

A PROPOSED FORMULA FOR THE EQUITABLE  
DISTRIBUTION OF STATE AID FOR  
PUPIL TRANSPORTATION  
IN OKLAHOMA

By

CHARLES DON KECK

Bachelor of Science  
Central Missouri State College  
Warrensburg, Missouri  
1960

Master of Education  
University of Missouri  
Columbia, Missouri  
1966

Specialist  
Central Missouri State College  
Warrensburg, Missouri  
1968

Submitted to the Faculty of the Graduate College  
of the Oklahoma State University  
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Thesis Approved:

*Richard L. Jones*  
\_\_\_\_\_  
Thesis Adviser

*J. M. Seal*  
\_\_\_\_\_  
*Arvid M. Stark*  
\_\_\_\_\_

*Robert L. Brown*  
\_\_\_\_\_

*D. D. Durham*  
\_\_\_\_\_  
Dean of the Graduate College

788367

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## CHAPTER I

### THE PROBLEM

#### Introduction

Some people regard the transporting of pupils to and from school as a service auxiliary to the education of the nation's youth. However, pupil transportation is an auxiliary service to the educational program only in the sense that it helps make actual instruction available to children.<sup>1</sup> The school bus may be considered an equalizer of educational opportunity. It is the instrument which helps to bring the child and the school together in those situations in which distance separates them. The child who lives in a place of considerable distance from school might be out of reach of an education if it were not for that "magic carpet," the school bus.<sup>2</sup>

The opportunity for completion of high school seems to be generally accepted as a minimum right of every child. The transportation program may be considered instrumental in extending the curriculum to all children capable of benefitting from secondary education. It allows many children to be brought together into a concentrated area

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<sup>1</sup>Hubert Wheeler, Pupil Transportation Laws, Regulations and Standards, Missouri State Department of Education, Pub. No. 73, (Jefferson City, 1962), p. 4.

<sup>2</sup>D. P. Culp, "A Magic Carpet," NEA Journal, XLI, (April 1952), p. 208.

for a more adequate and varied educational program. With the vast amount of reorganization and consolidation of school systems, little red school houses, the nineteenth century symbol of education for rural America, are being replaced by school buses and larger systems.<sup>3</sup>

It can be said that public school transportation contributes to the over-all efficiency of many districts when they are combined into bigger and more professionally administered units by utilizing the staff and equipment, broadening the curriculum, and generally contributing to a fuller and richer program than would have been possible in any one of several small schools.<sup>4</sup> The school pupil transportation program was not designed merely as a convenience to children who live beyond a reasonable walking distance from school. In its basic philosophy and practical existence, school transportation is an indispensable and integral part of the system of consolidated schools, which were developed and are continuing to be developed to serve the educational needs of modern times.<sup>5</sup> One objective in planning for greater equality in educational opportunities for all children, must be an adequate transportation program.<sup>6</sup>

As noted, pupil transportation is planned as a means of getting

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<sup>3</sup>William A. Owens, "Opportunity Rode A Yellow Bus," School Bus Transportation, VI, (February 1961), p. 23.

<sup>4</sup>Alfred Louis McGregor, "A Study to Determine the Adequacy of Texas Public School Transportation Service and Support Under the Foundation Program Act," (unpublished Ed.D. dissertation, North Texas State College, 1961), pp. 5-6.

<sup>5</sup>D. P. Culp, An Administrator's Handbook of School Transportation, Alabama State Department of Education Bulletin, pub. No. 4, (Montgomery, 1950), p. 1.

<sup>6</sup>Wheeler, 1962.



children to a place where they may participate in an educational program. The cost of transporting students must come from the educational budget. The transportation program must, in effect, compete with other areas for the funds available for purchasing education.<sup>7</sup>

This competition for the educational dollar makes it imperative that the same principles of equalization apply to the support of transportation as apply to the support of the direct cost of education. For this reason it is very appropriate that attention be given the development of a distribution formula that will preclude the giving of educational advantage to some children at the expense of other children equally deserving.<sup>8</sup> It is to this end that this study was undertaken.

#### Statement of the Problem

Distribution of state funds for pupil transportation to local school districts according to a per pupil per mile schedule, which is in essence a flat rate basis, magnifies the problem of inequity, rather than reducing it. Oklahoma does not distribute transportation funds on a flat rate basis. But state transportation monies are credited to a district's foundation aid in that manner. An adjustment factor which allows for an increase in a district's transportation costs, is an attempt to equalize apportionment of state monies in the Oklahoma plan of school finance. However, the equalizing effect of the adjustment

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<sup>7</sup>Van Miller, The Public Administration of American School Systems, (New York, 1965), p. 363.

<sup>8</sup>Kay Wilson Palmer, "A Plan For the Equitable Distribution of Pupil Transportation Funds in Utah," unpublished Ed.D. dissertation, Utah State University, 1969), pp. 2-3.

factor is minimal.

It was the purpose of this study to develop a more equitable method of allocating state pupil transportation funds than that presently being utilized in Oklahoma. The approach was to incorporate the factors of ability and need together with a maximum level of state support using a measure of local effort.

More specifically, the study was designed to answer the following questions:

1. How well does the present Oklahoma method for crediting transportation funds to local district state foundation aid correlate with the financial efforts the districts are making, with their respective financial abilities to support the program and with the financial burden that is assumed when districts provide transportation services.
2. Will the correlations improve with the application of a distribution formula based upon the factors of local district general fund mill levy, assessed valuation per pupil in average daily attendance, percent of general fund monies expended for transportation, and a maximum level of state support for pupil transportation?

#### Assumptions

The nature of the problem and procedures for study have necessitated the following assumptions:

1. The state of Oklahoma has a responsibility to provide funds for pupil transportation.
2. The state has a responsibility to distribute these

- funds as equitably as possible.
3. Information provided to the State Department of Education by the school districts on the various financial reports are true and accurate.
  4. Pupil transportation is a necessary service to help equalize educational opportunities for the citizens of Oklahoma.
  5. The state of Oklahoma is financially able to assist in supporting the pupil transportation program.
  6. The present state method of crediting funds for support of pupil transportation is equitable if a significant positive relationship exists between the local transportation burden and state support.
  7. The present method is equitable if a significant positive relationship exists between the local general fund mill levy and state support.
  8. The present method of supporting transportation is equitable if the amount credited is inversely proportional to the assessed valuation of the local district. A district with a low assessed valuation per pupil in average daily attendance would be credited with a proportionately higher amount of money for pupil transportation.

#### Limitations of the Study

The data used in this study were limited primarily to certain financial and statistical records on file with the Oklahoma State

Department of Education. The data were provided by the various school districts within the state as part of their required annual financial reports to the State Department of Education.

In the Oklahoma plan for school finance, state funds for pupil transportation are incorporated as a part of the foundation aid to districts. The amount of funds credited to the foundation program does not necessarily reflect exactly what a district receives for transportation. The relationship from one district to another is much the same but in a rank order correlation a slight difference in the results could be reflected. The possibility exists, therefore, that the results might be altered in cases where foundation aid is smaller than the amount credited for transportation. Estimates indicate that slightly more than 50 percent of the districts' total transportation costs are presently reimbursed through foundation aid. Even though the proposed formula suggests a 75 percent maximum level of state support, when the average percentage is computed it is very near that under the existing formula. Therefore, the amount of funds for pupil transportation credited to the foundation program was used for comparison purposes in determining the equity of the current method of financing pupil transportation in Oklahoma. This could be viewed as a possible limitation of the study.

#### Definition of Terms

In order that there would be no misunderstanding as to the meaning of certain terms used in this study, the following definitions were offered.

Pupil Transportation System--the means by which students ride to

school at public expense as distinguished from those students who walk or are transported by private means.

Approved Transportation Cost— Those expenditures incurred for transporting pupils from home to school and return and made within the framework prescribed by the state legislature and Department of Education, State of Oklahoma.

Per Pupil Cost—the cost of transporting a student from home to school and return for one school year. It is calculated by dividing the local district's approved transportation cost by the total number of pupils transported.

Bus Route—the entire way traveled by a school bus in transporting children to and from school, not including the distance from the bus garage to the starting point.<sup>9</sup>

Operating Efficiency—the extent to which all activities of the transportation program make for a safe and economical method of transporting children from home to school and return.<sup>10</sup>

Bus Depreciation—the decrease in value of a school bus as a result of age, miles of operation, or other factors. A planned devaluation of the bus so that the investment in the vehicle will reach a zero value at approximately the time the bus has no further value or usefulness.<sup>11</sup>

Average Daily Haul (or A.D.H.)—The total number of children who

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<sup>9</sup>Carter V. Good, Dictionary of Education, (New York: McGraw-Hill, 1959), p. 71.

<sup>10</sup>Delbert George Rustman, "Public School Transportation Practices in Missouri," unpublished Ed.S. thesis, (Central Missouri State College, 1963), p. 11.

<sup>11</sup>Good, p. 70.

are eligible to be transported and actually ride the school bus to school divided by the total number of days that school was in session during any school year.<sup>12</sup>

Density Figure—the quotient found by dividing the average daily haul for the preceding year by the area (in square miles) served for the same period.<sup>13</sup>

#### Legally Transported Students<sup>14</sup>

- A. Inside the district. The district is authorized by law to furnish transportation to any student who lives at least one and one-half ( $1\frac{1}{2}$ ) miles from school. (Students living less than the one and one-half ( $1\frac{1}{2}$ ) miles from school may be transported, but are not counted in calculating state transportation aid).
- B. Outside the District. Any legally transferred student may be transported, provided he meets and boards the bus within the district's transportation area. (Students living outside the district and paying tuition may be transported, but not counted for state transportation aid. Likewise, students may be transported to an area vocational school, but not counted for state transportation aid).

Assessed Valuation—the value placed on real and personal

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<sup>12</sup>Annual Reports filed with the State Dept. of Education.

<sup>13</sup>State Board of Education, The School Finance, Transportation and Activity Fund Laws Including the State Board of Education Regulations for Administration and Handbook on Budgeting and Business Management, Oklahoma State Department of Education, Bulletin No. 145-P, 1969-70, (Oklahoma City, 1969), p. 32.

<sup>14</sup>State Board of Education, pp. 27-28.

property for the purpose of local ad valorem taxes. By Oklahoma statutes this must not be more than 35% of the property's true value as determined by the local assessor.

State support per transported pupil—total state transportation support, as defined by the Oklahoma transportation aid formula, divided by the total number of legally transported students eligible for state aid.

District transportation burden—the relative burden that a school district's transportation program places upon the educational expenses of the district. In this study a district's transportation burden was expressed in terms of the per cent of the general fund expenditures that were spent for transportation services.

State transportation formula—the method used in computing the amount of state funds that each school district receives in support of its pupil transportation program.

School district—the designation given by the Oklahoma State Legislature to the political subdivisions responsible for public education within their attendance areas and under control of the State Department of Education and locally elected boards of education.

Flat grants—the allocation of state funds to school districts based upon the certain specified characteristics of the school program, such as number of pupils, number of students per mile, number of teachers, etc. This method of allocating funds does not provide for equalizing factors such as financial ability to support educational programs or burden placed upon a school district by local conditions.

Financial ability—the relative ability of a school district to finance local programs of education. In this study, financial ability

has been expressed in terms of a district's assessed valuation per pupil in average daily attendance. (the assessed valuation of a district divided by its A.D.A.).

Equitable distribution of state transportation funds—the allocation of state funds for pupil transportation in relation to the burden to the district to provide transportation services and to the financial ability of the district to support an educational program.

General fund mill levy—the rate of tax per each dollar of assessed valuation. In Oklahoma this cannot exceed 35 mills.<sup>15</sup>

Maximum level of state support—in this study 75% was used as the maximum level to which the state would support the transportation program. However, this was an arbitrary figure and the amount should probably best be left to those who are charged with the responsibility of allocating state funds for pupil transportation. It is assumed that the exact level would be determined according to the availability of funds.

Local effort—refers to the local general fund mill levy approved by the local district voters for support of local educational programs.

Subscription-financed transportation—a method of pupil transportation in which school patrons who desire transportation for their children subscribe for the service and pay the cost in advance.

Minimum program cost—the amount of money for which a district qualifies on the equalization formula as determined by the State Department of Education. Calculations are made using 1963-64 as the

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<sup>15</sup>School Laws of Oklahoma 1968, Article VII, Section 328, pp. 161-162.



base year.<sup>16</sup> This amount is used in calculation of the "Q" factor defined below.

Minimum program income—the amount of money collected by a district for 15 mills multiplied by the district assessed valuation, 4 mills county tax, transfer fees, auto license, farm truck tax, county mortgage tax, oil and gas gross production tax, intangible tax and basic state aid from the preceeding year.<sup>17</sup>

District "Q" Factor—the figure used to determine a school district's foundation aid. It is calculated each year by the State Department of Education. The figure is computed by subtracting the minimum program income from the cost of the minimum program.<sup>18</sup>

Correction figure (or "k")—a calculated number that is multiplied times a district's minimum program for transportation to arrive at the level of financial support for transportation credited to that district's foundation program aid. The number is determined by dividing the cost of transportation in the district for the previous six years by the minimum program for the previous six years as calculated by the State Board of Education. Each succeeding year's cost and minimum program, respectively, for an additional year shall be used in determining a permanent district correction figure. The district correction figure ('k') shall not exceed 1.25.<sup>19</sup>

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<sup>16</sup> Ibid., Article XVIII, p. 129.

<sup>17</sup> State Department of Education, p. 120.

<sup>18</sup> Ibid., p. 115.

<sup>19</sup> School Laws of Oklahoma 1968, p. 133.

### Significance of the Study

Most writers view the transportation of children at public expense to and from school as one of the great equalizers of our society. It is a means of enhancing the opportunity of the individual student who may live a great distance from school. At the same time, however, it adds another financial burden to the taxpayer. The present Oklahoma method of allocating funds in support of pupil transportation does not make adequate allowance for the equalization of this burden among the individuals who must pay the bill. It is possible that this unequal burden of costs actually results in increased inequalities of educational opportunity. If the formula being proposed herein assists in diminishing these inequalities, then the study will be of value.

An examination of the Oklahoma school finance plan will reveal that the current method of supporting pupil transportation is inequitable for the following reasons: First, there is little provision made for differences in financial ability among school districts to support a transportation program. Second, sparsely populated rural districts must transport a large percentage of their school children. It is obvious that these districts must expend a larger portion of their budget for transportation than the more compact, densely populated districts. Third, there is no provision for differences in the effort made by districts to provide an adequate transportation program. Fourth, the money received by a school district does not present a true indication of the cost to local districts of supporting the transportation program. There should be worth in a finance formula that makes provisions for the differences in local district financial

ability, financial effort and financial burden of providing pupil transportation.

The state of Oklahoma allocated a large amount of money to the foundation program in the 1968-69 school year for support of public school pupil transportation. Many persons throughout the state have expressed discontent with the inequities inherent in the present method of supporting pupil transportation. If this study can help reduce the inequities by providing a defensible formula for dispensing these funds, it seems as if it would be valuable for those charged with the responsibility of regulating the flow of state monies to the public schools of Oklahoma. Perhaps it may also have implications as a guide to other states which provide financial assistance to local districts in support of pupil transportation.

#### Summary

Chapter I included the problem to be studied. The problem was essentially to find an equitable method of distributing state aid for pupil transportation. The development of a new transportation aid formula was proposed to accomplish this objective.

Assumptions and delimitations of the study were presented. The chapter also included a list of the terms and definitions used throughout this document.

The chapter concluded with a discussion of the significance of the study. It was advanced that this study would be of value if the proposed formula could provide for equitable distribution of state aid for pupil transportation. It was also advanced that possibly the proposed formula could be used as a guide to other states in quest of an equitable method of distributing state transportation funds.

## CHAPTER II

### A REVIEW OF SELECTED RELATED LITERATURE

#### Introduction

Pupil transportation is a large expense item, but one which is necessary if the youth of the United States are to be afforded anything approaching equal educational opportunity.<sup>1</sup> Pupil transportation is an integral part of American education. One child in every three presently enrolled in the nation's public schools is transported to and from school. Pupil transportation is big business.<sup>2</sup>

The problem of financing pupil transportation on an equitable basis has been an inviting topic to writers and authors for a half century or more. The variegated abundance of literature in the field necessitated a division of this chapter into four sections: (1) the development of state financial aid to schools in the United States, (2) the development of school transportation in the United States, (3) the principle of equalization in school finance with particular emphasis on pupil transportation, and (4) approaches to equitable state aid for pupil transportation.

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<sup>1</sup>Ray Page, Illinois Manual for School Bus Drivers, Illinois State Department of Public Instruction, (Springfield, 1970), p. ii.

<sup>2</sup>Pupil Transportation Handbook for School Administrators, Kansas State Department of Education, (Topeka, 1969), p. 1.

The Development of State Financial Aid  
to Schools in the United States

Most of the state constitutions adopted in the early nineteenth century contained specific provisions calling for the establishment of free public schools. The various state legislatures usually delegated extensive fiscal authority and responsibility to local governments in the matter of education. At an even earlier date, however, the different levels of government became involved in the financial support of education.<sup>3</sup>

State responsibility for education, including financial support, began in the particular relation of colonial governments to their local communities. The Massachusetts laws of 1642 and 1647 were the beginnings of statewide interest in education expressed through legislative enactment. With independence won for the new nation and a wider spreading of the philosophy of "education for citizenship," grew the acknowledgement of the educational responsibilities of the state.<sup>4</sup>

Most of the new state constitutions which called for the establishment of public schools extended the franchise to non property owners who stood to benefit most directly from public supported education. Although it lingered in some sections, belief that free education should be provided only for the poor and underprivileged began to decline. The earlier schools depended upon funds derived from rate

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<sup>3</sup>Lloyd E. McCann and Floyd G. Delon, "Governmental Structure for School Finance," The Theory and Practice of School Finance, Warren E. Gauerke and Jack R. Childress, eds., (Chicago: Rand McNally and Co., 1967), p. 97.

<sup>4</sup>Ibid.

bills, tuition, gifts, and, in a few cases, grants from the state as principle sources of support.<sup>5</sup>

With the adoption of education clauses in constitutions there developed greater encouragement for state involvement in educational financing. Therefore, steps were taken to implement the needed financial provisions. First, permissive legislation allowed local districts to tax themselves; next, state aid was offered as an inducement for local districts to tax themselves; and finally, state legislation made it mandatory for the local districts to tax themselves. Locally raised revenues accounted for seventy-five percent of all school financial support during peak years.<sup>6</sup>

At the time when land was the best measure of wealth, the finance pattern of taxing property locally was a moderately successful method of financing schools. With the advent of many social and economic changes, however, wealth became concentrated in areas which had little relation to the district organization and the needs of the school children who attended therein. Because of this, the needs of a changing society could not be met in many school districts.<sup>7</sup>

The inequality in ability to support education among local districts gave rise to the need for revenues collected from the entire state. The states then began to develop financial equalization plans or formulas. Taxes were to be levied on statewide wealth and the

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<sup>5</sup>Ibid., p. 98.

<sup>6</sup>Freeman R. Butts, A Cultural History of Western Education, (New York: McGraw-Hill, 1955), p. 448.

<sup>7</sup>Roger Don Fisher, "A Six Year Comparative Study of Two Transportation Equalization Formulae for Utah," (Unpublished Ed.D. Dissertation, Brigham Young University, 1965), p. 4.

resulting revenue was to be distributed where the children were located.<sup>8</sup>

Accompanying the movement of financial equalization was a trend toward the enlargement of school districts, the reduction in the total number of districts, and an expansion of school attendance areas. Because a characteristic of secondary schools is the variety of subjects which they teach in depth, this movement was especially important at this level. The educational needs of children were better met from a greater concentration of students, which allowed for more teachers to be employed and more subjects to be taught, often at less cost per student.<sup>9</sup>

#### The Development of Pupil Transportation in the United States

In order to concentrate students in more efficient, larger school plants, at both the elementary and secondary levels, transportation became necessary in the 1920's for many more pupils than before. Often, pupils were required to attend school a considerable distance from their homes. At first the pupils or their families were expected to furnish transportation. Later, school districts accepted the responsibility of transporting pupils to school. The financial burden fell unequally upon the districts because of differing local conditions. Along with the development of good motor transportation came efforts by some states to compensate local districts for the

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<sup>8</sup>McCann, p. 98.

<sup>9</sup>Fisher, p. 4.

incident of transportation costs.<sup>10</sup>

The evolvement of school transportation in the United States has been slow and of universal concern. The idea of pupil transportation at public expense was initiated and legalized in Massachusetts in 1869.<sup>11</sup> The first school system of record to legally provide pupil transportation was in the town of Quincy that same year.<sup>12</sup>

Present programs of pupil transportation service in the nation's public school systems bear little, if any, resemblance to that original program. The covered wagon has been replaced with a yellow painted, all steel unit, capable of seating as many as eighty-three pupils. The crude dirt roads have been replaced with hard surface highways in most of the areas that were inaccessible. The illiterate and poorly clothed mule team drivers of the wagon era have been replaced with more literate and carefully supervised drivers, possessing the highest rated driver's license issued in their respective states. The maximum route length of five miles has been increased many times over without increasing to any appreciable extent the time required in transit; and the school year has been extended from four months to nine months or more with transportation equipment in operation on a fairly acceptable basis throughout the school term.<sup>13</sup>

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<sup>10</sup>Ibid., p. 5.

<sup>11</sup>Ray Page, Illinois School Bus Transportation, Illinois State Department of Public Instruction, Pub. No. 171, (Springfield, 1969), p. 1.

<sup>12</sup>Report of Proceedings—National Conference on Pupil Transportation, Tennessee State Department of Education, (Nashville, 1966), p. 1. (This conference was funded under Title V, E.S.E.A., P. L. 89-10).

<sup>13</sup>Ibid.



The idea of pupil transportation was conceived by the more prosperous farmers who chose to transport their children to school, rather than board them in urban areas. It was introduced for the explicit purpose of equalizing educational opportunity for all children living in rural areas. The success of the venture can be, for the most part, attributed to the improvement of roads, the mechanization of industry, the rapid decline in the influence of the early rural neighborhood, and the consolidation of inferior one and two teacher schools.<sup>14</sup>

School transportation at public expense progressed as did district reorganization. The early schools drew pupils from homes no farther away than the smallest child could walk. Consequently, many legal provisions for school transportation were related to legislation for district reorganization. As a means of avoiding objection to reorganization, many laws providing for consolidation included requirements that transportation be furnished children in need of it. In some cases this need was determined by stating a specified distance so that all children living more than a mile and a half from school, for instance, must be furnished transportation. Another type of provision was that transportation must be furnished so that no child would be required to walk farther to school after reorganization than he had previously been required to walk. Although such laws applied as a mandate only to the reorganized districts, they became part of permissive legislation for other types of school districts.

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<sup>14</sup>Joe Morgan, Manual for School Administrators on Pupil Transportation, Tennessee State Department of Education, (Nashville, 1961), p. 1.

When states began sharing the cost of transportation with the local district, the legal qualifications frequently pertained to any pupil living beyond a specified distance, but within the school district. Thus, according to the laws of many states, transportation must be furnished in districts organized under certain consolidation procedures and may be provided in other districts.<sup>15</sup>

The road to success for the various programs of pupil transportation has been filled with trials and tribulations of the greatest magnitude. In many systems, programs were initiated only to be discontinued when sufficient funds could not be secured to insure their survival. In desperation, school officials turned to subscription-financed transportation which flourished, but did not fulfill their needs. Finally, after years of sub-standard transportation service, the various states provided some degree of badly needed financial assistance and many school systems, for the first time, envisioned an end to the financial drought that had plagued their programs for so long.<sup>16</sup> As of yet, the visions have not come into exact focus and the drought has not completely ended.

School transportation was initially a product of sparsity of population. With pupils scattered over a wide area, people were confronted with either small, inadequate and expensive attendance units or with providing transportation to bring pupils to an attendance unit of adequate and efficient size. As programs for special education have developed, the same problem has cropped up again. Provisions have been

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<sup>15</sup>Van Miller, p. 364.

<sup>16</sup>Report of Proceedings . . . , p. 1.

made for special education pupils in order to assemble enough of each of the various types in one place to warrant operation of a good program. In this age of high-speed cars and heavy highway or arterial street traffic, school transportation is also being provided for the sake of safety. In some places a form of shuttle bus service is being used to shift students from one attendance center to another for portions of their programs to better utilize heavy or expensive equipment. In recent years in the cities, bus service has been used to relieve overcrowding of schools in congested areas. It has been proposed, and adopted in some instances, also to use school bus service for shifting pupils to various attendance units to gain a better racial and ethnic group balance.<sup>17</sup> The demand upon the schools to provide complete pupil transportation services has been intensifying.

#### The Principle of Equalization in School Finance With Particular Emphasis on Pupil Transportation

It appears inevitable that the principle of financial equalization would develop in a country where society believes in free education for all. Many authors in the school finance area have commented on the overall basis of financial support.

The history of educational finance in the United States, as viewed by Wochner and Miller, has been a constant refinement in the effort to

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<sup>17</sup> Van Miller, p. 365.

equalize educational opportunity.<sup>18</sup> As early as 1905, Cubberly<sup>19</sup> called attention to the fact that many inequalities resulted from the lack of sound formulas for the equalization of state funds for education purposes. His 1904 study was the first serious attempt made to identify the inequities that existed among the states in the area of school finance. He pointed to the transporting of pupils as a means for improving educational opportunity and of equalizing educational advantages in rural areas.

In 1918 Gowans summed up the attitudes of many educational writers when he wrote, "It is thought to be unnecessary here to advance any argument in favor of the proposition that any one child in the state is entitled to the same educational opportunity as any other, irrespective of where he may live."<sup>20</sup> Many other writers in the field of school finance, such as Strayer<sup>21</sup> and Moffitt<sup>22</sup>, have repeated the philosophy of equalization of educational opportunity.

The concept of equalization of educational opportunity was also expressed by Strayer and Haig in their report to the Educational In-

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<sup>18</sup>Raymond E. Wochner and Van Miller, "Correction for Sparsity in State Aid Formulas," American School Board Journal, CXVII, (November 1948), p. 29.

<sup>19</sup>Ellwood P. Cubberly, School Funds and Their Apportionment, (New York: Teachers College, Columbia University, 1905), p. 247.

<sup>20</sup>E. G. Gowans, "Twelfth Report of the Superintendent of Public Instruction," A Report for the Period Ending June 30, 1918, (Salt Lake City: The Department of Public Instruction), p. 10, Mimeographed.

<sup>21</sup>George D. Strayer, Jr., Guidelines for Public School Finance, (Spencer, Indiana: Phi Delta Kappan, 1963), p. 12.

<sup>22</sup>John C. Moffitt, The Development of Public School Finance in Utah, (Provo; 1958), pp. 47-58.

quiry Commission in 1923.

There exists today and has existed for many years a movement which has come to be known as the "equalization of educational opportunity" or the "equalization of school support". . . .the state should insure equal educational facilities to every child within its borders at a uniform effort throughout the state in terms of the burden of taxation.<sup>23</sup>

This report was one of the first interpretations of the equalization principle which provided for a minimum educational program below which no local district could go and above which any district could rise by means of additional local tax effort. Although this statement of principle constituted only a small segment of the report in which it was contained, it had far reaching consequences. From this concept was evolved the Strayer-Haig formula for school finance that continues to influence many, if not all, state foundation finance plans to this day.<sup>24</sup>

The state financial aid to education systems developed to advance the principle of equal educational opportunity have been the foundation programs which provided for minimum educational agenda. But, the foundation programs have not completely reached the equalization objective.

Mort recognized the inequities that existed in the financing of public schools and in 1924, proposed a general plan for measuring educational need. His proposal contained an outline of the elements that should constitute a satisfactory equalization program. He stated that

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<sup>23</sup>George D. Strayer and Robert M. Haig, The Financing of Education in the State of New York, Report of the Educational Finance Inquiry Commission, (New York: The Macmillan Company, 1923), p. 173.

<sup>24</sup>Palmer, p. 12.

a satisfactory equalization program would demand that special facilities such as transportation must be furnished.<sup>25</sup>

Johns and Morphet wrote of the importance state financial assistance provided for minimum educational programs.

The foundation program represents the minimum amount of education per child (expressed in terms of costs) which shall be provided for every community in the state or at the national level, by every state in the commonwealth and should be based upon the general consensus of the body politic as to the value of resources expended for education in comparison with the (marginal) returns which those resources would have yielded in other uses.<sup>26</sup>

The authors had previously indicated their belief that given the size of the total government, money should be allocated among the various avenues of expenditure in such a way that the marginal advantages (benefits secured from the last dollar spent on each purpose) in each line are equal.<sup>27</sup>

Superficially it may appear that transportation has little to do with an adequate education program. However, on closer examination it is evident that the operation of a transportation system has many implications for the instructional program. Johns has stated, ". . . school transportation was the key to educational opportunity in rural areas."<sup>28</sup> With the current emphasis on school integration, school transportation possibly could play a major role in equalizing educa-

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<sup>25</sup>Paul R. Mort, The Measurement of Educational Need, (New York: Teachers College, Columbia University, 1924), p. 8.

<sup>26</sup>R. L. Johns and Edgar L. Morphet, Problems and Issues in Public School Finance, (New York: National Conference of Professors of Educational Administration, 1952), p. 119.

<sup>27</sup>Ibid., p. 118.

<sup>28</sup>R. L. Johns, "Determining Pupil Transportation Costs," The National Schools, XLIII, (February 1949), p. 48.

tional opportunity for minority groups in poverty stricken areas.

If transportation is essential to providing equal educational opportunity, it is likewise essential that the burden of providing this important service be equalized. In 1926, Mort indicated the need for an adequate index for measuring the cost of transporting pupils. He left no doubt as to where he felt the responsibility for this program belonged when he stated, "The costs of such transportation are a legitimate responsibility of the state as a whole. They should be considered as a part of the cost of the minimum (education) program."<sup>29</sup> He also appealed for research designed to develop refinements in the technique of equalizing educational opportunity.

Mort saw as a necessary first step toward equal education opportunity, the equalization of the burden caused by transportation. He believed that only then could state foundation programs work.<sup>30</sup>

It was noted by Burns that the equalization of educational opportunity depended upon a correspondending equalization in the burden of transportation costs. He declared that an equal opportunity for education demands that the state distribute the burden of transportation costs in an equitable manner.<sup>31</sup>

Lambert believes that transportation plays a vital role in the social as well as in the academic educational process. He noted that

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<sup>29</sup>Paul R. Mort, State Support for the Public Schools, (New York: Teachers College, Columbia University, 1926), p. 99.

<sup>30</sup>Paul R. Mort, State Support for Public Education, (Washington D. C.: American Council of Education, 1933), p. 74.

<sup>31</sup>Robert L. Burns, Measurement of the Need for Transporting Pupils: Basis for State Equalization of Transportation Costs, (New York: Teachers College, Columbia University, 1927), p. 52.

pupil transportation would continue to grow and its inherent problems, such as finance, would become more complex.<sup>32</sup>

Butterworth and Ruegseggar declared that the state governments have responsibility in setting standards of operation of pupil transportation programs.<sup>33</sup> Burrup, however, pointed out that if a state sets standards and provides financial aid, there is no guarantee that the burden will be equalized. He noted that many forms of state aid do not equalize the burden of school transportation.<sup>34</sup>

Mort believed that only after equalizing the financial burden by transportation could a workable state equalization program be developed.<sup>35</sup> Likewise, Johns considered school transportation services to be a part of a "balanced comprehensive program of education financed by an equitable taxing system."<sup>36</sup>

The Council of Chief State School Officers listed as one of the areas of responsibility for states a provision for equitable distribution of state transportation funds. In connection with this important responsibility the council reported as follows:

When state funds are made available, a necessary first step is to provide a method of allocating these funds . . . formulas should be prepared for the equitable

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<sup>32</sup> Asail C. Lambert, School Transportation, (California: Stanford University Press, 1938), p. 48.

<sup>33</sup> Julian E. Butterworth and Virgil Ruegseggar, Administering Pupil Transportation, (Minneapolis: Educational Publishers, Inc., 1941), p. 4.

<sup>34</sup> Percy E. Burrup, "Equalization Begins With Transportation," Nations Schools, LIV, (July 1954), p. 61.

<sup>35</sup> Mort, State Support for Public Education, p. 74.

<sup>36</sup> Johns, p. 48.



distribution of funds to local districts.<sup>37</sup>

Approaches To Equitable State Aid  
For Pupil Transportation

Many states had struggled with the problem of equitable distribution of state transportation funds and by 1962, two general methods of distribution had evolved. One was to make flat grant payments to local districts on some measure of transportation load such as bus miles traveled, pupils transported, or a flat percentage of transportation costs. The other was to attempt to distribute funds equitably through the application of equalizing factors such as density of population and/or types of roads.<sup>38</sup> In many cases the utilization of "equalization factors" has not resulted in a true equilization of funds because local district financial ability and effort has not been taken into consideration.

Johns and Morphet stated that there were unsatisfactory features and inequities in most plans for state support of transportation and many of the provisions in effect were little more than makeshift devices for giving some assistance for financing the cost of school transportation. They especially recognized the inequities of the flat grant plans in the following statement:

Several states provide a flat amount per pupil toward meeting the cost of transportation. This is

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<sup>37</sup> Council of Chief State School Officers, Pupil Transportation Services and School Plant Services, (Washington D. C.: The Council, 1958), pp. 19-20.

<sup>38</sup> Paul George Bethke, "Equitable Distribution of State Funds for Pupil Transportation in Colorado," (unpublished Ed.D. dissertation, University of Denver, 1965), p. 29.

not equitable because the cost per pupil, other things being equal, is considerably greater in the sparsely populated areas than in areas having sufficient pupils to justify larger buses with shorter trips.<sup>39</sup>

They also emphasized the fact that in the states in which there is no financial assistance for transportation expense, consolidation of schools tends to be retarded and the least wealthy and most sparsely populated areas are seriously penalized.<sup>40</sup>

This penalizing of the poorer districts has continued to attract attention to the inequities brought about by the flat grant method of fund distribution. Some areas have greater problems and fewer resources for combating them. There is no recognition of these problems and no extra allowance for limited ability to support the pupil transportation program in the flat grant method. As an example, a rural district having only a few pupils to transport, could well have more transportation expense than an urban district with many more pupils, yet would receive considerably less money from state sources.<sup>41</sup>

In 1965, Murray investigated many studies that had been made in a search for allocating state aid for transportation on an equitable basis. Through his work he was able to identify the weaknesses of another form of state fund distribution. He reported:

. . . state aid allowances distributed on a per capita basis invariably introduced inequalities at the local level and resulted all too often in the promotion and expansion of those activities and services such as pupil transportation only in those localities which

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<sup>39</sup>R. L. Johns and Edgar L. Morphet, Financing the Public Schools, (Englewood Cliffs: Prentice Hall, Inc., 1960), pp. 349-350.

<sup>40</sup>Ibid.

<sup>41</sup>Palmer, pp. 16-17.

were financially best able to match state funds.<sup>42</sup>

Lambert concluded that the need for pupil transportation was not equivalent to predicted cost nor could need be predicted from some basic measure, such as density of the school population or density of the transported pupil population. He was of the opinion that need should be determined locally. From these locally determined needs the equalization factor could be considered.<sup>43</sup>

Later, in 1951, McIntyre and Combs attempted to determine the relationship between transportation costs in South Dakota and several factors found in literature that reportedly affect transportation costs. These factors, used by many states in the calculation of state aid for transportation, were: the number of pupils transported per square mile; the number of transported pupils per mile of bus route; road surfaces and conditions; and the number of pupils transported.<sup>44</sup>

A significant positive correlation ( $r=.85$ ) between transportation costs and a factor combining the number of pupils transported and the distance from school for each pupil was found by McIntyre and Combs. Correlations between transportation costs and the other factors were not significant in South Dakota.<sup>45</sup>

Burrup stated that there was a need for valid formulas and pro-

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<sup>42</sup>John B. Murray, "An Analysis of State Plans for Financing Pupil Transportation," (Unpublished Ed.D. dissertation, Michigan State University, 1965), pp. 31-32.

<sup>43</sup>Lambert, pp. 118-120.

<sup>44</sup>Kenneth E. McIntyre and Richard J. Combs, "Transportation: A Basis for Distributing State Funds," The Nations Schools, IL, (March 1952), pp. 51-53.

<sup>45</sup>Ibid.

visions for equalization for pupil transportation as reorganized school districts developed and pupil transportation problems became greater. He cited the inequities that followed when state aid was distributed on a flat grant or on a per pupil transported basis. He declared that the method of state aid based on a percent payment of the total cost of pupil transportation to each district also resulted in inequity among districts. His answer to the question of equalization of pupil transportation costs was that equalization should be based upon equal tax effort in all districts with the state providing the money necessary to pay the additional costs. Ironically, many states establish a minimum foundation program based on this fundamental principle, but disregard it when providing for the equalization of transportation costs.<sup>46</sup>

A 1956 study of transportation costs in Kentucky was purposeful in attempting to determine some of the reasons for variations in pupil transportation costs for twenty selected school districts. The wide variations in costs among the districts led to the conclusion that distributing state aid on average cost was questionable.<sup>47</sup>

Wells,<sup>48</sup> as a result of his study of pupil transportation in Indiana, recommended that the state support the estimated reasonable cost of pupil transportation or at least bear the major portion of the

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<sup>46</sup>Burrupe, pp. 61-62.

<sup>47</sup>Larue Cocanougher, "An Analysis of Pupil Transportation Deviations in Selected Kentucky School Districts," (unpublished Ed.D. Dissertation, George Peabody College, 1956), p. 107.

<sup>48</sup>Charles A. Wells, "A Critical Analysis of Sparsity and Wealth Factors of the Indiana Pupil Transportation Support Formula," (unpublished Ed.D. dissertation, Indiana University, 1957), pp. 163-164.

cost. Each school's aid should be computed from the local wealth per legally transported pupil. Wealth factors must be established as a first step in implementing the equalization plan.

The distance criterion as a means for determining transportation need has been questioned by Featherstone.<sup>49</sup> He noted that most state plans for financing transportation did not contain elements which encouraged economy in the use of transportation funds.

Morphet and Lindman<sup>50</sup> stated that a fixed amount of state support per pupil regardless of the conditions under which pupils must be transported was an impractical procedure. They cited the practice in some states of providing state aid on the basis of transportation expenditures. This practice penalized the least wealthy districts because they were less capable of financing pupil transportation.

In the school year 1964-65, Bethke<sup>51</sup> studied the method of distribution of state funds for public school transportation to Colorado school districts and attempted to develop a formula that would distribute state transportation money more equitably. He systematically developed the term "equitable" and, according to his definition, it was found that Colorado's method of distributing state funds did not accomplish equalization. His concept of an equitable transportation formula was predicated on the grounds that such a formula should also offer incentives to local districts for the health and safety of the

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<sup>49</sup>E. Glenn Featherstone, "Pupil Transportation: The Next Ten Years," The Nations Schools, LXII, (August 1958), pp. 33-38.

<sup>50</sup>Edgar L. Morphet and Erick L. Lindman, Public School Finance Programs of the Forty-Eight States, (Washington D. C.: U. S. Government Printing Office, 1950), pp. 20-59.

<sup>51</sup>Bethke, 127 pp.

transported pupils, the adequacy and efficiency of the pupil transportation program, ease of administration, and maximum local control of transportation policies. The proposed formula provided that no district would receive from the state less than twenty-five percent nor more than seventy-five percent of the actual cost. The measure of ability of a school district to support its various programs was measured by relating each district's assessed valuation of taxable property per pupil in average daily attendance to the state-wide assessed valuation per pupil in average daily attendance. The formula was then developed on each district's ability index.

Glenn's<sup>52</sup> study of Indiana's transportation aid formula was completed in 1967. He determined that the state formula, which included a wealth factor, but no burden factor, was equitable to a degree. But, the plan would be more equitable if the wealth factors and some of the other factors were revised or adjusted.<sup>53</sup>

The adequacy of school transportation service and state support in Texas was researched by McGregor.<sup>54</sup> He found that there were some inequities in the Texas formula. State aid was based primarily on a set number of dollars per size of bus, rider load, etc. McGregor made no recommendations about how to solve these inequities other than to increase the money flow to all districts on the previously indicated factors.

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<sup>52</sup>Max Edward Glenn, "A Comparative Study of Expenditures and State Support for Pupil Transportation for Indiana Local Districts for 1965-66," (Unpublished Ed.D. dissertation, Indiana University, 1967), 139 pp.

<sup>53</sup>Ibid., pp. 84-85.

<sup>54</sup>McGregor, p. 99.

Fisher, by modifying earlier work by Burrup, contrived a transportation aid formula for the state of Utah, which he professed to be equitable. At the time of Burrup's study, Utah was distributing funds strictly on a student-mile basis. He proposed a formula based upon tax effort ratio. That is, he thought payments to a local district should be according to the relationship between the district taxable wealth and the corresponding tax levy.<sup>55</sup>

In another Utah study, K. W. Palmer refined the formula proposed by Fisher and devised a program for equalizing pupil transportation aid. His proposed formula incorporated various factors designed to produce an improved measure of equalization. These factors were local effort, assessed valuation per pupil in average daily attendance, percent of maintenance and operation budgets being expended for transportation and a maximum level of state support (90%).<sup>56</sup> He found that the proposed formula would distribute state transportation aid more equitably and would equalize educational opportunity to a far greater extent than the state's adopted plan of providing money according to a flat-rate schedule.<sup>57</sup>

It is primarily the work of Fisher and Palmer that fostered the premise to which this document was dedicated. The primary thrust of this study, therefore, was to devise an equitable formula for distributing state transportation aid to the public schools in the state of Oklahoma.

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<sup>55</sup>Fisher, pp. 178-183.

<sup>56</sup>Palmer, p. 66.

<sup>57</sup>Ibid., p. 69.

## Summary

It has been cited that early in the history of the United States, citizens began to realize the need to establish free public schools. State financial support for education began during colonial times. As new states were formed, their respective constitutions included provisions for collecting and distributing the necessary revenues. Local land and real estate taxes have been used for many years as the principle source of money to finance schools. But, the many social and economic changes among communities has led to an inequality in ability to support education. Therefore, there has been a move toward more state financial aid to local districts to assist in compensating for this discrepancy in ability. To provide better educational opportunities, more economically, school districts have been reorganized into larger attendance areas with a greater concentration of students. This reorganization has fostered the problem of transporting children over a greater area to larger attendance centers.

The idea for providing transportation for students was conceived and the practice legalized in Massachusetts in 1869. The evolvement from that time has been slow but positive. Mule teams and wagons have been replaced by school buses. And, with the improvement of roads, routes have been increased considerably while traveling time has remained rather constant. Much of the progress in pupil transportation has been necessitated by the reorganization of school districts. As districts became larger, the laws advanced from permissive to mandatory. It became an obligation to provide transportation for children living more than a specified distance from school.

Many noted authors have commented on free education for all and



on the ramifications for financing an adequate educational program. Most seem to agree that education should be financed as fairly and equitably as possible. It is essential that schools be financed in an equitable manner if the American ideal of equal educational opportunity is to be realized. A major step in providing for equal educational opportunity is an adequate pupil transportation program. There seems to be a consensus among authors that providing a functional pupil transportation system requires adequate and equitable financing.

## CHAPTER III

### RESEARCH DESIGN

#### Introduction

Riley defined research design for an investigator as being ". . . a particular set of methods that he will follow in obtaining his research findings."<sup>1</sup> The research design for this dissertation, formulated according to Riley's definition, is described in this chapter. More specifically, sampling techniques, data collection and statistical analysis of the data are discussed. The chapter concludes with the procedures for developing and presentation of a proposed new formula for supporting pupil transportation and a description of the statistical procedures used to analyze data from application of the proposed formula.

#### The Sample

Oklahoma has a wide variation of topography, population density and wealth within its borders. This has fostered much diversity among school districts as to the number of students, land area and assessed valuation or wealth behind each child in average daily attendance.<sup>2</sup>

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<sup>1</sup>Matilda Riley, Sociological Research, (New York: Harcourt, Brace and World, Inc., 1963), p. 5.

<sup>2</sup>John W. Morris, Oklahoma Geography, (Norman, 1961), p. 4.

To gain a sampling of school districts that would include the mentioned characteristics, it was deemed necessary to draw samples from all areas of the state. As counties provide ready made areas of division, the seventy-seven counties in Oklahoma were used as the areas from which the sample was drawn. The districts in each county were numbered and placed in a container. One district was drawn for each county. This afforded a total of seventy-seven independent school districts which provide transportation to be studied in this project.

This study was basically a one-group repeated trials design. The subject school districts were analyzed by using one formula for supporting pupil transportation and then the same districts were treated in the same manner using a proposed new formula.

Kerlinger has said that, ". . . the best possible matching of subjects (under this type design) is to match a subject with himself."<sup>3</sup> There is some indication that representativeness is not essential. It was denoted, however, that when district financial ability was considered, representativeness of one type was at least approached. As a point of support for this contention, the state average assessed valuation per pupil in average daily attendance was \$6,141.80 and the sample average assessed valuation per A.D.A. was \$6,167.02 with a range from \$726 to \$19,723.

#### The Present Method of Supporting Transportation in Oklahoma

After the sample had been selected, pertinent data were gathered

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<sup>3</sup>Fred N. Kerlinger, Foundations of Behavioral Research, (New York, 1964), p. 339.

from various reports that the subject schools had filed with the State Department of Education. Data were also secured from the statistical file of the State Department of Education. Assessed valuation, average daily attendance, average daily haul, general fund mill levy, general fund expenditures, "k" factor and minimum program for transportation used to determine the "Q" figure in the state foundation program were the basic items secured for use in this endeavor.

The schedule on which state funds per transported child are credited to a district's foundation aid is presented in Table I.<sup>4</sup> The State Department of Education has refined this schedule and introduced many more divisions. This refined schedule is presented in Table II.<sup>5</sup> The rate of payment from the refined schedule is then multiplied by a correction factor ("k") to determine the amount of funds to be credited to a school district's foundation aid. The total transportation aid minimum program to which each sample school was entitled in the 1968-1969 school year is presented in Table III.

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<sup>4</sup>School Laws of Oklahoma 1968, Article VIII, Section 254g, (1968).

<sup>5</sup>Department of Education, State of Oklahoma, The School Finance, Transportation and Activity Fund Laws Including The State Board of Education Regulations for Administration and Handbook on Budgeting and Business Management, Bulletin No. 145P, 1969-70 (Oklahoma City, 1969), p. 33.

TABLE I  
 A GRADUATED SCALE ON WHICH STATE AID TO TRANSPORTATION  
 IS CALCULATED BASED ON LEGALLY TRANSPORTED  
 PUPILS PER SQUARE MILE<sup>6</sup>

Density Figure	Per Capita Allowance
0.30	\$76.00
0.60	58.00
1.00	43.00
2.50	36.00
3.50	32.00
4.50	29.00
5.50	29.00
6.50	24.00
7.50	22.00
8.00	15.00

<sup>6</sup>School Laws of Oklahoma 1968, p. 132.

TABLE II  
 THE STATE DEPARTMENT OF EDUCATION  
 REFINEMENT OF TABLE I<sup>7</sup>

Density Figure	Per Capita Allowance	Density Figure	Per Capita Allowance
.3000— .3083	.... \$76.00	.9334— .9599	.... \$45.00
.3084— .3249	.... 75.00	.9600— .9866	.... 44.00
.3250— .3416	.... 74.00	.9867— 1.1071	.... 43.00
.3417— .3583	.... 73.00	1.1072— 1.3414	.... 42.00
.3584— .3749	.... 72.00	1.3215— 1.5357	.... 41.00
.3750— .3916	.... 71.00	1.5358— 1.7499	.... 40.00
.3917— .4083	.... 70.00	1.7500— 1.9642	.... 39.00
.4084— .4249	.... 69.00	1.9643— 2.1785	.... 38.00
.4250— .4416	.... 68.00	2.1786— 2.3928	.... 37.00
.4417— .4583	.... 67.00	2.3929— 2.6249	.... 36.00
.4584— .4749	.... 66.00	2.6250— 2.8749	.... 35.00
.4750— .4916	.... 65.00	2.8750— 3.1249	.... 34.00
.4917— .5083	.... 64.00	3.1250— 3.3749	.... 33.00
.5084— .5249	.... 63.00	3.3750— 3.6666	.... 32.00
.5250— .5416	.... 62.00	3.6667— 3.9999	.... 31.00
.5417— .5583	.... 61.00	4.0000— 4.3333	.... 30.00
.5584— .5749	.... 60.00	4.3334— 4.6666	.... 29.00
.5750— .5916	.... 59.00	4.6667— 4.9999	.... 28.00
.5917— .6133	.... 58.00	5.0000— 5.3333	.... 27.00
.6134— .6399	.... 57.00	5.3334— 5.7499	.... 26.00
.6400— .6666	.... 56.00	5.7500— 6.2499	.... 25.00
.6667— .6933	.... 55.00	6.2500— 6.7499	.... 24.00
.6934— .7199	.... 54.00	6.7500— 7.2499	.... 23.00
.7200— .7466	.... 53.00	7.2500— 7.5357	.... 22.00
.7467— .7733	.... 52.00	7.5358— 7.6071	.... 21.00
.7734— .7999	.... 51.00	7.6072— 7.6785	.... 20.00
.8000— .8266	.... 50.00	7.6786— 7.7499	.... 19.00
.8267— .8533	.... 49.00	7.7500— 7.8214	.... 18.00
.8534— .8799	.... 48.00	7.8215— 7.8928	.... 17.00
.8800— .9066	.... 47.00	7.8929— 7.9642	.... 16.00
.9067— .9333	.... 46.00	7.9643— or more	.... 15.00

<sup>7</sup> State Department of Education, p. 33.

TABLE III  
STATE TRANSPORTATION AID FOR  
SAMPLE SCHOOLS (1968-69)

School District	Density	Aid Per Trans. Child	A.D.H.	"k" factor* (1.25 max.)	Minimum Program
1	3.1924	\$33.00	680	1.19	\$26,704
2	1.0217	43.00	94	1.44	5,053
3	1.6121	40.00	661	1.16	30,670
4	0.3683	72.00	149	2.75	13,410
5	1.2181	42.00	282	1.41	14,805
6	0.9523	45.00	180	1.64	10,125
7	6.8333	23.00	287	1.38	8,251
8	5.2136	27.00	305	1.35	10,294
9	3.8555	31.00	347	1.21	13,000
10	4.7130	28.00	271	1.21	21,300
11	2.5427	36.00	1190	1.17	50,123
12	1.5135	41.00	252	1.24	12,812
13	0.3307	74.00	169	2.39	15,633
14	2.7857	35.00	429	1.41	18,769
15	1.0220	43.00	278	1.42	14,943
16	1.2624	42.00	279	1.45	14,648
17	0.9642	44.00	189	1.81	10,395
18	2.1367	38.00	250	1.59	11,875
19	19.5820	15.00	1312	1.46	24,600
20	1.3148	42.00	213	1.84	11,183
21	2.2727	37.00	175	1.25	8,094
22	0.5636	60.00	177	1.80	13,275
23	0.2922	76.00	45	2.10	4,275
24	8.0392	15.00	410	1.62	7,688
25	4.0542	30.00	523	1.34	19,613
26	1.2793	42.00	229	1.29	12,023
27	0.8842	47.00	107	1.78	6,286
28	0.6506	56.00	244	1.74	17,080
29	2.2570	37.00	180	1.40	8,325
30	0.3965	70.00	115	1.68	10,063
31	3.1278	33.00	416	1.25	17,160
32	1.9682	38.00	248	1.25	11,780
33	5.6969	26.00	564	1.41	18,330
34	0.5826	59.00	148	1.69	10,915
35	1.6250	40.00	78	1.16	3,619
36	1.1104	42.00	176	1.64	9,240
37	1.5642	40.00	201	1.61	10,050
38	0.8101	50.00	192	1.25	12,000
39	1.7479	40.00	215	1.53	10,750
40	5.8059	25.00	778	1.25	24,313
41	2.7603	35.00	334	1.29	14,613
42	0.7889	51.00	86	1.46	5,483

TABLE III (Continued)

School District	Density	Aid Per Trans. Child	A.D.H.	"k" factor* (1.25 max.)	Minimum Program
43	1.555	\$40.00	252	1.14	\$11,491
44	1.5537	40.00	188	1.25	9,400
45	2.0336	38.00	484	1.32	22,900
46	3.4921	32.00	447	1.18	16,879
47	5.1746	27.00	326	1.41	11,003
48	3.7909	31.00	834	1.25	32,318
49	2.2828	37.00	347	1.25	16,049
50	1.9813	38.00	319	1.25	13,406
51	4.8181	28.00	318	1.22	10,863
52	0.7974	51.00	185	2.09	11,794
53	1.5701	40.00	179	1.25	13,650
54	1.9827	38.00	230	1.25	10,925
55	153.5581	15.00	6603	1.25	123,806
56	2.5500	36.00	204	1.25	9,180
57	0.7776	51.00	146	1.46	9,308
58	4.4086	29.00	205	1.20	7,134
59	1,6409	40.00	489	1.25	24,450
60	2.3977	36.00	211	1.47	9,495
61	0.7438	53.00	90	1.34	5,963
62	2.4883	36.00	214	1.25	9,630
63	5.9538	25.00	387	1.25	12,094
64	1.2791	42.00	559	1.25	29,348
65	0.4396	68.00	102	1.52	8,670
66	9.6307	15.00	626	1.25	11,738
67	23.0769	15.00	450	1.58	8,438
68	7.8421	17.00	447	1.25	9,499
69	3.7833	31.00	227	1.22	8,585
70	0.2594	76.00	62	1.73	5,890
71	0.4400	68.00	77	1.25	6,545
72	13.5154	15.00	97	1.96	24,581
73	3.8684	31.00	588	1.23	22,420
74	6.7515	23.00	530	1.08	13,165
75	1.4848	41.00	245	1.25	12,556
76	0.2945	76.00	109	1.37	10,355
77	1.8682	39.00	383	1.25	18,671

\*Even though the "k" factor in many cases is shown to be more than 1.25., the maximum "k" allowed by the State Department of Education for computing state aid was 1.25 in the 1968-1969 school year.



## Statistical Analysis of the Present Method of Supporting Pupil Transportation

Three procedures were employed to evaluate the equity of the present method of financially supporting pupil transportation in Oklahoma. The first approach was to compute Spearman rank order correlations between state support per transported child credited to the minimum program and assessed valuation behind each child in average daily attendance.

The second approach was to compute Spearman rank order correlations between the state support per transported child credited to the minimum program and the effort on the part of the local district to provide an adequate educational program. Effort was measured by the local general fund mill levy.

The third approach was to compute Spearman rank order correlations between the percent of transportation costs credited to the district's minimum program and the burden to the local district that results from efforts to provide pupil transportation. The local district burden was expressed as the percent of the local district's general fund that is being expended to support pupil transportation. The actual results from statistical computation of data will be presented in Chapter IV.

### Developmental Procedures and Presentation of the Proposed Formula

The proposed transportation aid formula was developed on information available at the State Department of Education. The procedure required the author to rely heavily upon the work of

R. D. Fisher<sup>8</sup> and K. W. Palmer<sup>9</sup> in the development of the proposed formula. Fisher's contrived transportation formula for the state of Utah incorporated district financial ability, transportation burden and a minimum mill levy to support a pupil transportation program. However, the three factors were primarily based on approved costs as defined by Fisher, bus miles traveled per day, a density index, a bus utilization index, a bus depreciation allowance and a special minimum mill levy for pupil transportation.<sup>10</sup> Even though the formula was workable, it was rather burdensome and complicated and was not adopted for use by the state.

The transportation aid formula for Utah proposed by Palmer was a refinement of Fisher's work. Palmer greatly simplified the formula, but used many of Fisher's ideas. The proposed transportation aid formula developed herein utilized many of the premises developed by Palmer

Palmer's formula was developed according to local effort (.25 mill special transportation levy), ability (assessed valuation per pupil in A.D.A.), burden (percent of maintenance and operation budget being expended for transportation) and a maximum level of state support (90%).<sup>11</sup> This investigator proposes to use some of the same terminology as Palmer, but the terms are projected somewhat differently.

Whereas both Fisher and Palmer proposed a uniform special local

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<sup>8</sup>Fisher, 1965, 194 pp.

<sup>9</sup>Palmer, 1969, 100 pp.

<sup>10</sup>Fisher, pp. 122-139.

<sup>11</sup>Palmer, p. 66.

tax of .25 mill for transportation and labeled the result as local effort, this writer preferred to measure effort by the total general fund mill levy voted by a district. Ability in both Palmer's formula and in the proposed formula presented herein was identified as the assessed valuation per pupil in average daily attendance. Burden for Palmer was the percent of maintenance and operation budget being expended for transportation. In the proposed formula, burden was expressed as the per cent of general fund expenditures spent for transportation. Both formulas incorporate a maximum level of state support. Palmer proposed 90% for Utah. This writer views the maximum level of state support as being adjustable and dependent upon the amount of capital available. For comparison purposes in this study 75% was used as the maximum level of state support.

To be truly equalizing, a formula must take into consideration the relative financial ability of each school district to provide a pupil transportation program.<sup>12</sup> In this study, as previously stated, financial ability was expressed as the assessed valuation per pupil in average daily attendance in each district.

It is common knowledge that the local ad valorem tax is by far the most productive local source through which school districts may secure funds to support their educational programs. In the 1968-1969 school year, the most recent data available at the start of this project, the sample districts' assessed valuation per pupil in average daily attendance ranged from a high of \$19,753 to a low of \$726. Thus, the same mill levy in the first district would raise approximately

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<sup>12</sup>Ibid., pp. 41-42.

twenty-seven times the amount of revenue per pupil in average daily attendance as in the latter district. Districts having high assessed valuations per pupil in average daily attendance, are therefore placed in a privileged position as compared with those of lower fund-raising potential.

A true equalization formula should contain factors which would offset these inherent inequalities. The formula should provide a proportionately greater share of state funds to districts having a proportionately lower ability to raise local funds.<sup>13</sup> For these reasons the ability ratio was included in the proposed formula. A school district's ability ratio was computed by dividing the district's assessed valuation per pupil in average daily attendance by the sample average of the same measure.

An equalization formula for supporting pupil transportation should also recognize the relative burden placed on respective school districts to provide an adequate pupil transportation program. Various local conditions contribute to the problems a district faces in providing pupil transportation services. These conditions vary from district-to-district, imposing different financial requirements of each.

That the problems faced by the districts are not consistent throughout the state is evident through a comparison of the percent of general fund expenditures spent to support pupil transportation. The percent of general fund expenditures expended for pupil transportation in the sample schools ranged from a high of 17.65 percent to a low of

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<sup>13</sup>Ibid., pp. 41-42.

0.42 percent. Local conditions in the first district required that proportionately over 42 times as many dollars were lost to the educational program as in the latter.

In order to reduce such inequities, the burden ratio was incorporated into the proposed formula. The burden ratio was defined as the percent of general fund expenditures being spent by a district for pupil transportation divided by the sample district average of the same measure.

It has been proposed that an equitable state aid formula should recognize the effort made by each school district to support education. Oklahoma state law permits a district to levy up to a 35 mill tax levy for general fund purposes.<sup>14</sup> Districts that do not levy the legal maximum amount are not making the same effort to support education as those districts that levy the 35 mill ad valorem tax. For these reasons the effort ratio was included in the proposed formula. Effort ratio was derived by dividing a district's general fund mill levy by the maximum, 35 mills allowed by law.

To instill an incentive for districts to practice economy in providing transportation services, it was decided to include a maximum level of state support in the proposed formula. If a state were to underwrite the total cost of pupil transportation, uneconomical operation of a district's pupil transportation program could possibly result.<sup>15</sup> It was reasoned that involvement by local districts in providing funds would foster economy of operation. Any funds spent

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<sup>14</sup>School Laws of Oklahoma 1968, Article VII, Section 328, pp. 161-162.

<sup>15</sup>Palmer, p. 45.

unnecessarily would result in a corresponding reduction in funds available for other educational programs. The maximum level of state support in the proposed formula was set at 75 percent. The exact percent of state support was determined to be best decided by officials in the State Department of Education in accordance with available revenue. The 75 percent level of state support, as incorporated in the proposed formula was, therefore, an arbitrary figure.

Computing state aid for pupil transportation under the proposed formula is a rather simple process. The basic data needed to calculate transportation aid for a school district is currently being filled each year with the State Department of Education. There are five basic steps involved. The first step is essentially the same as that suggested by Palmer in his proposed transportation aid formula for the state of Utah.<sup>16</sup> The remaining steps, however, depart from those presented by Palmer. The steps in the proposed transportation aid formula for Oklahoma are as follows:

1. Determine the ability ratio. As shown in Figure 1, the ability ratio for each district is computed by dividing a district's assessed valuation per child in average daily attendance into the average assessed valuation per pupil in average daily attendance of the sample districts.

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<sup>16</sup>Ibid., p. 47.

<u>School District</u>	<u>Avg. A.V. Per A.D.A.</u>	$\div$	<u>Dist. A.V. Per A.D.A.</u>	=	<u>Ability Ratio</u>
X	6,167.00		\$1,567.00		3.93
Y	6,167.00		9,785.00		0.63

Figure 1. Procedure for Determining Ability Ratio

2. Determine the burden ratio. The burden ratio for a school district is computed by dividing the district's percent of general fund expenditures spent for pupil transportation by the sample average percent of general fund monies being expended for pupil transportation services. Figure 2 pictures the procedure for determining burden ratio.

<u>School District</u>	<u>Percent of Gen. Fund for Trans.</u>	$\div$	<u>Sample Average</u>	=	<u>Burden Ratio</u>
X	5.42		5.91		0.92
Y	4.76		5.91		0.81

Figure 2. Procedure for Determining Burden Ratio

3. Determine the maximum level of state support. The maximum level of state support for which a district is eligible is computed by multiplying the ability ratio by the burden ratio. This product is then multiplied by one hundred. The result is rounded down to 75.0 in those cases where it exceeds that amount. This number, as shown in Figure 3, repre-

sents the percent of a district's transportation costs that may be paid by the state. However, the state will pay the calculated percentage only if an effort ratio of 1.000 is computed for that district.

<u>School District</u>	<u>Ability Ratio</u>	x	<u>Burden Ratio</u>	x	<u>100</u>	=	<u>Percent of State Support (rounded to 75.0)</u>
X	3.92		0.92		360.0		75.0
Y	0.63		0.81		51.0		51.0

Figure 3. Procedure for Determining Level of State Support

4. Determine the effort ratio. The effort ratio is determined by dividing the district's ad valorem tax levy for general fund purposes by the maximum (35 mills) allowed by law. The procedure is indicated in Figure 4.

<u>School District</u>	<u>District Mill Levy</u>	<u>.</u>	<u>State Max. Mill Levy</u>	=	<u>Effort Ratio</u>
X	35		35		1.000
Y	30		35		.857

Figure 4. Procedure for Determining Effort Ratio



5. Determine state aid for pupil transportation. The state's share of a district's transportation costs is determined by multiplying that district's transportation cost times the maximum level of state support for that same district. This product is then multiplied by the district's effort ratio. The resulting number, calculated to the nearest dollar, represents the amount to be funded by the state. Examples of this procedure are presented in Figure 5.

<u>School District</u>	<u>Trans. Cost</u>	x	<u>Max. Percent of Support</u>	x	<u>Effort Ratio</u>	=	<u>State Aid</u>
X	\$37,682		75.0		1.000		\$28,262
Y	33,786		51.0		0.857		14,767

Figure 5. Procedure for Determining District Transportation Aid

A hypothetical application of state pupil transportation aid to the sample school districts was computed using basic data reported by the districts to the State Department of Education for the 1968-1969 school year. Table IV shows the results of this hypothetical allocation to the Oklahoma school districts included in this study. The basic data are available in the finance division of the State Department of Education. The remaining data in Table IV are the results of mathematical computations using the known data as a basis.

Instructions for computing Table IV are as follows:

TABLE IV  
 HYPOTHETICAL APPLICATION OF PROPOSED FORMULA  
 TO SAMPLE OKLAHOMA SCHOOL DISTRICTS  
 FOR 1968-1969 SCHOOL YEAR\*

School District	(1) District A.V. per A.D.A.	(2) Average A.V. per A.D.A.	(3) Ability Ratio (A.R.)	(4) Percent Gen. Fund For Trans.	(5) Average Gen. Fund For Trans.
1	\$ 1,567	\$6,167	3.93	5.42	5.91
2	9,785	6,167	0.63	4.76	5.91
3	2,706	6,167	2.27	3.04	5.91
4	13,700	6,167	0.45	6.01	5.91
5	8,718	6,167	0.71	4.39	5.91
6	8,401	6,167	0.73	4.32	5.91
7	3,567	6,167	1.73	0.79	5.91
8	3,459	6,167	1.78	4.88	5.91
9	4,139	6,167	1.49	2.23	5.91
10	4,954	6,167	1.24	5.09	5.91
11	2,224	6,167	2.77	4.09	5.91
12	2,890	6,167	2.13	7.48	5.91
13	12,427	6,167	0.50	8.57	5.91
14	4,257	6,167	1.45	7.96	5.91
15	5,074	6,167	1.22	6.10	5.91
16	3,290	6,167	1.87	4.63	5.91
17	4,960	6,167	1.24	4.85	5.91
18	4,842	6,167	1.27	2.67	5.91
19	3,466	6,167	1.78	2.47	5.91
20	7,151	6,167	0.86	3.52	5.91
21	726	6,167	8.49	7.31	5.91
22	10,055	6,167	0.61	5.44	5.91
23	16,916	6,167	0.37	5.01	5.91
24	5,965	6,167	1.03	0.42	5.91
25	4,032	6,167	1.53	2.00	5.91
26	6,257	6,167	0.99	6.00	5.91
27	19,753	6,167	0.31	5.30	5.91
28	7,144	6,167	0.86	4.40	5.91
29	4,828	6,167	1.28	17.65	5.91
30	15,196	6,167	0.41	7.45	5.91
31	2,908	6,167	2.12	8.37	5.91
32	5,233	6,167	1.18	7.10	5.91
33	3,133	6,167	1.97	0.87	5.91
34	9,585	6,167	0.62	5.52	5.91
35	2,683	6,167	2.30	5.03	5.91
36	4,925	6,167	1.25	2.23	5.91
37	8,559	6,167	0.72	2.50	5.91
38	11,797	6,167	0.52	8.83	5.91

TABLE IV (Continued)

School District	(6) Burden Ratio (B.R.)	(7) A.R.xB.R.	(8) A.R.xB.R. x100	(9) Level of State Support (75% Max.)	(10) Trans. Cost
1	0.92	3.606	360.6	75.0	\$37,682
2	0.81	0.510	51.0	51.0	20,064
3	0.51	1.157	115.7	75.0	33,786
4	1.02	0.459	45.9	45.9	36,266
5	0.74	0.525	52.5	52.5	22,402
6	0.73	0.533	53.3	53.3	12,631
7	0.13	0.225	22.5	22.5	8,293
8	0.83	1.477	147.7	75.0	17,021
9	0.38	0.566	56.6	56.6	20,007
10	0.86	1.066	106.6	75.0	16,530
11	0.69	1.911	191.1	75.0	49,278
12	1.26	2.684	268.4	75.0	18,422
13	1.45	0.725	72.5	72.5	41,228
14	1.35	1.957	195.7	75.0	34,567
15	1.03	1.257	125.7	75.0	17,732
16	0.78	1.458	145.8	75.0	13,782
17	0.82	1.017	101.7	75.0	19,413
18	0.45	0.572	57.2	57.2	18,965
19	0.42	0.747	74.7	74.7	41,890
20	0.60	0.516	51.6	51.6	18,630
21	1.23	10.443	1044.3	75.0	13,645
22	0.92	0.561	56.1	56.1	18,479
23	0.85	0.315	31.5	31.5	7,167
24	0.07	0.072	7.2	7.2	20,039
25	0.34	0.520	52.0	52.0	18,802
26	1.02	1.009	100.9	75.0	15,136
27	0.90	0.279	27.9	27.9	9,600
28	0.74	0.636	63.6	63.6	23,419
29	2.98	3.814	381.4	75.0	18,179
30	1.26	0.516	51.6	51.6	31,531
31	1.42	3.010	301.0	75.0	25,257
32	1.20	1.416	141.6	75.0	21,750
33	0.15	0.300	30.0	30.0	22,586
34	0.93	0.576	57.6	57.6	15,685
35	0.85	1.955	195.5	75.0	4,477
36	0.38	0.475	47.5	47.5	20,488
37	0.42	0.302	30.2	30.2	17,838
38	1.49	0.775	77.5	75.0	22,377

TABLE IV (Continued)

	(11)	(12)	(13)	(14)	(15)
School District	Max. State Contribution	District Mill Levy	Max. Mill Levy	Effort Ratio	State Trans. Aid
1	\$28,262	35	35	1.000	\$28,262
2	10,232	35	35	1.000	10,232
3	25,340	30	35	0.857	21,716
4	16,646	30	35	0.857	14,266
5	11,761	35	35	1.000	11,761
6	6,736	35	35	1.000	6,732
7	1,866	35	35	1.000	1,866
8	12,766	30	35	0.857	10,940
9	11,324	35	35	1.000	11,324
10	12,398	35	35	1.000	12,398
11	36,959	35	35	1.000	36,959
12	13,817	30	35	0.857	11,841
13	29,890	35	35	1.000	29,890
14	25,925	35	35	1.000	25,925
15	13,299	25	25	0.714	9,495
16	10,337	35	35	1.000	10,337
17	14,560	35	35	1.000	14,560
18	10,848	35	35	1.000	10,848
19	31,292	35	35	1.000	31,292
20	8,786	32	35	0.914	8,786
21	10,234	35	35	1.000	10,234
22	10,367	35	35	1.000	10,367
23	2,258	30	35	0.857	1,935
24	1,443	35	35	1.000	1,443
25	9,777	35	35	1.000	9,777
26	11,352	35	35	1.000	11,352
27	2,678	30	35	0.857	2,295
28	14,894	25	35	0.714	10,635
29	13,634	30	35	0.857	11,685
30	17,107	25	35	0.714	11,617
31	18,943	35	35	1.000	18,943
32	16,313	35	35	1.000	16,313
33	6,776	25	35	0.714	4,838
34	9,035	25	35	0.714	6,451
35	3,356	30	35	0.857	2,878
36	9,732	35	35	1.000	9,732
37	5,387	35	35	1.000	5,387
38	16,783	25	35	0.714	11,983

TABLE IV (Continued)

School District	(1) District A.V. per A.D.A.	(2) Average A.V. per A.D.A.	(3) Ability Ratio (A.R.)	(4) Percent Gen. Fund For Trans.	(5) Average Gen. Fund For Trans.
39	\$ 7,825	\$ 6,167	0.79	10.56	5.91
40	2,951	6,167	2.09	6.90	5.91
41	3,329	6,167	1.85	6.30	5.91
42	18,351	6,167	0.34	10.54	5.91
43	3,950	6,167	1.56	3.13	5.91
44	11,056	6,167	0.56	8.28	5.91
45	4,901	6,167	1.26	8.13	5.91
46	5,159	6,167	1.20	1.69	5.91
47	3,604	6,167	1.71	13.09	5.91
48	2,453	6,167	2.51	6.69	5.91
49	3,326	6,167	1.85	6.50	5.91
50	7,344	6,167	0.84	4.66	5.91
51	14,220	6,167	0.43	3.43	5.91
52	6,703	6,167	0.92	7.25	5.91
53	5,434	6,167	1.14	4.78	5.91
54	11,618	6,167	0.53	9.59	5.91
55	7,140	6,167	0.86	2.25	5.91
56	3,910	6,167	1.58	0.79	5.91
57	6,239	6,167	0.99	3.96	5.91
58	3,013	6,167	2.05	3.61	5.91
59	5,823	6,167	1.06	4.79	5.91
60	5,151	6,167	1.20	12.23	5.91
61	3,849	6,167	1.60	14.51	5.91
62	3,827	6,167	1.61	9.64	5.91
63	1,617	6,167	3.81	3.80	5.91
64	3,131	6,167	1.97	7.04	5.91
65	6,963	6,167	0.89	13.84	5.91
66	3,132	6,167	1.97	14.54	5.91
67	3,204	6,167	1.92	1.86	5.91
68	1,369	6,167	4.50	5.43	5.91
69	3,462	6,167	1.78	4.02	5.91
70	11,504	6,167	0.54	4.49	5.91
71	14,204	6,167	0.43	6.77	5.91
72	4,887	6,167	1.26	4.42	5.91
73	3,715	6,167	1.66	3.62	5.91
74	3,901	6,167	1.58	1.80	5.91
75	5,507	6,167	1.12	3.89	5.91
76	17,158	6,167	0.36	9.45	5.91
77	6,430	6,167	0.96	2.17	5.91

TABLE IV (Continued)

School District	(6) Burden Ratio (B.R.)	(7) A.R.xB.R.	(8) A.R.xB.R. x100	(9) Level of State Support (75% Max.)	(10) Trans. Cost
39	1.79	1.414	141.4	75.0	\$19,581
40	1.17	2.445	244.5	75.0	38,566
41	1.07	1.980	198.0	75.0	17,150
42	1.78	0.605	60.5	60.5	15,025
43	0.53	0.826	82.6	75.0	9,469
44	1.40	0.784	78.4	75.0	16,008
45	1.38	1.739	173.0	75.0	39,895
46	0.29	0.348	34.8	34.8	19,532
47	2.22	3.796	379.6	75.0	23,813
48	1.13	2.836	283.6	75.0	44,391
49	1.75	3.237	323.7	75.0	31,469
50	0.79	0.664	66.4	66.4	23,549
51	0.58	0.249	24.9	24.9	18,953
52	1.23	1.132	113.2	75.0	45,777
53	0.81	0.932	93.2	75.0	23,942
54	1.62	0.859	85.9	75.0	36,311
55	0.38	0.326	32.6	32.6	159,371
56	0.13	0.205	20.5	20.5	12,749
57	0.68	0.673	67.3	67.3	17,014
58	0.61	1.251	125.1	75.0	17,014
59	0.81	0.859	85.9	75.0	27,818
60	2.07	2.484	248.4	75.0	20,990
61	2.45	3.920	392.0	75.0	16,532
62	1.63	2.624	262.4	75.0	15,051
63	0.64	2.438	243.8	75.0	19,082
64	1.19	2.344	234.4	75.0	37,785
65	2.34	2.083	208.3	75.0	25,241
66	2.46	4.846	484.6	75.0	27,543
67	0.31	0.595	59.5	59.5	11,022
68	0.92	4.140	414.0	75.0	12,561
69	0.68	1.210	121.0	75.0	18,028
70	0.76	0.410	41.0	41.0	10,738
71	1.15	0.495	49.5	49.5	9,745
72	0.75	0.945	94.5	75.0	77,296
73	0.61	1.013	101.3	75.0	25,475
74	0.30	0.474	47.4	47.4	11,869
75	0.68	0.762	76.2	75.0	15,124
76	1.60	0.576	57.6	57.6	32,185
77	0.37	0.355	35.5	35.5	27,867

TABLE IV (Continued)

School District	(11) Max. State Contribution	(12) District Mill Levy	(13) Max. Mill Levy	(14) Effort Ratio	(15) State Trans. Aid
39	\$14,686	35	35	1.000	\$14,686
40	28,925	35	35	1.000	28,925
41	12,863	35	35	1.000	12,863
42	9,090	35	35	1.000	9,090
43	7,102	30	35	0.857	6,086
44	12,006	35	35	1.000	12,006
45	29,921	35	35	1.000	29,921
46	6,791	35	35	1.000	6,791
47	17,860	35	35	1.000	17,860
48	33,293	35	35	1.000	33,293
49	23,602	25	35	0.714	16,852
50	15,637	35	35	1.000	15,637
51	4,719	35	35	1.000	4,719
52	34,333	35	35	1.000	34,333
53	17,957	35	35	1.000	17,957
54	27,233	35	35	1.000	27,233
55	51,955	35	35	1.000	51,955
56	2,614	35	35	1.000	2,614
57	11,450	35	35	1.000	11,450
58	9,639	35	35	1.000	9,639
59	20,864	28	35	0.800	16,691
60	15,743	35	35	1.000	15,743
61	12,399	35	35	1.000	12,399
62	11,288	35	35	1.000	11,288
63	14,312	35	35	1.000	14,312
64	28,339	35	35	1.000	28,339
65	18,931	35	35	1.000	18,931
66	20,657	35	35	1.000	20,657
67	6,558	35	35	1.000	6,558
68	9,421	35	35	1.000	9,421
69	13,521	35	35	1.000	13,521
70	4,403	35	35	1.000	4,403
71	4,824	35	35	1.000	4,824
72	57,972	33	35	0.943	54,668
73	19,106	28.5	35	0.814	15,552
74	5,625	35	35	1.000	5,625
75	11,343	35	35	1.000	11,343
76	18,539	35	35	1.000	18,539
77	9,893	35	35	1.000	9,893

\*The basic data on which computations were made are available in the State Department of Education.

1. Record the district's assessed valuation per pupil in average daily attendance in column 1.
2. Record average assessed valuation per pupil in average daily attendance in column 2.
3. Divide column 2 by column 1 and record quotient in column 3. This is the district's ability ratio.
4. Record the percent of general fund expenditures spent for pupil transportation services in column 4.
5. Record the average general fund expenditures spent for transportation in column 5.
6. Divide column 4 by column 5 and record results in column 6. This represents the district's burden ratio.
7. Multiply column 3 by column 6 and record the product in column 7.
8. Multiply column 7 by 100 and record the result in column 8.
9. Transfer figures in column 8 to column 9 rounding down to 75.0 those numbers that exceed that amount. This represents the maximum level at which the state can contribute to a district's transportation program.
10. Record the district's transportation costs in column 10.
11. Multiply column 10 by column 9 and record the product in column 11.
12. Record the district general fund mill levy in column 12.
13. Record the maximum general fund mill levy allowed by law in column 13.
14. Divide column 12 by column 13 and record the quotient in column 14. This represents a district's effort ratio.



15. Multiply column 11 by column 14 and record the result in column 15. This represents the state transportation aid to which the school district is entitled.

#### Statistical Analysis of the Proposed Formula

A statistical analysis of the hypothetical allocations to the sample districts will be presented in the following chapter. The data from application of the proposed formula was processed in the same manner as that described for the current method of distributing state aid for pupil transportation.

#### Summary

A description of the sampling techniques used in selecting the subject schools was presented. Justification for the seventy-seven school districts selected for study was also discussed.

The current method of supporting pupil transportation was examined. A table was presented that indicated actual state allocations credited to the sample districts' minimum programs for the 1968-1969 school year.

A proposed new transportation formula that incorporated local district financial ability and effort along with the local financial burden of providing a transportation program was described. Hypothetical allocations were made to the school districts under this formula. Examples of the formula application were presented in a step-by-step manner, showing how state funds would have been distributed for the 1968-1969 school year if the proposed formula had been in effect.

Spearman rank order correlations were presented as being the statistical methods used to analyze the current method of supporting pupil transportation. It was explained that the data secured from application of the proposed formula were also analyzed by using Spearman rank order correlations. The actual results from the statistical analysis are presented in Chapter IV of this document.

## CHAPTER IV

### ANALYSIS OF DATA

#### Introduction

This chapter is divided into two sections. The results of applying Spearman rank order correlations to the actual state allocations for pupil transportation in Oklahoma for the 1968-1969 school year are presented in the initial part of the chapter. The hypothetical allocations for the same school districts using a new proposed formula for distributing state aid for pupil transportation are treated similarly in the latter section.

#### Equity of the Oklahoma Method of Distributing Transportation Funds

As was previously stated in Chapter I, one of the primary objectives of this study was to determine if the present Oklahoma formula for supporting pupil transportation is equitable. To accomplish this objective, Spearman rank order correlations were applied in three ways: between the wealth or ability of a district (assessed valuation per child in average daily attendance) and the annual state support per transported child credited to the minimum program; between the effort made by the school district to provide an educational program (local general fund mill levy) and the annual state allocation for each transported child credited to the minimum program; and, between the

local district transportation burden (percent of the local district's general fund expenditures being spent for pupil transportation) and the percent of transportation costs that the state credits to the minimum program.

In the case of the relationship between the ability of a district to provide a transportation program (column 1, Table IV) and the state aid per transported child (column 2, Table III), a negative Spearman rho would be desirable. This would indicate that a district with relatively low wealth would rank low among the districts and receive a larger proportion of state funds, placing them higher among the districts in this respect. If the Oklahoma formula were crediting funds in a perfectly equitable manner, the resulting Spearman rho would be a  $-1.000$ . Because there are many factors involved, a perfect  $-1.000$  correlation could not be expected from any formula. However, if a formula were equitable in nature, some significance in this relationship could be expected. This was not the case in the relationship studied. The 1968-1969 data produced a Spearman rho of  $.649$ . The figure was statistically significant at the  $.05$  level, but in an opposite direction from that desired. This indicates that the relationship between the manner in which Oklahoma credits funds to the districts' minimum program and the relative abilities of the districts to support transportation is unsatisfactory.

The relationship between district financial effort (column 12, Table IV) and state allocation per transported child (column 2, Table III) was equally revealing. In this case, a district making maximum effort to provide an adequate education program would rank high among the districts and would ideally receive a higher proportion

of state funds. A high positive relationship would, therefore, be desirable and a significant positive relationship would exist if the formula were equitable. The 1968-1969 data produced a Spearman rho of  $-.212$ . The correlation denied the existence of a desirable relationship between state transportation fund distribution and local district effort.

Finally, the relationship between the percent of district general fund expenditure spent for transportation (column 4, Table IV) and the percent of transportation costs credited to district minimum programs (column 4, Table VIII) fostered similar conclusions. In this case, a district spending a larger percent of available general fund monies for pupil transportation would rank high among the districts and would ideally be credited with a higher percentage of state funds. Therefore, a high positive correlation would be desirable and would exist if pupil transportation services were being funded in an equitable manner. The 1968-1969 data produced a correlation of  $-.468$ . Again, the relationship was in an opposite direction from that necessary to indicate equity. This result also indicated the iniquities inherent in Oklahoma's present method of supporting pupil transportation.

#### Equity of the Proposed Formula

The remaining primary objective of this study was to propose a formula that would improve the equity of state support for pupil transportation. The hypothetical distribution of state transportation funds under the proposed formula for the 1968-1969 school year was correlated with the same factors as were the actual allocations. The resulting correlations are presented below.

District financial ability (column 1, Table IV) was correlated with hypothetical allocations per transported child in accordance with the proposed formula (column 1, Table VIII). The resultant Spearman rho was .304. As previously shown, the correlation between ability and actual allocations under Oklahoma's present method of supporting pupil transportation produced a rho of .649. This figure was, as noted earlier, statistically significant in an opposite direction from that needed for equity.

In dealing with relative ability, districts with low assessed valuation would ideally receive a proportionately high state allocation, thereby producing a negative Spearman rho. A perfect formula considering the factor of assessed valuation per pupil only, would theoretically produce a rho of -1.000.

The correlation improvement toward the ideal, from .649 to .304 is evident. Even though neither correlation produced a negative rho and the change was not statistically significant, the hypothetical allocations correlation under the proposed formula was nearer to the ideal correlation than that under the existing formula. The results also indicated that, when considered alone, the standard of assessed valuation correlated with state aid per transported child would not produce an equalizing formula. A comparison of the correlations are presented in Table V.

The relationship between district financial effort and state aid per transported child revealed similar findings. When hypothetical allocations under the proposed formula (column 1, Table VIII) were correlated with local district general fund mill levy (column 12, Table IV) a Spearman rho of .188 was computed. Correlation of actual

allocations for the 1968-1969 school year and general fund mill levies produced a Spearman rho of  $-.212$ .

TABLE V  
ACTUAL AND HYPOTHETICAL ALLOCATIONS CORRELATED  
WITH ASSESSED VALUATION PER PUPIL IN  
AVERAGE DAILY ATTENDANCE

Actual Allocations Present Formula (1968-1969)	Hypothetical Allocations Proposed Formula (1968-1969)
rho = $.649$	rho = $.304$

Again, a comparison of the two results shows a marked improvement by using the proposed formula. Hypothetical allocations under the proposed formula did produce a non-significant rho. However, it was closer to the ideal positive 1.000 than that noted using actual allocations. A comparison of the correlations are presented in Table VI.

When the factor of percent of transportation cost paid by the state under the proposed formula (column 2, Table VIII) was correlated with the percent of general fund expenditures spent for transportation (column 4, Table IV), a totally different picture emerged. The Spearman rho was computed to be  $.514$ . This was significant at the  $.05$  level. The resultant Spearman rho using actual allocations under the current method was recorded as being  $-.468$ . The results indicated

therefore, that under this measure the proposed formula could be extremely more effective for supporting pupil transportation in an equitable manner. Comparisons are shown in Table VII.

TABLE VI

ACTUAL AND HYPOTHETICAL ALLOCATIONS CORRELATED  
WITH DISTRICT GENERAL FUND MILL LEVY

Actual Allocations (1968-1969)	Hypothetical Allocations (1968-1969)
rho = $-.212$	rho = $.188$

TABLE VII

PERCENT OF DISTRICT TRANSPORTATION COSTS PAID BY  
THE STATE UNDER PRESENT AND PROPOSED FORMULAS  
CORRELATED WITH PERCENT OF GENERAL FUND  
EXPENDED FOR TRANSPORTATION

Percent of Costs Allocated by State (present formula)	Percent of Costs Paid by State (proposed formula)
rho = $-.468$	rho = $.514$



All the correlations computed using the present method of supporting pupil transportation made the formula appear to be inequitable. Even though the significance level was reached in only one measure under the proposed formula, the correlations were closer to the ideal in each of the other two cases. Therefore, it seems logical to conclude that the objective of developing a more equitable formula was accomplished.

Annual transportation aid per child comparisons under both the proposed formula and the method presently employed to support pupil transportation are presented in Table VIII. The table also indicates the percent of district transportation costs charged to the state under both formulas.

TABLE VIII

THE STATE'S PERCENT OF TRANSPORTATION COSTS  
AND PER PUPIL AID UNDER BOTH THE  
PRESENT AND PROPOSED FORMULAS

School District	Proposed Formula		Present Formula	
	Aid Per Child	Percent of Trans. Cost Paid by State	Aid Per Child Credited to Min. Program	Percent of Trans. Cost Credited to Min. Program
1	\$ 41.56	75.00%	\$ 33.00	70.87%
2	108.85	50.99	43.00	25.18
3	32.85	64.28	40.00	90.78
4	95.74	39.32	72.00	36.98
5	41.71	52.50	42.00	66.29
6	35.40	53.30	45.00	80.16
7	65.02	22.50	23.00	99.49
8	35.87	64.28	27.00	60.48
9	32.63	75.00	31.00	65.06
10	45.75	75.00	28.00	128.85
11	31.06	75.00	36.00	101.71
12	46.99	64.27	41.00	69.55
13	176.86	72.50	74.00	37.92
14	60.43	75.00	35.00	54.30
15	34.15	53.55	43.00	84.27
16	37.05	75.00	42.00	106.28
17	77.04	75.00	44.00	53.55
18	43.39	57.20	38.00	62.62
19	23.85	74.70	15.00	58.73
20	41.25	47.16	42.00	60.03
21	58.99	75.00	37.00	59.32
22	58.57	56.10	60.00	71.84
23	43.00	26.99	76.00	59.65
24	35.20	7.20	15.00	38.37
25	18.69	52.00	30.00	104.31
26	49.57	75.00	42.00	79.43
27	21.45	23.91	47.00	65.48
28	43.58	45.41	56.00	72.93
29	64.92	64.28	37.00	45.79
30	10.10	36.84	70.00	31.91
31	45.54	75.00	33.00	67.94
32	65.78	75.00	38.00	54.16
33	8.59	21.42	26.00	81.16
34	43.58	41.13	59.00	69.59
35	38.90	64.28	40.00	80.83
36	55.30	47.50	42.00	45.10
37	26.80	30.20	40.00	56.34
38	62.41	53.55	50.00	53.63

TABLE VIII (Continued)

District	Proposed Formula		Present Formula	
	Aid Per Child	Percent of Trans. Cost Paid by State	Aid Per Child Credited to Min. Program	Percent of Trans. Cost Credited to Min..Program
39	\$ 68.31	75.00%	\$ 40.00	54.90%
40	37.18	75.00	25.00	63.04
41	38.51	75.00	35.00	85.21
42	105.70	60.50	51.00	36.49
43	24.14	64.27	40.00	121.35
44	63.86	75.00	40.00	58.72
45	61.82	75.00	38.00	57.63
46	15.21	34.80	32.00	86.42
47	54.79	75.00	27.00	46.21
48	39.92	75.00	31.00	72.80
49	48.56	53.55	37.00	51.00
50	49.02	66.40	38.00	56.93
51	14.84	24.90	28.00	57.32
52	185.58	75.00	51.00	25.76
53	100.32	75.00	40.00	57.01
54	118.40	75.00	38.00	30.09
55	7.87	32.60	15.00	77.68
56	12.81	20.50	36.00	72.00
57	78.42	67.30	51.00	54.71
58	47.02	75.00	29.00	55.51
59	34.69	60.00	40.00	87.89
60	74.61	75.00	36.00	45.24
61	137.77	75.00	53.00	36.07
62	52.75	75.00	36.00	63.98
63	36.98	75.00	25.00	63.38
64	50.70	75.00	42.00	77.67
65	185.59	15.00	68.00	34.35
66	33.00	75.00	15.00	42.62
67	14.57	59.50	15.00	76.56
68	21.08	75.00	17.00	75.62
69	59.56	75.00	31.00	47.62
70	71.02	41.00	76.00	54.85
71	62.65	49.50	68.00	67.16
72	41.70	70.73	15.00	31.80
73	26.45	61.05	31.00	88.01
74	10.62	47.40	23.00	110.92
75	46.30	75.00	41.00	83.02
76	170.08	57.60	76.00	32.17
77	25.83	35.50	39.00	67.00

### Summary

Actual amounts credited by the state to the sample school districts' minimum programs for pupil transportation during the 1968-1969 school year were correlated consecutively with district financial ability, district financial effort and district transportation burden. The Spearman rho's, which resulted from the above correlations, indicated that the present method of supporting pupil transportation tended to be inequitable.

Hypothetical allocations under a proposed formula were also correlated with district ability, effort and transportation burden. These correlations were recorded and compared with those derived from using the actual amounts credited to local district minimum programs. It was found that pupil transportation could probably be supported more equitably under the proposed formula than under the present method.

## CHAPTER V

### SUMMATION, CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

#### Summation

The scope of this study encompassed two major objectives. The first objective was to determine the degree of equity in the present method of financially supporting pupil transportation in Oklahoma. The other major purpose was to develop a proposed formula that would allow distribution of these funds in a more equitable manner.

To accomplish the above stated objectives, it was deemed necessary to proceed with the study as indicated below. First, literature in the fields of school transportation and school finance was reviewed. Suggestions for evaluation of the financing of school transportation was gleaned from the abundant writing on the subject. Many authorities in the field have identified the principle of equity in financing education as a necessary prerequisite to the equalization of educational opportunity throughout the United States.

Second, seventy-seven independent school districts which provide pupil transportation were used as a sample for this study. One district was randomly selected from each county in Oklahoma.

After the sample had been selected, pertinent data were gathered from various reports which the subject schools had filed with the State Department of Education. The data were analyzed by computing

Spearman rank order correlations between local district financial ability and state aid per transported child credited to the minimum program; local district financial effort and state aid per transported child credited to the minimum program; and local district transportation burden and the percent of transportation costs credited to the minimum program. The existing method of supporting pupil transportation failed to pass any of the tests of equity to which it was subjected.

When district ability was correlated with state aid per transported child, the resultant Spearman rho was .649. If the method were equitable a high negative correlation could be expected.

The case in which district effort was correlated with state aid per transported child, the computed Spearman rho was -.212. A formula that approached equity would have produced a positive result here.

Likewise, when local transportation burden was correlated with the percent of transportation costs credited to the minimum program, a Spearman rho of -.468 was computed. Again, a high positive correlation would be produced if the present method of providing financial support for pupil transportation were equitable.

A proposed formula was developed which would allow the distribution of state pupil transportation funds in a more equitable manner. Hypothetical allocations were made to the sample districts and correlated with the same factors as were the actual allocations. This was done to determine the degree to which the proposed formula more nearly met the tests of equity.

When district ability was correlated with state aid per trans-

ported child using hypothetical allocations under the proposed formula, the recorded Spearman rho was .304. The same measure using actual allocations, as previously cited, resulted in a Spearman rho of .649. This proved to be statistically significant at the .05 level in a direction opposite from that necessary for equity. An equitable formula would have produced a high negative correlation here. A comparison of the two rhos on this measure clearly indicated that the proposed formula more nearly approached equity than did the existing formula.

Secondly, by correlating local transportation burden with state aid per child under the proposed formula, a Spearman rho of .188 was computed. This result, when compared with the same measure under the existing method, also indicated that the proposed formula more nearly approached equitable support of pupil transportation.

Finally, the case in which local transportation burden was correlated with the percent of transportation costs paid by the state under the proposed formula produced a Spearman rho of .514. This proved to be statistically significant at the .05 level. The same measure under the present method produced a Spearman rho of  $-.468$ . That the proposed formula for supporting pupil transportation tended to be much more equitable than the present method was evidenced by comparing the two results.

#### Conclusions

Based on the data analyzed in this study, it appeared that the following conclusions could be made:

1. The present method of supporting pupil transportation in

Oklahoma does not appear to be equitable. The manner in which funds are credited to the minimum program may even increase the financial advantage of some districts and add to the financial burden of others.

2. It appears that the proposed formula would more nearly equalize state support for pupil transportation than does the existing method. A proportionately greater share of state funds would be made available to those districts which are low in ability, high in effort and high in transportation burden.

#### Recommendations

The following recommendations result from the conclusions of this study and from the research conducted in the development of the topic.

1. In view of the suggestion that the level of state support for pupil transportation in the proposed formula be flexible and dependent upon available revenue, it is recommended that the State of Oklahoma abandon the present method of financially supporting pupil transportation.

2. It is recommended that the State of Oklahoma adopt a new formula for supporting pupil transportation that would be more equitable in nature. It has been determined that the proposed formula developed in this study would tend to serve that end without compounding record keeping at either the state or local level or increasing state costs.

3. If for some reason the adoption of a formula similar to the one proposed is unfeasible, it is recommended that consideration be given to district financial ability, financial effort and transporta-



tion burden in any formula that would be developed.

4. During the preparation of this thesis, additional school transportation problems were recognized, which seem worthy of further research. Recommended areas of study which may lead to improvement in the pupil transportation system are (1) efficiency in the routing of buses, (2) accounting and bookkeeping procedures at the local level, (3) safety and adequacy of pupil transportation programs, (4) feasibility of using contracted pupil transportation on a large scale, (5) economic efficiency of local district transportation programs, (6) school attendance of transported pupils, (7) the possibility of utilizing bus travel time for instructional purposes and (8) reasonableness of allowing transportation only to those students who live a prescribed distance from school.

#### Implications

Pupil transportation has been viewed by many writers as being one of the great equalizers of our society. This important service, however, must be financed. This study has indicated that the present method of financing pupil transportation places unequal burden on the various local districts and the taxpaying constituency. These inequities perpetuate unequal educational opportunity. If this study does, in some way, assist the State of Oklahoma to more nearly equalize educational opportunity, then the effort would be justified.

This study may also have implications as a guide to states other than Oklahoma that are contemplating an evaluation of pupil transportation financing practices. The study could be particularly valuable to those states that have visions of supporting education on an equitable basis.

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## APPENDIX A

### OKLAHOMA PUPIL TRANSPORTATION LAWS

#### Article IX—School Laws of Oklahoma, 1968.

Section 122. Transportation for Pupils—Approval State Board of Education: Any school district maintaining a high school or any school district which was entitled to operate legal transportation during the school year 1960-61 may provide transportation for each child who should attend any public elementary or high school when, and only when, transportation is necessary for accomplishment of one of the following purposes: (1) to provide adequate educational facilities and opportunities which otherwise would not be available; (2) to transport children whose homes are more than a reasonable walking distance, as defined by regulations of the State Board of Education, from the school attended by such child. Provided, that no State funds shall be paid for the transportation of a child whose residence is within one and one-half ( $1\frac{1}{2}$ ) miles from the school attended by such child, provided further that any district having twenty-five (25) or more square miles in area and maintaining only one (1) school, may provide legal transportation upon approval by the State Board of Education. Provided, further, that any school district which does not qualify for transportation under the provisions of this Act, may use school district funds not obligated under the minimum school program with the approval of the State Board of Education.

Section 123. Vehicles—Distance from Home of Child—Dangerous or Impassable Roads: No vehicle used for the transportation of school children shall be required to come nearer than one (1) mile from the home of any child, and no vehicle shall be required to traverse impassable or dangerous roads regardless of the distance from the home of a child.

Section 124. Purchase or Contract for use of Vehicles—Lettering—Stop Signs: The board of education of any school district authorized to furnish transportation to school children may purchase and maintain suitable vehicles for such use and/or may contract with responsible individuals or another school district to furnish all or part of said transportation. All such contractors, however, shall be subject to statutory provisions relating to the transportation of school children. Every vehicle with a capacity of six (6) passengers or more used in transporting school children shall have painted in letters not less than eight (8) inches in height on the front thereof the words, "SCHOOL BUS", and on the rear thereof in letters of the same size, "SCHOOL BUS—STOP ON SIGNAL."



Section 125. Transportation Equipment—Definition: For the purpose of the Oklahoma School Code "transportation equipment" is defined as any vehicle or conveyance used for transportation of pupils when the cost of rent, lease, purchase, maintenance, or operation of said vehicle or conveyance is defrayed in whole or in part from public school funds.

All transportation equipment shall be of such construction as to provide safe, comfortable, and economical transportation of passengers. All such equipment which is used to transport six (6) or more public school children at one time shall be constructed, maintained, and operated in accordance with all requirements of law and rules and regulations of the State Board of Education. Any persons violating the provisions of this Section shall be guilty of a misdemeanor.

Section 126. Boundaries of Area for Transportation—Definite Routes: It is hereby made the duty of the State Board of Education to determine and fix definite boundaries of the area in which each school district shall provide transportation for each school. The State Board of Education is also authorized to establish definite routes in each transportation area, and it shall be the further duty of said Board to make rules and regulations as to the manner in which said area and routes may be established or changed. State funds payable to a district shall be withheld for a failure or refusal to confine its transportation to the area and routes designated by the State Board of Education or to comply with the rules and regulations of the State Board of Education.

Section 127. Insurance to Pay Damages—Actions Against School District: The board of Education of any school district authorized to furnish transportation may purchase insurance for the purpose of paying damages to persons sustaining injuries proximately caused by the operation of motor vehicles used in transporting school children. The operation of said vehicles by school districts, however, is hereby declared to be a public governmental function, and no action for damages shall be brought against a school district under the provisions of this Section but may be brought against the insurer, and the amount of the damages recoverable shall be limited in amount to that provided in the contract of insurance between the district and the insurer and shall be collectible from said insurer only. The provisions of this Section shall not be construed as creating any liability whatsoever against any school district which does not provide said insurance.

Section 128. Rules of the Road. Each school bus shall be operated in conformity with all rules of the road duly established by law and shall observe traffic requirements for the route which it travels.

Section 130. Additional Transportation—Expenses: The board of education of any school district furnishing transportation is hereby authorized to furnish, in addition to free transportation to and from school, transportation within or without the district for children attending the schools of that district, for the purpose of attending community, county, and state fairs that admit school children free, for purposes connected with summer youth activities upon approval of

the school board governing said school district, and for all other purposes approved by the State Board of Education. Provided, that upon request thereafter by the State Director of Cooperative Extension Work in Agriculture and Home Economics (Service), or the State Director of Vocational Education, or the State Supervisor of Vocational Agriculture, the State Board of Education shall authorize any school furnishing transportation to provide transportation for school children participating in educational contests and activities outside of the State of Oklahoma, or outside of the districts in which they reside, and two (2) or more districts may enter into agreements for the furnishing of such transportation. The expense of any such additional transportation shall be paid by the children so transported, by the school activity or school organization receiving benefit from such transportation or from other private sources. Money so collected shall not be chargeable to or become a part of the school district's finances.

Section 131. Price List and Description of Transportation Equipment: The State Board of Education is hereby authorized to request a price list and a complete description and specifications of any transportation equipment to be offered for sale to any school board or board of education of any district in the State of Oklahoma.

The State Board of Education shall examine such equipment to determine whether or not such equipment meets the requirements of the National School Bus Standards and such other specifications as the State Board of Education may determine as necessary to provide safe transportation for pupils to and from school and shall approve for sale to all schools in the State of Oklahoma transportation equipment, including bus bodies and chassis, which equipment meets or exceeds the specifications provided for the National School Bus Standards and such other specifications as the State Board of Education may deem as necessary.

The State Board of Education shall make a list of the equipment approved by them and the maximum price at which such equipment can be purchased. The list shall include a complete description of the equipment. Such description shall include the specification of the school bus bodies and chassis as well as the factor list price of such equipment at the various factories. Such list shall be made available to all school districts authorized to purchase transportation equipment. Provided at any time there shall be any change of specification or prices by manufacturers of chassis or bodies, there shall be filed with the State Board of Education a revised set of specifications and prices.

The school board, or board of education of any school district authorized to furnish transportation for pupils to and from school and receiving any state aid funds shall be required to purchase all their transportation equipment from the list so provided on sealed bids and at a price not greater than the price filed with the State Board of Education, and the State Board of Education shall be required to deduct from any state aid for which the school district may qualify the amount paid by any school district for transportation equipment not approved by the State Board of Education or the amount paid greater than shown on the price list for that transportation equipment filed with the State Board of Education. Provided, however, all purchases made under the provisions of this Act for transportation shall be made

upon sealed bids, and contract of purchase shall be awarded to the lowest and best bidder.

It is hereby made the duty, and the State Board of Education is hereby required to make such rules and regulations as are necessary for the administration of this Section and to require from school district boards of education such information and reports as they believe necessary for proper administration of this Section.

Any cost of administration of this Section shall be paid by the State Board of Education from funds appropriated for the administration of the state aid law.

Section 132. Special Transportation Revolving Funds. There is hereby created a revolving fund to be known and designated as the "Special Transportation Revolving Fund," which shall consist of all appropriations made for the purposes hereinafter designated and shall also include all proceeds resulting from the use and/or resale of pupil-transportation equipment purchased out of monies in said revolving fund. Said revolving fund shall be a continuing fund and shall be non-fiscal in character.

Section 133. Use of Fund: The State Board of Education through the Director of Finance is hereby authorized to use the "Special Transportation Revolving Fund," for the purchase of pupil-transportation equipment suitable for the transportation of children to and from the common schools and to make one (1) or more units of such pupil-transportation equipment available for use by any school district in the State of Oklahoma which is either required or authorized by statute to provide free transportation to and from school for children legally residing in such district or legally transferred thereto and entitled to attend school therein, but which school district does not have sufficient funds available, and, because of then-existing indebtedness, may not legally issue its bonds for the purchase of other pupil-transportation equipment. Provided such equipment shall be purchased from the list of approved equipment as provided for in Section 11 and at a price not greater than the price so approved. Provided further the school board or board of education of any school district desiring to rent such equipment shall select from the approved list the equipment they desire before the State Board of Education shall be authorized to purchase transportation equipment for rental to any district. Provided further the State Board of Education shall not be authorized to act in behalf of any school district in the purchase of any transportation equipment except as provided for in this Act.

Section 134. Lease of Equipment: Any such eligible school district and the State Board of Education may enter into a lease contract, in writing, for the use by such school district of one or more of such pupil-transportation equipment units during the then-current fiscal year, at the annual rental value of such unit or units determined in the manner provided for herein, but which contract may be entered into only against a then-current item of appropriation for "Transportation Operation". Any school district which lawfully leases one or more of such pupil-transportation equipment units from the State Board of Education during any fiscal year shall be eligible to enter into a like contract for the same unit or units during and for the ensuing

fiscal year, and shall also be eligible to purchase the same such units, as provided for herein, even though such district then has sufficient funds available or may then legally its bonds for the purchase of other pupil-transportation equipment.

Section 135. Rental Value of Equipment: The State Board of Education shall fix the annual rental value of each particular unit of such pupil-transportation equipment at an amount not less than that required to amortize the original total cost of that unit by five (5) years' rental thereof.

Section 136. Sale of Units of Equipment After Lease for One Year: The State Board of Education may sell any particular unit of such pupil-transportation equipment to an eligible school district, at any time after such unit has been leased for one fiscal year, for an amount not less than the original total cost of such unit less rentals actually paid for the use of such unit; provided, however, in so selling any such unit, preference shall be given to the school district leasing such unit during the then-preceding fiscal year.

Section 137. Care of Equipment. Any school district leasing any such pupil-transportation equipment from the State Board of Education shall at its own cost and expense procure such equipment from the State Board of Education, keep such equipment, including all tires, tubes and accessories thereon and therewith, in good repair during the time the same shall be in its possession, and, at the expiration of the term of such lease, unless such equipment be purchased or again leased by such district, return such equipment to the State Board of Education in as good condition as when received, ordinary wear and tear alone excepted. Any tire or tube needing to be replaced while such equipment is the possession of a school district shall be replaced by, and at the expense of, such district.

Section 138. Space for Storage of Equipment: The State Board of Education is hereby authorized to procure for the storage of such pupil-transportation units while not in the possession of a school district and to pay the necessary cost thereof from the "Special Transportation Revolving Fund." When any such unit is returned to the State Board of Education, said board is hereby authorized to recondition same, and to pay necessary cost of such reconditioning, including the cost of any new tires or tubes required for such purposes, from said "Special Transportation Revolving Fund."

Section 139. Expense—Paid From What Funds: Any costs or expense necessarily incurred by the State Board of Education in the administration of the foregoing provisions relating to the "Special Transportation Revolving Fund" shall be paid from funds appropriated or allocated for the administration of laws providing for the payment of state aid to school districts in the same manner that expenses of administration of such laws are paid.

APPENDIX B

FINANCING PUPIL TRANSPORTATION

IN OKLAHOMA

Article XVIII--School Laws of Oklahoma, 1968.

Section 245h. In order to adjust the State guaranteed level of support per child for a school district that has been affected by an increase or decrease in transfer fees or the transportation allowance based on area served and the number of children transported during the next preceding year, or an unusual change during the first one-half ( $\frac{1}{2}$ ) of the current year, the State Board of Education shall calculate a new transfer fees receivable or transportation allowance and substitute such amount or allowance for the amount used in determining the Equalization Aid such district in 1963-64. The State Board of Education shall on the basis of such recalculation adjust the Foundation Program Aid for a school district so affected.

Transportation calculations shall be on the basis of the following scale where the number of legally transported pupils per square mile during the next preceding year was:

- (1) .30, Seventy-six Dollars (\$76.00) per year per pupil.
- (2) .60, Fifty-eight Dollars (\$58.00) per year per pupil.
- (3) 1.0, Forty-three Dollars (\$43.00) per year per pupil.
- (4) 2.5, Thirty-six Dollars (\$36.00) per year per pupil.
- (5) 3.5, Thirty-two Dollars (\$32.00) per year per pupil.
- (6) 4.5, Twenty-nine Dollars (\$29.00) per year per pupil.
- (7) 5.5, Twenty-six Dollars (\$26.00) per year per pupil.
- (8) 6.5, Twenty-four Dollars (\$24.00) per year per pupil.
- (9) 7.5, Twenty-two Dollars (\$22.00) per year per pupil.
- (10) 8.0, or more, Fifteen Dollars (\$15.00) per year per pupil.
- (11) When the density is less than .40, or when it is necessary to transport pupils to a school to which they can legally attend within an area assigned as provided by law, the State Board of Education is authorized to make special adjustments to meet the reasonable, but not to exceed the actual, cost of transportation.

(12) Districts having a density of less than 8.0 and more than 3.0 shall have a per pupil year allowance calculated to the nearest dollar corresponding to the actual density of the district.

(13) A district correction figure shall be determined by dividing the cost of transportation in the district for the previous six years by the minimum program for transportation in the district for the previous six years as calculated by the State Board of Education. Each succeeding year's cost and minimum program, respectively, for an additional year shall be used in determining a permanent district

correction figure. The district correction figure shall not exceed 1.25.

(14) The amount of transportation for each district shall be determined by multiplying the average daily attendance of the pupils legally transported during the next preceeding year by the appropriate amount per pupil set out in the foregoing schedule and the resulting product multiplied by the district correction figure. The number of pupils per square mile shall be determined by dividing the average daily attendance of the legally transported pupils by the area served as calculated by the State Board of Education. Provided that each school district having more than ten teachers may use any increase for transportation over the amount allowed in 1964-65, or so much thereof as is necessary to provide each regular school bus driver, not otherwise employed by the school district, having a standard School Bus Driver's Certificate and driving a bus with a seating capacity of more than fifteen passengers, a minimum salary of One Thousand Five Hundred Dollars (\$1,500.00) per school term.

Section 248. Operation of Buses Contrary to Rules and Regulations—Forfeit State Aid: (a) Any school district which wilfully operates school buses contrary to the rules and regulations prescribed by the State Board of Education shall forfeit its State Aid for the time of noncompliance. All State Aid funds shall be withheld from any school district that does not comply with the standards of the State Board of Education for accrediting.

## APPENDIX C

### SCHOOL DISTRICT AD VALOREM TAXES

#### Article VII—School Laws of Oklahoma, 1968.

Section 328. Amount of Ad Valorem Tax: (a) Except as herein otherwise provided, the total taxes for all purposes on ad valorem basis shall not exceed, in any taxable year, fifteen (15) mills on the dollar, no less than five (5) mills of which is hereby apportioned for school district purposes, the remainder to be apportioned between county, city, town and school district, by the County Excise Board, until such time as a regular apportionment thereof is otherwise provided for by the Legislature.

No ad valorem tax shall be levied for State purposes, nor shall any part of the proceeds of any ad valorem tax levy upon any kind of property in this State be used for State purposes.

(b) A tax of four (4) mills on the dollar valuation of all taxable property in the county shall be levied annually in each county of the State for school purposes and, until otherwise provided by law, the proceeds thereof shall be apportioned to the school districts of the county by the County Treasurer on the basis of the legal average daily attendance for the preceding school year as certified by the State Board of Education. Provided that in case a school district lies in more than one county, such district shall be deemed a school district of the county having the greater part of the area comprising such district, unless otherwise provided by law, and shall be entitled to participate in the proceeds of such tax on the same basis as districts lying wholly within such county but revenue from such tax on the assessed valuation of the district in other counties shall, when collected, be transmitted to the County Treasurer of such county having the greater part of the area comprising the district, unless otherwise provided by law, and be apportioned as hereinbefore provided for the proceeds of such tax on the assessed valuation of such county. Not to exceed seventy-five per centum (75%) of the amount received by a school district from the proceeds of such county levy in any year shall be required to finance the State guaranteed program of such district.

(c) Upon certification of a need therefor by the board of education of any school district an additional tax of not to exceed fifteen (15) mills on the dollar valuation of all taxable property in the district shall be levied for the benefit of the schools of such district.

(d) In addition to the levies hereinbefore authorized, any school district may make an emergency levy for the benefit of the schools of such district, in an amount not to exceed five (5) mills on the dollar valuation of the taxable property in such district when approved by a majority of the electors of the district voting on the question at an

election called for such purpose. This emergency levy shall provide only sufficient additional revenue to meet the needs of the district each fiscal year as determined by the board of such district and must be approved by a majority of the electors voting on said question at such an election for each fiscal year.

(d-1) In addition to the levies hereinbefore authorized, any school district may make a local support levy for the benefit of the schools of such district, in an amount not to exceed ten (10) mills on the dollar valuation of the taxable property in such district, when approved by a majority of the ad valorem taxpaying voters voting on said question at an election for each fiscal year called for such purposes. This local support levy shall provide only sufficient additional revenue to meet the needs of the district for each such fiscal year as determined by the board of such district; provide, an elector desiring to vote upon such local support levy must present an ad valorem tax receipt for the year immediately preceding before being issued a ballot, or sign a sworn affidavit certifying the fact of such payment.

(e) The amount of revenue from school district ad valorem taxes levied under (a) and (c) of this Section which any school district may require to use to finance its State guaranteed program shall not be in excess of its share, based upon its relative taxpaying ability as may be defined by law, of an amount equivalent to the net proceeds from a fifteen (15) mill tax levy on the aggregate net assessed valuation of the State; but until such relative taxpaying ability is defined by the Legislature, the amount of revenue from such taxes which any school district may be required to use to finance its State guaranteed program shall not be in excess of the net proceeds from an ad valorem levy for emergency levy and local support levy under (d) and (d-1) of this Section shall be required to finance the State guaranteed program of such district.



## APPENDIX D

### REGULATIONS OF THE STATE BOARD OF EDUCATION

#### GOVERNING SCHOOL TRANSPORTATION

The local superintendent and board of education shall be held responsible for applying these regulations to all transportation under their administration and supervision.

#### Section 1. Legally Transported Students

##### A. Inside the District

1. A student must live in a school district authorized by law to furnish transportation.
2. A student must live one and one-half ( $1\frac{1}{2}$ ) miles by commonly traveled road from the nearest schoolhouse offering the grade he is entitled to pursue, be of school age, and be regularly enrolled in school. Provided, however, that students living less than one and one-half ( $1\frac{1}{2}$ ) miles from school may be transported but shall not be counted in determining the State's share of the district's transportation program.
3. A resident child attending a kindergarten, nursery, or "Head Start" program may ride the bus if the program is accredited or approved by the State Board of Education.

##### B. Outside the District

1. Students living in a school district not offering the grade which said children are entitled to pursue are entitled to transportation to a school authorized by law to provide transportation to and from school provided they have been legally transferred or reside in the transportation area.
2. Students are eligible for transfer from one district to another when their grade is taught in the home school if (1) the topography of the district in which the pupil resides, or the health of the child is shown by a certificate of any person licensed under the Oklahoma law to practice a healing art is such that the best interest of the child cannot be served by the child's attendance in the district in which the child resides or if (2) the board of education of the school district in which the child resides determines that the best interest of the child will be best served by such transfer, or if (3) the school district in which the pupil resides does not offer the vocational subject or subjects which the pupil desires to pursue and such transfer has the approval of the board of education of the district receiving the transfer.

3. A legally transferred student residing outside a transportation district's approved area may be transported to and attend the transporting school, provided he meets and boards the bus of the transporting school within the area approved for that school by the State Board of Education.
4. Students living outside the transporting district or its transportation area but paying tuition equal to the sum of the education per capita cost and the transportation per capita cost may legally ride the buses on the approved routes but may not be counted for transportation minimum program.
5. School District "A" may provide transportation for its resident or transferred children outside its transportation area into School District "B's" transportation area for tuition children attending School District "B's" Area School District Vocational Technical School or Center if requested by School District "A's" Board of Education and approved by the State Board of Education. School District "A" will not receive state aid funds for transporting tuition pupils. Provided further, School District "A" may provide transportation for a neighboring school district's tuition pupils who attend School District "B's" Area Vocational Technical School or Center on a cooperative basis. School District "A" may provide transportation outside its transportation area into School District "B's" transportation area for children transferred from School District "B" to School District "A" if recommended by the Boards of Education of School Districts "A" and "B" and approved by the State Board of Education, provided School District "A" will not receive credit for area served outside its transportation area and funds not obligated under the minimum school program are used to finance this transportation.

## Section II. School Transportation Routes

### A. Definitions

1. The route shall include the operation of one transportation vehicle for the accommodation of children who may be legally transported.
2. The beginning of the route shall be the place where the first student is picked up in the morning trip.
3. The length of the route shall constitute the entire distance from where the first student is picked up to the schoolhouse.
4. Route numbers shall be assigned on the basis of the number of vehicles operated. If any vehicle operates two routes, the first trip in the morning shall be distinguished by the addition of the letter "A" and the second trip by the addition of the letter "B". Thus, vehicle number one (1) might operate route 1-A and route 1-B.

### B. Establishment of Routes Inside Transportation Area

1. In so far as possible, buses will be approved to go within one-half ( $\frac{1}{2}$ ) mile of a pupil's home. School buses may operate nearer than one-half ( $\frac{1}{2}$ ) mile of the home of any child whose residence is not within one and one-half ( $1\frac{1}{2}$ ) miles of the school attended by such child if the board of education of the

school district in whose transportation area the child resides determines that the additional transportation operation should be provided. The extra mileage if driven is not a part of the regularly approved bus route so far as calculation of area served the road improvements are concerned. Any extra mileage driven is permissive and not a requirement.

- (1) In districts where buses are owned by the school district, the buses should be kept at the closest possible place at a responsible home near the beginning of the route. If drivers are employed at greater distances from the beginning of the routes, they should furnish their own transportation to and from the location of the bus within the two (2) mile limit from the beginning of the approved routes.
- (2) If the district owns a bus shed, the superintendent is authorized to require the drivers to keep the buses in these sheds from Friday afternoon until Monday morning.
2. Under no circumstances shall a district be permitted to employ a bus driver who resides outside its approved transportation area unless such employment is approved by the State Board of Education.
3. No district shall be permitted to route its buses outside its transportation area except on approval of the State Board of Education.
4. Do not plan routes on or along the transportation boundary line.
  - (1) Exceptions may be made if roads are such that other routing is impractical and far more expensive, if neighboring school officials agree and parts of the bus routes are not duplicated.
  - (2) Bus routes if requested along a transportation boundary line that is also along a transporting school's district line will be given more consideration than one merely in a school's transportation area.
5. An elementary school district that has been authorized to provide transportation may transport transferred children in their district from one high school district's transportation area to another high school district's transportation area if the transportation is approved by the State Board of Education.

#### C. Changes After Bus Routes Have Been Approved

1. Further changes in school bus routes may be made only by:
  - (1) Submitting statement of request by the local board of education.
  - (2) Submitting statement signed by the County Commissioner showing his willingness to include the proposed change in the county road program.
  - (3) Approval by the State Board of Education.
2. Changing routes that do not require a request:
  - (1) Driver moves to a new home in the district's transportation area.
  - (2) Change will shorten route.
  - (3) Backtracking within the area to serve children living in the district's transportation area or to safeguard the health of a child.

- (4) Change in present routes is necessary to place bus within one-half mile of the homes of the children, also new routes necessary because of annexations or change of transportation boundary lines to provide services within one-half ( $\frac{1}{2}$ ) mile of the homes of the children. School buses may operate nearer than one-half ( $\frac{1}{2}$ ) mile of the home of any child whose residence is not within one and one-half ( $1\frac{1}{2}$ ) miles of the schoolhouse offering the grade the child is entitled to pursue if the board of education of the school district in whose transportation area the child resides determines that the additional transportation operation should be provided. The extra mileage if driven is not a part of the regularly approved bus route so far as calculation of area served and road improvements are concerned. Any extra mileage driven is permissive and not a requirement.
  - (5) School districts near federal-impact areas that are required to operate school buses over roads that carry an unusually heavy motoring traffic shortly before the opening of school of a morning and shortly after school in the afternoon may reverse a school bus route, if by so doing, it will greatly reduce the traffic hazards for a greater number of the children.
3. Changing routes that do require a request:
    - (1) Traveling new roads without shortening the route except as this is necessary under items under 2, above.
    - (2) Driver moves to a new home OUTSIDE the district's transportation area.

D. State Board of Education Determines Boundaries and Routes

1. It is the duty of the State Board of Education to determine and fix definite boundaries of the area in which each school district shall provide transportation.
2. The State Board of Education is also authorized to establish definite routes in each transportation area.
3. State funds payable to a district shall be withheld for a failure or refusal to confine its transportation to the area and routes designated by the State Board of Education or to comply with the regulations of the State Board of Education.
4. A change in transportation area made after July 1, will not become effective until the next July 1, unless all boards of education affected agree to the proposed change.
5. An elementary area that has been assigned to a high school transportation area may be changed to another high school transportation by mutual agreement in writing by the three (3) boards of education affected and the approval of the State Board of Education.
6. A part or all of an elementary school district may be changed from one high school district's transportation area to another high school district's transportation area that is isolated from the remainder of the school district's transportation area because of topography or previous annexations to another high school district if the State Board of Education determines the change should be made on the basis of good administration.

E. Petition for Changing Transportation Boundary Lines

1. Seventy percent (70%) of the legal voters residing in a district who have children eligible to attend a public school (Grades 1 through 12) or who have children under the age of six (6) may petition the State Board of Education for an election to change any part or all of a district from one transportation to another.
  - (1) Provided further that if the area described in the petition constitutes nine (9) or more square miles and is in the transportation area of a high school district that had an average daily attendance (A.D.A.) in high school (grades 9 through 12) the next preceding year of less than fifty-five (55), seventy percent (70%) of the legal voters residing in the described area who have children eligible to attend a public school (Grades 1 through 12) or who have children under the age of six (6) may petition the State Board of Education for an election to change the area from one transportation area to an adjacent transportation area.
  - (2) Provided further that if the area described in the petition constitutes nine (9) or more square miles and is in the transportation area of a high school district whose high school bus did not operate on an approved bus route within two (2) miles of the described area the next preceding year, seventy percent (70%) of the legal voters residing in the described area who have children eligible to attend a public school (Grades 1 through 12) or who have children under the age of six (6) may petition the State Board of Education for an election to change the area from one transportation area to an adjacent transportation area.

F. High school districts and/or elementary school districts that must be placed in one or more high school transportation area or areas because a high school has been discontinued may be placed in a transportation area or areas on the following basis?

1. All or part of District "A" may be placed in the transportation area of high school District "B" whose transportation area is not adjacent to District "A" provided high school District "C" which has transportation area that separates District "A" from District "B's, transportation area had an A.D.A. in high school grades 9 through 12 in the next preceding year of less than 55 and provided further the number of people in District "A" who want to be placed in the transportation area of District "B" justifies such an arrangement. Note: People in District "A" requesting the above arrangements to enable them to annex to District "B" will be given much more consideration than those desiring to transfer only.
2. No portion of a school district that is adjacent to a high school district's transportation area but is separated from the high school area by a natural barrier will be placed in the high school district's transportation area unless or until there is a road connecting the two (2) areas that is maintained in a manner that will justify the operation of a school bus

over the road across the barrier.

G. Transportation Area:

In calculating the area served by a transporting district, the total area within (2) miles of the approved bus routes and within the transportation area shall be used. Bus routes over winding roads in very hilly or mountainous areas shall be calculated as serving all area within two and one-half ( $2\frac{1}{2}$ ) miles on each side of the route if within the transportation area.

Section III. Density Figure

- A. Density Figure is found by dividing the average daily haul for the next preceding year by the area served for the same period.

Section IV. Correction Figure

- A. A district correction figure shall be determined by dividing the cost of transportation in the district for the past six (6) years by the minimum program for transportation for the past six (6) years as calculated by the State Board of Education. Each succeeding year's cost and Minimum Program respectively for an additional year shall be used in determining a district correction figure. The correction figure shall not exceed 1.25.

The amount of transportation for each district shall be determined by multiplying the average number of pupils legally transported daily by the district during the next preceding year by the appropriate amount per pupil set out in the foregoing schedule and the resulting product multiplied by the district correction figure. The average number of pupils per square mile shall be determined by dividing the number of legally transported pupils by the area served as calculated by the State Board of Education. Unless and until the district has provided safe and adequate transportation, not less than the Minimum Program allocation shall be spent for such purpose.

Section V. Adjustments in Transportation Allocation

- A. Increase: Schools having an increase in average daily haul of twenty (20) or more during the first one-half ( $\frac{1}{2}$ ) of the current school year may apply for adjustment in transportation allocation.
- B. Change in Area Served: Schools having a change in area served of twenty (20) or more square miles may apply for adjustment in transportation allocation based upon an average daily haul and area served during the first one-half ( $\frac{1}{2}$ ) of the current school year.
- C. Change Due to Annexations or Area Served: If annexation or annexations or area served make necessary additional unit of transportation, adjustment may be made upon the basis of the average daily haul and area served during the first one-half ( $\frac{1}{2}$ ) of the current school year.

- D. Low Density Ratio and Cost: Schools having a density figure of less than .40 may receive reasonable, but not to exceed the actual, cost of transportation.
- E. Reasonable Cost Will be Calculated as Follows: Passenger Car. 12<sup>1</sup>/<sub>2</sub>¢ per required mile. Panel job or station wagon—15¢ per required mile. School buses of 30 capacity or over—25¢ per required mile. Reasonable cost can be allocated only upon sworn statement of actual cost for the school year.
- F. The Per Capita Allowances on Density Figures between .30 and 8.00 are calculated to the nearest dollar. (See Table II).

#### Section VI. School Transportation Equipment

- A. Designation: Every vehicle with a capacity of six (6) passengers or more used in transporting school children shall have painted in letters not less than eight (8) inches in height on the front thereof the words, "SCHOOL BUS" and on the rear thereof in letters of the same size, "SCHOOL BUS—STOP ON SIGNAL." Smaller vehicles used for transporting school children should bear upon the front and rear thereof a plainly visible sign containing the wording and size of lettering indicated above, which may be removed or covered when the vehicle is not in use as a school bus.
- B. All equipment shall be constructed, maintained, and operated in accordance with all requirements of law and regulations of the State Board of Education.

#### Section VII. Districts Eligible to Provide Transportation

- A. Any district maintaining a high school.
- B. Any district entitled to operate legal transportation during the school year 1960-61.
- C. Any district having twenty-five (25) square miles in area and maintaining only one (1) school upon approval of the State Board of Education.
- D. Any other school district that can finance its transportation from school district funds not obligated under the minimum school program with the approval of the State Board of Education.

#### Section VIII. Tax Exempt Motor Fuels

Gasoline or special fuels used solely and exclusively in district-owned public school buses and FFA and 4-H Club trucks for the purpose of legally transporting public school children shall be exempt from all State taxes, and gasoline or special fuels purchased by any school district for use exclusively in school buses leased or hired for the purpose of legally transporting public school children shall also be exempt from all State taxes. State exemption is 6.58¢ per gallon and Federal exemption is 4.00¢ per gallon. (Blanks to be used for State

exemption may be secured from Motor Fuel Division of the Oklahoma Tax Commission, Oklahoma City, Oklahoma 73105)

#### Section IX. Transportation for Auxiliary Activities

The use of school buses for purposes other than the transportation of children to and from school should be strictly limited. Nevertheless, there are some purposes which necessitate transporting pupils some distance from schools, that justify the use of a school bus.

A district-owned school bus (or a school bus with district-owned body) may be used for group movements within the State to and from contests, athletic games, or other school functions under the direct auspices of the board of education. A district-owned school bus (or a school bus with district-owned body) may also be used to transport pupils to and from neighboring out-of-state schools for normally scheduled inter-school functions. A school bus used for auxiliary purposes should be driven by its regular operator, who is to be cautioned against the evils of overcrowding and speeding. The bus should be accompanied by the principal, one of the teachers, or a member of the board. Out-of-state excursions are prohibited.

School buses whether privately or publicly owned shall not be used to haul livestock, commodities, or anything that will render them unsuitable for use on short notice.

The following uses of school buses are approved by the State Board of Education.

1. Activity trips for children participating in regular scheduled school activities within the State.
2. Activity trips for children participating in educational contests and activities with neighboring out-of-state schools for normally scheduled inter-school functions.
3. FFA and FHA trips in the State for children participating in regularly scheduled activities.
4. 4-H trips in the State for children in regularly scheduled activities.
5. Transportation for school children participating in educational contests and activities outside the State of Oklahoma, or outside the districts in which they reside upon request therefor by the State Director of Cooperative Extension Work in Agriculture and Home Economics (Service), or the State Director of Vocational Education, or the State Supervisor of Vocational Agriculture.
6. Trips for purposes connected with summer youth activities upon approval of the school board governing said school district.

A careful study of the above regulations and the law itself will show that the following uses of school buses are prohibited.

1. Out-of-state excursions.
2. Transportation for pupils to and from night programs, contests, athletic games, or other school functions at the local schools.
3. Transportation for adults to and from night programs, contests, athletic games, or other school functions at the local schools.
4. Transportation for non-participating pupils to and from contests, athletic games, or other school functions at neighboring schools.
5. Any Oklahoma school district which transports pupils in a



district-owned bus or a district-owned body on out-of-state excursions or permits it to be done, shall be violating the transportation regulations of the State Board of Education and shall have its State Aid and accreditation withheld for a period of one year.

#### Section X. School Bus Listings

The maximum price which any district may pay for a new school bus chassis and/or body and not be penalized in State Aid may be determined by referring to the listings approved by the State Board of Education or amendments thereto.

An itemized detailed invoice should be furnished by equipment dealers to districts on all purchases of new chassis and/or bodies.

The State Board of Education requires that it be supplied with a copy of the invoice on all purchases of new chassis and/or bodies.

#### Section XI to XX. Special Transportation Revolving Fund

1. In order for a school district to be eligible to rent transportation equipment in accordance with the provisions of this Act, it must have a total indebtedness equal to ten percent (10 percent) of the net assessed valuation of the district or be able to show that it does not have bonding ability sufficient to purchase one complete unit of transportation equipment. To rent a school bus in addition to the number now operating, the district must show an increase in transportation haul over the previous year of a sufficient number to justify such additional equipment. No bus will be replaced that has been used less than five (5) years unless definite proof is made that it can no longer safely be used for transportation of pupils.
2. The yearly rental cost shall not be less than one fifth (1/5) of the total cost of the unit. Such total cost shall be determined by the State Board of Education and shall include, in addition to the purchase price of such equipment, cost of license and any other expense necessary to adequately protect the state funds and insure safe transportation for the pupils.
3. The title of all equipment shall be held by the State in the name of the State Board of Education.
4. All equipment shall be purchased by the State Board of Education through the Director of Finance on sealed bids filed with the State Purchasing Director of the Board of Affairs as provided by Senate Bill No. 211, of the Twenty-Seventh Legislature.
5. School districts will be required to keep such transportation equipment in as good condition as when rented except for ordinary wear and will be required to return same as directed by the State Board of Education when the rental period expires.

#### Section XXI.

1. When a school bus, either publicly or privately owned, is being operated for the purpose of transporting children to or from

school, on school activities such as field trips, extra-curricular activities, being driven to and from garage, or other necessary driving required as incidental to the transportation program in general, the maximum speed of the school bus is 50 MPH. When operating under these conditions, the school bus shall bear upon the front and rear thereof plainly visible signs containing the words "SCHOOL BUS" in letters not less than eight (8) inches in height and in addition shall be equipped with alternately flashing red lamps.

### School Bus Driver Certificates

No fee will be charged for standard certificates nor temporary certificates.

No board of education shall have authority to enter into any written contract with a school bus driver who does not hold a valid certificate issued by the State Board of Education authorizing said bus driver to operate a school bus.

The State Board of Education recommends all public school bus drivers attend the five-day workshop sponsored by the State Department of Education and the Department of Public Safety.

All school bus drivers must have not less than 20-50 vision in each eye and not less than 20-30 vision with both eyes, except those holding Oklahoma school bus driver certificates as of now.

A Temporary School Bus Driver Certificate is valid for only one year.

A Standard School Bus Driver Certificate is valid for five years, except that a school bus driver who is more than 65 years of age may hold a one (1) year Standard School Bus Driver Certificate if he meets all requirements for such certificate.

- A. Requirements for a Temporary School Bus Driver Certificate:
1. If applicant is at least 18 years of age.
    - a. Must file application with State Board of Education
    - b. Must file health certificate with State Board of Education
    - c. Must hold a valid Oklahoma Chauffeur's License
  2. If applicant is 16 or 17 years of age
    - a. Must have completed School Bus Driver's Training School
    - b. Must file certificate of need by the Board of Education and the Superintendent, FORM FT-16.
    - c. Must file application with State Board of Education
    - d. Must file health certificate with State Board of Education
    - e. Must hold a valid Oklahoma Chauffeur's License
- B. Requirements for a Standard School Bus Driver Certificate:
1. The applicant shall be at least 19 years of age.
  2. The applicant shall have successfully completed a five day, twenty-five hour special school bus drivers' course offered by the State Board of Education and Department of Public Safety.
  3. The applicant shall hold a valid Oklahoma Chauffeur's License.

4. The applicant shall present State Board of Education Form FT-16A signed by a licensed physician certifying good health.  
The use of alcohol by the driver prior to or during the operation of a school bus is strictly forbidden. The use of tobacco by a school bus driver is not permitted during the operation of the bus regardless of whether or not the bus is carrying pupils.

APPENDIX E

THE SPEARMAN RANK ORDER COEFFICIENT

FORMULA ACCORDING TO SIEGEL

$$r_s = \frac{\sum x^2 + \sum y^2 - \sum d^2}{2 \sqrt{\sum x^2 \sum y^2}}$$

VITA

Charles Don Keck

Candidate for the Degree of

Doctor of Education

Thesis: A PROPOSED FORMULA FOR THE EQUITABLE DISTRIBUTION OF STATE AID  
FOR PUPIL TRANSPORTATION IN OKLAHOMA

Major Field: Educational Administration

Biographical:

Personal Data: Born in Lone Jack, Missouri, January 12, 1938,  
the son of Mr. and Mrs. Earl Keck.

Education: Graduated from Oak Grove High School, Oak Grove,  
Missouri, in May, 1955; received the Bachelor of Science  
degree from Central Missouri State College in 1960, with a  
major in Physical Education and a minor in Mathematics;  
received the Master of Education degree from the University  
of Missouri in 1966 with a major in Secondary School Admini-  
stration; received the Specialist degree from Central Missouri  
State College in 1968 with a major in School Administration;  
completed requirements for the Doctor of Education Degree at  
Oklahoma State University in May, 1971.

Professional Memberships: Phi Delta Kappa; Department of Eleme-  
ntary School Principals, past Secretary-Treasurer West Central  
Missouri District; American Association of School Administra-  
tors; Oklahoma Association of School Administration; Oklahoma  
Education Association; Association of School Business  
Officials.

Professional Experience: Teacher of physical education and mathe-  
matics in Harrisonville Public Schools, Harrisonville,  
Missouri, 1960-66; Assistant Principal and Transportation  
Director in Harrisonville Public Schools, Harrisonville,  
Missouri, 1966-68; Superintendent of Schools, Lowry City C-4  
Schools, Lowry City, Missouri, 1968-69; Graduate Assistant  
in the College of Education, Oklahoma State University,  
1969-70; Assistant Superintendent of Schools, Duncan Public  
Schools, Duncan, Oklahoma, 1970-present.