DOCUMENT RESUME

ED 302 376 RC 016 916

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TITLE State Involvement in Capital Outlay Financing: Policy Implications for the Future.
PUB DATE Mar 88
NOTE 56p.
PUB TYPE Reports - Research/Technical (143) -- Viewpoints (120)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Capital Outlay (for Fixed Assets); Court Litigation; *Educational Equity (Finance); Educational Facilities; Elementary Secondary Education; *Finance Reform; *Public Schools; *School Buildings; *State Aid
IDENTIFIERS Fiscal Neutrality; *Kansas

ABSTRACT

This monograph addresses the issues surrounding financing school buildings. Kansas finances school buildings from the property tax base of the school district in which the building is located. Local districts face fiscal constraints in maintaining and building facilities. The backlog of maintenance in Kansas exceeds $380 million. Research in Kansas indicates that inequities in facilities will widen among its 304 school districts, 80 percent of which are rural. Many other states finance facilities by providing grants to local districts. The monograph evaluates the legal potential for state responsibility to aid facilities in Kansas and provides recommendations for state involvement. It describes court litigation in Kansas and other states involving the issue of facilities funding. The recommendations are based solidly in research, practice, and conservative extensions of legal principles. If research shows a relationship between facility adequacy and instructional outcomes, then courts will likely follow with mandates that the states bring their school buildings into compliance with predetermined minimum standards for describing adequacy for instructional facilities. The document includes tables on such data as: (1) age of buildings; (2) condition of buildings; (3) financial data on districts; (4) tax base of districts; (5) capital outlay; and (6) bonded indebtedness and capital outlay plans. This monograph contains 95 references. (KS)

STATE INVOLVEMENT IN CAPITAL OUTLAY FINANCING: POLICY IMPLICATIONS FOR THE FUTURE

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AN OPEN LETTER TO READERS

This monograph is about financing school buildings. It is written for school administrators, educational policymakers, and other individuals with more than a casual interest in educational finance. It is especially written for persons interested in general equity in education and facility financing in particular. It is about Kansas, and it should be keenly interesting to Kansas' educational and political leaders.

These individuals are abundantly aware that Kansas school buildings are financed from the property tax base of the school district in which the building is located. This is the law, and it has been the law during the 127 years of Kansas statehood. Certainly, this is not atypical; twenty-one other states rest responsibility for school construction finance with the local district. Interestingly, four of those states border Kansas and four others are fairly nearby—Arkansas, Iowa, Minnesota, South Dakota, and Texas. This system of finance was typical of most states and worked fairly well until the turn of this century.

During the past eighty or so years, major social and political events occurred which have caused dramatic shifts in the needs of school districts relative to financing school building construction. Kansas did not escape these events. Through the 1920s and 1930s the population grew rapidly, and new communities developed and flourished. School buildings were constructed to accommodate increasing school enrollments, except that during the 1930s, few school buildings were constructed except some PWA projects. This decade of relative inactivity was followed by the war years during which little construction took place. Although the postwar baby boom of the 1950s and early 1960s saw a great deal of new construction, there was little replacement of older facilities. Many of those older facilities were at least forty years of age by 1965; some are in use today.

About 1970, enrollment began to decline. The decline continued into the early years of the present decade. While school boards were reluctant to build new facilities when enrollments were declining, some older facilities were replaced. Also in 1971, state and federal courts began to be called upon to rule on issues of general school finance equity. Many court cases were decided with widespread impact, and still others are awaiting trial. The decisions in those cases focused attention on state finance systems for general fund (instructional program) financing. Concurrently, new emphases and new initiatives were mounted to make schools more effective, instruction more relevant, and teacher training and development more meaningful. Again facilities and facility financing were for the most part outside the mainstream of educational change which has occurred during the past fifteen or so years.

During the same period, the backlog of needed school construction and maintenance continued to increase until now, in 1988, estimates of the national backlog in maintenance exceed $25 billion. In Kansas alone, the backlog amounts to over $380 million. While states responded and are continuing to respond to educational equity issues, buildings are continuing to age and deteriorate. Research in Kansas indicates that the facility issues will intensify and that inequities in facilities will widen among its 304 school districts, some 80 percent of which are rural. At the same time, school district plans to initiate capital improvement programs are being frustrated by local constraints.

The whole problem is now compounded by increasing court interest in facilities. Federal courts have already addressed the problem in some states. Courts have mandated taxation, as in Missouri, in which tax rates are set judicially and are aimed at financing capital improvements. The potential for additional court action looms heavily in the future. In addition to the decisions already established in case law, there are other cases pending which may result in dramatic changes in facility finance. Existing case law frequently recognizes the effect of school buildings on instructional programs and indicates that changes are due in order to better equalize equal educational opportunity. The pending cases hold tremendous potential for significantly impacting how school buildings are financed in the fifty states. Some investigators are arguing vigorously that it is simply a matter of time until courts require states to equalize facilties in a fashion similar to finance plans which have been assembled in recent years to satisfy court mandates to insure fiscal neutrality for instructional opportunity.

Valuable research on the topic of facility equity has been completed, and other research is still needed. This research monograph centers principally on the impact of facility needs on local taxing units. The monograph evaluates the legal potential for state responsibility to aid facilities in Kansas and provides recommendations for state involvement. The recommendations are based solidly in research, practice, and conservative extensions of legal principles to the task of financing educational facilities. There is a clear recognition in this monograph that if researchers show a relationship between facility adequacy and instructional outcomes, then courts will likely follow with mandates that the states bring their school buildings into compliance with predetermined minimum standards for describing adequacy for instructional facilities.

The authors are fully aware that many facility studies are conducted in the state of Kansas each year by boards of educations who use consultant services. The authors are also aware that all such studies include recommendations. At least one of those studies recently included a recommendation to Kansas boards of education that the district sue the State of Kansas for a perceived failure to provide assistance to educational programs as expressed by school facilities. Although none of the authors has participated in such recommendations, the likelihood that a lawsuit will occur increases each time in a similar recommendation is made.

It is with this potential clearly in mind that this research project is offered for critical review. It is dedicated to the inquiring minds of practitioners and policymakers alike as an opportunity to examine policy options for meeting an emerging challenge in the future of Kansas education—that of facility equity.

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Chapter 1
PUBLIC SCHOOLS AND CAPITAL OUTLAY

Introduction

Educational policymakers have reason to be concerned with capital outlay financing. Although school finance observers have frequently spoken out regarding the potential impact of capital outlay financing on the economic balance of school tax structures, the topic has received more avoidance than attention. In fact, a discussion of capital outlay funding and potential state participation is likely to evoke strong emotions and responses. Financing the nation's schools appears to be an insurmountable problem, and property tax concerns and a growing unwillingness among patrons to support tax increases constitute an increasingly serious threat to the integrity of educational systems in America. Increasingly, tax reform initiatives place pressure on school officials, board members, and legislators who must be sensitive to patrons while accepting the legal and moral responsibility of their respective offices.

Concern for equity in school finance is not a recent phenomenon. Reform interest escalated to historic proportions during the 1960s and 1970s. Many sweeping changes occurred across the nation. The period of the 1970s in particular saw many court decisions which ruled state systems for financing education unconstitutional because of extreme variations in wealth. The *Serrano v Priest* (1971) decision in California with its emphasis on statewide equality of educational opportunity sparked an impetus for the refo m movement, causing realignment of many state systems for financing education.

Th wsuits which resulte in sweeping reforms and new finance formulas across the st s brought funding mechanisms in line with court requirements. Many basic equity concerns were not truly resolved, but states found artificial mechansims which adjusted for inequities that occur naturally within tax base distributions. Numerous examples exist in which it may be seen that real issues of unequal property wealth were not corrected, but the increased level of funding by the states through new finance formulas was often sufficient to satisfy the courts. As a consequence of increased fiscal support, the furor over finance formulas and equity concerns diminished.

Enthusiasm for reform waned following the changes brought about by *Serrano*, but a resurgence of interest for equity in finance is becoming evident once again. Several states are facing new court challenges to their present systems of financing schools. Some of the interest is no doubt related to the economic climate of the states. As long as revenues are plentiful, society is relatively slow to challenge traditional methods of financing schools. As economic difficulties increase, the likelihood of challenges also increases. It is also likely that some interest is rooted in past attitudes which still persist. The legacy of aggressive litigation from the 1970s has provided a history which holds fruitful promise for court challenges to state finance schemes.

Interest has recently begun to turn toward a better understanding of how school finance mechanisms and instructional programs are dependent upon each other (Childs and Shakeshaft, 1986). Thus, focus is turning toward the integrated and interactive of all facets of education. Just as there are concerns about teacher quality,

instructional resources, and other achievement variables, there is a concern that equality of opportunity may be affected by bricks and mortar. As our knowledge of effective schools, effective principals, and effective teachers improves, we are called to explore the interaction of facilities and educational programs (Odden, 1986).

As we move from the 1980s into the next decade, several indicators suggest that methods for financing facilities may receive new emphasis in the search for better understanding of how opportunity and finance are interdependent. These indicators are seen in a quietly growing body of court comments which touch upon funding facilities and in an increasing body of research literature which examines the achievement of equity in facility financing. These barometers suggest that a deeper examination is in order.

The Key Issue

This monograph addresses several concerns surrounding school building finance. The purpose of reviewing capital outlay financing is to place in perspective some sense of the emergence of the concern, to provide a guiding synthesis of existing research, to add through new research to the body of knowledge, and to speculate on how the issue may affect the rural and urban areas of the state of Kansas and the state as a whole.

The concerns and issues surrounding financing facilities are thus succinctly stated:

* What are the sources of concern, and what are the legal issues surrounding the potentially troublesome issues?

* How are other states addressing the issue, and can we gain insight into the problem by observing their involvement?

* What are the dimensions and effects of the problem in Kansas?

* Are there differences between rural and urban areas of the state, or is the problem generic to the entire state?

* Is there an association between educational facilities and the quality of educational programs?

Answers to these questions are not clearly evident. Studies have found that most school district superintendents hold a high level of awareness and concern for financing facilities (Jolley, 1983). Similar evidence exists in Kansas (Thompson et al, 1988), but the evidence also suggests that superintendents are slow to embrace state involvement. There appears to be strong resistance to extension of state support to facilities funding despite the fact that some needs are going unmet as a consequence of extreme dependence on local wealth for funding school facilities (Bogie, 1986).

Like most issues in education, the question of how to provide school buildings for children is complex. As issues are examined, new questions arise from the [illegible]t. By examining related research and by continuing the research that has

already been conducted in Kansas, we are able to answer some concerns and to raise new and important questions. The answers and questions will serve to offer structure for evaluation of the concern and to help in the determination of future state policy.

Historical Antecedents

Historically, facility financing has been a low priority in the overall school finance picture. Sophisticated formulas have been developed for operating budgets, special programs, transportation, and other services, but capital outlay and debt service have received less than enthusiastic attention among the states (Barr et al, 1973; Cross, 1983).

Several causes for state inaction have been surmised. Chief among the reasons has been tradition. Prior to 1900, education was a uniquely community-based event. A smaller percentage of children attended school, and building costs and programs were simpler. School buildings were such local possessions that they were often raised by hand with volunteer labor and donated materials and land. Obsolescence of facilities was nearly nonexistent, and the demands of a largely rural nation on the tax base for competing governmental services were minimal (Burrup, 1982).

The years after the turn of the twentieth century saw the advent of bonding for construction of facilities. School districts experienced needs that increased faster than their ability to pay with cash, and issues of tax base adequacy emerged. In the new economy of the growing nation, assessed valuation of property and location of power plants, oil and gas facilities, railroads and other industries became critical to the local community's educational funding program (Thomas, 1978; Salmon et al, 1981).

Despite a historically low priority for funding facilities, a number of states have experimented with aid to construction and have adopted plans providing for state participation in funding local school buildings. A number of events occurred which encouraged states to become involved. School building needs increased dramatically after World Wars I and II and following the Great Depression of the 1930s. These devastating events had nearly halted facility construction, resulting in a severe backlog of unmet needs. Additionally, the increasing costs of education, demands for new curricular programs, and postwar mobility of the American population removed education from the closely-knit communities that previously existed.

The widespread reorganization of school districts which occurred in the late 1960s also contributed to the demise of the local schoolhouse, and the unified or consolidated school district with increased student population became a new reality. At the beginning of the twentieth century, the American education system was highly decentralized with over 125,000 school districts financed entirely at the local level. By 1987 that number had decreased to less than 16,000 school districts financed jointly by local, state and federal dollars (McRel, 1987). Nonetheless, issues of local control remain strong in their effect on funding patterns, and vestiges of older systems of governance exist where several states continue to support more than 1,000 independent school districts.

History of State Involvement in Financing Facilities

State involvement in assisting local communities with facilities funding provides a checkered history. At various times the effort has been enthusiastic, but at other times denial of responsibility has been evident. In general, there has been less than enthusiastic support among the states for the concept of state participation in school building costs. States have often given the same impression regarding facility finance reform that was evident surrounding general school finance reforms in the 1960s and 1970s as states waited until forced to reorder funding formulas.

Despite the slowness of states to assume responsibility for the major expense of providing for construction and upkeep of facilities, there has nonetheless been considerable movement toward increased state involvement. Table 1.1 indicates that 28 states presently provide some form of true grant-in-aid assistance to local school districts.

Table 1.1

METHODS OF STATE PARTICIPATION 1988

Grants		No Aid
Alaska	Montana	Alabama
Arizona	North Carolina	Arkansas
California	North Dakota	Colorado
Connecticut	New Hampshire	Idaho
Delaware	New Jersey	Indiana
Florida	New Mexico	Iowa
Georgia	New York	Kansas
Hawaii	Pennsylvania	Louisiana
Illinois	Rhode Island	Michigan
Kentucky	South Carolina	Minnesota
Maine	Utah	Missouri
Maryland	Vermont	Nebraska
Massachusetts	Washington	Nevada
Mississippi	Wyoming	Ohio
		Oklahoma
		Oregon
		South Dakota
		Tennessee
		Texas
		Virginia
		West Virginia
		Wisconsin

Source: Camp, William E., and Thompson, David C.
Compiled January 22, 1988

methods by which states have participated have been diverse. Within the 28 providing grant-in-aid programs, a wide range of participation schemes exists.

When states which provide either loan funds to local districts or bond authorities and bond banks are included, the number of states establishing some form of assistance to local school districts increases to 45 of the 50 states.

The features of the basic plans utilized by the states are varied and unique to the states' needs. Despite the variance associated with adaptations, the basic plans remain fairly consistent in their operation. The major trends, each with its strengths and weaknesses, are seen below:

Full state support. Full state funding implies a major assumption by the state of the local building program. Under this concept, education is seen to be an ultimate state responsibility. Several states presently employ a full state funding concept in some form.

Advantages to full state funding include the support of the wealth of the entire state and provides the broadest possible tax base and access to resources within a state. Additionally, full state funding closely approximates principles of wealth neutrality important in *Serrano*. Disadvantages associated with full state funding have included a higher than anticipated cost for needs that have been identified, and some concern is present for local control of education and local initiative when the state has assumed the sole or major financing role.

Equalization grants. Equalization plans are similar to the familiar equalization formulas often found in general fund financing and are generally given on some type of percentage-matching or other method by which aid increases as ability to pay declines.

Equalization grants are presently available in several states. Advantages to equalization aid to facilities are the same as for the general fund. Consistent with *Serrano*, districts are aided in inverse proportion to ability to pay, thereby ensuring that lack of wealth results in greater aid from the state. Few disadvantages have been seen for such schemes, except that a major weakness has simply been the fiscal ability of states to adequately fund all of the identified needs among districts.

Percentage-matching grants. Percentage matching plans provide funds to districts on a cost-share basis. A level of support is determined by the legislature annually. The unique feature is frequently that a district may choose to increase its contribution amount and qualify for increased state participation.

A major advantage is seen in the element of incentive for increased local effort. The primary disadvantage is related to ability to pay. Districts which are in greatest need due to low wealth may not be able to afford increased local contributions in order to receive higher aid monies associated with increased local effort.

Flat grants. Flat grant provisions offer the district a set amount of money that is legislatively determined on some distribution basis. The result

is that while aid is not necessarily related to need, the district's cost is nonetheless reduced by the equivalent amount.

The advantage is that districts receive at least some funds where none previously existed. The disadvantage is seen in that there is no relationship between ability to pay and aid received.

State loans. Loan programs provide funds to school districts with favorable interest rates and strong security ratings for investors. Loan programs require repayment by the local district to the state.

Advantages are similar to grants in that money becomes available to districts and favorable treatment reducing repayment costs is often present. In some instances, loans are forgiven if the district is unable to repay the loan. The primary disadvantage lies in the relationship of wealth to ability to pay. Districts in the greatest need of funds may in some instances be districts that are least able to afford the added expense of borrowed money.

State or local authorities. Building authorities exist in some states which have laws allowing for utilization of private capital to construct and lease or lease-purchase school buildings to local districts. Building authorities are thus able to provide funds for local construction without major concern for limits of assessed valuation.

The major advantages of building authorities lie in the ability to tap resources separate from the school's tax base, take advantage of economies of scale, and the process of building schools is frequently shortened. Opponents of authorities see the ability to avoid voter opinion through bond issues and the involvement of tax dollars in potentially increased costs associated with for-profit enterprises. Opponents of building authorities see grave consequences which they believe to be inimical to democratic principles.

Despite the high number of states which offer assistance to financing facilities in some form, many plans do not provide substantial assistance to local districts. Some genuine experimentation has been seen, but in many instances involvement has been forced. States where involvement has been substantial have also tended to be those states which provide greater than 50 percent of general fund revenues.

The question of legal responsibility for state participation in school building costs is the basis for this policy analysis. Presently 22 states offer no assistance in the form of equalization to capital outlay in local school districts. These states may potentially be targets for claims of unequal educational opportunity. Kansas is among those states that provide no assistance to financing facilities. Given the absence of state participation for capital projects in Kansas, evaluation of potential consequences should be a present concern for educational policymakers.

Chapter 2
EQUITY, THE COURTS, AND CAPITAL OUTLAY

The Legal Concept of Equity

A concern for equity has been the foundation of court decisions in school finance throughout the entire period of finance reform. Equity is an elusive term which has been broadly used throughout the educational jargon. Equity has as many definitions as it has applications. Similarly, equity within school finance is variously defined. For capital outlay purposes in this monograph, we will consider equity as requiring achievement of three dimensions commonly present across the research literature (Thompson, 1985; Carlton, 1980, Funk, 1980). All three dimensions are direct products of the reform movement following the *Serrano* (1971; 1976) decision in California.

The first dimension of equity seeks accessibility to fiscal resources, and is referred to as **resource accessibility.** Resource accessibility requires that students within a state have equal access to resources required to meet their needs. Resource accessibility is the primary foundation of all efforts to equalize expenditure levels Resource accessibility is central to the Kansas School District Equalization Act (SDEA) and seeks to adjust revenue variations by the infusion of state aid into relatively poorer school districts. Resource accessibility is an integral part of other equity funding efforts such as special education.

The second dimension of equity is **ex post** fiscal neutrality. **ex post** fiscal neutrality means that variations in per pupil revenue should not be related to the local tax base, but that variations should instead be related to local preference (Melcher, 1979). Thus **ex post** fiscal neutrality is a pupil equity standard which exhibits an equal educational opportunity concern for students across an entire state.

The third dimension of equity is **ex ante** fiscal neutrality. **Ex ante** fiscal neutrality exhibits a concern for taxpayers by requiring that equal tax effort in all communities should yield equal revenue. Equalization formulas are a mechanical adjustment for the effect of unequal distribution of assessed valuation by providing higher aid to poorer districts because equal effort does not ordinarily result in equal tax revenues.

These three principles are concerned with students and taxpayers. They provide a working definition of equity which states that students should have access to resources to meet their individual needs regardless of location of residence in a state and that taxpayers have a right to expect the state to support education to such an extent that variations in local wealth will not have an adverse effect on the local ability to provide an adequate educational system. While other confounding factors exist which affect the ultimate accessibility by students to educational services, these definitions of equity assist in understanding the legal principles which have caused realignment of general fund formulas in several states including Kansas.

Principles of General Finance Equity

Responsibility for financing education is well established. The Tenth Amendment to the U.S. Constitution delegates all powers to the states which are not specifically ed to the federal governmert. As the federal constitution is silent on education,

the responsibility for providing a system of schools falls to the individual states. This principle was tested in court in *Rodriguez v San Antonio Independent School District* (1973) when the U.S. Supreme Court refused federal protection under the Fourteenth Amendment equal protection clause where no individious discrimination against a class of persons exists. The *Rodriguez* case was important because it denied claims of education as a fundamental right under the federal constitution.

After *Rodriguez*, equity cases were filed in state courts seeking protection under individual state constitutions. The logic was simply that if federal protection was denied, then protection under the individual states' constitution might prove to be a means to force states to substantially equalize education expenditures. In many instances the tactic proved effective. The language of many state constitutions was construed by the courts to deem education to be a fundamental right. Where a question regarding fundamental rights is brought, the courts have frequently required the state to defend itself under strict judicial scrutiny, thereby requiring a compelling interest of the state in order to allow the finance formula to stand (Levin, 1977).

Thirteen days after *Rodriguez*, the New Jersey Supreme Court in *Robinson v Cahill* (1973) declared that the state's finance formula violated the state constitution. Following *Robinson*, states were besieged with equity suits seeking to overturn systems of educational finance. Similar claims centered around constitutional language, with a majority of claims focusing on 'thorough and/or efficient' clauses and language which implied or guaranteed education to be a fundamental right (Hack, 1978; Richman, 1981). Where either condition was found, litigants stood a good chance of having the finance formula overturned.

Of the equity suits, *Serrano* (1971; 1976) in California had the widest impact. Of interest to the states was the court's decision in *Serrano* that variations in local wealth were ultimately related to educational opportunity. The court ruled that variations in wealth were violative of equity standards and noted that equity requires education to be a function of the wealth of the state as a whole. The court also indicated that failure by the state to correct extreme variations in ability of local districts to sufficiently provide funds for education represented an abdication of the state's constitutional requirement to establish an adequate system of schools.

Following *Serrano*, many states realigned their finance formulas under the presumption that if challenged, their own system for funding schools would be declared unconstitutional. The net effect of *Serrano* was that states had to find means by which to adjust for uncontrollable wealth variations. While it was not possible to physically redistribute property wealth, the states devised methods to improve assessment practices and to redistribute tax revenues. Equalization formulas were a popular means by which states attempted to bring expenditure levels closer together.

There was a common assumption in the new finance formulas that equalization principles applied only to general fund expenditures. The accuracy of that assumption is being questioned, and there are indicators which suggest that the assumption may have been erroneous. A quietly growing body of court decisions intimates that there are other areas to which equity should be applied. Facilities financing is among the [illegible] which may ultimately be affected.

Legal Application

States which offer no support to capital outlay funding place the burden for providing school buildings squarely on the local community. Reliance on local property wealth to fund capital outlay opens the question of the vulnerability of many states' programs if challenged (Thompson, 1987; 1986; 1985; Cross, 1983). The effect is even broader than the 22 states which provide no assistance to local districts for capital outlay because of the local wealth dependency issue. In the words of Governor Calvin Rampton as he addressed the Utah Conference on School Finance in 1972:

> "...if we think there are inequities in state systems for funding current expenditures of public schools, just wait till we examine the way we finance school buildings!" (in Webb, 1972).

Despite the recognition of jeopardy envisioned by Rampton and others, capital outlay has not yet received the same attention in the courts as has other equity concerns. Sensible reasons can be provided, chief among which is that is was justifiable to first focus attention on educational programs which relate directly to instruction. A second likely reason has been that unless a building is in dangerous condition, the relationship between educational programs and facilities is not highly visible. Still a third reason for the lesser emphasis on facilities is a highly local tradition surrounding financing of educational facilities. Communities have traditionally resisted government involvement in education, and the dependency of school facilities on local tax base sufficiency is evidence of lingering tradition. A final reason appears to rest on the widespread assumption that court-ordered reform applied only to general educational expenditures.

Court Decisions Involving Capital Outlay

Accuracy of the assumption regarding the lack of need to include capital outlay in reform is clouded by uncertainty because the courts have taken note of several concerns involving capital outlay financing. Although no broad equity claims have been brought initially on capital outlay financing, notice taken by the courts regarding financing school facilities has increased in both intensity and directness. These decisions, together with pending court cases, offer some useful indications for understanding equity issues in facility funding.

For the past 15 years, courts have commented on how local districts provide funding for school buildings. The *Serrano* (1971) decision and its subsequent review in *Serrano II* (1976) established the responsibility of the state for providing an adequate educational system regardless of local wealth. The dependence of educational systems on local property tax sufficiency was clearly condemned. *Rodriguez* (1973) added strength to the concept of state responsibility for education. Similarly, in *Van Dusartz v Hatfield* (1973), the Minnesota Supreme Court struck hard when it noted that a child's education cannot depend on variations in parental or local wealth. *Robinson v Cahill* (1973) in New Jersey added reinforcement to the concept that systems of education relying on local property taxes violate the rights of taxpayers and deny opportunity by unequal access to fiscal resources.

Direct reference to capital outlay has been made in numerous court cases, and the effect of principles of general equity upon capital outlay funding may be hypothesized. *Shofstall v Hollins* (1973) in Arizona noted that funds for capital improvements were more closely tied to district wealth than funds for operating expenses and that the capacity of a school district to raise revenue by bond issue is a function of assessed valuation. The court noted in *Robinson v Cahill* (1973) that the state's obligation included capital expenditures, without which required educational opportunity could not be provided. Provisions were also made in *Serrano II* (1976) for deferred maintenance funds in order to satisfy the court. The court noted in *Board of Education of the City of Cincinnati v Walter* (1977) that a thorough and efficient system of schools is not met if any schools are starved for funds, teachers, buildings, or equipment. The court also showed a concern for capital outlay in *Lujan v Colorado State Board of Education* (1977) when it stated that some districts were better able to provide facilities. In *Lujan v Colorado State Board of Education* (1982) the court concluded that the fiscal capacity of school districts to raise revenue for bond redemption and capital reserve was a function of property wealth. More recently, capital outlay financing was also an issue in the court decision of *Christiensen v Graham* (1988) in Florida and *Helena Elementary School District et al v State of Montana et al* (1988). Although the Florida case ruled in summary judgment that the state system for financing education did not violate equal opportunity, it is important to note that Florida is among those states which has held national prominence as a leader in assisting facility financing. On the other hand, the Montana court found that the state's system of funding public schools did in fact violate constitutional provisions, and the court specifically noted that the ability of school districts to raise funds for capital outlay was dependent on local tax levy, noting that the absence of state aid to capital outlay created a wealth dependency in Montana's school finance system.

A Texas court also recently cited capital outlay as an area needing attention from the state in *Edgewood Independent School District v Kirby* (1987). On April 29, 1987 a district court judge declared the Texas system of school finance unconstitutional. The ensuing court order to correct conditions included remedies and noted that funds for school facilities would be required to satisfy the court. According to the decision, the legislature would be required to take action that would guarantee adequate funding for educational expenditures, including facilities, to every district through legislative appropriation or local taxation. The court enjoined state aid distributions under the present finance system, but stayed the order until 1989 to allow the legislature appropriate time to remedy the conditions (Haas and Sparkman: in press 1988).

The West Virginia case of *Pauley v Bailey* (1982) offers the best analysis of the potential breadth of the concern for financing school buildings (Thompson, 1987; 1985). Originally filed as *Pauley v Kelly* (1972) as a broad concern for inaccessibility to a quality education, the focus in *Pauley* became for the first time in history a direct concern for equal opportunity as defined by adequate school buildings. The case was originally dismissed. The lower court's ruling against the plaintiffs was ...ed by the West Virginia Supreme Court based on findings that (1) education

was a constitutional right, (2) a constitutional right required high quality across the state, and (3) that failures to meet the criteria could not be attributable to the state. The court saw a primary flaw in the state's finance scheme in the reliance on local property tax for providing quality education. A quality education was extensively defined as including school facilities.

The *Pauley* case contains broad implications for the funding of capital outlay. *Pauley* holds its greatest value for analysis of capital outlay equity in its extensive detail in defining a quality education and equal education opportunity. The court went to historic lengths to describe the scope of a quality education in which it clearly indicated that facilities were a part of equal opportunity (Meckley, 1983). The court-ordered master plan for improvement included broad facilities mandates and specified in detail that each school would provide adequate space and quality for each area of the curriculum. The court ordered, for example, that each elementary school must have an art room for each 350-500 pupils with at least 50 square feet per child and that every secondary school of 500 students would need at least one art room with a minimum of 65 square feet per pupil. Even storage areas were detailed. Similar minute specifications were provided for each academic and activity function of elementary, junior high, and high school levels (Smith and Zirkel: in press, 1988).

The *Pauley* case signaled a potential change in court attitude toward becoming involved in definitions of quality education. Courts had long stated that, unless forced to do so, they would leave the mechanisms of funding to legislatures and would content themselves with broad equity concerns. In *Pauley*, the court delineated exhaustively the characteristics of a quality education and indicated a willingness to define for the state what was expected by equity and equal opportunity. The actions of the court in *Pauley*, together with troubles surrounding cases such as *Edgewood v Kirby* in Texas and other cases in current litigation, provide some predictive speculation for potential danger in states which do not support capital facility funding.

Litigation

Several cases are presently in court which challenge state finance systems on broad equity issues. Equity cases which may hold potential for capital outlay concerns are pending in Alaska, Kentucky, and New Jersey.

The courts have frequently noted capital outlay finance as a concern in the equitable distribution of educational funds. But despite the attention focused in *Pauley* on the relationship of facilities to educational opportunity, the court order in Texas to include capital outlay in state support mechanisms and the notice in Montana of capital outlay dependency, the two Alaska cases represent the only suits initially filed on challenges to capital outlay funding mechanisms. *Kenai Peninsula Burrough and Jerry Anderson v State of Alaska* and *Matanuska-Susitna Burrough v State of Alaska* are scheduled for trial in early 1988. Both cases follow similar claims. Both cases reflect Alaska's unique system of governance, its finance formula, and its remote geography. Whether they will ultimately impact on the broader capital outlay equity concerns is not known, but a potential value lies in the fact that both cases address the right of an appropriate education within the local community and the corresponding level of state support for building.

The Alaska cases rest on prior lawsuits in Alaska involving general equity principles. In *Hootch v Alaska State Operated School System* (1975), general equity claims were brought which sought to force the state to build schools in outlying communities so that boarding schools would no longer be required of rural students. The court initially ruled against the plaintiffs, but the state agreed to build rural schools and reimburse both rural and urban communities for debt retirement in order to avoid continued litigation. Reimbursement levels varied with the condition of the economy, and the net result was differing levels of reimbursement to rural and urban districts. The present cases were filed in protest of unequal protection.

It is speculated that the Alaska cases will not have a far reaching application to broader capital outlay equity principles since the focus of the cases is unique to Alaska. However, other cases which have addressed capital outlay were not originally seen as applicable either. The issue of differing levels of support for facility financing may hold some importance, particularly in states which choose to provide funding to school buildings.

Neither is it known whether other equity cases pending in court will affect capital outlay. In some instances the likelihood appears good that capital outlay will be addressed since those cases are reviews of earlier important court cases which noted capital outlay as a concern for the state. The *Robinson* case in New Jersey has been brought again as *Abbott v Burke* (1985). A Kentucky case *Council for Better Education v Martha Layne Collins* was filed in late 1987. Further, a new equity case was filed in Missouri as *Jenkins v State of Missouri* (1987), and facility financing appears to play an important part. The Kansas City, Missouri case promises to keep the issues of facility finance in turmoil, as funding for school buildings appears destined to play an important part in both the court's decision and any appeal process.

Finally, leading cases which cite the importance of capital outlay in state support mechanisms are presently on appeal in Florida, Texas, and West Virginia. The decision in Florida in *Christiensen v Graham* (1988) is on appeal. *Edgewood v Kirby* is being appealed by the state, the West Virginia case is back in court as *Pauley v Gainer* (1987), and the *Jenkins* case in Missouri is virtual certainty for appeal. The eventual outcome of *Pauley*, *Kirby*, and *Jenkins*, and other pending cases will be of critical importance to equity trends in school finance. Inasmuch as the issue is yet to be addressed by Kansas courts, the outcomes of court decisions may have profound implications for capital outlay financing in Kansas where more than 1,400 school buildings dot a landscape of over 82,000 square miles of mostly rural territory.

Summary

Like most issues of substance in education, the issue of facility finance is complex. Further, as the questions are examined and tentative answers formulated, new questions emerge from the ferment. Despite the lengthy history of litigation, the impact of twenty years of school finance litigation is still not clear. No universal guidelines for a 'good' school finance system have emerged. How to achieve equity is not clearly defined. As Augenblick (1984) noted, school finance reform must be consistent with requirements of the federal constitution, the language of a state's constitution, and the social, political, and economic climate of the states and even

the nation. One thing is certain in that school finance will be modified over time, and those modifications may include the question of facility equity. By observing court decisions and relating it to established research, indicators of potential difficulty can be identified and addressed.

Chapter 3
RESEARCH ADDRESSING CAPITAL OUTLAY

Until 1980, issues in school finance were predictable. Challenges to finance schemes invariably attacked fiscal variations based on a state's equal opportunity clause or on the state's education article of the state constitution. Additionally, challenges addressed general expenditures rather than facility financing. Although for many years there has been a concern for capital outlay funding, it did not approach the levels exhibited for general fund revenues (Baylor, 1984). Despite the absence of concerted effort to legislatively address those concerns, the research on capital outlay equity is ample indicating that the lack of legislative concern has not been accompanied by an equal lack of interest among researchers in school finance.

The purpose of this review is to provide a sense for the central issues found in the research rather than to provide an exhaustive explanation of diverse literature. The review was limited to the narrow scope of capital outlay equity. The amount of research deemed to be quantitative evaluation of capital outlay funding equity was moderate when compared to the total education finance equity field which exceeds 7,000 articles and dissertations. The research reviewed was logically divided into four divisions: (1) early research, (2) tracking methods of funding facilities, (3) equity concerns, and (4) facilities needs.

Early Period of Research

State assistance to capital outlay funding has been a research interest for many years, and the absence of aid to facility projects in the various states has not been due to a lack of research evidence. The early research literature focused on identifying the problems associated with capital outlay funding and suggested practical ways states could use to implement relief to local districts. Proposals as early as 1922 suggested the usefulness of state aid to building funds.

Proposals for state assistance have been varied, but they have constantly focused on the concept of ability to pay and have attempted to provide some form of assistance that would bring districts closer together in their ability to provide educational facilities. Updegraff's idea to tie state aid to actual construction and maintenance costs and local school district ability to pay was one of the earliest proposals, and Mort suggested state support as a fixed percentage of current expenditures. Other proposals were advanced and occasionally implemented in some form, but none were universally popular, and few were accepted enthusiastically by legislatures or the educational community.

Tracking Current Methods of Funding Facilities

The early efforts focused on applied research which identified problems and needs. Such efforts led to more recent attempts to identify problems surrounding facility finance needs prompted the federal government to eventually implement Public Law 874 which provided impact funds for the states to assist local school districts affected by federal installations.

Modern research dates from the National School Facilities Survey in the early

1950s. The National Education Finance Project (NEFP) had as a corollary the National Capital Outlay Project (1979). The NEFP surveyed legal bases, procedures, and practices for funding facilities in the 50 states and suggested new finance models for implementation. The NEFP was the last major national effort which promoted aggressive new policies for financing educational facilities. Although efforts have been made to periodically update the list of current facilities financing mechanisms, no new initiatives have approached either the depth or magnitude of the NEFP.

The major research efforts addressing capital outlay issues are found in a growing series of research articles, dissertations, and legislative studies. In the 1970s, several states conducted studies utilizing consultants to address policy issues of local interest. These studies and numerous subsequent reviews of funding mechanisms confirm that methods for financing capital outlay have remained stable with few innovative features (Salmon et al, 1981). Recent review has provided evidence of a continuation of stability in funding mechanisms (Thompson et al, 1988; Tantillo, 1985; Cross, 1983) with patterns of assistance similar to those of other studies.

Equity Concerns

While awareness of current methods is valuable to the general improvement of finance patterns, qualitative and quantitative assessment of equity achievement represents truer evaluation of the success level of various funding plans. Unfortunately, equity is as difficult to measure accurately in school finance as it is in other areas of education.

Although the concern for equity in the finance literature is evident, the quantity of research narrows significantly regarding equity in capital outlay funding, probably because the relationship between facilities and educational programs is not yet well defined. Equity models for capital outlay financing have yet to be widely embraced, and the result is a lack of quantitative research identifying relationships between student achievement and facilities.

The majority of research in capital outlay equity has been conducted since the mid-1960s, and a primary source is dissertation research. Findings have been fairly consistent, indicating that heavy reliance on property wealth has had an effect on the adequacy and condition of facilities. From the earliest efforts, the research has indicated that increased state involvement is a desirable goal in neutralizing the effect of local assessed valuation as a principal determinant of facility adequacy. Palmer (1966), in a study of Oklahoma school districts, concluded that a need existed for emergency and long-range facilities needs assessment. Hehr (1973) indicated that even with assistance, needs were still going unmet and that a plan for providing equal dollars did not adequately address the issue of unequal needs.

The earliest evidence also indicated that local wealth may have a detrimental effect on both the quality of programs offered and the quality of facilities made available to students. Stewart (1976) noted that state inaction had severely limited facilities and had placed a heavy burden of unmet facility needs on local districts in Arkansas. Similar results in Arkansas were found by Woolbright (1985). Darbison (1978) surveyed Oklahoma schools to examine district ability to pay for programs and found observed positive relationships between tax base, educational programs,

and school facilities. Supporting evidence was found by Ikoku (1983) in a study of bonding practices in Oklahoma where it was found that significant wealth disparity existed in per pupil bond revenue. The variations were found to affect the quality of facilities and ultimately made an impact on educational programs and services.

Despite a general reluctance of superintendents to seek external aid in facilities financing (Bogie, 1985), the disparity in ability to pay is a concern to superintendents. Jolley (1983) surveyed Utah superintendents to assess interest in alternatives for equalization in capital outlay and to assess alternative methods. Jolley found a high degree of belief among superintendents that sharing the wealth is a desirable goal, and that a desirable criteria for a state assistance plan would include equal tax yield for equal tax effort, equal opportunity, tax base adequacy, partnership with the state while retaining local control, innovativeness, and taxing efficiency. The evidence is at odds with the expressed preference of many superintendents who resist state involvement in facility financing. The evidence seems to suggest that superintendents hold one set of knowledge beliefs while operating under another set of functional values. Their intellectual experiences appear to be at odds with their preferences. This contradiction may account in part for relative inaction by many state legislatures to address the issue head-on.

The research also indicates that districts experience difficulty in funding both current and extended expenditures for capital outlay. Edington (1979) found extreme disparity in ability to service capital outlay and debt retirement in Texas and that construction problems were heightened by inflation, population changes, educational program improvements, and normal deterioration of facilities. Keller (1981) also studied 1,071 Texas school districts and found that wealthier districts were able to tax less for services, could simultaneously produce more revenue per pupil, and that smaller districts in Texas were generally wealthier than larger districts.

The relationship of facilities to ability to pay was also evidenced by Peccia (1982) in a study linking quality of facilities to fiscal capacity. Peccia concluded that variance in facility quality in Virginia was attributable to size of the district, local fiscal capacity and tax effort, and that districts with low assessed valuations could not provide equal facilities when compared to wealthier districts. Cross (1983) similarly examined Colorado districts and found that the state system which offered no support to capital outlay failed to provide acceptable fiscal neutrality and that state participation as high as a 50 percent contribution level still would not provide adequate revenues for capital outlay to local districts.

Research in Kansas has yielded similar results. Thompson (1985) analyzed all 304 districts in the state to assess achievement of equity under five proposed alternative models for state participation. Results indicated that the state's failure to fund capital outlay violated fundamental equity principles of resource accessibility and **ex post** and **ex ante** fiscal neutrality and that the introduction of state aid would significantly reduce reliance on local school district property wealth while simultaneously satisfying accepted standards of equity.

Facility Needs: Repair, Maintenance, New Construction, and Debt Service

The research weaves together the areas of equity and specific facility needs.

Repeatedly, the literature emphasizes a backlog of needs among districts, and their relative ability to pay for unmet needs is documented. The American Association of School Administrators (1983), in cooperation with the Council of Great City Schools and the National School Boards Association, reported estimates for maintenance backlog in excess of $25 billion in the nation's schools.

The literature indicates that modernization and replacement are growing needs, while other uncontrollable influences such as handicapped accessibility, Title IX, and expanding curricular needs including technology have outstripped local budgets (Thompson and Camp 1988, Thompson, 1985; Woolbright, 1985; Edington, 1979). Districts have typically been unable to meet such needs from reserve funds or current expenditures. The concept of deferred maintenance and construction has yielded huge amounts of unmet needs in the various states. For example, the Oklahoma State Department of Education (1987) in an extensive survey estimated that more than $622 million in needs had gone unaddressed in that state, and if all districts were to extend themselves to the legal maximum for capital outlay purposes, needs would still exceed $125 million. In 1987, North Carolina similarly noted $3.2 billion in unmet needs and enacted new legislation which addresses some of the state's facility shortcomings by providing more than $793 million in new state monies (SDPI, 1987). Similarly, evidence submitted in Texas suggests that a total of $5.4 billion will be needed to fund facility projects by 1996 (Lutz et al; cited in Haas and Sparkman: in press, 1988). Research in Kansas has yielded a deferred maintenance estimate of approximately $381 million. Research in other states has identified capital outlay concerns and the disparity among districts in relative ability to provide for maintenance, repair, and debt retirement (Peterson, 1985). Analyses conducted by consultants for various state departments of education have similarly confirmed the importance of deferred and current needs and the relationship of local wealth dependency to unmet needs.

Research in Kansas on deferred maintenance and condition of schools provides similar evidence and indicates that districts operate at varying levels of budget stress. Consequently modernization, new construction, and deferred maintenance have been seen to be a sizeable problem in Kansas. Honeyman and Stewart (1985) surveyed rural school districts and found the average age of buildings was sufficiently high to warrant evaluation regarding continued utility, that maintenance decisions were significantly related to debt levels, and that estimates for maintenance deferral approached $60 million in districts of less than 1,000 enrollment (Stewart, 1988: in press).

Other studies in Kansas have confirmed and extended the concepts of equity addressed by Thompson (1986; 1985) and Honeyman and Stewart (1985). Devin (1985) reviewed unmet maintenance needs in districts over 1,000 and concluded that deferred levels exceeded $321 million. Devin noted a positive correlation between level of general fund aid and level of deferred maintenance, indicating a positive relationship between wealth and condition of facilities which is unaddressed through the state's equalization formula. Similarly, Burk (1987) found positive variance among Kansas districts when considering deferred maintenance and factors of assessed valuation, income, enrollment, and general fund budget amounts. Such indicators

suggest that the absence of state support to facility costs in Kansas violates accepted principles of equity, results in wealth-related condition of facilities, relies substantially on local property wealth as a determinant of the quality of facilities, and allows for assumptions of the effect of state funding mechanisms on the relationship between facilities and educational programs.

Summary of Research

The research on equity establishes the relationship between wealth and facilities and indicates that facilities and educational programs are somehow related. The research also indicates that:

(1) there is a concern for equity issues as applied to capital outlay. Although the number of direct equity studies is limited, the frequent reference to inequity is clearly evidenced.
(2) there is documented evidence of extensive school building needs in areas of maintenance, renovation, and new construction, and
(3) interest in capital outlay financing is not likely to diminish in the near future as evidenced by both continued research and potential interest of the courts in facility finance issues.

Interestingly, as vigorous research efforts continue, the buildings continue to age.

Chapter 4
THE FACILITY DILEMMA IN KANSAS

Research indicates concern for facility construction, maintenance, renovation and similar capital outlay issues. While components and features of problems are unique to individual states, there are commonalities which should be explored with the intent of measuring efficiency, effectiveness, and equity. Certainly Kansas, with its myriad rural and urban school districts, is no exception. The size of expressed needs, and ultimately the effect on educational programs, is a topic which clearly relates to the adequacy of funding mechanisms for capital outlay and to potential court challenges to finance mechanisms.

The major study reported in this chapter was undertaken to:

(1) Assess the extent of concern among Kansas superintendents on issues of capital outlay financing.
(2) Apply earlier concepts of broad equity research to the area of capital outlay.
(3) Consider associations between various economic elements and subsequent decisions regarding capital expenditure. Efforts were guided by substantive questions derived from the literature:
   a. What are the commonalities of problems in the state regarding the funding of facilities?
   b. Are there differences between rural and urban districts in capital outlay funding?
   c. Are districts in the greatest need also the districts exhibiting high general fund levies?
   d. Are districts in need able to levy adequately for capital outlay purposes?
   e. Are growing districts disadvantaged by high levies and low assessed valuations?
(4) Provide an analysis of the issue for policymakers.

While earlier research in Kansas on these issues has utilized at least the measures used in this study (Thompson, 1985; Honeyman and Stewart, 1985; Devin, 1985; Burke, 1987), the present study is the first to isolate rural and urban subgroups for descriptive analysis and comparison. The present research is interrelated with other research efforts as part of an ongoing interest in capital outlay financing in the state. While the present research explores the issues in Kansas, a corollary research effort on the national level is funded by the Kansas State University Bureau of General Research. That study is jointly sponsored by the National Rural Education Association and the Kansas State University Center for Rural Education.

Methodology

The present research analyzed the total populations of 304 Kansas school districts during FY 1986-87. A survey was mailed to all superintendents in the state. Enrollment of districts ranged from 78.0 to 42,457.7 FTE with a median statewide

enrollment of 543.4 FTE. Of the 304 total districts, 72 percent were below 1,000 FTE enrollment K-12. The 1,000 FTE enrollment was the break-point utilized in the study to identify rural and urban divisions. The division is consistent with accepted definitions of rural and urban classification utilized in other studies in Kansas and the nation.

Superintendents were asked to respond to a series of questions related to capital outlay funding which assessed the financial basis and needs of districts. Questions related to tax base size and type, general fund budget, capital outlay budgets, mill rates for general fund and capital outlay, bonded indebtedness, and dollars budgeted for planned improvements. Superintendents also responded to questions regarding recent bond election success or failure, plans to conduct bond elections, the adequacy of present facilities including plans for major renovation and construction, and potential closing of facilities based on enrollment projections. Superintendents were also given the opportunity to call attention to capital outlay issues of general or unique concern.

A 98 percent total response rate was experienced. For the few nonresponding districts, necessary financial information was derived from state department documents. The data were collected and analyzed by computer to produce the findings contained in this research.

Collection of descriptive data was necessary in order to analyze statistically the conditions in the state and to analyze the appropriateness of concern for the issue. To assess statistically any relationships among selected variables, standard procedures were used to produce the measures of description and dispersion. Descriptive data summarized in Table 4.1 include factual data regarding district enrollment, organizational patterns, and the number of buildings by organizational type (i.e., elementary, middle/junior high, high school). Tables 4.2 and 4.3 show the age and condition of each attendance center. Table 4.4 provides descriptive data on the financial information of all districts, and Table 4.5 indicates sources of tax base reliance among Kansas districts. Table 4.6 identifies data specifically related to capital outlay and debt retirement, and Table 4.7 indicates debt levels and capital outlay plan projections for the 298 responding districts. Information regarding the state as a whole was then broken out for later analyses into groups for rural and urban classifications and for the state as a whole.

As the intent of the study was exploratory in order to determine the magnitude of need and the relationship of suspect variables, the research design was limited to measures of description, distribution, central tendency and variation, and correlation between variables. Four statistical measures were utilized to obtain a panoramic view of the state and the rural and urban subgroups. Measures included were: (1) unrestricted range (2) restricted range (3) federal range ratio and (4) Pearson correlation coefficients. A brief description of each measure explains the selection of these measures.

The results of unrestricted range and central tendency measures are found in Table 4.8. The unrestricted range is a raw score measure which identifies the upper and lower limits of a distribution of scores. In this study, the unrestricted range measure [illegible]t the amount of revenue that can be produced in each school district by taking

the unadjusted assessed valuation times a uniform four mills. For example, the ability to produce revenue for capital outlay purposes is calculated for each school district as (Unrestricted Range = Assessed Valuation × .004). The ability of each district is then calculated and arrayed in a descending order. The lowest score (lower limit) is subtracted from the highest score (upper limit), and the resulting expression is the unrestricted range of scores or ability of the district to raise revenue. This measure was calculated for each of the class subgroups of rural and urban and for the state. The unrestricted range identifies the distance between the wealthiest and the poorest district. As the difference in unrestricted range decreases, the degree of equity is assumed to increase.

The restricted range utilitizes the same procedure, except that it eliminates extreme scores at both ends of the distribution in order to determine the range within the most frequent scores. The logic for a restricted range measure is that it is useful in viewing the effect of extremely high and low districts (outliers) and results in a less distorted view of the majority of the group. The restricted range is calculated as (Restricted Range = $X_{95} - X_5$). For the present distribution, scores were again arrayed in descending order and the extreme top 5 percent and bottom 5 percent of scores were eliminated. The range was then found for all groups. As the size of the range increases, the assumption of inequity also increases.

The federal range ratio is a wealth neutrality measure utilized to determine eligibility of groups for certain monies for which fiscal neutrality is required. Like the unrestricted and restricted range, the federal range ratio assesses the width of the distribution and further expresses it as a single numeric value. The federal range ratio is based on the restricted range and is calculated by [Federal range ratio = $(X_{95} - X_5)/X_5$]. Ideally, the federal range ratio should equal zero. Again as the numeric value increases, the degree of difference among districts also increases.

The final statistical measure utilized a correlation procedure. Correlation steps beyond expressing simple variance and is important to decisions regarding the value of further research. Since it may be assumed that various conditions are interrelated in some fashion, the question becomes which conditions are dependent on other conditions. The present study seeks to explore and identify relationships among suspect factors in order to determine if there is a need for further research which could identify causal relationships. In exploratory studies where identification of relationships is intended but where there are no assumptions regarding prediction and causation, the Pearson correlation coefficient is an appropriate tool.

The Pearson correlates the degree of association between two variables and identifies the relationship as positive, negative, or nonexistent. If a positive relationship is observed, there is a linear association between the two variables in that they tend to both move together in the same direction. A negative correlation indicates opposite relationships. If there is no observed relationship, the two variables are not believed to contribute to variability in tandem. Pearson correlation coefficients are expressed by values from -1.0 to $+1.0$. Although the size of the coefficient and the sign indicate the strength of the relationship, a low correlation may still be significant and it cannot be assumed that because a value lacks obvious strength the correlation is insignificant. This is especially true in a study where the number

of cases is large or equals the total population. The Pearson coefficients correlated in this study and seen in Table 4.9 were found to be statistically significant, and Table 4.10 shows the correlations which did not meet the level of significance test.

The variables correlated in this study are frequent among conditions which can reasonably be surmised to have an effect on district ability to construct, maintain, and improve facilities. A total of 32 Pearson correlation coefficients were utilized to assess the extent of relationship between:

1. Type of tax base and planned improvements.
2. Type of tax base and percent of general state aid.
3. Type of tax base and expressed needs.
4. Type of tax base and debt level.
5. Type of tax base and condition of facilities.
6. Type of tax base and general fund mill rate.
7. Wealth and planned improvements.
8. Wealth and percent of general state aid.
9. Wealth and expressed needs
10. Wealth and debt level.
11. Wealth and condition of facilities
12. Wealth and capital outlay ability.
13. FTE and planned improvements.
14. FTE and percent of general state aid.
15. FTE and expressed needs.
16. FTE and debt level.
17. FTE and condition of facilities.
18. FTE and general fund mill rate.
19. Percent of state aid and expressed needs.
20. Percent of state aid and general fund mill rate.
21. Percent of state aid and capital outlay mill rate.
22. Percent of state aid and planned improvements.
23. Percent of state aid and condition of facilities.
24. Planned improvements and debt level.
25. Planned improvements and condition of facilities.
26. Planned improvements and general fund mill rate.
27. Age and percent of general state aid.
28. Age and condition of facilities.
29. Age and planned improvements.
30. Age and expressed needs.
31. Age and debt level.
32. Age and general fund mill rate.

Descriptive Data: District and Facility Characteristics.

In FY 1986-87, the number of pupils enrolled in the public school systems in Kansas totalled 394,777.4 FTE. Students were housed in 892 elementary schools, 209 locally defined junior high schools, and 356 high schools. Grade arrangements

by building in the state caused variations in the several classifications, with the most common grade arrangement being 128 districts identifying a K8-4 pattern, 54 districts reporting K6-6, and the remaining districts reporting other organizational characteristics, with the least common grade arrangement being a K-12 pattern reported by only five school districts.

The subdivisions of rural and urban populations and organizational patterns seen in Table 4.1 produced no surprises and the following conclusions can easily be drawn. The number of school buildings in the state consistently reflects the expected rural and urban economies of scale where proportionately more buildings educate correspondingly fewer students. The organizational patterns bear out the size of Kansas communities as well. Rural districts are able to support fewer but broader organizational forms as typified by the K-8 structure.

Table 4.1

DESCRIPTIVE DATA

	Rural	Urban	Statewide
N of districts	220	84	304
FTE	96,911.7	299,473.3	396,385.0
Elementaries	360	573	892
Middle/junior highs	90	126	209
High schools	246	115	356
K-8-4	115	14	128
K-6-6	51	3	54
K-12	5	0	5
Other	53	62	115

N = 304

Rural = FTE $\leq$ 1,000

The age and condition of buildings across the state provide a basis for analysis and comparison between rural and urban districts. As seen in Table 4.2, respondents reported that there were 131 buildings ranging from 0-10 years, 187 buildings aged 10-20 years, 696 buildings whose age fell between 20-50 years, and 253 buildings more than 50 years old. Subgroupings for rural and urban indicate the age of buildings fairly evenly distributed across the two subgroups with no particular group outstripping the other.

Table 4.2

AGE OF BUILDINGS

Age	Rural	Urban	Statewide
0-10 years	56	75	131
10-20	97	90	187
20-50	335	361	696
+50	153	100	253

N = 298 districts responding

Additionally, superintendents were asked to rate the condition of the buildings. Results of the rating seen in Table 4.3 indicate that superintendents assessed 67 buildings as being new or in new condition, 900 assessed as good condition, 209 buildings in fair condition, and 66 buildings in poor condition. The rural and urban subgroupings revealed that 29 percent of rural schools were rated in fair to poor condition, while only 7.1 percent of the urban schools were similarly rated.

Table 4.3

CONDITION OF BUILDINGS

Condition	Rural	Urban	Statewide
New (age 1-5)	35	32	67
Good	411	489	696
Fair	151	58	209
Poor	51	15	66

N = 298 responding districts

Financial data on the districts offered a revealing look at the fiscal base of Kansas school districts as seen in Table 4.4. The state contributed approximately $435,209,307 in aid to general fund budgets in Kansas school districts. The mean aid level was 33.77 percent. Thirty-seven districts in Kansas received no state aid and represented 12.2 percent of the distribution, and the highest level of state aid to a school district was 80 percent. The sum of all general fund budgets for the fiscal year 1986-87 reached $1,288,503,382. The sum of Kansas unadjusted assessed valuations was $11,201,043,673, and general fund mill rates ranged from 6.13 mills to 91.33 mills. The mean and median mill rates were nearly indistinguishable with the mean established at 51.24 and the median at 51.33 mills.

Table 4.4

FINANCIAL DATA ON KANSAS USDs

Total assessed valuation for the state	$11,201,043,673
Total General Fund budgets	1,288,503,382
Total state aid in dollars	435,209,307
N no aid districts in the state	37
Highest percent state aid to a district	80%
Highest General Fund mill rate	91.33
Lowest General Fund mill rate	6.13
Median General Fund mill rate	51.33

	Rural	Urban	Statewide
Mean percent aid	33.8	40.0	35.6
AV per pupil	$51,354.20	$24,826.20	$44,025.40
Mean General Fund mills	49.6	57.6	51.8

N = 304

The tax base of Kansas school districts can be seen in Table 4.5. Not surprisingly, the data indicate the rural nature of the state's tax base. A 58.5 percent majority reported primary reliance on agricultural pursuits for tax revenues. An additional 4.9 percent indicated primary reliance on industry, and 8.2 percent reported urban settings as the source for tax revenue. An additional 17 percent identified a mixture of revenue sources with no single predominant feature, and the remaining 11.4 percent identified other sources of revenue primarily related to energy production.

Table 4.5

TAX BASE OF KANSAS USDs

Agriculture	58.5%
Urban real estate	8.2%
Industry	4.9%
Mixed sources (no predominant feature)	11.0%
Other (typically energy related)	11.4%

298 responding districts

Descriptive data regarding capital outlay levies and related information are summarized in Table 4.6. The data indicate that despite the average age of buildings in the state, a majority of school districts have found it necessary to levy for capital outlay and have accumulated bonded indebtedness which is being serviced by the local tax base. The subgroupings of rural and urban districts show that urban districts are levying more frequently for both capital outlay and debt retirement, but a majority in both groups is levying for capital outlay and debt reduction.

Table 4.6
CAPITAL OUTLAY DATA

	Rural	% Pop	Urban	% Pop	State-wide	% Pop
N levying for capital outlay	171	77.7	73	86.9	244	80.3
N levying for bonded indebtedness	106	48.2	57	67.9	163	53.6
Revenue per 4 mills for capital outlay	$205 40	--	$99 30	--	$176.10	--
Mean levy by group for capital outlay	2.8	--	2.9	--	2.9	--
Mean levy by group for B & I	3.4	--	6.3	--	4.5	--

N = 304

Data in Table 4.7 indicate the extent to which Kansas school districts are committed to facility obligations under bonding capacity and foreseeable plans to engage in facilities alteration, expansion, or use reduction. Total bonded indebtedness for the state reached $384,875,687 with 129 districts reporting no bonded indebtedness. Superintendents also reported the intent to spend $67,626,299 in FY 1986-87 for capital improvements. Nearly half of all districts who responded to the survey planned to conduct facilities projects, and 20 percent reported plans to hold a bond election. Fully 10 percent of districts reporting indicated bond election failures within the past five years. An additional 21.2 percent of districts reported plans to close buildings or merely curtail use in the next ten years.

Table 4.7

BONDED INDEBTEDNESS AND CAPITAL OUTLAY PLANS

Total bonded indebtedness	$384,875,687
N of no-debt districts	129
Percent of no-debt districts in the total distribution	42.5%
N of districts planning capital outlay projects in FY 1986-87	47.3%
N of districts planning bond elections in FY 1986-87	20.0%
N of districts with bond election failure in the last 5 years	10.0%
N of districts planning to close facilities or curtail use	21.2%

N = 298 responding districts

Descriptive Data: Distribution, Central Tendency, and Variation

Descriptive data in the form of ranks, percentages, proportions of population, and comparison between similar and opposite groups are useful in obtaining a picture of relationships in clear and ordinary terms. In addition to such data, it is helpful to further assess the distribution of scores through measures of central tendency and variation, and by statistical measurement such as correlations among contributing variables.

Table 4.8 contains the results of the unrestricted range, restricted range, and the federal range ratio. Data were again analyzed on two subgroups of rural and urban, and for the statewide group.

Table 4.8

DISTRIBUTION, CENTRAL TENDENCY, AND VARIATION

Measure	Rural	Urban	Statewide
Raw Range of Ability	$2380.80 12.50	$854.90 36.80	$2380.80 12.50
Restricted Range of Ability	$477.20	$101.70	$455.60
Federal Range Ratio of Ability	9.5	3.6	9.6
Restricted Range of Mean Ability	$420.30	$157.80	$454.70
N of districts below Restricted Mean of Ability	128	77	291

The measures yield a clear indication of the variations of ability among school districts. At the state level, the ability of districts to raise money for capital outlay purposes under a uniform four mill levy shows ability in the highest wealth district to be 190 times greater than the lowest district for a net difference of $2,368.30 per pupil. When the restricted range strips off the top and bottom five percents of districts, the remaining high wealth district can still raise $455.60 more per FTE. Similarly, the Federal Range Ratio yields a high value of 9.6, indicating the presence of wide variance of ability in the restricted range. When statewide ability is compared to actual expenditure utilizing unrestricted range of expenditures, the disparity drops to find high ability districts actually spending $170.60 more per FTE than low spending districts. The reasons for the difference in expenditure provide the basis for speculation regarding low-end ability to effort ratio.

When analyzing rural and urban unrestricted range ratios, it becomes apparent that the extremes of both wealth and inability are present among rural schools and that urban districts are much closer to one another in relative ability. The upper and lower limits of the unrestricted range for rural districts correspond to the limits for the state. The unrestricted range for urban districts shows that the wealthiest urban district can raise 23.2 times as much revenue per FTE for capital outlay as can the poorest urban district. The ratio of 23:1 for urban districts represents a wide difference, but is much narrower when it is compared to the 190:1 ratio that is present in rural districts. The restricted range indicates the same results, showing that the ability difference among urban districts is $101.70 per FTE compared to $477.20 for rural districts. The extreme variations in wealth among rural districts appears to control the statewide restricted range.

Similar support for the wide variations of wealth exists when comparing rural and urban districts using the federal range ratio (FRR). Whereas the FRR for urban districts is set at 3.6, the FRR for the state stands at 9.6 and for rural schools is 9.5. As the FRR is based on the restricted range, this statistic indicates again that extreme differences of wealth exist across the state even after the top and bottom districts have been removed from the distribution. The disparity is evident in urban districts, but the range is much wider among rural districts.

The actual expenditure level across the state and among urban and rural schools provides a comparison between ability and actual effort. Actual expenditure among rural and urban districts differs sizeably on the basis of both ability and practice. Table 4.8 indicates that statewide the unrestricted actual mean expenditure for capital outlay is $170.60 per FTE higher in the highest effort district than in the lowest effort district. Compared to $454.70 for restricted mean ability for the total state, it is seen that expenditure and ability levels are not equal because some districts are spending less than they are fiscally capable. Within subgroups the range is closer, with urban districts spending within $104.80 of each other, and rural districts spending within $374.00 of one another. The proportional difference in spending among rural districts is thus higher than among urban schools.

While data regarding actual expenditures are helpful in determining the actual effort school districts are exerting for capital outlay, a better indication of equity can be determined by comparing the wealth base which districts use to levy for revenue.

Actual practice, however, is affected by many variables including political philosophy. Such factors are difficult to account for and vary uniquely across districts. What is clear from the data is that a wide range of both restricted and unrestricted ability exists within the assessed valuations of districts, that the range of ability among urban districts is much less than the range among rural districts, that rural districts for whatever reason spend more than twice the mean capital outlay expenditure, and that the rural districts occupy both extremes of wealth in the total distribution, making conclusions regarding excessive wealth among rural districts somewhat difficult to substantiate.

Correlational Data

The Pearson correlation coefficient explores relationships among variables. Results of the correlations among the 32 variables are found in Table 4.9 and 4.10. Correlational research requires not only that a correlation be found between two variables believed to be related but also that the level of significance be checked. The strength of the coefficient is not always straightforward evidence of the degree of association, particularly when a coefficient has a low numeric value. For instance, a low correlations value of .095 might be discounted as insignificant when in reality .095 may be the threshold for statistical significance when N = 300 and p = < .05. The p = < .05 indicates that the relationship found would be in error less than five percent of the time. The test for statistical significance rules out the oversight of significant relationships by indicating the minimum required coefficient for statistical significance.

Table 4.9 displays the correlational values for the variables found to hold statistical significance:

Table 4.9

PEARSON CORRELATION COEFFICIENTS MATRIX OF SIGNIFICANT VALUES

Variable	$ Improv	% Aid	Debt	Con-dition	GF mills	c.o mills	c.o ability	Need
Tax base	.2444	--	.17	.13	.00	--	--	.23
Wealth	.6333	−.1954	.3034	--	--	--	+1.00	−.1424
FTE	.6397	--	.38	--	--	--	--	−.22
% Aid	--	--	--	--	.1197	.0951	--	−.28
$ Improve	--	--	.2641	.10	--	--	--	--
Age	--	--	--	.5980	--	--	--	--

N = 304

p = ⩽.05

ificance = .095

Correlations obtained were of varying degrees of strength. The strongest positive correlations were found for:

1. Capital outlay ability to district wealth	1.0000
2. FTE to planned improvements	.6397
3. Wealth to planned improvements	.6333
4. Condition of facilities to age	.5980
5. FTE to level of bonded indebtedness	.3800
6. Wealth to level of bonded indebtedness	.3034
7. Planned improvements to level of debt	.2641

The correlation between capital outlay and district wealth yielded a perfect positive relationship. This is expected because the ability of a district to raise revenue for capital outlay is directly dependent on assessed valuation. The dependent relationship between wealth and ability is the concern expressed in the research reviewed earlier in that the ability of the local school district to provide quality facilities for education depends entirely on local property wealth. To the extent that the courts have interpreted and may continue to interpret local wealth dependency as violative of equity principles, the positive correlation deserves further consideration by the state, particularly if concepts of equity are extended to facility financing.

The correlation between FTE and planned improvements yielded a value of .6397. The correlation addresses perceived needs in the district as they relate to the size of the district. The coefficient is of sufficiently high value to attribute significant relationship between the two variables. While correlation does not explain or allow for causation, assumptions can be made regarding possible relationships. It is reasonable to assume that in growing districts as the enrollment increases, need for new and updated facilities correspondingly increases. Inversely, in districts where enrollments are stable or declining, there is little evidence to suggest that maintenance needs or obsolescence of existing facilities correspondingly decline; in fact, with time they usually intensify. Other correlations to enrollment also yielded significant values, indicating the possibility that declining enrollments, low tax base, aging facilities, and other variables can potentially account for a positive correlation between FTE and planned improvements. In both growing and declining districts, needs may be assumed to continue.

A moderately high value of .6333 was found when correlating wealth to planned improvements. Factors which may contribute to positive association in high wealth districts would indicate that the ability to spend more for improved and added facilities may in fact lead to increased expenditures. Inversely, factors that could contribute to a positive relationship between planned improvements and wealth in districts with low assessed valuation would indicate that the inability to spend higher amounts because of low tax yield and priorities for scarce resources may lead to reduced expenditures. While the data do not explain the causes for the positive association, the moderately high coefficient offers a suspect relationship between wealth and the ability to make improvements in facilities.

The coefficient of .5980 between age and condition of facilities is not surprising supported in other research in Kansas (Burk, 1987; Honeyman and Stewart,

1985; Devin, 1985). While no causation is presumed, other research has utilized regression techniques to predict group membership among districts where expressed needs are high. The correlation value found in this research supports a positive and significant association between age and condition.

Correlating FTE to level of bonded indebtedness yielded a .38 coefficient. Under similar reasoning, growing districts face a continual need to expand, while stable or declining districts must maintain and improve facilities. Where a third relationship of wealth is added, the potential significance for explanation is increased.

A coefficient of .3034 was found when correlating wealth and bonded indebtedness. It is known that the ability to bond for improvements and construction is a direct function of wealth. Where a positive relationship between wealth and debt exists, questions regarding the effect of low wealth and high debt arise. Since a positive relationship exists, further exploration into the causes for variance is needed.

A coefficient of .2641 was found between planned improvements and level of bonded indebtedness. Questions arising from the positive association include the extent to which debt may affect decisions for planned improvements and the extent of deferral that arises as a result of higher debt and district wealth. Earlier research (Burk, 1987, Devin, 1985; Honeyman and Stewart, 1985) suggests that there is a strong relationship in Kansas between level of debt and deferral decisions. To the extent that the association is positive and supports earlier findings, further research which explains the variance is appropriate.

Variables showing a significant negative correlation were also found. Understandably, a significant negative correlation between wealth and state aid was found, indicating the effect of the SDEA. Under accurate conditions, aid should result in an absence of positive relationship between revenue and wealth and is mostly reflected in a coefficient of $-.1954$. Despite the negative sign, however, some influence of wealth is still present to a low degree, indicating either that tax base effect on local effort has not been entirely eliminated through the SDEA or that local effort is higher than required as a result of local preference. In the latter case, the association is permissible under equity because preference rather than ability is governing expenditure levels.

Other variables also showed slight relationship but were below the required .05 level of significance. The nonsignificant values are shown in Table 4.10. While the list of variables correlated was not absolutely exhaustive and a different set of variables could yield useful information, a wide range of conditions was represented and provided a reasonable summary of suspect relationships.

Table 4.10

PEARSON CORRELATION COEFFICIENTS MATRIX OF NONSIGNIFICANT VALUES

Variable	$ Improv	% Aid	Debt	Condition	GF mills	c.o mills	c.o ability	Need
Tax base	--	.04	--	--	--	NC	NC	NC
Wealth	--	--	--	-.0647	NC	NC	--	--
FTE	--	--	--	.08	.00	NC	NC	NC
% Aid	-.0159	NC	--	.0064	--	--	NC	NC
$ Improve	NC	NC	--	--	.04	NC	NC	NC
Age	.01	NC	-.07	--	.05	NC	NC	NC

N = 304

p = .05

Significance = .095

NC = not calculated or repeated measures or identical intersections.

Summary

The findings suggest that Kansas school districts are confronted with facility finance issues deserving consideration. The responses from superintendents, together with the data derived from the analysis of fiscal information, offer a view of schools in Kansas which describes an existing need of significant proportion. The age and condition of facilities suggest continued and increasing age of many buildings. To maintain excellence in rural education is a pressing problem, and the expansion faced by many urban districts similary results in serious considerations for facility finance. The cost of maintaining excellent or improved facilities is significant and has been estimated using statistical methodologies.

The profile suggests that Kansas districts will continue to face obvious facility needs and continued facility inequalities. The evidence also suggests that a considerable degree of variation exists in local ability to fund capital improvement projects. The correlations found among the most significant variables suggest that plans for improvements are being affected by various fiscal constraints. These include wealth, existing debt, and age and condition of facilities. Additionally, several relationships among variables are seen to significantly contribute to varying levels of ability to construct and finance educational facilities, a principal one of which increasingly suggests that wealthier school districts tend to have better facilities than do poorer systems simply because they are better able to spend in greater amounts.

Chapter 5
ANALYSIS AND APPLICATION

The countenance of educational finance has been drastically altered since the turn of the twentieth century with many of the present characteristics having only recently occurred. Education has become a global event, and the effect of financial decisions are felt at all levels and with lasting impact. When dealing with a state's largest single expenditure category, decisions made in the local board room, the state legislature, and the federal government have profound influence on the shape and future of education. As a result, policies regarding change or decisions to maintain the status quo should be made with utmost deliberation.

Dimensions of the Issue in Kansas

This study contains implications for the state of Kansas and for its urban and rural communities. The evidence presented suggests that Kansas school districts face at least several conditions from which inferences and conclusions can be drawn about capital outlay financing.

A clear conclusion is that Kansas school districts are significantly affected by methods for financing school buildings. Plans for facility improvement and construction speak to the attention superintendents and school boards are giving to facility needs. Support for the importance of capital outlay funding mechanisms is seen in the financial data on mill rates for capital outlay and debt retirement. The importance of methods of funding capital outlay cannot be denied when over 80 percent of districts levy for capital outlay and where school systems also levy substantially for debt service.

A second conclusion is that neither rural nor urban school districts monopolize a distinct advantage in facility funding. Depending on the issue, advantages and disadvantages can be found which relate to either rural or urban schools. Since no school district receives assistance from the state, any advantage or disadvantage is strictly related to district wealth.

Problems in funding facilities are frequently unique to the size of the school system. Urban schools are experiencing problems as a result of facility needs. Estimates of deferred maintenance and growth factors have indicated large needs in urban settings which must be addressed soon. While urban districts have an advantage in accessing a larger and more diverse tax base, the sufficiency of the resource base is critical because revenue in urban settings is limited by finite resources for which proportionately more tax supported institutions compete. While urban districts do in fact have a broader tax base, they serve larger populations of students and levy nearly twice as much for debt retirement as do their rural counterparts. Certainly a part of the higher levy is due to increased expansion, and some is attributable to maintenance and renovation. At the same time as urban districts are serving increasing general populations, they are expected to accomodate a growing number of students who are often commensurately more expensive to educate. These needs come at a time when urban districts are additionally affected by the state's agricultural dependency and have felt the impact of the state's agricultural troubles in a variety

of ways including declines in general state aid as the equalization formula shifts general state aid from urban communities to rural schools based on property-related wealth measures. The benefits of broader and more lucrative tax sources are subject to limits which are pressed when competition, population growth, and deferred maintenance are combined.

Rural schools are likewise uniquely affected by capital outlay and facility finance. While urban districts wrestle with problems of growth and tax base competition, rural districts face significantly different problems. Generally experiencing stable or declining enrollments with few exceptions, rural districts in Kansas rely primarily on agriculture or other singular industries for property tax support. Dependency on narrow tax bases creates severe problems for communities because the health of the local economy generally dictates outcomes of educational expansion efforts. Certainly the effect of the energy and agricultural economies has been a significant contributor to local decisions regarding aggressive programs for facility maintenance, expansion, and new construction. The decline in agricultural and energy commodities including farmland has placed rural communities at a recent disadvantage, resulting in higher property tax rates and increased general fund state aid in order to maintain and improve present standards. While urban communities in the state are affected by the state's agricultural and energy dependency, rural school districts are the first to encounter the effects of a decline in economic prosperity. The dependency of facility improvements in rural communities on local wealth cannot avoid expression through local decisions to proceed or delay projects based on the economy.

Although the data suggest that urban communities are exerting more tax effort than rural schools, rural districts are levying substantially for capital outlay and debt retirement. The narrow tax base in most rural communities is frequently under stress because, although average levy rates are lower, the proportion to the total tax effort may be equal or greater. Because rural districts are frequently among those which receive no general fund state aid because of high wealth, there is an assumption that rural areas are wealthier than urban areas. Reality suggests the inaccuracy of that assumption because rural areas represent both extremes of wealth and insufficiency and because the shift in state aid toward rural areas results from declining wealth factors in the equalization formula. A lower mill rate for capital outlay and the presence of upper limits of wealth in rural communities cannot be assumed to indicate an adequate tax base for funding school facilities.

A third conclusion is that while rural and urban districts have different circumstances, their problems are similar. The problems are simply differing effects of enrollment, condition of facilities, sufficiency of tax base, and the need to continually improve the educational program. Urban districts face enrollment growth, intergovernmental competition, and aging facilities. Their rural counterparts face narrowness of tax base, aging buildings, and increasingly fewer students resulting in proportionally higher cost. Urban districts strive to provide high quality education under increasing public demand for economy of scale, while rural districts face difficulty maintaining high standards by convincing the public of the appropriateness of program growth and higher per unit costs. The problem is especially compounded for both urban and rural districts when there is a corresponding need to close or

curtail use of buildings in 21 percent of the state's school districts. Rural districts must face declining enrollments and school closings, while urban districts have difficulty explaining the need to close buildings while simultaneously building new attendance centers. In all instances it appears to be increasingly difficult to convince communities to invest higher amounts in education when the public questions the wisdom of current expenditures and demands a visible return on their educational investment. Education has always struggled with issues of immediate accountability, and the difficulty of exhibiting a corresponding level of productivity for increased levels of support continues to be a dilemma for which there seems to be no immediate solution.

A fourth conclusion suggests the size of the problem in Kansas. The age and condition of buildings throughout the state indicate a growing problem districts will experience as they face the coming years. Although the conscientious effort of superintendents and boards of education has resulted in many older buildings that are well kept and preserved, the age and condition of facilities must be a vital concern for communities and the state because of costs for replacement and modernization. The concern is even more evident when nearly 20 percent of buildings exceed 50 years of age and the physical condition of buildings is described as fair to poor in nearly 22 percent of the state's facilities. With 80 percent of districts levying for capital outlay and over half the districts levying for debt retirement, the evidence indicates that there are significant needs in school districts for repair, maintenance, and replacement of facilities. Plans for improvement and expressed unmet needs suggest a continuance of these activities despite a generally lackluster economic climate and wide variations in local tax ability. Unfortunately, unfavorable economic conditions tend to aggravate the situation by accelerating maintenance and improvement deferral. Research has examined the extent of facility needs in Kansas, suggesting that deferred maintenance represents roughly $381 million to the state. As time passes, the needs of districts will likely increase for renovation, modernization, and replacement, and those needs will vary rather widely according to location (Cooper, 1982). The evidence regarding failures of bond elections in ten percent of Kansas school districts indicates that the problem of maintaining and improving schools in Kansas will not diminish in the near future.

A fifth conclusion is found in the method by which school districts provide capital outlay funds. Capital outlay financing in Kansas is entirely dependent on the local community. Where local preference determines the level of support without regard for fiscal ability, local preference is acceptable to the definition of fiscal equity. Yet tax rates, health of the local economy, and adequacy of tax base determine the ability to bond for construction in Kansas. These factors may thus be strong determinants which affect community attitudes and decisions toward bond issues or capital outlay levy renewals. The data indicates that a substantial proportion of rural and urban communities are spending below the group average for capital outlay. The expenditure levels stand in conflict with the needs expressed by districts for increased spending, leading to a belief that districts need to spend more than they can presently afford. At the same time, other districts are spending higher amounts which force the mean upward, forcing a wider gap in expenditure levels which contradicts the

principles expressed by the SDEA. While some difference in expenditure levels may be attributed to local preference, the extent to which local preference governs expenditures in school districts as opposed to fiscal limitations associated with tax burden and assessed valuation becomes the critical question.

A sixth conclusion states there is now documented evidence that school districts in Kansas have varying levels of ability to pay for facilities. The disparity of ability is evident in the unrestricted range. The degrees of variation remain when the extremes are removed. Large variation is a concern because range measures, wealth neutrality tests, and correlations indicate consistently that wealth or its absence is a primary determinant in school district ability to fund capital outlay. These data in Kansas have been consistently observed over time. A recognition of the existence of wealth variations has been addressed in the SDEA, but capital outlay remains outside the equalization act. The SDEA recognizes the effect of wealth on educational programs and facilities and the evidence places a responsibility on the state to examine itself.

A seventh conclusion can be drawn from the data seen in the correlations between various factors contributing to local wealth dependency. The correlational data are of sufficient strength to indicate a significant relationship between suspect variables, each of which affects the ability of local districts to provide facilities. A concern among rural and urban districts alike exists where wealth and ability to finance facilities produce perfect correlations. In addition to the correlations which indicate a positive relationship between local needs, facilities, and wealth, there is evidence that a majority of Kansas districts are unable to fund either the mean ability level or the mean expenditure level in the state. The inability to fund the average expenditure level is different from choosing not to fund it and raises the same questions regarding how equal opportunity can be available when a large majority of districts represent insufficient ability to fund an established state average expenditure. In the general philosophy of the courts, equity has focused on ability more than practice.

A final conclusion addresses the most important aspect of the examination of facility finance and states that the impact of facilities on educational programs must be a central concern in the assessment of equity. While equity is an elusive term, it describes a concept which educators and educational decision makers use to guide action. The definition of equity in this monograph proposes students should have access to resources which meet their individual needs regardless of location of residence in a state, and taxpayers have a right to expect the state to support education to such an extent that variations in local wealth do not have an adverse effect on local ability to provide an educational system. The key phrase is access to resources which meet individual needs. While there must be concern about working conditions for school employees, salaries and appearance of facilities, schools exist for students. The degree to which school facilities provide the greatest opportunity for individuals to fulfill their intellectual, emotional and social capabilities is the measure of their suitability and usefulness and is the ultimate expression of equity.

The focus of equity appears to be shifting from fiscal inputs toward measurement of educational outcomes. Measures of educational production are in themselves valued differentially in society. Achievement test scores, admission rates of

graduates to prestigious colleges and universities, and the value of scholarships may be the set of measures valued by one community. In another community, low drop-out rate, high percentage of students graduating, and immediate employability of graduates may be the major expectations. In still another community, student success in extracurricular competition, achievement test scores, and development of leadership skills may be perceived as appropriate measures of educational productivity. Futher, every school's educational productivity level, regardless of its definition, is affected by numerous factors such as socio-economic background of students, parental expectations, and pupil characteristics including language, attitudes, self-concept, and intellectual capabilities over which the school does not have substantial control.

The search for equity measurement in educational outcomes is complex. Most research efforts have not shown a clear relationship between student achievement and educational expenditures, especially as outcomes relate to educational facilities. Childs and Shakeshaft (1986) described relationships between outcomes and facilities as minimal. The most positive relationship appears when only those expenditures relating directly to instruction are considered, such as teacher salaries and instructional supplies, as opposed to such items as insurance and transportation. However, it is clearly unreasonable to presume that an effective school can exist without an adequate physical facility, necessary insurance, and other important services.

Given a lack of research focus on capital outlay and educational outcomes, the best guide to assessing the effect of facilities on educational programs may simply be reasoned judgment. For students to grow intellectually, emotionally, and socially, they need a place that is safe and conducive to productive learning. A facility lacking such essential conditions can be either old or new, rural or urban, or large or small. Regulations passed by external agents have placed new demands on schools including curricular offerings, graduation requirements, and mainstreaming of handicapped students. All of these require unique, new, and expanded facilities.

Those schools least able to provide these needed services must seek alternative approaches. For example, some schools unable to provide foreign languages have sought instruction via satellite, with a corresponding outlay of considerable capital for receiving equipment. Even if capital improvement funds are not used for computers and equipment for advanced physical science courses, there are facility concerns that must be addressed. For some schools, the question may be to remodel the science laboratory or repair the roof. Roof repair, which if not completed could cause extensive damage, would probably be chosen above an improvement that would have direct impact on the opportunity for students to learn. Additionally, it seems reasonable that pride and respect for the school would have substantial impact on student achievement. Although possibly superficial to what actually happens in the classroom, it seems unlikely that a student would believe that he or she is receiving a quality education if the facility is in disrepair and outdated. Such a belief may easily translate into the understanding that education is not really important, especially in that community.

Limited resources in schools that are already strapped to provide essentials result in decisions that may be best economically but not educationally. Although no one disputes that equal opportunity for students to visit art museums, attend symphony

concerts, or discuss questions about physics with an engineer can be met by equal expenditures on a per capita basis, students need a laboratory in which to study science, and facilities for physical education must be provided if it is to be anything more than a period of physical activity. Correspondingly, districts with less ability to generate capital outlay funds must make decisions that have substantial impact on educational programs.

The evidence through research, logic, and the courts suggests that there is a relationship between facilities and student achievement. The research has not clearly identified that relationship and additional study is needed. As research methods for identifying contributing variables and causal techniques become more sophisticated, the states' interest in and responsibility for capital outlay finance assistance will become increasingly clearer. Logic indicates the relationship between safety, security, pride, and availability of appropriate facilities and student achievement. The growing interest of the courts in numerous references to equality of educational opportunity through capital outlay funding exemplified in *Pauley* indicates that it may be a concern to school executives and educational policymakers as definitions of equal educational opportunity evolve.

Chapter 6
CONCLUSIONS AND RECOMMENDATIONS

Implications for Educational Policymakers: What We Know and What Can Be Expected

The question becomes: what are the trends for finance reform challenges, and what is the application to capital outlay? What do we know as a result of existing research and the present study? What can we learn from the actions of other states in funding facilities? What are the implications for policymakers in the state of Kansas? What can be expected as a consequence of the concerns expressed in the various research and court cases regarding equity and capital outlay financing?

The problem of capital outlay has been variously defined and otherwise reviewed. Coffield and Gaither (1976) referred to capital outlay as the edifice complex, and certainly it has proved to be an elusive concern. The problem has long been recognized and documented, and it is appropriate to summarize what we know and what can be expected for those whose responsibility includes the funding of education.

What We Have Learned in Court

The past two decades have taught us a great deal about court attitudes and equity in general as a consequence of litigation in the fifty states. We know that most states saw challenges to finance systems mounted in the past twenty years, and many state finance formulas were overturned to comply with newly developed principles of equity and equality of educational opportunity. We have seen that those states in which successful suits were brought advanced arguments either for a fundamental right to an appropriate education or for equal protection under the state constitution. We can also surmise that for those states which escaped direct litigation, some of the relief was undoubtedly attributable to preventive action by states to comply with developing principles of equity in anticipation of an unfavorable court decision.

We have learned that the history of litigation in the fifty states resulted in changes and warnings to states regarding their methods of financing educational costs and that despite a lengthy history of litigation, some inconsistencies in general trends remain. Although the quantity of litigation and similarity of legal issues were frequent and uniform, Connelly and McGee (1987) noted that the courts were seemingly more consistent in the 1970s in upholding challenges than they have been in the 1980s. While predicting the course of courts has never been easy, the results have been less certain recently than in earlier years. Efforts to overturn general finance schemes in the 1980s failed in Georgia (*McDaniel v Thomas*, 1981), Colorado (*Lujan v Colorado State Board of Education*, 1982), New York (*Levittown v Nyquist*, 1982), Maryland (*Hornbeck v Somerset Board of Education*, 1983), Michigan (*Gwinn Area Community Schools v State*, 1984; and *East Jackson Public Schools v State*, 1984), Connecticut (*Horton v Meskill II*, 1985), California (*Serrano III*, 1986), Oklahoma (*Fair School Finance Council v State et al*, 1987), and Florida (*Christiensen v Graham*, 1988). Cases which were successful in overturning existing finance formulas were brought in Wyoming (*Washakie County School District No. One v Herschler*, 1980), Arkansas (*Dupree v Alma School District No. 30*, 1983), Texas (*Edgewood*

Independent School District v Kirby, 1987), and Montana (*Helena Elementary School District et al v State of Montana et al*, 1988).

We know that cases which succeeded and failed were brought under generally classic arguments. Courts in Colorado, Georgia, Michigan, Maryland, and Oklahoma noted that equal protection provisions were not shown to be violated, and the courts in Maryland, Michigan, and Oklahoma noted that equal funding and expenditures were not conditions of equal protection. The Oklahoma court dismissed the case without trial which alleged wide disparities in expenditures, stating that federal and state guarantees of equal protection were not violated and were not constitutional guarantees. The Florida court in *Christiensen* reached a summary judgment based on a case from several years prior, and noted that the state's finance formula did not violate the state constitution for funding either the general fund or capital outlay finance. There appears to be some evolution occurring regarding the need to provide equality in funding mechanisms in order to satisfy the courts.

In contrast, cases which were brought successfully were often argued under the same contentions and produced opposite results. In Wyoming (*Washakie County School District No. One v Herschler*, 1980), the state supreme court agreed that the system of finance failed to afford equal protection under the state constitution and that poor districts consistently produced less revenue based on assessed valuation. The Wyoming court stated that equality of educational opportunity cannot be achieved until equality of financing is a reality. The Arkansas Supreme Court followed similar reasoning when it held that equal opportunity provisions of the constitution were violated when the system for finance substantially bound educational needs and property tax base together. The much troubled Texas school finance system once again received an unfavorable ruling when the court in *Kirby* agreed that the state formula for funding schools violated the state's constitutional provisions and ordered massive reforms including significant implications for capital outlay. Additionally, the Montana court agreed that the state finance formula violated constitutional provisions and that capital outlay emerged as an issue noted by the court.

We also know that several cases either remain under judicial review or have recently been decided, and that other new cases have been filed in several states. *Robinson v Cahill* in New Jersey has returned again as *Abbott v Burke* (1985) to review the constitutional mandate of which capital outlay is a part of the plaintiff's claims. Further, the *Serrano* case returned to court again in 1986. *Christiensen v Graham* (1987) in Florida and *Edgewood Independent School District v Kirby* (1987) in Texas are on appeal as well. Two other cases which may hold implications for general equity and capital outlay have been filed. In Kentucky, the case of *Council for Better Education v Martha Layne Collins* (1987), and a Missouri case of *Jenkins v State of Missouri* (1987) offer new chapters in the court battle over school finance. While the final outcomes are not known, a contribution to the continuing search for definitions of equity will result. We do know that facility financing is becoming more important to the courts. Certainly we anticipate from the discussions and decisions to date that the outcome of the Kansas City case of *Jenkins* will have a far reaching impact for taxation patterns, and the implications for statewide responsibility for a system of schools are significant.

What We Know by Research and Practice

We also know several things about finance and equity from research and practice. We know better how to measure equity of educational inputs and resources, and we can exhibit relative equity achievement for students and taxpayers on numerous vertical and horizontal measures. We have some crude and preliminary methodology for measuring outcomes of educational achievement as seen in the effective schools research. We have a history of court cases which addresses equity in educational finance and makes mention by both direct and indirect reference to the need to equitably provide for financing facilities. We also know that economics dictate much of the climate of the various states as seen in various tax reform initiatives. We also know that the role of politics in educational reform has been frequently documented (Berger, 1984), and we are aware that the attitudes of the courts are frequently reflective of society in general (Johns, 1976).

We know too that the taxpayer's increasing unwillingness to support bond issues and voting tax levies indicates that alternative methods to financing public school construction may eventually need to be identified (Tantillo, 1985). We have simulated the improvement of equity using proposed models for funding capital outlay in Kansas (Thompson, 1985). We also know that related to the construction of new facilities is the growing problem of modernization of existing facilities and replacement of obsolete structures (Honeyman and Stewart, 1985; Devin, 1985; Burk, 1987), and that these demands are placed upon the local community whose tax base must support building projects while other uncontrollable influences such as Title IX, provisions for handicapped accessbility, and programs for exceptional children have strained district budgets. We further know that district needs for facilities modernization and expansion due to increased curricular offerings have forced reconsideration of inefficient or inadequate facilities (Thompson and Camp: in press, 1988). We also know that wealth and expenditure levels are somehow linked to student performance (Horn, 1987; MacPhail-Wilcox and King, 1986; Odden, 1986; Childs and Shakeshaft, 1986).

We also know that needs cannot be presumed to be uniform overall, and the literature suggests that needs are unique and therefore deserve specific attention. We know that needs are related directly to the uniqueness of the local economy, and the conditions suggested by *Pauley* case and research such as Woolbright's estimation (1985) of fully one-third of existing facilities in Arkansas to be inadequate cannot be assumed to be universally true and predictive of Kansas. Nonetheless, the expression of need among Kansas school districts, the estimation of backlog of maintenance in the nation's school districts, and the apparent relationship between tax base, facilities, educational program, and equal opportunity all suggest the legitimacy of concerns which relate to facilities finance. A recent article in the *Wichita Eagle-Beacon* (1987) placed the backlog of needs in one Kansas school district in excess of $20 million, and the formal research suggests many millions more exist in Kansas. When we know that the wealthiest district can raise nearly 190 times the revenue for capital outlay than the poorest district, we know we should exhibit interest in examining the issues. Inasmuch as the relationship of wealth to educational opportunity is important to the development of legal responsibility and the fiscal

policy in the state, close examination of varying levels of ability among school districts is important.

What We Might Expect

We can anticipate that the future will develop in directions which increase the role of the state in local educational policy. The historical involvement of government in local affairs has been one of slowly increasing proportion, and the literature regarding bureaucracy supports the general notion that governments grow rather than diminish in authority. Given the historical reluctance on the part of government to voluntarily assume responsibility for financing education, knowledge of whether the encroachment on local option will be a gradual process or will first be tested in court is open to speculation.

Although the immediacy and certainty of state involvement in capital outlay finance is not predictable, the trend in many states has been to at least become somewhat involved in capital outlay financing, and in some instances like Maryland and Pennsylvania, states have become substantially involved. The proportion of states who do provide some form of true assistance apart from state loans is larger than those who do not; and the result is a greater degree of equity and reduced vulnerability to legal challenges (Thompson, 1985; Cross, 1983). What appears clearer is that it is prudent for states to observe the conditions involving facilities and to assess the degree of vulnerability in the event that challenges do emerge.

We can expect as Salmon and Thomas (1981) noted, that capital outlay reform attempts will become more common, but reform will continue to receive less attention than more pressing problems like providing for growth in maintenance and operational costs. The dilemma which Salmon and Thomas identify is a part of the concern expressed in Kansas studies which includes facility maintenance, operation, and construction. Given the backlog of needs and other indicators of increasing need, the issue may grow in proportion to the total school finance picture. Given the size of expressed needs, some method by which to address the problem is needed.

We can also expect as the new decade approaches that facilities will become more of a priority with many school boards, especially as enrollment decline has leveled and a slow increase is being observed in many communities including some rural districts (Stewart: in press, 1988). We can further expect legislators to approach issues in school finance cautiously. A recent survey of legislators and state board of education members in Kansas revealed a cautious but optimistic outlook by both groups for the future of educational finance. Concerns expressed in the survey surrounded the mandated reappraisal of property and its affect on formula adjustment and other issues of revenue adequacy. Legislators also indicated a general lack of belief that capital outlay mechanisms would be addressed in the near future. It can be surmised that major reform activity in Kansas will not be quick.

Finally, we can expect further activity in the courts regarding issues of general equity, and that capital outlay will continue to play a part in equity considerations. Prediction is risky, particularly where the courts are concerned. Nonetheless, challenges to school finance schemes will likely continue to press the courts and include challenges to capital outlay funding practices. The decisions in those

cases will no doubt influence heavily the future of capital improvement financing.

Recommendations

It is incumbent upon investigators to offer recommendations which logically flow from research efforts. The data contained in this study and the increasing level of involvement of states in aiding facility financing lead us to offer recommendations which are guided by the potential for legal interpretation of state responsibility for facility financing. As the research and litigation have exhibited a strong concern for the conditions surrounding finance equity and its application to facilities, we recommend several key points for consideration by state legislators, school board members, school superintendents, and others interested in education.

We recommend that Kansas adopt a mechanism for granting aid to local school districts to assist in capital outlay funding including facility construction and maintenance. The issues we have examined suggest that there is strong evidence that court activity surrounding facility finance will increase in both directness and intensity and that the increase will ultimately result in court mandates to at least substantially equalize educational opportunity as defined by school facilities. As we have studied courts comments on methods of funding capital outlay, we are led to conclude that there is a substantial legal question if the concern is appropriately pressed. This concern becomes even more pressing when it is realized that in some communities, bond issues fail to elicit voter support and that in at least one instance it was recommended that a local school board sue the state for its failure to support educational opportunity as defined by the adequacy of district school facilities.

We also recommend that Kansas adopt an aid mechanism consistent with the principles of equlization found in the general aid formulas now operational in many states including Kansas. Equalization principles provide a secure basis for court approval by adhering to the guidelines found in *Serrano*. It is further appropriate for the State of Kansas to include an equalization scheme consistent with the School District Equalization Act (SDEA). The SDEA is a logical vehicle for inclusion of aid to capital outlay since formulas for calculation of general state aid to local school districts could be adapted easily for capital improvement finance aid.

We further recommend that several critical features should become an integral part of any plan to assist facility finance in Kansas. These features would provide for the inclusion of most districts through increased levels of funding and would address concerns about local effects inherent in any change. These features would require the state of Kansas to build in provisions which allow for a high level of state participation, consider current local effort for facility financing, provide for continued local incentive and local control, provide funding for existing debt reduction, and consider variables such as special needs, enrollment growth, sparsity, and emergencies.

One such feature is concern for how the local district is affected, and this concern is central to new proposals for state involvement in education. Certainly as state participation increases, there is a concomitant concern that local control will diminish. While increased state control is likely, the benefits outweigh the detriment, particularly if strong local and state partnership is built into the plan. Loss of local control

is nebulous, and frequently strong local control is more perceived than real. School districts already are obligated to the state through bonding limitations based on assessed valuation, approval by the state architect's office for construction plans, and other guidelines which create a state/local district partnership. The benefits of state aid to facility construction outweigh possible loss of local control by providing badly needed funds to many districts now unable to provide sufficiently for facility financing. Since all districts could benefit by a shared responsibility, provision can be made through incentive financing to reward districts for extended effort while ensuring poorer districts a guaranteed yield for local effort.

A second critical feature of this plan would ensure funds for existing debt service as well as for new projects. The benefits are numerous, including rewards for districts which have already taken ambitious steps toward improving educational facilities financed entirely by local effort. By providing aid to existing projects, the state would exhibit concern for districts which have previously extended themselves during a time when local effort controlled the quality of facilities. By providing aid for financing new facilities, the state addresses the evolving concern regarding state liability for assisting local districts to provide the best educational program available within the limitations of the wealth of the entire state.

The third critical feature requires the State to take notice of special needs, growth, sparsity, and emergencies. In developing a state plan for assistance to local districts, the collection of data should provide funds for districts which face unusual difficulties and address those concerns first. Such action is consistent with principles of logic and sound fiscal management by addressing critical needs before undertaking a regular program of assistance.

We further recommend that the State of Kansas standardize a process to include a statewide project list which prioritizes needs and identifies cost projections, thereby maximizing the utility of project identification and fiscal constraints. These may be termed five year or perhaps even ten year capital improvement program plans. A process which identifies critical needs and establishes methods for regularly aiding facility projects ensures effective identification of needs using realistic cost estimates. This allows for joining state revenue projections with anticipated facility needs well in advance of actual project scheduling and fiscal encumbrances. A project approval list provides the state with an orderly plan by which local and state partnerships may be scheduled.

Finally we recommend that the state should establish two operational funds for assistance to local school districts. The first fund should tie directly to the immediate needs for school districts which are experiencing difficulties. Difficulties may be related to the inability to pass a bond issue, to substandard facilities or to facilities which fail to meet criteria for accessibility or other such features. Also, these may include districts which have expressed facility needs but are unable to locally fund a legislatively mandated minimum budget per pupil. A critical needs fund to finance capital improvement projects which provides significant aid to deserving school districts would meet this criteria.

A corollary fund should also be established which systematically addresses long-range plans and capital improvement needs in school districts. Where a large number

of districts are unable to fund an average expenditure and where large numbers of districts express unmet needs as in Kansas, the need to establish state funding is present. As a part of the recommendation, it should be noted that the critical needs fund and the long-range fund should appropriate substantial dollars to assist local districts.

In considering the recommendations, several observations are appropriate. First, many additional recommendations can be conceived, but we suggest that the recommendations made in this monograph represent a realistic beginning to guide development of future state action. As plans are developed, recommendations will be modified and outcomes altered in light of new information and fiscal restraints. Nonetheless, it is imperative that the State consider the research data and the agruments which suggest a relationship between a potential legal responsibility for financing facilities and the state's failure to aid capital outlay efforts in local school districts. That relationship provides the basis for the evidence presented and is the foundation on which potential liability ultimately rests. To the extent that the arguments are presently convincing and to which analogies to general equity principles are correct, there appears to be a strong motivation for the state to consider assisting local school districts with facility initiatives.

Finally, in recommending that the State adopt a mechanism for aiding local school districts in funding facility concerns, we recognize the enormity of the task. But we are similarly aware that there is a potential for state liability if court trends develop as the indicators suggest. Research has identified a substantial estimate of deferred needs and the effect of failed bond elections. New data increases the total dollar amount on a daily basis. We are also aware that the task of describing needs is large. We believe, however, that the state is well advised to explore the issue rationally in preparation for a potentiality which appears to hold promise. From that assessment should evolve decisions and processes to assist the state in developing guidelines for the administration of a state plan to fiscally aid facility finance in local school districts. We are convinced from the research efforts and findings that the process of planning for state involvement in local capital outlay financing is inevitable and should begin now.

The future holds no guarantees except that it will come. Its shape will be defined as it evolves. Just as we have evolved in sophistication in our knowledge on effective schools, effective principals, and effective teaching, a concern for the interaction of facilities and programs should be demonstrated.

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