utilized.
Foundation School Program

1. Using the foundation school program formula which assumes the total FSP (foundation school program) costs to be the product of the total refined state ADA and the particular expenditure level, the state's required share of the total expenditure for public education was approximately: (a) $7.9 billion at the $3,850 per-pupil expenditure level; (b) $8.6 billion at the $4,200 per-pupil expenditure level; and (c) $9.4 billion at the $4,580 per-pupil expenditure level.

2. Using the foundation school program plan, the state's proportionate contribution increased 68 percent at the $3,580 per-pupil expenditure level, 83 percent at the $4,200 per-pupil expenditure level, and 100 percent at the $4,580 per-pupil expenditure level above the amount required using the foundation school program in 1987.

3. Under the foundation school program plan, the state's proportionate share of the total revenue required for public education increased to 69 percent. In 1987, the state's share of the foundation school program, excluding federal funding, was 46 percent.

4. The state's required expenditure using a foundation school program plan with a recapture provision was approximately: (a) $7.6 billion at the $3,850 per-pupil expenditure level; (b) $8.3 billion at the $4,200 per-pupil
expenditure level; and (c) $9.1 billion at the $4,580 per-pupil expenditure level.

5. Using the foundation school program plan with a recapture provision, the state's proportionate contribution increased 62 percent at the $3,850 per-pupil expenditure level, 77 percent at the $4,200 per-pupil expenditure level, and 94 percent at the $4,580 per-pupil expenditure level above the amount required in 1987.

6. Under the foundation school program plan with a recapture provision, the state's share of the total revenue required for public education increased to 67 percent; 21 percent greater than the 1987 figure.

7. At each expenditure level, 122 or 11.5 percent of the 1,061 districts received no state aid under the foundation school program formula and, in fact, exhibited negative totals in the calculations.

8. Using a recapture clause, the funds available for return to the state under the foundation school program plan totaled approximately $277 million at the $3,850 per-pupil expenditure level, approximately $302 million at the $4,200 per-pupil expenditure level, and approximately $329 million at the $4,580 per-pupil expenditure level.

General Findings

1. At equivalent ADA values, all the formulas which were examined provided greater funding for districts with
lower total property values. Therefore, all formulas achieved some measure of fiscal neutrality.

2. At equivalent ADA values, the state's allocation under the foundation school program plan is greater than that of either the percentage or power equalization formulas.

Conclusions

The findings of this investigation support the following conclusions.

1. All formulas are equalizing in nature if set per-pupil expenditure levels are maintained, and no local enrichment is included.

2. In pure form with set per-pupil expenditure levels, each of the four plans meets the fiscal neutrality standard of Edgewood v. Kirby.

3. The full state funding plan eliminates local wealth and reward for effort as bases for funding since districts receive revenue only as a function of their refined ADA and the established per-pupil expenditure levels.

4. The full state funding plan allows districts to have equal access to the same basic revenues per pupil.

5. There are problems associated with the implementation of a full state funding plan. These include: (a) unless the property taxes currently collected by local districts are maintained, the size of the state levy which
would be needed to support proposed expenditure levels would be prohibitive; (b) a definition of enrichment and how it is to be controlled; (c) the methodology of phasing in a shift from current funding practices to state assumption; and (d) the continuing problem of how to support facilities.

6. The most feasible response to the fiscal neutrality standard would be a program of percentage or power equalization. Both require less monetary response on the part of the state, while still maintaining equalization. The aid ratio of percentage equalization provides more revenue from the state for those school districts with a lower property value per student, thus neutralizing differences in fiscal capacity. The power equalization plan makes the same resources available per student by guaranteeing districts a resource base of equivalent value per penny of local tax effort.

7. In pure form, a percentage equalization plan puts states in a reactive rather than a proactive position. When making appropriations, legislators must respond to local spending patterns and this is politically unpopular. In addition, depending upon the expenditure level chosen as the key or target level, the necessary investment of state monies could be too massive to entertain using the current local property tax as the major source of revenue.

8. The recapture provision is a very controversial point for opponents of percentage or power equalization.
9. The total amount available for recapture in both the percentage and the power equalization formulas and in the foundation school program plan represents an insignificant amount with respect to equalization.

10. In general, a foundation school program plan requires that the state and local districts share in the cost of a minimum educational program in every district, with each district remaining free to enrich the equalized minimum program in keeping with local ability. The model used in Texas is complex and under constant revision in an attempt to address the disparity of enrichment. To date, it has not succeeded.

11. Regardless of the reform measure selected for Texas, it can be assumed it will cost more money.

12. No state school finance plan that relies heavily upon local property taxes as a source of revenue can ever hope to gain either equity or adequacy.

Recommendations

As Texas moves toward examination of the current funding model and its ability to achieve equity, several recommendations deserve attention.

1. In reviewing any plan for school finance, the state should undertake an assessment of what is currently being done and considered in other states.
2. The state should consider a combination of formulas. For example, employment of a full state funding model up to the $3,850 per-pupil expenditure level with added permissible local millage being limited and power equalized would reduce inequities. While funding caps or ceilings are not popular, use of them, at least to some extent, represents a viable method for control of the problems associated with local enrichment.

3. The state should consider using other sources of state revenue to fund public education. Personal and corporate income taxes comprise about 30 percent of all state revenues in the United States, thus Texas could be in a favorable position for utilizing these sources for additional revenue (Walker 1984).

4. Though currently prohibited by the state's Constitution, the collection of property taxes at the state level should be considered. A system of statewide industrial taxation could potentially aid in the equalization of funding.

5. If the problems associated with additional millage for enrichment cannot be addressed adequately through spending caps, the state must translate the term into specific parameters and account for it within proposed financing plans.
Recommendations for Future Study

Based on the results of this study, the following recommendations are made for future research.

1. Since local initiative is a usual component of any school finance model, future studies could be conducted to examine usage of one or more levels of local initiative in various models. For example, using a power equalization model, several tax rates could be examined to determine their impact on the proportions of state and local funding. In percentage equalization, several key district values could be examined to determine the fiscal and equalization impact of each. Since 97 percent of the students in Texas public schools in 1986-87 attended classes in districts with $500,000 or less in total taxable wealth per ADA, another investigation could examine taxable wealth values per ADA that would include different percentages of students (i.e., 90 percent, 85 percent, or 80 percent).

2. The large disparity in taxable wealth among the numerous school districts in the state represents a major problem in the achievement of equity. A study to determine the percentage of districts which could or should be exempt from funding plans such as percentage or power equalization would prove insightful.

3. Although district consolidation or redistricting has been suggested as a viable alternative, it seems doubtful that this extreme measure would be necessary since this
study has shown that equity can be achieved using basic equalization models that attempt to manage a balance between local initiative and state control. However, a simulation study which used a variable, such as an established median property value within a certain geographic area, could provide potentially useful information regarding the viability of district consolidation or redistricting.

4. The funding of facilities and capital outlay is a major component of school finance that has not been widely addressed at the state level. Since the figures reflected in Chapter 4 do not consider bonded indebtedness, a study to determine whether or not such expenditures represent another form of unequalized local enrichment would be useful. In addition, a study to ascertain the costs associated with assisting local districts at various levels of funding would prove beneficial.

Whether consolidation of school districts, regional taxing authorities or another funding formula prove the best solution, it is important to realize that all of the alternatives differ with respect to political feasibility, fiscal capacity requirements, the extent to which they neutralize existing geographic wealth disparities and in the practicality of their implementation. There exist numerous "solutions," but little agreement.

Interestingly enough, legal philosophies may prevail and the ultimate course of action may have more to do with
whether the judges of the courts involved believe in a
strict or a "flexible" reading of the State Constitution.
However, even the courts argue that everyone should be
actively engaged in bringing a workable solution to the
problem.

For some, the most basic question still remains whether
or not more money equates with more effective schooling. At
what level of spending do marginal returns stop? Is it how
much money we have or how we use it that is the key?
Regardless of the questions asked, however, those involved
in the formation and implementation of educational policy
must continue to struggle with the issue of equity versus
subsidiarity. It is even more critical now, however, that
all those involved accept the responsibility of informing
the legislative bodies of each state of the results of
studies such as these.
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