

The University of Oklahoma
College of Education

A COST ANALYSIS OF SPECIAL EDUCATION PROGRAMS
IN ELEVEN SELECTED SCHOOL DISTRICTS IN OKLAHOMA

A Dissertation
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in partial fulfillment of the requirements for
Doctor of Philosophy

by

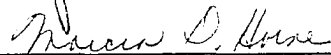
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Norman, Oklahoma
1984

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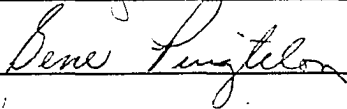
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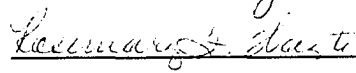
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Table of Contents

	Page
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vi
CHAPTERS	
I. THE PROBLEM	1
Introduction	1
Background Information	4
Statement of the Problem	10
Significance of the Study	11
Operational Definition	13
Limitations of the Study	16
Organization of the Study	16
II. REVIEW OF LITERATURE	
Selected Court Cases Significant to Financing Special Education Programs	18
Selected Federal Legislation Significant to Financing Special Education Programs	27
Selected State Legislation Significant to Financing Special Education Programs	33
Selected Special Education Finance Research	34
III. METHODOLOGY	52
Selection of the Sample	52
Data Collection Process	53
Analysis of the Data	55
Computation of Non-Handicapped Student Cost	57
Computation of Handicapped Student Cost	58
IV. PRESENTATION AND INTERPRETATION OF THE DATA	62

	Page
V. SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS	75
Summary	75
Findings	76
Ancillary Findings	80
Conclusions	81
Recommendations	83
BIBLIOGRAPHY	88
APPENDICES	93

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List of Tables

Table	Page
1. Per Pupil Program Cost of Special Education by Category of Handicapping Condition and Size of School District Enrollment	63
2. Per Pupil Excess Cost of Special Education by Category of Handicapping Condition and Size of School District Enrollment	64
3. Per Pupil Cost Index by Category of Handicapping Condition and Size of School District Enrollment	65
4. Per Pupil Program Cost of Special Education Adjusted for Allocation of Federal Categorical Monies by Handicapping Condition and Size of School District Enrollment	66
5. Adjusted for Allocation of Federal Categorical Monies by Handicapping Condition and Size of School District Enrollment	67
6. Per Pupil Cost Index by Adjusted for Allocation of Federal Categorical Monies by Size of School District Enrollment	68
7. Mean and Median Per Pupil Program Cost of Special Education by Category of Handicapping Condition	69
8. Mean and Median Per Pupil Excess Cost of Special Education by Category of Handicapping Condition	70
9. Mean and Median Per Pupil Cost Index by Category of Handicapping Condition	71
10. Comparison of Projected Cost Indices to Actual Cost Indices by Category of Handicapping Condition	72
11. Comparison of Oklahoma's Weights Assigned to Handicapping Children and the Aggregate Categorical Cost Indices for the School District Studied	73

A COST ANALYSIS OF SPECIAL EDUCATION PROGRAMS
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CHAPTER I

Introduction

It is generally accepted that special education programs are more expensive than regular education programs. Indeed, it is for this reason that categorical monies are set aside by the federal and state agencies responsible for funding educational programs for handicapped children. Like most other educational programs, the bulk of the cost of special education is found in personnel costs. However, the lowered teacher/pupil ratios that characterize special education programs, coupled with the state requirement of an additional five percent salary for special education teachers in Oklahoma make personnel costs an even more significant factor in the extra cost of special education programs.

In addition to the personnel costs of such labor intensive programs, other factors are likely to contribute to the added cost of special education. Many of these factors result from procedures that have been fairly recently mandated by the courts and the Congress. In the decade of the seventies, two court cases, The Pennsylvania Association for Retarded Citizens (P.A.R.C.) v. The Commonwealth of Pennsylvania¹ and Mills v. The Board of Education of

¹Pennsylvania Association for Retarded Children v. The Commonwealth of Pennsylvania, 343, F. Supp. 279 (E.D. Pa. 1972).

The District of Columbia,² and two pieces of legislation, Section 504 of The Vocational Rehabilitation Act of 1973, Public Law (P.L.) 93-112,³ and The Education for All Handicapped Children Act of 1975, P.L. 94-142,⁴ serve to illustrate the extent to which such reforms have been taken. A more in depth discussion of these laws and court cases is found in Chapter II of this study.

In addition to increasing the cost of providing special education, the requirements of the courts and Congress have also resulted in a system where educational costs are programatic to the individual child, thereby, creating a system that is difficult to address in advance in a school district's budget.

Because the federal role in education is more requirement oriented than assistance oriented, the local school districts are left to provide an education for every eligible handicapped child living within their boundaries. This process is generally acknowledged to be much more expensive than that of providing for non-handicapped children. However, little in the way of federal financial assistance is provided to the schools.

The fiscal impact of the federal mandates on the more than 600 school districts operating within Oklahoma is difficult to determine. These school districts are characterized by their diversity. Many are located in metropolitan areas but many more are found in smaller towns and sparsely settled rural areas. This diversity in all likelihood affects the cost of providing special education.

² Mills v. Board of Education of the District of Columbia, 348 F. Supp. 366 (D.D.C. 1972).

³ U. S. Department of Education, Federal Register, Implementation of Section 504, Rehabilitation Act of 1973, May 9, 1980.

⁴ U. S. Department of Health, Education, and Welfare, Office of Education, Federal Register, Implementation of Part B of the Education of the Handicapped Act, August 23, 1977.

A factor that is likely to have a significant effect on the cost of special education in the various school districts is the diseconomy of scale that exists between the cost of providing education in small and large school districts. It generally requires a greater per pupil expenditure in the smaller districts. This is due to the fact that many of the costs of operating a school do not vary with the size of the school. The best example of this is found in personnel costs. The difference in the cost of providing a teacher in the two settings is not likely to vary significantly. However, the small school is likely to have fewer students over which to spread the cost of a teacher.

Because of the labor intensive nature of special education programs, it is likely that the effect of a diseconomy is magnified in small schools (i.e., already small special education classes are likely to be smaller and, therefore, represent a greater per pupil expenditure). It would seem that small schools suffer from two diseconomies: one inherent in the costs of providing educational services in a more sparsely settled area and another inherent in providing special education per se.

In an attempt to address the problem of the excess cost of special education, the United States Congress and the Oklahoma State Legislature each provide categorical monies to be used exclusively for the education of handicapped children. The federal allocation is distributed on a per child basis while the state allocation is distributed through an equalization formula via a system of weights.

Each handicapping condition is assigned a weight (e.g., a learning disabled child is given a weight of .4 and is funded for the full amount that a nonhandicapped child living in that district would receive plus an additional forty percent). The additional state money together with the federal

allocation is, at least theoretically, enough to cover the excess cost of educating a learning disabled child.

Background Information

While ostensibly this study deals with financing special education programs, the true topic of this work is equity of educational opportunity.

Rossmiller et al.⁵ stated that

. . .no other concept so pervades the history of American education as the concept of equity of educational opportunity... Exceptional children were, for many years, widely regarded as not being subject to application of the concept of equal opportunity. They often were either discouraged from attending the public schools or excluded from them, and responsibility for the exceptional child's education was assumed to rest with the family or perhaps consigned to charity. As the concept of equality of educational opportunity increasingly came to be viewed as requiring that every child should be educated to the limit of his ability, there developed apace a recognition that the public school system should accept responsibility for providing education programs for exceptional children.

In regard to educating special needs children, it has long been recognized that equal per pupil expenditure does not insure equal educational opportunity. Those students with special needs, such as the handicapped, generally require a greater per pupil expenditure to achieve an equal degree of educational opportunity.⁶

⁵Richard A. Rossmiller, James A. Hale, and Lloyd E. Frohreich, Educational Programs for Exceptional Children: Resource Configurations and Costs, National Educational Finance Project Special Study No. 2 (Madison, WN: Department of Educational Administration, University of Wisconsin, 1970) p. 21.

⁶William T. Hartman and Theda R. Haber, School Finance Reform and Special Education, Project Report No. 81-A8 (Palo Alto, CA: Institute for Research on Educational Finance and Governance, 1981), p. 12.

The concept of fiscal equity in school finance is not new to researchers. Ellwood P. Cubberly wrote of the problems of school finance as early as 1906. He seemed, however, to be interested primarily in the provision of minimum levels of educational opportunity when he wrote:

The duty of the state is to serve for all as high a minimum of good instruction as is possible, but not to reduce all to this minimum; to equalize the advantages to all as nearly as can be done with the resources at hand; to place premium on those local efforts which will enable communities to rise above the legal minimum as far as possible; and to encourage communities to extend their educational services to new and desirable undertakings.⁷

Mort and his colleagues wrote that equity of educational opportunity did not mean identical education for all children. Rather, it meant that the state and local mean must provide minimum essentials of financial support.⁸

An approach to equity first introduced by Morrison⁹ in 1930 is the concept of full state funding. This concept is in use today in Hawaii and it is experiencing much attention by educational leaders. Morrison saw this approach as the answer to the funding needs of public schools in the future. He emphasized that to provide equitable educational opportunity in the United States the variable of local funding must be removed and replaced by a system funded largely through the state.

However, equalization of educational opportunity cannot be insured even with full state funding of educational programs. Differences in costs among school districts can vary greatly due to such factors as population

⁷ Ellwood P. Cubberly, School Funds and Their Apportionment (New York: Teachers College, Columbia University, 1906), p. 16.

⁸ Paul R. Mort, Walter C. Reusser, and John W. Polley, Public School Finance—Its Background, Structure, and Operation (New York: McGraw Hill, 1960), pp. 47-48.

⁹ Henry C. Morrison, School Revenue (Chicago: University of Chicago Press, 1930), p. 214.

density and variables within the populations of students served such as large numbers of bilingual or handicapped students. The objectives of equal educational opportunity for all children can only be approached through a system where per pupil expenditures are related to per pupil need.

Distribution of funds to those students needing a greater allocation of resources to improve their level of achievement is a difficult task. While it is generally acknowledged that providing an education to a handicapped student is more expensive than providing for a non-handicapped, little information is available regarding the amount of funds needed for these special needs students. Traditionally the unit of measurement regarding educational need has been the cost-per-pupil. While Polley¹⁰ acknowledged this, he also stated that the need for education by an individual will, in all likelihood, never be measured precisely. However, educators may differentiate between broad groups of students in regard to their special education needs.

States typically attempt to address the educational needs of the broad groups formed by the categories of handicapped students through some type of funding formula. Hartman, drawing upon the work of Thomas,¹¹ identified six types of funding formulas in common use today. These formulas in some form or combination comprise the basis for funding special education programs in the United States. The six formulas are:

Unit. A fixed amount of money is provided for each qualified unit of instruction, administration, and transportation. The funding is

¹⁰ John W. Polley, Problems Connected with Equalization of Educational Opportunity (Albany NY: Bureau of Educational Research, New York State Department of Education, 1970), p. 5.

¹¹ Marie A. Thomas, "Finance: Without Which There Is No Special Education," Exceptional Children 39 (March 1973), pp. 475-480.

for the costs of resources necessary to operate the unit (e.g., teacher salary and other operating expenses), and the amounts may vary by type of unit.

Personnel. Funding is provided for all or a portion of the salaries of personnel who work with handicapped children. No other costs are reimbursed under this formula. It is essentially a special case of the unit formula approach, limited to personnel costs.

Straight Sum. A fixed amount is provided for each handicapped child. The amount may vary by type of handicap.

Percentage. A percentage of approved costs of educating handicapped children is provided. This approach is often combined with others, as in funding 75% of certified special education teacher salaries.

Excess Cost. The additional costs of educating handicapped children are reimbursed in full or part.

Weight. An amount of money is provided for each handicapped child equal to the regular per pupil reimbursement times a factor or weight which typically varies by type of handicap. The net result is a per pupil funding amount.¹²

It was this final category that the Oklahoma State Legislature selected as the appropriate method of reforming the previous method of funding special education programs, a straight sum approach called flat grants. Reforming the state's educational finance system, never a slight undertaking, was complicated by the unusually large number of school districts within Oklahoma. Slightly over 600 school districts have established boundaries and organizational patterns over a period of time which can only be described as haphazard.¹³ It was thought that by weighting categories of handicapped students as part of a comprehensive plan to equalize funding in the state that the state's school districts would be appropriately compensated for the excess cost of educating

¹² William T. Hartman, Policy Effects of Special Education Funding Formulas, Project Report No. 80-B1 (Palo Alto, CA: Institute for Research on Finance and Governance, 1980), pp. 6-7.

¹³ Jack F. Parker and Gene Pingleton, Financing Education in Oklahoma, 1981-1982, (Norman, OK: Oklahoma State School Boards Association, 1981), pp. 36-37.

handicapped students and that educational dollars would be distributed more nearly in accordance with the varying needs of students.¹⁴

The use of some form of weightings in state school finance programs has been practiced for many years. Several states currently incorporate some type of weighting in their state programs for financing education. Oklahoma's formula for calculation of state aid involves weightings for pupil grade level, economically disadvantaged students, teacher experience, and categorical weighting for special education students.¹⁵

The notion of pupil weightings involves the establishing of cost indices. These cost indices are expressed as ratios. A basic unit, usually the estimate of cost of educating a typical, non-handicapped student, is designated and is given the numerical value of 1.0. A program costing twice as much as the basic unit would be assigned an index of 2.0. If the cost of operating a particular program is twice the cost of operating the base unit, then each student in the program would be counted twice for funding purposes.

Rossmiller and Frohreich¹⁶ stated that pupil weighting systems have certain distinct advantages when they are carefully developed and applied. First, they help focus attention on the child to be served. Funds are provided by the state for meeting the individual needs of the student while allowing local

¹⁴ Jack Leppert and Dorothy Routh, A Policy Guide To Weighted Pupil Education Finance Systems: Some Emerging Practical Advice (Washington: U. S. Department of Health, Education, and Welfare, 1979), pp. 3-9.

¹⁵ Parker and Pingleton, Financing Education in Oklahoma, 1981-1982, pp. 12-27.

¹⁶ Richard A. Rossmiller and Lloyd E. Frohreich, Expenditures and Funding Patterns in Idaho's Programs for Exceptional Children (Boise, ID: Idaho State Department of Education, 1979) pp. 6-7.

administrative units flexibility to devise programs for different student populations in different geographic and demographic situations.

Second, pupil weighting systems facilitate the consolidation of categorical funding for education. This enables state policy makers to consider the needs of all pupils in a single funding scheme. Policy makers have the advantage of being able to consider simultaneously the various resource requirements of the different programs in relation to the basic unit and their relationship to each other. Furthermore, pressure from special interest groups interested in each type of student would decrease since individual categorically funded programs would no longer exist.

Citing the work of Leppert and Routh,¹⁷ the authors listed the following advantages for the use of cost differentials in state school finance formulas:

1. To make allowances for variable concentrations of pupils among districts in need of higher than regular cost programs,
2. To avoid penalizing some districts and rewarding others because of differences in grade levels served,
3. To improve present costs units (pupil or instructional) in use for distribution of funds, and
4. To improve the quality of financial information that can be related more effectively to teacher results.

The researchers¹⁸ also described a number of limitations associated with the use of cost indices. The most obvious limitation is the fact that a cost index for any program represents an average, generally, a statewide average. It is reasonable to assume that one-half of the local districts in the

¹⁷Leppert and Routh, A Policy Guide To Weighted Pupil Education Finance Systems: Some Emerging Practical Advice, pp. 30-34.

¹⁸Rossmiller and Frohreich, Expenditures and Funding Patterns in Idaho's Programs for Exceptional Children, pp. 9-12.

state will be spending more than the statewide average and the remaining one-half will be spending less. Consequently, using a statewide average cost of special education as a basis for the distribution of state funds will not guarantee adequate provisions will be made for the education of these students.

A further limitation is that cost indices reflect current educational practice. While identifying current expenditure levels for different programs, they provide no information on what schools should be providing in these areas. Some schools may be spending more because of inefficient practices, diseconomy of scale, or lower tax rates and the resultant lowered revenues.

While the use of cost indices to allocate funds among local units has certain limitations, their use is none-the-less particularly helpful for statewide planning purposes. The use and development of accurate cost indices would enable state policy makers to estimate much more accurately the amount of money needed to provide adequately for the special education needs of all students.

Statement of the Problem

The problem investigated in this study involved determining the differences in the cost of providing special education in Oklahoma school districts whose enrollments vary in size. The study examined the differences in the cost among various size school districts of providing special education to several categories of handicapped children identified and served during the 1980-81 school year. Also, this study compared its findings in light of two established cost indices: (1) the projected cost indices for 1980 found in an

earlier study¹⁹ and (2) the cost indices which serve as the basis for funding programs for handicapped students in Oklahoma.²⁰

In order to investigate the problem, the following research questions were formulated:

1. What differences exist among the various size school districts in the per pupil expenditure for the education of handicapped students?
2. What differences exist among the various size school districts in the excess cost for providing education to handicapped students?
3. What differences exist among the various size school districts in the cost indices for providing education to handicapped students?
4. What differences occur when the program costs excess costs and the cost indices are adjusted to reflect the amount of federal categorical monies applied to the cost of educating handicapped students in the various size school districts?
5. What are the mean and median program costs, excess costs, and cost indices for the handicapped students being educated in the school districts studied?
6. What differences exist in the projected cost indices for special education predicted by a National Education Finance Project study for the year 1980 and the actual cost indices in a comparable school district for school year 1980-81?
7. What differences exist between the categorical cost indices established by the current school funding formula and the mean categorical cost indices for the school districts studied?

Significance of the Study

The added cost of special education above the cost of regular education is a topic of great interest among educators involved in the financing

¹⁹ Rossmiller, Hale, and Frohreich, Educational Programs for Exceptional Children: Resource Configurations and Costs, p. 129.

²⁰ Parker and Pingleton, Financing Education in Oklahoma, pp. 9-10.

of programs for the public schools. The reason for this interest can be best explained by examining a recent study²¹ which stated that budgets for special education are rising twice as fast as those for regular education. It further said that the proponents of special education must understand its financial aspects in great detail if they are to keep their programs operating in time of declining enrollments and contracting budgets.

The funding formula established by the Oklahoma Legislature in House Bill 1236 shares the philosophy of all educational funding formulas, (i.e., to allocate service cost to those students who were intended to benefit from the service).²² By establishing categorical cost indices for special education programs, it was hoped that monies would be directed to the needs of the children it was intended to serve. However, these cost indices were never intended to be permanent measures. As the Oklahoma Citizen's Commission on Education²³ recommended, "There should be a continuing review of the pupil weighting factors in the various special education categories in the state finance formula." How these reviews are to be conducted is addressed in another publication, Financing Education in Oklahoma,²⁴ which states "The criteria that ought to be used to determine the weights should be as objectively determined as possible. There should be studies of actual cost of the various programs." This study was designed to carry out these recommendations.

²¹J. S. Kakalik et al., The Cost of Special Education (Santa Monica, CA: Rand, 1981) p. 203.

²²Oklahoma Citizen's Commission on Education, Strengthening Oklahoma Education (Oklahoma City, OK: State of Oklahoma, 1982) p. 19.

²³*Ibid.*, p. 19.

²⁴Parker and Pingleton, Financing Education in Oklahoma, p. 47.

Although not the first cost analysis of special education programs conducted, this study had several characteristics that were unique. In the first place, this study represented the first attempt to systematically determine what were the excess costs and cost indices of Oklahoma's special education programs. These two measures are significant because one, excess cost, must be demonstrated in order for a school district to receive federal categorical monies for handicapped students; while the other, cost indices, serve as the basis for the allocation of state equalization aid to schools for handicapped students served in Oklahoma.

Secondly, this study represented the first such cost analysis using data gathered after the full implementation of P.L. 94-142. This factor was especially significant in light of the widely held belief among educators that the requirements placed upon them by this law has greatly contributed to the excess cost of educating the handicapped.

The information gained through this study may assist in the formation of policies and the allocation of resources for the education of handicapped children by providing accurate information on the cost of various types of special education. This information could aid in determining the levels of financing required to provide an appropriate education for handicapped students, facilitate policy making regarding service requirements and related matters by enhancing understanding of the costs of different types of service and educational placements, allow adjustment of the state scheme of financing handicapped students' education to match local needs, and reduce fiscal incentives for inappropriate classification of handicapped children.

Operational Definitions

1. Cost Index. A ratio of the per pupil expenditure for special services

divided by the per pupil expenditure for a defined regular education program.²⁵

2. Educable Mentally Retarded (E.M.R.). Mentally retarded individuals whose level of intellectual functioning is measured to be in the 50-75 range on an individually administered standardized IQ test.²⁶
3. Excess Cost. The added cost of special education and related services above the cost of a regular education program and the minimum average amount a local educational agency must spend for the education of each of its handicapped children.²⁷
4. Handicapped Children. Children classified as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, or children with specific learning disabilities who, because of those impairments need special education and related services.²⁸
5. Hearing Impaired (H.I.). Those individuals classified as deaf and hard-of-hearing as determined by a minimum 40 decible loss of hearing measured by an individually administered audiological examination.²⁹
6. Learning Disabled (L.D.). A disorder in one or more of the basic psychological processes involved in understanding language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily a result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.³⁰

²⁵ Charles D. Bernstein, ed. et al., Financing Educational Service for the Handicapped, (Reston, VA: Council for Exceptional Children, 1976), p. 7.

²⁶ Oklahoma State Department of Education, Policies and Procedures Manual for Special Education in Oklahoma, (Oklahoma City, OK: Oklahoma State Department of Education, 1982), p. 34.

²⁷ U. S. Department of H.E.W., Federal Register, Implementation of Part B of E.H.A.-B, sec. 121a. 183.

²⁸ Ibid, sec. 121a. 5.

²⁹ Oklahoma S.D.E., Policies and Procedures Manual for Special Education in Oklahoma, p. 34.

³⁰ U. S. Department of H.E.W., Federal Register, Implementation of Part B. of E.H.A.-B, sec. 121a. 5 (9).

7. Mentally Retarded. Significantly subaverage intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects the child's performance.³¹
8. Multihandicapped (M.H.). Concomitant impairments, the combination of which causes such severe educational problems that they cannot be accommodated in special education programs solely for one of the impairments. The term does not include deaf-blind children.³²
9. Physically Handicapped (P.H.) Severe orthopedic impairment which adversely affects a child's educational performance.³³
10. Related Services. Transportation and such developmental, corrective, and other supportive services as may be required to assist a handicapped child to benefit from special education and includes the early identification and assessment of handicapping conditions in children.³⁴
11. Seriously Emotionally Disturbed (E.D.) The term means a condition exhibited one or more of the following characteristics over a period of time and to a marked degree, which adversely affects a child's educational performance:
 - (A) An inability to learn that cannot be explained by intellectual, sensory, or health factors,
 - (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers,
 - (C) Inappropriate types of behavior or feelings under normal circumstances,
 - (D) A general pervasive mood of unhappiness or depression, or
 - (E) A tendency to develop physical symptoms or fears associated with personal or school problems.³⁵
12. Special Education. Specially designed instruction, at no cost to the parents or guardians, to meet the unique needs of a handicapped child including classroom instruction, instruction in physical education, home instruction, and instruction in hospitals and institutions.³⁶

³¹ Ibid., sec. 121a. 5 (4).

³² Ibid., sec. 121a. 5 (5).

³³ Ibid., sec. 121a. 5 (6).

³⁴ Ibid., sec. 121a. 13.

³⁵ Ibid., sec. 121a. 5 (8).

³⁶ Ibid., sec. 121a. 14.

13. Speech Impaired (S.I.). A communication disorder, such as stuttering, impaired articulation, a language impairment, which adversely affects a child's educational performance.³⁷
14. Supplanting. Replacing state or local monies dedicated for special education with federal categorical monies for that purpose.³⁸
15. Trainable Mentally Retarded (T.M.R.). Mentally retarded individuals whose level of intellectual functioning is measured to be in the 30-50 range on an individually administered standardized IQ test.³⁹
16. Visually Impaired (V.I.). A visual impairment which, even with correction, adversely affects a child's educational performance. The term includes both partially seeing and blind children.⁴⁰

Limitations of the Study

The study's major limitations include:

1. The costs studied were limited to the following:
 - a. Expenditures incurred by the eleven school districts studied,
 - b. Expenditures for the 1980-81 school year, and
 - c. Expenditures for the categories of handicapping conditions reported.
2. The expenditures included in the calculation of the costs of regular and special education programs were limited to those expenditures in the following general fund accounts:
 - a. Administration
 - b. Instruction
 - c. Attendance Services
 - d. Health Services
 - e. Transportation
 - f. Operation of Plant
 - g. Maintenance of Plant
 - h. Fixed Charges

³⁷ Ibid., sec. 121a. 5 (10).

³⁸ Ibid., sec. 121a. 230.

³⁹ Oklahoma S.D.E., Policies and Procedure Manual for Special Education in Oklahoma, p. 34.

⁴⁰ U. S. Department of H.E.W., Federal Register, Implementation of Part B of E.H.A.-B, sec. 121a. 5 (11).

- i. Food Services
 - j. Student Body Activities
 - k. Outgoing Transfer Accounts
3. Although cost data were obtained regarding learning disabilities and speech therapy programs, sufficient information was not available to convert them to a full-time equivalent basis and allow the calculation of cost in a manner comparable from school district to school district. However, speech therapy costs are reported on a per pupil basis for those handicapped students receiving speech therapy as a related service.

Organization of the Study

Chapter I contains the introduction, background information, statement of the problem, research question, significance of the study, operational definitions, limitations of the study, and the organization of the study. The selected review of literature is found in Chapter II. The methodology is presented in Chapter III. Chapter IV contains the analysis and interpretations of the data. The summary, findings, ancillary findings, conclusions, and recommendations are found in Chapter V.

CHAPTER II

Selected Court Cases Significant to Financing Special Education Programs

The legal rights currently enjoyed by handicapped students were won largely through a series of court decisions whose rulings were based on earlier civil rights cases. The most significant of these civil rights cases for the handicapped was the United States Supreme Court Decision in Brown v. Board of Education of Topeka. In the Brown opinion the Court stated:

In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be available to all on equal terms.¹

The Brown Court further stated "that in the field of public education the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal." Citing the United States Constitution the Court concluded that segregation by race deprived Blacks of equal protection under the law guaranteed by the Fourteenth Amendment.²

Turnbull, et al., stated that Brown was a landmark because of its impact on so many issues of educational law and procedure most notably that:

1. All educational issues (such as the educational rights of handicapped students) are actually political or social issues in the guise of constitutional litigation,

¹Brown v. Board of Education of Topeka, 347 U. S. 483, 74 S. Ct. 686, 98 L. Ed 873 (1954).

²E. Edmund Reutter, Jr. and Robert R. Hamilton, The Law of Public Education (Mineola, NY: The Foundation Press Inc., 1976), p. 643.

2. Brown marked the entry of the federal government into public education, and
3. The Fourteenth Amendment became the constitutional basis for the right-to-education movement.³

The authors also point out in regard to Brown that if the word "handicapped" is substituted for "Negro" and "non-handicapped" for "White" in the body of the opinion, it becomes apparent how important it is to the education of the handicapped.⁴

In a later court case in the area of school finance the Fourteenth Amendment was also applied.⁵ Here litigation focused on equal access to wealth, a concept that has come to be known as fiscal neutrality.

A class action suit filed in 1971 challenged the State of California's scheme of financing public education primarily on the basis of property taxes. The suit alleged that this method of financing education was unconstitutional because it made the quality of the education received by a child a function of the property wealth of the school district in which the child resides. It should be noted that the plaintiffs considered education to be a fundamental right.

This case actually developed into two cases referred to in the literature as Serrano I and Serrano II. Serrano I essentially established the validity of the plaintiffs' case, while Serrano II dealt with the actual issues raised by the plaintiffs.⁶ After nearly five years of legal battles the issue was

³H. Rutherford Turnbull and Ann Turnbull, Free Appropriate Public Education Law and Implementation (Denver: Love Publishing Co., 1978), pp. 14-15.

⁴*Ibid.*, p.17.

⁵Serrano v. Priest, 5 Cal. 3d 584, 96 Cal. Rptr. 601, 487 P. 2d 1241 (1971) Subsequent opinion, 45 U.S.L.W. 2340 (Dec. 30, 1976).

⁶Steven H. McDonald, "An Analysis of the Relationship Between the Local Wealth and Distribution of State Support for the School Districts of Oklahoma During the 1977-78 School Year" (Ed.D. dissertation, University of Oklahoma, 1980), pp. 47-48.

finally decided by the California Supreme Court in a four-to-three majority decision upholding the trial court's earlier decision that ruled that the state system of financing public schools was unconstitutional under the California State Constitution.⁷

Justice Sullivan, speaking for the California Court, stated:

We have determined that this funding scheme individually discriminates against the poor because it makes the quality of a child's education a function of the wealth of his parents and neighbors. Recognizing as we must that the right to an education is a fundamental interest which cannot be conditioned on wealth, we can discern no compelling state purpose necessitating the present method of financing. We concluded, therefore, that such a system cannot withstand constitutional challenge and must fall before the equal protection clause.

The court felt that education should be considered a "fundamental interest" because: (1) it is necessary to sustain "free enterprise democracy," (2) it is unusually relevant, (3) it continues over a long period of time, (4) its role is unequalled in molding society's personality and (5) if it were not vitally important, then why is it compulsory?⁹

Singletary stated that the most notable land-mark cases relating to the right-to-education movement for handicapped children have been Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania and Mills v. Board of Education of the District of Columbia.¹⁰

⁷ Ibid.

⁸ Serrano v. Priest, 45 U.S.L.W. 2340 (Dec. 30, 1976).

⁹ Ernest Singletary, "Special Education: Financial and Legal Ramifications," ed. S.B. Thomas and K.M. Floyd, Critical Issues in Educational Finance (Harrisburg, VA: Virginia Institute for Educational Finance, 1975), p. 174.

¹⁰ Ibid., p. 178.

Both cases were heard in light of the favorable decisions in Serrano establishing education as a fundamental right.¹¹

In a suit filed in January, 1971, the Pennsylvania Association of Retarded Citizens (P.A.R.C.) and 17 mentally retarded children and all others similarly situated challenged the state secretaries of education and public welfare, the State Board of Education and 13 school districts representing all the school districts in the state.¹² The action was directed against state law and public policy which postponed or denied free public education to mentally retarded children. Free access to public educational opportunities was sought.¹³

The attorney for P.A.R.C. noted in a brief submitted during the trial that John W. Davis, an attorney representing South Carolina in the Brown case, had opened his argument to the Supreme Court with the following caution:

*I think if the appellants' construction of the Fourteenth Amendment should prevail here, there is no doubt in my mind that it would catch the Indian within its grasp just as much as the Negro. If it should prevail, I am unable to see why a state would have any further right to segregate its pupils on the grounds of age or on the grounds of mental capacity.*¹⁴

The court in the P.A.R.C. case agreed with Mr. Davis' statements regarding the segregation of handicapped students in public schools and ruled that the state must: (1) provide its mentally retarded children with an education which is (a) suited to each child's needs or (b) includes tuition grants to private schools which will provide such an education, and (2) provide due

¹¹Leopold Lippman and I. Ignacy Goldberg, Right to Education (New York: Teachers College Press, Columbia University, 1974), pp. 64-65.

¹²Pennsylvania Association for Retarded Children v. Pennsylvania, 343 F. Supp. 279 (E.D. Pa. 1972).

¹³Ibid.

¹⁴Lippman and Goldberg, Right to Education, p. 13.

process procedures, notice, and hearing rights which must accompany any change in status of a mentally retarded child.¹⁵

An injunction during the proceedings placed the children named in the case in public schools immediately and required that all school age mentally retarded be placed in the public schools by the start of the next school year. After all decrees were finalized, the court appointed an individual to oversee them.¹⁶

The other landmark case in special education, Mills v. Board of Education of The District of Columbia, dealt more directly with the issue of finance than did the P.A.R.C. decision. The plaintiffs in the Mills case, seven children afflicted with a variety of handicapping conditions, alleged that they were denied educational opportunities, and that they were denied due process required by the Fifth Amendment to the United States Constitution. The plaintiffs sought appropriate educational services and guarantees of their rights from the defendants, the District of Columbia Board of Education, the Department of Human Resources and the Mayor of the City of Washington.¹⁷

Judge Joseph Waddy's decision in the Mills case greatly affected the future funding of special education when he wrote:

The Defendants are required by the Constitution of the United States, the District of Columbia Code and their own regulations to provide a publicly-supported education for these "exceptional" children. Their failure to fulfill this clear duty to include and retain these children in the public school system or otherwise provide them with publicly supported education and their failure to afford them due process and periodical review, cannot be excused by the claim that there

¹⁵ Pennsylvania Association for Retarded Children v. Pennsylvania, 343 F. Supp. 279 (E.D. Pa. 1972).

¹⁶ Gene Hensley, C. D. Jones, and Nancy Ellen Cain, Questions and Answers-The Education of Exceptional Children, Report No. 73, (Denver: Education Commission of the State, 1975), p. 7.

¹⁷ Ibid., p. 9.

are insufficient funds... the District of Columbia's interest in educating the excluded children must outweigh its interest in preserving its financial resources. If sufficient funds are not available to finance all of the services and programs that are needed and desirable in the system, then the available funds must be expanded equitably in in such a manner that no child is entirely excluded from a publicly-supported education consistent with his needs and ability to benefit there from. The inadequacies of the District of Columbia Public School System, whether occasioned by insufficient funding or administrative inefficiency, certainly cannot be permitted to bear more heavily on the "exceptional" or handicapped child than on the normal child.¹⁸

On December 20, 1971, the court ordered the placement of plaintiffs by January 5, 1972, and the identification and placement of all handicapped children living within the school district.¹⁹

Rodriguez v. San Antonio, a case like Serrano, was based on the concept of fiscal neutrality. The plaintiffs in Rodriguez sought to have the Texas system of financing public schools declared unconstitutional claiming that it violated the Fourteenth Amendment of the Constitution because it was based primarily on local property taxes and, therefore, favored certain more affluent school districts because such a system resulted in substantial disparities in monies available for children's education between school districts. Plaintiffs in Rodriguez, like those in Serrano, considered education to be a fundamental right.²⁰ The Federal District Court applied the concept of strict judicial scrutiny, which requires states to justify unequal treatment by establishing a compelling state interest and found the Texas scheme of financing public schools to be unconstitutional.²¹

¹⁸ Mills v. Board of Education of the District of Columbia, 348 F. Supp. 866 (D.D.C. 1972).

¹⁹ Ibid.

²⁰ Rodriguez v. San Antonio Independent School District, 337 F. Supp. 280 (W.D. Tex. 1971), rev'd U. S. 1, 93 S. Ct. 1278, 36 L. Ed. 2d 16 (1973).

²¹ McDonald, "Analysis of the Relationship Between the Local Wealth and Distribution of State Support for the School Districts of Oklahoma," p. 48.

However, this opinion was over-turned on appeal by the United States Supreme Court in a five-to-four majority decision. The reversal of the lower court's decision was based largely upon the inapplicability of the test of strict judicial scrutiny in this matter. The court also refuted the plaintiff's claim that education was a fundamental right under the Constitution of the United States.²²

Considering the effect of Rodriguez upon the right-to-education of handicapped children, Casey wrote:

Regarding the suspect class, Rodriguez has laid down criteria for suspectness, each and all of which are characteristic of the handicapped. It is strongly indicated that the opportunity to a minimum level of education may be protected as requisite to meaningful exercise of the right to vote and freedom of speech. Moreover, exclusions (of handicapped students) even fail to meet the more lenient rational basis test. The Supreme Court's decision has not only failed to weaken efforts on behalf of exceptional children but has actually strengthened their contentions.²³

Hartman stated that the courts in the Rodriguez case "interpreted 'equal educational opportunity' as equal access to minimally adequate resources" and found that this requirement was satisfied in Texas by the state-imposed minimum expenditure level. He further wrote that, "This judicial shift from the standard equal protection to a minimally adequate education could have important ramifications..."²⁴

The impact of this interpretation of equal educational opportunity may have been recently felt in a 1982 United State Supreme Court decision, Board of Education of the Hendrick Hudson Central School District Westchester

²²Ibid., pp. 49-50.

²³P. J. Casey, "The Supreme Court and the Suspect Class," Journal of Exceptional Children, Oct. 1973, p. 458.

²⁴Hartman and Haber, School Finance Reform and Special Education, Report No. 81-A8, p. 11.

County, et al. v. Rowley. Ruling on the question of the appropriateness of a hearing impaired child's education as required by Public Law 94-142, the court stated:

The Act's intent was more to open the door of public education to handicapped children ... than to guarantee any particular substantive level of education once inside.

The fiscal impact of the Rowley decision on financing of special education programs cannot yet be measured. However, The Supreme Court appears to be committed to the idea of equal opportunity in education for the handicapped.

A school finance case in New York, Levittown v. Nyquist, serves as an example of the evolution of litigation in the area in terms of the comprehensive nature of the issues included within the case.²⁶ Based on the state education clause as well as the state and federal equal protection clause, Levittown included the fiscal neutrality argument as well as such issues as the necessity of a financing system to be sensitive to the needs of special student population.²⁷ The plaintiffs in the case, twenty-seven school districts, differed in their individual characteristics but shared a common characteristic in that they were below or nearly below average in property wealth and were unable to support the level of spending and quality of educational services they thought necessary for children living within their school districts.²⁸

²⁵ Board of Education of the Hendrick Hudson Central School District Westchester County et al. v. Rowley, 102 S. Ct. 3034 (1982).

²⁶ Allan Odden and John Augenblick, School Finance in the States: 1981, Report No. F81-1 (Denver: Education Commission of the States, 1981), p. 6.

²⁷ Ibid., p. 7.

²⁸ The New York State Special Task Force on Equity and Excellence in Education, The Report and Recommendations of the New York State Special Task Force on Equity and Excellence in Education, (New York: Office of the Governor, 1982), p. 7.

The state aid formula, while recognizing that great difference in revenue-raising abilities exist among the 700 school districts in the state, was judged to be a failure in its goal of equalization of educational expenditures because gross disparities continued to exist. Justice L. Kingsley Smith held that a direct, though not exact, relationship existed between wealth and expenditure and likewise between expenditure and the quality of education. This made the quality of education a child receives, as in Serrano, a function of the wealth of the child's parents as determined by the tax base of the school district in which he happens to reside. The Court held this to be unconstitutional under the education clause and the equal protection clause of the State Constitution and the Fourteenth Amendment of the United States Constitution.²⁹

The four largest cities represented in the case claimed the state's system of financing public schools to be unconstitutional because it failed to take into account the over-burdening conditions which they must bear that are not found in rural or suburban school districts. The court held the funding formula to be unconstitutional on these grounds as well.³⁰

The case was appealed to the Appellate Division and a decision was rendered on October 26, 1981. In a three-to-four majority decision, the Court upheld the lower court's decision that the state's scheme of financing public schools was unconstitutional. One dissenting Justice stated that while he dissented with respect to the funding formula violating the equal protective clause, "he opined that the formula violates the education clause only because

²⁹Ibid., p. 12.

³⁰Odden and Augenblick, School Finance in the States: 1981, p. 7.

its provisions are such a labyrinthine maze that it does not constitute a 'system' within the clause." The Court also unanimously reversed the holding of Justice Smith that the old formula violated the Fourteenth Amendment of the United States Constitution.³¹

Selected Federal Legislation Significant to
Financing Special Education Programs

For handicapped children, as for black children, the United States Supreme Court's decision in Brown v. Board of Education of Topeka signifies a turning point in terms of handicapped children's right to an education. Brown is also significant to the handicapped because it marks the intervention of the federal government into education. Handicapped children now enjoy many rights and procedural protection due to federal statutes that resulted from Brown and later cases such as P.A.R.C. and Mills.³²

Federal involvement in programs for the handicapped began in 1958 when funds were provided through Public Law (P.L.) 85-926 for training professional teacher educators for the mentally retarded. Two other bills, P.L. 87-276 in 1961 and P.L. 88-164, in 1963, provided grants for training teachers of the deaf and teachers of children with other handicapping conditions.

Title I of the Elementary and Secondary Education Act of 1965, (E.S.E.A.), P.L. 89-10, greatly expanded the federal government's role in the

³¹The New York State Special Task Force on Equity and Excellence in Education, The Report and Recommendations of the New York State Special Task Force on Equity and Excellence in Education, p. 20.

³²Christiane H. Citron, The Rights of Handicapped Students, Report No. LEC-2, (Denver: Education Commission of the State, 1982), p. 1.

education of the handicapped and the economically disadvantaged by providing funds to schools for state-level programs. Later amendments to E.S.E.A. include: P.L. 89-313 enacted in 1966 which provides monies for the education of children in state supported institutions that follow the child to the public schools should the child leave the institution, P.L. 89-750 which created the Bureau of Education for the Handicapped in the United States Department of Health, Education and Welfare, and P.L. 91-230 passed in 1970 to recognize the handicapped and exceptional children as one population with special needs.

The decade of the 1970's marked a period of tremendous progress for the handicapped. It is significant to note that these gains were accomplished in a period when other minority group's influence was declining. The most significant legislative event of the decade in regard to the handicapped began with the introduction by New Jersey Democrat Harrison Williams of Senate Bill (S.B.) 6 to the 93rd Congress in 1973. S.B. 6 represented the culmination of years of work by the handicapped and their advocates. Prior to the introduction of this bill, Congress had passed scores of laws favorable to the handicapped, but in S.B. 6 the gains made by the handicapped were to be amended and consolidated into one comprehensive act similar in scope to the Civil Rights Act of 1964.

Congress, recognizing the need to be thorough when enacting such a comprehensive bill, passed a law for an interim period of one year in order to give themselves additional time to determine if any additional federal assistance was needed to enable the states to meet the educational needs of handicapped children. This action ultimately produced the Education for All Handicapped Children Act (P.L. 94-142), which was signed into law by President Ford on November 29, 1975.

P.L. 94-142 provides federal money to assist state and local educational agencies in educating handicapped children. These funds are awarded to states who, on a permissive basis, elect to comply with the extensive goals and procedures set out in the Act regarding the education of handicapped students. To qualify for federal assistance, a state must show that it has enacted "a policy that assures all handicapped children the right to a free appropriate public education." That policy is set out in a "state plan" which describes the goals, programs, and timetables under which the state will operate.³³

To receive money under the Act, a state must educate the handicapped by priority, providing the unserved and severely handicapped underserved children first.³⁴ Also, "to the maximum extent appropriate" schools must educate the handicapped "with children who are not handicapped."³⁵ Additionally, receipt of federal funds is contingent upon a school district's assurance that these funds will be used only for the excess cost³⁶ of the special education programs; and that they not be used to supplant state or local monies previously allotted for special education.³⁷

The "free appropriate public education" required by P.L. 94-142 must be designed to meet the needs of each handicapped child by means of an individualized educational program (IEP). In Oklahoma, the IEP is prepared at a meeting between the child's parent, surrogate parent, or guardian, a special

³³U. S. Department of H.E.W., Federal Register, Implementation of Part B EHA-B, sec. 121a. 110.

³⁴*Ibid.*, sec. 121a. 127.

³⁵*Ibid.*, sec. 121a. 132.

³⁶*Ibid.*, sec. 121a. 229.

³⁷*Ibid.*, sec. 121a. 230.

education teacher, a teacher of non-handicapped children, a representative of the school's administration, and other persons who the parent or school feel can make a significant contribution to the education of the child. The document itself contains:

(1) A statement of the present levels of educational performance of the child, (2) A statement of annual goals, including short-term instructional objectives, (3) A statement of the specific educational services to be provided to such a child, and the extent to which such child will be able to participate in regular educational programs, (4) The projected date for initiation and anticipated duration of such service, and (5) Appropriate objective criteria and evaluation procedures and schedules for determining, on at least an annual basis, whether instructional objectives are being achieved.³⁸

Finally, the Act imposes extensive procedural requirements on states receiving funds under its provisions, in addition to those measures already described. Parents must be given prior notice of any change of placement, identification, evaluation, or other matters relevant to the child's education. Parents are also permitted to bring about a complaint regarding any matter related to compliance with the requirements of the Act.³⁹

In return the federal government is committed to provide funding to assist state and local educational agencies in attaining these goals. The fiscal provisions of P.L. 94-142 established a state's entitlement to federal funds through a statutory formula. A state's allocation is determined by multiplying the number of handicapped children between the ages of 3 and 21 who are receiving special education services by the "national average per pupil expenditure." The national average per pupil expenditure is defined as the aggregate current expenditures of all local educational agencies during the fiscal year preceding the fiscal year for which the computation is made, plus additional

³⁸ *Ibid.*, sec. 121a. 130.

³⁹ *Ibid.*, sec. 121a. 508.

expenditures of state monies, divided by the aggregate number of children in average daily attendance. The States were to receive P.L. 94-142 monies on the following schedule:

Fiscal Year 1978: 5% of the national average per pupil expenditure
 Fiscal Year 1979: 10% of the national average per pupil expenditure
 Fiscal Year 1980: 20% of the national average per pupil expenditure
 Fiscal Year 1981: 30% of the national average per pupil expenditure
 Fiscal Year 1982 and thereafter: 40% of the national average per pupil expenditure⁴⁰

Schools were required to maintain records which demonstrate that funds provided under the Act were used solely for the excess cost of educating handicapped students. This provision insures that educational agencies commit themselves to provide the same base of support for handicapped students that they provide for the non-handicapped.⁴¹

Unfortunately, the full authorization of 40 percent of the per pupil cost has never been achieved. Also, even if full funding of special education was achieved, there is a fixed authorization ceiling. The ceiling for fiscal year 1981 was 3.16 billion dollars. This amount, while a substantial sum, will not match the added cost of special education which was estimated to be 7 billion dollars in this same year.⁴²

P.L. 94-142 then is a carrot and a stick providing funding to assist states in carrying out the requirements it mandates. However, Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112) provides no funding; its provisions contain only requirements.

⁴⁰Rossmiller and Frohreich, Expenditures and Funding Patterns in Idaho's Programs for Exceptional Children, pp. 53-54.

⁴¹Ibid., p. 55.

⁴²"Implementation of a Mandate," Institute for Finance and Governance Policy Notes, vol. 2, No. 1. Winter 1981, p. 6.

Section 504 states:

No otherwise qualified handicapped individual . . . in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Section 504 is, essentially, an antidiscrimination law requiring that all handicapped students receive the same quality of education as non-handicapped students in schools receiving federal funds. In this way Section 504 is not substantially different from other civil rights laws. However, unlike the absolute ban on racial discrimination in the Civil Rights Act of 1964, Section 504 prohibits discrimination only against "otherwise qualified" handicapped individuals in institutions receiving "Federal financial assistance."⁴³

The definition of a handicapped individual is much broader under Section 504 than under P.L. 94-142. Included in the term are such conditions as speech, hearing, visual and orthopedic impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, diabetes, heart disease, mental retardation, emotional illness, and specific learning disabilities such as perceptual handicaps, dyslexia, minimal brain dysfunction and developmental aphasia. In accordance with a formal opinion of the Attorney General of the United States, alcohol and drug addicts are also considered to be handicapped. However, physical or mental impairments do not constitute a handicap, unless they are severe enough to substantially limit one or more of the major life functions.⁴⁴

⁴³Citron, The Rights of Handicapped Students, p. 12.

⁴⁴U. S. Department of Health, Education, and Welfare, Office of Civil Rights, Section 504 of the Rehabilitation Act of 1973 Fact Sheet, (Washington: Office for Civil Rights, 1977), p. 1.

The final Section 504 regulations went into effect on June 3, 1977 and for many students who had been excluded from an educational program on the basis of physical, mental, or behavioral handicapping conditions, this meant that local school districts must either open existing programs to them or establish new programs in which they could be educated. Either situation could result in considerable expense for schools.⁴⁵ In addition to pre-school, elementary, and secondary education, Section 504 contains provisions regarding employment practices, program accessibility, post-secondary education, health, welfare, and social services.

Selected State Legislation Significant to
Financing Special Education Programs

The school laws of Oklahoma authorize the school districts in the state to provide special education services necessary for the handicapped children residing in these districts.⁴⁶ This may be accomplished by serving handicapped children within the home district, by cooperative programs established by two or more school districts, or a special education system may be established on a county wide basis and administered by the county superintendent. In this latter category, any school district located wholly or in part in a county may participate by contributing funds either directly or by reimbursement to the county.⁴⁷

⁴⁵"Implementation of a Mandate," I.F.G. Policy Notes, p. 7.

⁴⁶Oklahoma State Board of Education, School Laws of Oklahoma, 1982, (Oklahoma City, OK: Oklahoma State Department of Education, 1982), sec. 224.

⁴⁷Ibid., sec. 217.

In addition to providing services directly within school districts, in cooperatives, or in county-wide systems, transfers of special education between school districts are authorized. Such transfers are made under regulations which provide that the sending school district pay an equitable proportion of the cost of the program to the receiving school district. Home instruction is also authorized for handicapped students when deemed appropriate by an I.E.P. placement team.⁴⁸

Until the passage of House Bill 1236, special education programs received state funds on a per teaching unit or flat grant basis.⁴⁹ However, this legislation established a system of cost indices called weighted pupil categories or simply "weights." These weights were designed to reflect the excess cost per category of each handicapping condition. The weighted pupil calculation is found by multiplying the number of qualified students enrolled the previous year by each category's assigned weight and adding the categorical totals together. This figure is combined with the weighted pupil grade level calculation and the weighted district size calculation to figure the weighted average daily attendance.⁵⁰

Selected Special Education Finance Research

Although the financing of public education has been a topic of much research since the turn of the twentieth century, the financing of educational programs for exceptional children has received comparatively little attention.

⁴⁸Ibid., sec. 219.

⁴⁹Ibid., sec. 222.

⁵⁰Ibid., sec. 309.

However, in the late 1960's, interest in the topic expanded in keeping with the phenomenal growth of special education that was largely brought about by the commitment of the federal government to the education of handicapped children.

A major contribution in the area was made in a national study of school finance. The National Education Finance Project (N.E.F.P.) was conducted under a grant to the Florida State Department of Education from the United States Office of Education, Department of Health, Education, and Welfare. The study, conducted between 1968 and 1972, was charged with determining the educational needs of the next decade by estimating future school populations and computing current costs as a benchmark for future projections. Snell writes that the work done by the N.E.F.P. was the most comprehensive ever undertaken and the first since 1933.⁵¹

Specifically the purposes of the study were to:

1. Identify the dimensions of educational need in the nation,
2. Identify the target populations with special educational needs,
3. Measure cost differentials among different educational programs,
4. Relate the variations in educational needs and costs to the ability of school districts, states, and the federal government to support education,
5. Analyze economic factors affecting the financing of education,
6. Evaluate present state and federal programs for the financing of education, and

⁵¹Dwayne Earl Snell, "Special Education Program Cost Analysis for Three Selected School Corporations in Indiana" (Ph.D. dissertation, Indiana University, 1973), p. 30.

7. Construct alternative school finance models, both state and federal and analyze the consequences of each.⁵²

The literature generated by the N.E.F.P. consists of three types of documents: (1) The principle volumes, which present the overviews, summaries, and findings of the entire project, (2) The special studies which deal with specific issues or areas, and (3) The consulting studies initiated by individual states. Special education is mentioned throughout many of the studies and is the subject of one special study.⁵³

The N.E.F.P. special study on special education, Education Programs for Exceptional Children: Resource Configuration and Costs by Richard Rossmiller, James Hale and Lloyd Frohreich reported the results of a study of selected districts offering comprehensive, high quality special education programs in five states, Wisconsin, Florida, California, Texas, and New York.⁵⁴ Consistent with other N.E.F.P. studies, expenditure data were gathered for regular and special programs. Generally, this data had to be reorganized in order to allocate expenses to the individual programs, because school districts accounted for expenditures by line-item (salaries, transportation, etc.) rather than by program. Expenditures were adjusted to compensate for the atypical expenditures associated with special education such as classroom aides and expenditures for related services such as physical therapy.

The major objectives of the study were to:

1. Identify the configuration of human and material resources being applied in high quality special education programs,

⁵²Ibid., p. 29.

⁵³Bernstein, ed. et al., Financing Educational Services for the Handicapped, p. 7.

⁵⁴Rossmiller, Hale, and Frohreich, Educational Programs for Exceptional Children: Resource Configurations and Costs, p. 35.

2. Determine the cost differentials associated with these programs, and
3. Project the future costs of educating all handicapped children.

After analyzing data to develop a per pupil expenditure for regular and special education programs, a cost index was developed for each program in the school district. The cost index is a ratio of the per pupil expenditure on special service divided by the per pupil expenditure for a defined regular education program. It was assumed that cost indices were a more useful indicator of relative costs between programs than were the raw data.

The authors, noting the wide variation in program cost among school districts in the study, computed an average composite index slightly over two when all special education costs were combined. This indicates that special programs were, on the average, twice as expensive as regular education programs.⁵⁵

The N.E.F.P. undertook, contributed to, or influenced a number of state studies including: Texas, Florida, Mississippi, Delaware, South Dakota, and Kentucky.⁵⁶ Busselle's work in Texas resulted from the United States District Court decision in the Rodriguez case. The N.E.F.P. was engaged by a special

⁵⁵ Ibid., p. 118.

⁵⁶ National Educational Finance Project, Financing the Public Schools of South Dakota (Gainesville FL: National Educational Finance Project, 1973); National Educational Finance Project, Financing the Public Schools of Kentucky (Gainesville FL: National Educational Finance Project, 1973); Richard A. Rossmiller and Thomas A. Moran, Programmatic Cost Differentials in Delaware School Districts (Gainesville FL: National Educational Finance Project, 1973); T. N. Busselle, The Texas Weighted Pupil Study (Austin, TX: Office of Urban Education, Texas Education Agency, 1973); Institute for Educational Finance, Cost Factors of Education Programs in Florida (Gainesville, FL: National Educational Finance Project, 1974); Governor's School Finance Study Group, Mississippi Public School Finance (Jackson, MISS: National Educational Finance Project, 1973) ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 8.

committee on school finance to study the cost of special education in the state. Because of difficulties in outlining specific programs only a single cost index for special education was established. The cost index for special education ranged from 2.21 in elementary school to 2.71 in high school. The findings of this study were, for the most part, consistent with comparable N.E.F.P. studies. In addition to the findings, the study outlined the organizational and procedural steps necessary in a weighted pupil study.⁵⁷

A study of programmatic cost indices in selected Florida school districts was undertaken because it was widely recognized that the current cost indices were established without sufficient supporting data. The study of selected school districts attempted to provide additional information to educational planners regarding, among other things, the cost of special education. The mean costs were found to be lower than the mandated indices.⁵⁸

Mississippi Governor Waller appointed a study group to investigate state funding for schools and to make appropriate recommendations for change. The group employed the N.E.F.P. in an advisory capacity, and the cost study was conducted in the N.E.F.P. pattern. Special education, adjusted to a full time equivalent (F.T.E.) was found to cost \$784 per student as compared with \$418 average cost of a non-handicapped student. This results in an over-all cost index of 1.9 which is a figure consistent with other N.E.F.P. studies.⁵⁹

⁵⁷ Busselle, The Texas Weighted Pupil Study, ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 40.

⁵⁸ Institute for Educational Finance, Cost Factors of Education Programs in Florida, ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 48.

⁵⁹ Governor's School Finance Study Group, Mississippi Public School Finance, ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 50.

A study conducted for the Delaware State Board of Education and jointly financed with the N.E.F.P. which included all of the state's 26 school districts was conducted in the area of school finance. Because current operating expense data were not available by category the researchers had to devise methods for allocating expenditures into the proper areas.⁶⁰ The researchers developed cost indices for handicapped and vocational-technical programs. The handicapped indices were computed for educable and trainable mentally retarded students, the emotionally disturbed, learning disabled, physically handicapped, and the hearing impaired.

Other joint state-N.E.F.P. studies were conducted in South Dakota⁶¹ and Kentucky.⁶² Although factors varied between the two states, both studies concluded by recommending a system of weighted indices as the basis of funding systems for handicapped students.

The most current of the N.E.F.P.-style state studies was done in Idaho in 1979 by Rossmiller and Frohreich.⁶³ The study dealt exclusively with the cost of educating exceptional children, the gifted as well as the handicapped. With the assistance of the Idaho State Department of Education, the researchers gathered cost data from a sample of 45 school districts in the state during the 1976-77 school year.

⁶⁰ Rossmiller and Moran, Programmatic Cost Differentials in Delaware Public Schools, pp. 7-23. ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 61.

⁶¹ N.E.F.P., Financing the Public Schools of South Dakota, ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 56.

⁶² N.E.F.P., Financing the Public Schools of Kentucky, ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 56.

⁶³ Rossmiller and Frohreich, Expenditure and Funding Patterns in Idaho's Programs for Exceptional Children, pp. 12-206.

Costs were determined on a per pupil basis and gathered by program delivery system then allocated on a full time equivalent basis. The researchers, veterans of the N.E.F.P. studies during the early 1970's, refer to this study as one of the first studies in the area in which "reasonably accurate" data had been available. It was found that resource rooms represent a less costly program delivery model than self contained classrooms "for those pupils whose educational needs can be met through resource room programs."

The study made three recommendations regarding the funding of programs for exceptional children which can be summarized as:

1. Refinement of the current financing scheme,
2. More extensive use of pupil weighting, and
3. Full state funding of programs for exceptional learners.

Some states undertook studies of their finances utilizing methodology other than that developed by the N.E.F.P. California established what was referred to as a "master plan" for the funding of special education. This action was taken in the wake of the Serrano decision regarding equity in financing of educational programs. The plan recommends that states finance the full excess cost of special education.⁶⁴

Research done by Leppert and Routh⁶⁵ regarding systems of pupil weightings in three states, Florida, Utah and New Mexico, noted that while weighting in the special education program affects comparatively little money (generally only about 10 percent of the states' educational program funds) it is

⁶⁴ R. Keefe, Cost of Special Education Programs in California (Walnut Creek, CA: Decision Development Corporation, 1980), pp. 1-133.

⁶⁵ Jack Leppert and Dorothy Routh, Weighted Pupil Education Finance Systems in Three States: Florida, Utah, and New Mexico (Washington: U. S. Department of Health Education and Welfare, Office of Education, 1980), p. 29.

the area that attracts the most attention and controversy. The authors used a comparative case study approach to investigate the establishment, implementation, and impact of pupil weighting systems in the three states.⁶⁶ Utilizing an interview methodology, the writers gathered data from legislators, legislative staff members, one governor, governors' staff members, state chief school officers, state department of education personnel, academicians, statewide organizations of teachers and of school administrators, as well as local school district personnel.

Noting that compliance with the excess cost and non-supplanting requirements found in federal regulations regarding the education of handicapped children is difficult to demonstrate without some type of cost accounting system,⁶⁷ the researchers recommended a weighted pupil funding scheme. The recommendation was made because it encourages school administrators to establish cost accounting systems. They pointed out that educational program funding schemes such as flat grants and excess cost systems tend to make school administrators oblivious to the cost of educating the handicapped, while a child based approach such as pupil weightings encourages awareness of program cost and were likely to result in a more efficient use of resources.

Illinois took a different approach to determining the cost of special education. In a study conducted for the state by the accounting firm of Ernst and Ernst,⁶⁸ the researchers attempted to determine special education costs

⁶⁶ Ibid., pp. 9-16.

⁶⁷ Ibid., p. 132.

⁶⁸ Ernst and Ernst, A Model for the Determining of the Costs of Special Education as Compared with that for Regular Education (Chicago Illinois Governor's Office of Human Resources, 1974), pp 7-152.

systematically. To do so they developed the Ernst and Ernst Student Educational Unit (E.E.S.E.U.). The E.E.S.E.U. represented a 10 minute unit of instruction. For each categorical program, a unit was assigned and a price determined by past experience.

The system of financing public education in New York State has been studied at least twice. One was done by a commission appointed by the governor in 1969. One chapter of one volume was devoted to special education. Here, the commission recommended an overall weighting for handicapped children of 2.05 as opposed to a weight of 1.0 for non-handicapped students.⁶⁹

A second New York study was also done by a commission established by the governor. This commission was formed in 1979 to study New York's financing scheme in the aftermath of the Levittown decision. Their recommendations were that the state continue using weighted pupil averages and continue to use equalization formulas to distribute state aid for special needs students. It was also recommended that the system of flat grants be phased out.⁷⁰

In addition to studies conducted by states, special education finance has been the subject of a number of doctoral dissertations. One, Sorensen's 1972 study, was first published as his thesis and later as a state document. Sorensen conducted an N.E.F.P.-style study of seven single district and joint agencies in the state. He selected his sample on the basis of geographic

⁶⁹ New York Commission on the Quality, Cost, and Financing of Elementary and Secondary Education, The Fleischman Report (New York: Viking, 1973), ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 56.

⁷⁰ New York State Special Task Force on Equity and Excellence in Education, The Report and Recommendations of the New York State Special Task Force on Equity and Excellence in Education, pp. 25-48.

diversity and comprehensiveness of programs. After determining the net cost of a special education program (i.e. gross cost less state reimbursement), Sorenson computed cost indices of special to regular education programs. His particular interest was determining the percentage of excess costs covered by state categorical monies.⁷¹

Costs were examined by school district and by program. These costs were divided into three categories (direct instruction, supportive services, and general administration) for a more detailed analysis. Excluded from cost figures were those for capital outlay, transportation, public or private transfer tuition, homebound or hospital instruction, and programs for the gifted. It was found that the per pupil costs for special education varied greatly among similar programs in different school districts and different categorical programs within the same school district. More severely handicapped children required more expensive programs. Salaries constituted the major expense in educating the handicapped and state reimbursement paid only 50 percent to 80 percent of the excess cost.⁷²

Sorensen encountered a great many difficulties gathering data for his study and this led him to recommend that Illinois set a standard accounting system in order that comparable data may be available on costs for planning purposes. Also, he suggested that Illinois' system for distribution of categorical monies, a per teacher flat grant, lacked a rational basis and other means of compensation should be explored.⁷³

⁷¹ Francis William Sorensen, "A Cost Analysis of Selected Public School Systems in Illinois," (Ph.D. dissertation, University of Illinois, 1973), p. 72.

⁷² Ibid., pp. 143-158.

⁷³ Ibid., pp. 205-210.

Another doctoral study, Snell's, undertook an analysis of 1971-72 data from three Indiana school districts. Patterned after the N.E.F.P. special study in special education finance, the researcher gathered descriptive and financial data from interviews and accounting records. Total costs for special education and regular education programs were computed and cost indices were derived.

Like Sorensen, Snell experienced a great deal of difficulty in gathering data for his study and, like Sorensen, recommended a standardized accounting procedure.⁷⁴ Snell's cost indices were not unlike those established in the N.E.F.P. special study. Most significantly, he found that rural districts generally had higher cost indices for special education programs than non-rural programs. However, the total costs were generally lower indicating a lowered per pupil expenditure in both regular and special education programs in the rural school districts.⁷⁵

The Handicapped Children's Education (H.A.C.H.E.) Project sponsored by the Education Commission of the States (E.C.S.) spawned several conferences on the subject of financing programs for handicapped students which, in turn, generated several reports on the subject.⁷⁶ The H.A.C.H.E. conferences and literature were greatly influenced by the earlier work of the N.E.F.P. in the area. Henderson, writing for E.C.S., investigated the effect of cost on small and poor school districts. He found that these schools are especially subject to

⁷⁴Snell, "Special Education Program Cost Analysis for Three Selected School Corporations in Indiana," p. 205.

⁷⁵Ibid., p. 198.

⁷⁶Handicapped Children's Education Project. A Summary of Issues and State Legislation Related to the Education of Handicapped Children in 1972, Report No. 36. (Denver: Education Commission of the States, 1973). ed., Bernstein et al., Financing Educational Services for the Handicapped, p. 47

cost variance resulting from uneven distribution of high cost handicapping conditions. Financing the more expensive programs, said Henderson, represents a serious obligation to poor schools where the added cost of special education is higher than for schools with the resources to support high per capita expenditures for regular students.⁷⁷

Chambers⁷⁸ noted that the major focus in school finance in recent years has been on the reduction or elimination of the relationship between school spending and the wealth of local public school districts and pointed out that even if school spending were equalized across all school districts within a state, that inequities would remain in the system due to the differences in pupil need and variations in the prices paid for educational services. Chambers' work reviewed a program in Florida which funded school districts on the basis of the area's cost of living. The major short-comings of such a system were that while costs of living and costs of education are related, they are not the same. Factors such as the attractiveness of regions and/or school districts as places to work and live and the willingness of individuals to supply teaching or other services also affect the costs.

Chambers⁷⁹ study of California school districts to determine the cost of education found higher costs in larger urban school districts than in either

⁷⁷ R. A. Henderson, "Financing Special Education for Exceptional Pupils." ed., N.E. Cain, Financing Education Programs for Handicapped Children, Report No. 50 (Denver: Education Commission of the States, 1974). ed., Bernstein et al., Financing Educational Services for the Handicapped, pp. 47-48.

⁷⁸ Jay G. Chambers, The Development of a Cost of Education Index: Some Empirical Estimates and Policy Issues, Report No. 79-B11 (Palo Alto, CA: The Institute for Research on Educational Finance and Governance, 1979), pp. 1-8.

⁷⁹ *Ibid.*, pp. 22-23.

suburban or rural schools. The exception was in remote rural areas where some difficulties in attracting school personnel and high transportation costs tended to result in higher costs. It was also established that for the vast majority of school districts differences in educational costs were determined by differences in the cost of personnel since personnel accounted for 85 percent of the average school district's budget.

Hartman⁸⁰ reported on the results of a 28 state survey regarding the cost of special education programs. The researcher developed cost estimates using a resource-cost model in which the student characteristics and program configurations form the basis for estimating the costs of special education. The results of the model's calculations indicated a most likely estimate of the costs to serve all school age handicapped in school year 1980-81 to be \$9.0 billion dollars.

Chambers and Hartman⁸¹ developed a cost-based method for the funding of special education programs for the stated purpose of "improving the equity of school finance systems and increasing the efficiency with which educational funds are distributed." They considered the most appropriate strategy to be one which considered the development of categorical programs and the reform of school finance systems within the context of a cost-based funding approach. It was felt that such a funding method would provide equal access to educational resources across local districts serving similar student

⁸⁰William T. Hartman, Projecting Special Education Costs, Report No. 81-B8 (Palo Alto, CA: Institute for Research on Educational Finance and Governance, 1981), pp. 62-63.

⁸¹Jay G. Chambers and William T. Hartman, A Cost-Based Approach to the Funding of Educational Programs: An Application to Special Education, Report No. 81-A4 (Palo Alto, CA: Institute For Research on Educational Finance and Governance, 1981), pp. 1-6.

populations while, at the same time, providing for systematic differences in access to resources of districts serving students with specified differences in programatic needs.

To accomplish their purposes the authors developed a resource cost model for the financing of educational programs. This model would, according to its authors, provide a decision making structure for educational policy makers by dividing cost on a per unit basis. Costs were determined by estimating the number of units needed by each student multiplied by the per unit cost.⁸²

Vasa and Wendel⁸³ conducted a study to determine per-pupil and program cost of special education and the extent to which local school districts rely on state and federal funding to offset the costs of special education programs. Noting that special education programs cost twice those of regular education, the researchers found that of the 375 school districts surveyed the great majority, 86.4 percent, reported that they received less than 25 percent of their funds from the federal government. State governments, it was found, provided the majority of funding for these programs.

Rossmiller's⁸⁴ research regarding special education costs in smaller school districts, based on data gathered in Idaho during the school year 1976-77, studied programs grouped on the basis of instructional type (i.e. self-contained classroom or resource room) rather than by category of handicapping

⁸²Ibid., pp. 12-28.

⁸³Stanley F. Vasa and Fredrick C. Wendel, "How School Districts Finance Special Education," Phi Delta Kappan, vol. 63, no. 10 (June 1982), pp. 703-04.

⁸⁴Richard A. Rossmiller, "Program Patterns and Expenditures for Special Education in Smaller School Districts," Journal of Education Finance, no. 7 (Spring 1982) 381-402.

condition. The author noted that in small school districts, handicapped children were rarely grouped for instruction by category. Rather, in the small schools, the typical resource room or self-contained classroom contained children with various handicapping conditions.

The author, citing the lack of research on the cost of special education in small school districts, stated that to provide services for handicapped children, small school districts were advised to join together and offer cooperative programs or take advantage of intermediate educational agencies. Because the requirements imposed by state and federal regulations regarding the education of handicapped children do not contemplate that handicapped children were sometimes found in locations that are sparsely populated and in isolated areas, these small schools were faced with an extremely challenging situation.

To remedy the situation, Rossmiller recommended that programs for handicapped children be funded on an "excess cost" basis rather than by a weighting scheme. By funding all costs for educating the handicapped above the cost of educating non-handicapped students, the state would insure that each handicapped child would receive adequate educational services. The author also recognized that the use of excess cost funding would require more careful monitoring by the state to insure that local school district program arrangements and expenditures are definable.

The Commission on Financing of a Free and Appropriate Education for Special Needs Children⁸⁵ was established to investigate the issues relating to

⁸⁵The Commission on Financing of a Free Appropriate Education for Special Needs Children, The Report from the Commission on the Financing of a Free and Appropriate Education for Special Needs Children (Philadelphia: Research for Better Schools, 1983), p. 3.

the financing of special education and to prepare a report of its findings for the Select Education Sub-committee of the Committee on Education and Labor of the United States House of Representatives. The objective of the report was to provide Congress and the public with practical assistance in the formulation of effective policies and administrative strategies to better marshal existing resources for handicapped children. The report concluded that federal leadership was a critical factor in the success of integrating handicapped students into the mainstream of public education as required by law. This conclusion forms the basis for the commission's recommendation for "full Federal funding of P.L. 94-142."⁸⁶

The most comprehensive study to date on the fiscal impact of educating the handicapped was entitled The Cost of Special Education by J. S. Kakalik, W. S. Furry, M. A. Thomas, and M. F. Cannery. The study was authorized and financed under Contract Number 300-79-0733 from the United States Department of Education, Office of Special Education.⁸⁷ The study's objective was to assist in the formulation of policies and the allocation of resources for the education of handicapped students by providing accurate information on the cost of various types of special education and related services. The N.E.F.P.-type study collected data from a nationally representative sample of school districts during the 1977-78 school year. The study addressed the following questions:

1. What are the total costs of special education and related services for different age levels and handicapping conditions for various educational placement and sizes of school districts?

⁸⁶ Ibid., p. 35.

⁸⁷ Kakalik et al., The Cost of Special Education.

2. What are the costs of such services for handicapped students, assessment, placement, instructional services, related services, and administrative services?
3. What is the excess cost of special education for handicapped students above the cost of regular education services?⁸⁸

It was hoped that this information would assist state and federal agencies in determining the level of financing required to provide an appropriate education for the handicapped and allow adjustment of state and federal finance formulas to match local need and reduce fiscal incentives for inappropriate programming of handicapped students. The Kakalik study found that for school year 1977-78, total nationwide expenditures for the excess cost of special education was over \$7 billion dollars. The total cost of special education per handicapped child in 1977-78 was estimated to be \$3,577 with an excess cost for special education above the cost of regular education of \$1,927. The ratio of cost for special education to cost for regular education was 2.17, a finding very close to that of the N.E.F.P. studies.

The cost indices varied by type from 1.37 for speech impaired students to 5.86 for the functionally blind. It also varied by type of educational placement from 0.55 for students working full time under the supervision of a special education program, to 3.24 for students in special day schools exclusively serving handicapped students. The highest cost category, considering type of handicap and educational placement combined, was the functionally blind student served in the regular class and receiving itinerant special education teacher services with a cost index of 6.78 (a total cost of \$11,189 per child during the 1977-78 school year.)⁸⁹

⁸⁸Ibid., p. 3.

⁸⁹Ibid., pp. 5-7.

The Cost of Special Education was cited in by the United States Department of Education in its fifth annual report to Congress on the implementation of Public Law 94-142. Here it was reported that the total cost per handicapped student of special education adjusted for the 37 per cent inflation rate between school years 1977-78 and 1980-81 was \$5,109.⁹⁰

⁹⁰U. S. Department of Education, Fifth Annual Report to Congress on the Implementation of Public Law 94-142: The Education for All Handicapped Children Act (Washington: U. S. Office of Special Education and Rehabilitative Services, 1983), p. 16.

CHAPTER III

Methodology

In this study of handicapped children's educational program costs, the data were collected from school district expenditures made during the 1980-81 school year. The 1980-81 school year was chosen because: (1) complete data were available for that year, and (2) it was, as mentioned in Chapter I, the first year of full implementation of P.L. 94-142 and, therefore, could serve as a benchmark for measuring educational costs of programs for the handicapped.

Selection of the Sample

The eleven school districts which comprise the sample of this study were not randomly chosen. Rather, consistent with the work of Rossmiller, et al.,¹ they were selected on the basis of their reputation for high quality education. The identification of these programs representing best current practice was accomplished through a process which utilized reports by the Oklahoma State Department of Education regarding compliance monitoring, records of parent complaints and due process hearings, and actual on-site observations by the researcher. It was the opinion of the N.E.F.P. group studying special education costs that by analyzing only the costs of those school districts with a high quality of programming that the cost figures generated

¹Rossmiller, Hale, Frohreich Educational Programs for Exceptional Children: Resource Configurations and Costs, p. 21.

would more nearly reflect the cost of educating handicapped children as they should be educated rather than as they currently are being educated.

Data Collection Process

Data for this study were obtained from a variety of sources. Information regarding the total enrollment of non-handicapped students was obtained from the 1980-81 Annual Report of the Oklahoma State Department of Education. This document also provided the information regarding the allotment of federal categorical monies for special education programs (monies derived from P.L. 94-142 and P.L. 89-313). The latter figures were checked against the school districts' own figures required on the Oklahoma State Department of Education's "Excess Cost" form. Another State Department of Education document, the "FR-3," a record of school district expenditures from the general fund and cash accounts, provided the basis for determining the per pupil costs of non-handicapped students and the costs common to handicapped and non-handicapped children.

The following expenditure components listed here with their definitions from the "FR-3" were utilized in the study:

Administrative Services. "Those activities which have as their purpose the general regulations, direction, and control of the school district..."²

Instructional Services. "Those activities dealing directly with or aiding in the teaching of students or improving the quality of teaching..."³

²Oklahoma State Board of Education, The State Board of Education Regulations for Administration and Handbook on Budgeting and Business Management (Oklahoma City, OK: Oklahoma State Department of Education, 1981), p. 64.

³*Ibid.*, p. 71.

Attendance Services. "Those activities which have as their primary purpose the promotion and improvement of children's attendance at school through enforcement of compulsory attendance laws and other means..."⁴

Health Services. "Activities in the field of physical and mental health which are not direct instruction..."⁵

Transportation Services. "Those activities which have as their purpose the conveyance of pupils to and from school activities, either between home and school, or on trips for curricular or co-curricular activities..."⁶

Operation of Plant. "The housekeeping activities concerned with keeping the physical plant open and ready for use..."⁷

Maintenance of Plant. "Those activities that are concerned with keeping the grounds, building, and equipment at their original condition of completeness or efficiency..."⁸

Fixed Charges. "Expenditures of a generally recurrent nature which are not readily allocable to other expenditure accounts..."⁹

Food Services. "Those activities which have as their purpose the preparation and serving regular and incidental meals, lunches, or snacks in connection with school activities..."¹⁰

Student-Body Activities. "Direct and personal services for public school pupils ... that are managed or operated by the student body ... and are not part of the regular instruction program..."¹¹

Outgoing Transfer. "Any expenditures made to other school districts or administrative units..."¹²

⁴Ibid., p. 77.

⁵Ibid., p. 78.

⁶Ibid., p. 80.

⁷Ibid., p. 84.

⁸Ibid., p. 87.

⁹Ibid., p. 93.

¹⁰Ibid., p. 96.

¹¹Ibid., p. 97.

¹²Ibid., p. 101.

The major source of data for this study was provided by school districts who participated in a survey of special education costs conducted by the State Department of Education. However, data were collected from one school district's records of program costs compiled for purposes of determining inter-district transfer fees and from another via personal interview. Handicapped child count data and salaries of special education teachers in the state in school year 1980-81, both on file at the Special Education Section of the State Department of Education, were compared manually to incidence rates and salaries submitted by the various school districts to check their accuracy.

Several data forms were developed to supply the data necessary to accomplish the objectives of the study. A copy of each is contained in the appendices along with an example of the cost calculations.

Analysis of the Data

The primary task involved in analysis of the data was the reduction of the data in terms of categorical programs. Computation of program costs for non-handicapped students served as a baseline measure for the cost of special education. Costs of special education programs were computed and compared with the regular program cost. Per capita allotments of federal monies were subtracted from the costs of the special education programs to determine what portion of the cost of special education is paid by state and local funds.

Regarding the analysis of special education cost data, Rossmiller, et al.¹³ wrote, "The nature of the sample precludes the application of any type of inferential statistical treatment." However, the researchers further stated that

¹³Rossmiller, Hale, and Frohreich, Educational Programs for Exceptional Children: Resource Configuration and Costs, pp. 48-49.

descriptive statistical analyses which render mean and median figures could be performed. Such was the case with this study. Also, consistent with the model of analysis established by the N.E.F.P. study, data in this research project were processed manually using a desk calculator. Because the data consisted largely of information of a unique nature from a limited number of sources, it was considered more efficient to utilize the desk calculator rather than develop computer programs.

Due to the lack of standardization of cost accounting methods among school districts, it was often necessary to contact school administrators to clarify the particular costs reported. Generally these matters could be corrected by a telephone conversation with the superintendent or director of special education. In some instances, sufficient clarification could not be satisfactorily ascertained; in these instances it was decided not to report the costs in this study.

After gathering the data, the next step was to calculate educational program costs for non-handicapped students. Although per pupil cost figures were available from various sources, it was decided to calculate costs specifically for this study to insure comparability and accuracy. Data from the "FR-3" report were utilized for this purpose. It was decided to pattern this cost computation after that mandated by the excess cost requirements found in the regulations implementing P.L. 94-142. These regulations state that the cost of educating the children residing in a school district shall be comprised of, "All expenditures of the local educational agency ... except capital outlay and debt service."¹⁴ Additionally, consistent with Oklahoma's excess cost requirements, community service costs were omitted.

¹⁴U. S. Department of H.E.W.: Federal Register. Implementation of Part B of EHA-B, sec. 121a. 110.

Computation of Non-Handicapped Student Costs

The first step in calculating the cost of educating non-handicapped children involves determining the number of such children served in each school district. This was accomplished in the following manner:

1. The total enrolled population of the school districts studied was obtained from the 1980-81 Annual Report of the Oklahoma State Department of Education.
2. The total enrolled population of handicapped students served was next obtained from the child count information kept on file at the Special Education Section of the Oklahoma State Department of Education.
3. The handicapped student enrollment was then subtracted from the total enrollment to give a total non-handicapped student enrollment.

The per pupil educational cost of non-handicapped students was determined by totaling the figures which were calculated as follows:

1. Those areas of expenditures common to handicapped and non-handicapped students were divided by the total enrolled population to yield a per pupil expenditure in each area. These areas included: instructional services, textbooks, school libraries and audio-visual materials, other expenses for instruction, attendance services, health services, operation of plant, maintenance of plant, food services, and student body activities.
2. Special education expenditures for instructional services salaries were subtracted from total expenditures in the area. Expenditures for fixed costs for special education programs were likewise subtracted from total expenditures. The remainders were each divided by the total number of non-handicapped students enrolled in the school district.
3. When reported, expenses for special education administrative services, teaching supplies, pupil transportation, and outgoing transfer accounts were subtracted from the total expenditures in the areas and then divided by the total enrollment of non-handicapped students. When no expenditures for special education were reported in these areas, the total costs for each were divided by the total enrolled population.

Computation of Handicapped Student Costs

The next step was calculating the educational costs of serving the various categories of handicapped children in the different school districts. To accomplish this it was necessary to determine the number of full-time-equivalent students as well as the actual count of students served within each school district in each category. The categories of handicapping conditions were established "a priori" by Oklahoma's system of classification of handicapping conditions. This system is strongly influenced by federal categorical definitions found in the regulations for P.L. 94-142. The categories investigated in this study were served primarily in self-contained programs and their costs reported here represent the total cost of serving these children.

However, many handicapped students were primarily served in resource rooms. In these programs, children are generally placed for a period of one, two, or three hours per day as determined by their individualized educational program placement teams. A few handicapped students were served entirely within the regular classroom with an appropriately certified teacher overseeing the child's program. It was necessary to convert the costs of serving these students to their full-time-equivalent (F.T.E.). The F.T.E. was found by summing the total number of hours all students were served in the special education classrooms and dividing that number by six, the total number of hours in a school day. The F.T.E. basis made it possible to sort out the portion of time a student spends in a special education program from that spent in a regular program and to allocate expenses accordingly. The conventional methods of counting pupils indicated only that a student is attending or enrolled in school; they do not reflect the division of a student's time between programs.

Rossmiller and Frohreich stated that the concept of the F.T.E. is sometimes difficult to understand because it is not the same as a head-count.¹⁵ However, to accurately determine program costs where students divide their time between two or more programs it is necessary to allocate expenditures between and among programs. This figure also provided comparable data when viewing the costs of students in other school districts served in similar instructional settings.

The per pupil costs for special education used to calculate means and medians were then determined by totaling the following figures:

1. Teacher salaries, the cost of administrative services, classroom aide salaries, and fixed costs were each divided by the number of F.T.E. students. It was felt that by using the F.T.E. a better cost figure was provided for purposes of comparison among school districts.
2. The cost of school supplies and such related services as transportation, assessment, speech therapy, and physical therapy were totaled for each category of handicapping condition and then divided by the actual number of students served. The actual student count was used because these items and services are typically provided on a per pupil basis.
3. Per pupil expenditures from the school districts general fund accounts were included for textbooks, school libraries and audio-visual materials, other expenses for instruction, attendance services, health services, operation of plant, maintenance of plant, food services, student body activities, teaching supplies, pupil transportation, and outgoing transfer accounts. These expenses were pro-rated on a total pupil count basis when not addressed in the reported cost of the school districts' special education programs. When special education costs were reported in these areas, they were pro-rated for the number of children in each category of handicapping condition.

Traditionally, special education costs have been viewed in light of the cost of educating non-handicapped children. This is typically done through some sort of cost index or excess cost figure. When costs for handicapped and

¹⁵ Rossmiller and Frohreich, Expenditure and Funding Patterns in Idaho's Programs for Exceptional Children, pp. 25-26.

non-handicapped students have been derived, it is then possible to calculate excess costs and cost indices for special education.¹⁶ To make these calculations, the researcher is required to:

1. Obtain an enrollment in each education program in each school district,
2. Determine the current expenditure for each educational program in each school district,
3. Divide the total cost of each program by the number of students in the program,
4. Calculate the difference between the cost per pupil of the base program and the cost per pupil of the special program (excess cost), and
5. Divide the cost per pupil of the special program by the cost per pupil of the base program (the cost index).

Mean and median per pupil cost were also determined. To determine median costs it was necessary to arrange the per pupil costs from lowest to highest. The median cost was the per pupil expenditure where 50 percent of the costs are higher and 50 percent of the costs were lower. The mean cost was calculated by totaling the per pupil costs in all school districts and dividing it by the number of programs.

It was also necessary to compute aggregate categorical costs (i.e., the total cost for all handicapped students' educational programs in each categorical area). These costs were reported utilizing the method known as the weighted pupil calculation. It was decided to use this method rather than the mean per pupil cost figure described above. The weighted cost per pupil was obtained by dividing the total program cost by the number of pupils enrolled. This methodology for calculating mean cost allows each student to

¹⁶*Ibid.*, pp. 27-28.

contribute equally to the aggregate cost and was considered a more representative figure than the mean cost per pupil. This is because the mean cost per pupil is a function of the number of school districts offering the program while the weighted cost per pupil is a function of the numbers of pupils in the program.

Finally, to facilitate calculation of the cost of special education by school district size, it was necessary to group the school districts in some manner. This was done utilizing a format established by another cost analysis of special education programs where the average daily membership (A.D.M.) was selected as the standard of measure.¹⁷ From the sample of school districts, three groups were formulated. The first of these groups was comprised of school districts with an A.D.M. over 15,000. The second group consisted of school districts with fewer than 2,500 students enrolled. The remaining category was comprised of those school districts with an A.D.M. between 2,500 and 15,000 students.

¹⁷ Kakalik et al., The Cost of Special Education, p. 203.

CHAPTER IV

Presentation and Interpretation of the Data

The problem of this research project was to investigate the per pupil educational cost of providing special education to the various categories of handicapping conditions found in eleven selected school districts in Oklahoma during the 1980-81 school year. The special education program costs were then examined in light of the cost of regular education programs, and excess cost figures and cost indices were derived. Aggregate data were gathered for comparison among the three different sized groupings of school districts and for comparison among two established cost indices. These figures were also adjusted to reflect the aggregate per pupil allotment of federal categorical monies for special education programs awarded to the school districts studied. Per pupil costs were reported for each available category in each school district to make possible the calculation of mean and median costs, excess costs, and cost indices.

In order to investigate this problem, seven research questions were formulated. This chapter contains a presentation and interpretation of the data as they relate to the research questions found in Chapter I.

Research Question

What differences exist among the various size school districts in the per pupil expenditure for providing education to handicapped students?

Data relevant to this research question are summarized in Table 1.

TABLE 1

PER PUPIL PROGRAM COST OF SPECIAL
EDUCATION BY CATEGORY OF HANDICAPPING
CONDITION AND SIZE OF SCHOOL DISTRICT ENROLLMENT

Category	Size of School District Enrollment		
	More than 15,000	2,500 to 15,000	Less Than 2,500
E.M.R.	\$2,416.92	\$2,093.43	\$2,247.90
T.M.R.	3,931.15	3,831.13	8,519.72
E.D.	3,492.42	3,598.95	8,075.56
M.H.	6,111.43	6,056.23	7,581.69
H.I.	4,301.40	10,665.70	_____
V.I.	6,323.57	9,004.22	_____
P.H.	_____	3,221.87	8,526.49

The weighted per pupil expenditure in each of the three areas were calculated by taking the total program cost for each category of handicapping condition and dividing it by the number of F.T.E. students served in each category. The cost for programs for the educably mentally retarded do not vary greatly among the three groups of schools. These costs range from a per pupil expenditure of \$2,093.43 in the intermediate size group to \$2,416.92 in the largest group of school districts. The trainable mentally retarded program costs for the largest and the intermediate group do not vary greatly, however, the cost reported in the smallest group is more than twice that of the other two. Likewise, the cost for programs for the multihandicapped and the physically handicapped are much higher among the smallest school districts.

The most expensive programs reported were those for the hearing impaired and the visually impaired in the intermediate sized school districts

with per pupil expenditures totaling \$10,665.70 and \$9,004.22 respectively as compared with a per pupil expenditures of \$4,301.40 for hearing impaired students and \$6,323.57 for the visually impaired students in the largest size school district. No cost data were available for comparable placements in the smallest group of school districts.

Research Question

What differences exist among the various size school districts in the excess cost for providing education to handicapped students?

Data relevant to this research question are summarized in Table 2.

TABLE 2

PER PUPIL EXCESS COST OF SPECIAL
EDUCATION BY CATEGORY OF HANDICAPPING
CONDITION AND SIZE OF SCHOOL DISTRICT ENROLLMENT

Category	Size of School District Enrollment		
	More than 15,000	2,500 to 15,000	Less than 2,500
E.M.R.	\$ 793.41	\$ 429.75	\$ 395.83
T.M.R.	2,307.64	2,167.45	6,667.65
E.D.	1,868.91	1,935.27	6,223.49
M.H.	4,487.92	4,392.55	5,729.62
H.L.	2,677.89	9,002.02	_____
V.L.	4,700.06	7,340.54	_____
P.H.	_____	1,558.19	6,674.42

The weighted aggregate excess cost for each handicapping condition in each of the various size school districts were calculated by subtracting the weighted per pupil expenditures for handicapped students from the weighted per

pupil expenditure for the non-handicapped students served in various size school districts. The weighted per pupil expenditure for non-handicapped students was \$1,623.51 for the largest size school district and \$1,663.58 and \$1,852.07 respectively for the next two groups of school districts. The general pattern of excess cost was similar to that for per pupil expenditure. The lowest excess cost was \$395.83 for educable mentally retarded students in the smallest school districts while the highest was \$9,002.02 for hearing impaired students in the intermediate sized school districts.

Research Question

What differences exist among the various size school districts in the cost indices for providing education to handicapped students?

Data relevant to this research question are summarized in Table 3.

TABLE 3

PER PUPIL COST INDEX BY CATEGORY OF HANDICAPPING CONDITION AND SIZE OF SCHOOL DISTRICT ENROLLMENT

Category	Size of School District Enrollment		
	More than 15,000	2,500 to 15,000	Less than 2,500
E.M.R.	1.49	1.26	1.21
T.M.R.	2.42	2.30	4.60
E.D.	2.15	2.16	4.36
M.H.	3.76	3.64	4.09
H.I.	2.65	6.41	—
V.I.	3.89	5.41	—
P.H.	—	1.94	4.60

The aggregate cost indices for each handicapping condition in each of the various size school districts were calculated by dividing the weighted per pupil

expenditure for handicapped students by the weighted per pupil expenditure for the non-handicapped students served in each of the various size school districts. The pattern of the cost indices was similar to those of the per pupil expenditure and excess cost. The smallest ratio of handicapped to non-handicapped expenditures were 1.21 for educably mentally retarded students in the smallest group of school districts and the largest was 6.41 for hearing impaired students in the school districts with enrollments between 2,500 and 15,000 pupils.

Research Question

What differences occur when the program cost, excess cost, and cost indices are adjusted to reflect the amount of federal categorical monies applied to the cost of educating handicapped students in the various size school districts?

Data relevant to this research question are summarized in Table 4, 5, and 6.

TABLE 4

PER PUPIL PROGRAM COST OF SPECIAL EDUCATION
ADJUSTED FOR ALLOCATION OF FEDERAL CATEGORICAL MONIES BY
HANDICAPPING CONDITION AND SIZE OF SCHOOL DISTRICT ENROLLMENT

Category	Size of School District Enrollment		
	More than 15,000	2,500 to 15,000	Less than 2,500
E.M.R.	\$2,212.26	\$1,832.03	\$2,024.63
T.M.R.	3,726.49	3,569.73	8,296.45
E.D.	3,287.76	3,337.55	7,852.29
M.H.	5,906.77	4,131.25	7,358.42
H.I.	4,096.74	10,404.30	-----
V.I.	6,118.91	8,742.82	-----
P.H.	-----	2,960.47	8,303.22

These figures were calculated by totaling the aggregate per pupil federal allotment of categorical monies for special education for each of the three groups and dividing this figure by the total number of students served in each group. This allocation was \$204.66 per pupil in the first group, \$261.40 in the second group, and \$223.27 in the third group of school districts. These monies were comprised of federal allotments provided on a per pupil basis by P.L. 94-142 and P.L. 89-313. The federal per pupil allocation of categorical monies for special education was then subtracted from the per pupil program cost found in Table 1. The adjusted figures represent the cost of special education in terms of expenditures of local and state funds by the school districts.

TABLE 5

PER PUPIL EXCESS COST OF
SPECIAL EDUCATION ADJUSTED FOR ALLOCATION
OF FEDERAL CATEGORICAL MONIES BY HANDICAPPING
CONDITION AND SIZE OF SCHOOL DISTRICT ENROLLMENT

Category	Size of School District Enrollment		
	More than 15,000	2,500 to 15,000	Less than 2,500
E.M.R.	\$ 588.75	\$ 168.42	\$ 171.92
T.M.R.	2,102.98	1,906.15	6,443.74
E.D.	1,664.25	1,673.97	6,005.71
M.H.	4,283.26	2,467.28	5,505.42
H.I.	6,569.97	8,740.33	_____
V.I.	4,495.40	7,078.85	_____
P.H.	_____	1,296.50	6,450.51

TABLE 6

PER PUPIL COST INDEX ADJUSTED FOR ALLOCATION
OF FEDERAL CATEGORICAL MONIES BY HANDICAPPING
CONDITION AND SIZE OF SCHOOL DISTRICT ENROLLMENT

Category	Size of School District Enrollment		
	More than 15,000	2,500 to 15,000	Less than 2,500
E.M.R.	1.36	1.10	1.09
T.M.R.	2.30	2.15	4.48
E.D.	2.03	2.01	4.24
M.H.	3.64	2.48	3.97
H.I.	2.52	6.25	—
V.I.	3.77	5.25	—
P.H.	—	1.78	4.48

The costs reported in Table 4 were used in the calculation of excess cost and cost indices found in Tables 5 and 6. The same per pupil costs for non-handicapped students utilized in the calculation of excess cost and cost indices presented in Table 2 and Table 3 were used here also. The adjustment for federal allocation of categorical monies for special education did not appear to alter the pattern of expenditures seen in the first three research questions. The impact of federal assistance was seen most significantly in the cost index for the educable mentally handicapped students, the lowest per pupil costs reported.

Research Question

What are the mean and median program costs, excess costs, and cost indices for the handicapped students being educated in the school district studied?

Data relevant to this research question are summarized in Tables 7, 8, and 9.

TABLE 7

MEAN AND MEDIAN PER PUPIL PROGRAM COST OF
SPECIAL EDUCATION BY CATEGORY OF HANDICAPPING CONDITION

School District	E.M.R.	T.M.R.	E.D.	M.H.	H.I.	V.I.	P.H.
A	\$ 2,416.92	\$ 3,931.15	\$ 3,492.42	\$ 6,111.43	\$ 4,301.40	\$ 6,323.57	-----
B	2,221.92	2,741.43	3,746.23	4,461.88	18,479.18	8,003.78	-----
C	2,151.98	6,029.41	-----	6,533.54	8,644.31	-----	-----
D	2,001.78	3,250.00	3,308.21	7,330.01	-----	-----	-----
E	1,810.90	3,753.00*	4,633.93*	4,328.73*	5,210.10*	-----	-----
F	1,896.09	3,641.58	-----	8,536.27	-----	-----	\$ 3,221.87**
G	2,689.35	8,519.73	9,050.41	7,458.36	1,163.98***	2,225.48***	-----
H	1,931.76	-----	-----	9,524.34	-----	-----	-----
I	2,887.40	-----	3,744.35*	-----	-----	-----	8,526.49**
J	3,871.56	-----	-----	-----	-----	-----	-----
K	2,479.83	-----	-----	-----	-----	-----	-----
N	11	7	6	8	4	2	2
ΣX	\$26,359.49	\$31,866.30	\$27,975.55	\$54,284.56	\$ 36,634.99	\$14,327.35	\$11,748.36
Mean	\$ 2,396.32	\$ 4,552.33	\$ 4,662.59	\$ 6,785.57	\$ 9,158.75	\$ 7,163.68	\$ 5,874.18
Median	\$ 2,221.92	\$ 3,753.00	\$ 3,745.29	\$ 6,931.78	\$ 6,927.21	\$ 7,163.68	\$ 5,874.18

*transfer to another school district

**totally mainstreamed placement with related services

***institutionalized placement - not used in the calculation of means and medians

TABLE 8

MEAN AND MEDIAN PER PUPIL EXCESS COST OF
SPECIAL EDUCATION BY CATEGORY OF HANDICAPPING CONDITION

School District	E.M.R.	T.M.R.	E.D.	M.H.	H.I.	V.I.	P.H.
A	\$ 812.35	\$ 2,326.58	\$ 1,887.85	\$ 4,506.86	\$ 2,696.83	\$ 4,719.00	-----
B	562.76	1,082.27	2,087.07	2,802.72	16,452.35	6,344.62	-----
C	461.10	4,338.53	-----	4,842.66	6,953.43	-----	-----
D	610.12	1,658.34	1,716.55	5,738.35	-----	-----	-----
E	332.16	2,275.15*	3,155.19	2,849.99*	3,731.36*	-----	-----
F	157.81	1,902.30	-----	6,797.04	-----	-----	\$ 1,482.59**
G	898.30	6,735.62	7,266.30	5,674.25	-----	441.37***	-----
H	171.16	-----	-----	7,763.74	-----	-----	-----
I	1,231.00	-----	1,454.34*	-----	-----	-----	6,870.09**
J	2,227.48	-----	-----	-----	-----	-----	-----
K	150.85	-----	-----	-----	-----	-----	-----
N	11	7	6	8	4	2	2
EX	\$ 7,615.09	\$20,318.79	\$17,567.30	\$40,975.61	\$ 29,833.97	\$11,063.62	\$ 8,352.68
Mean	\$ 692.28	\$ 2,902.68	\$ 2,927.88	\$ 5,121.95	\$ 7,458.49	\$ 5,531.81	\$ 4,176.34
Median	\$ 562.76	\$ 2,275.15	\$ 1,987.46	\$ 5,258.46	\$ 5,342.40	\$ 5,531.81	\$ 4,176.34

*transfer to another school district

**totally mainstreamed placement with related services

***institutionalized placement - not used in the calculation of means and medians

TABLE 9
MEAN AND MEDIAN PER PUPIL COST INDEX
BY CATEGORY OF HANDICAPPING CONDITION

School District	E. M. R.	T. M. R.	E. D.	M. H.	H. I.	V. I.	P. H.
A	1.51	2.45	2.18	3.81	2.68	3.94	—
B	1.34	1.65	2.04	2.69	11.14	4.82	—
C	1.27	3.57	—	3.86	5.11	—	—
E	1.22	2.54	3.13*	2.93*	3.52*	—	—
F	1.09	2.09	—	4.91	—	—	1.85**
G	1.50	4.78	5.07	4.18	.65***	1.25***	—
H	1.10	—	—	4.41	—	—	—
I	1.74	—	1.61*	—	—	—	5.15**
J	2.35	—	—	—	—	—	—
K	1.06	—	—	—	—	—	—
N	11	7	6	8	4	2	2
ΣX	15.20	17.47	16.11	31.40	17.34	3.76	7.00
Mean	1.38	2.50	2.69	3.92	4.34	4.38	3.50
Median	1.22	2.09	2.13	3.83	4.32	4.38	3.50

*transfer to another school district

**totally mainstreamed placement with related services

***institutionalized placement - not used in the calculation of means and medians

Because the costs presented here are for each school district and not aggregate figures, a per pupil expenditure rather than a weighted cost figure was utilized. The lowest mean and median program cost, \$2,396.32 and \$2,221.92 respectively, were found in the programs for the educable mentally retarded. The highest mean cost, \$9,158.75, was found in the program for the hearing impaired. It should be noted that this figure did not include the cost of residential institutional placement of a hearing impaired child, \$1,163.97. This figure consisting of prorated administrative costs was omitted from calcula-

tions because it was not considered comparable to the costs of public school placements for this category. The highest median cost, \$7,163.68, was found in the programs for the visually impaired. Again, this cost did not include the cost of a residential institutional placement for a visually impaired child, \$2,225.48. This amount was also omitted from the selection of a median for the reason described above.

Research Question

What differences exist in the projected cost indices for special education predicted by a National Education Finance Project study for the year 1980 and the actual indices in a comparable school district for school year 1980-81?

Data relevant to this research question is summaries in Table 6.

TABLE 10

COMPARISON OF PROJECTED COST INDICES TO ACTUAL COST INDICES BY CATEGORY OF HANDICAPPING CONDITION

	E.M.R.	T.M.R.	E.D.	H.I.	V.I.
Projected Cost Index	1.87	2.10	2.83	2.99	2.97
Actual Cost Index	1.51	2.45	2.18	2.68	3.94

School district "A" of this study was comparable in size to the hypothetical school district cited in the N.E.F.P. study. The hypothetical school district had a handicapped population of 1768 while "A" had one of 1793 and A.D.M.'s of 20,000 and 17, 424.51 respectively. The projected cost indices most notably differ from the actual cost indices in the categories of emotionally disturbed (an overestimate) and visually impaired (an underestimate). The projected cost index closest to the actual cost index was found in the area of hearing impairment.

Research Question

What differences exist between the categorical cost indices established by the current school funding formula and the categorical cost indices for the school districts studied?

Data relevant to this research question are summarized in Table 7.

TABLE 11

COMPARISON OF OKLAHOMA'S WEIGHTS
ASSIGNED TO HANDICAPPED CHILDREN AND THE AGGREGATE
CATEGORICAL COST INDICES FOR THE SCHOOL DISTRICTS STUDIED

	E.M.R.	T.M.R.	E.D.	M.H.	H.I.	V.I.	P.H.
Oklahoma's Assigned weight	2.3	2.3	3.5	3.4	3.9	4.8	2.2
Actual Cost Index	1.31	2.42	2.25	3.7	3.83	4.92	2.38

The aggregate weighted categorical cost indices for all the school districts studied were calculated by totaling the total weighted per pupil expenditure for handicapped students in each category of handicapping condition and dividing them by the total weighted per pupil expenditure for all non-handicapped students, \$1,671.18. It should be noted that in the current funding formula the cost indices are not applied to the entire state appropriation for common education. However, when Oklahoma's cost indices were originally determined it was assumed that they would be applied to the entire allocation.¹ Also, because Oklahoma's weighting system is

¹Parker and Pingleton, Financing Education in Oklahoma, p. 47.

cumulative, the cost indices listed on Table 7 reflect an increase of 1.0 above the weight as it is generally listed.²

The findings, conclusions, and recommendations drawn from the results presented in Tables 1 through 7 are presented in the final chapter of this research project. Also contained in the final chapter is a short summary of the study and ancillary findings.

²Oklahoma State Board of Education, School Laws of Oklahoma, sec. 309.

CHAPTER V

Summary

This study investigated the cost of special education programs in public schools of Oklahoma during the 1980-81 school year. The purpose of the study was to determine program cost, excess cost and cost indices for school districts of differing sizes and to view the effect of federal categorical monies for special education upon these costs. In order to accomplish this, it was decided to place each of the eleven school districts studied into one of three groups: those with total enrollments over 15,000, those with total enrollments under 15,000 but greater than 2,500, and those with total enrollments under 2,500.

Mean and median costs were reported on all special education programs studied. In addition, data collected in this study were compared with the projected cost indices for 1980 found in a N.E.F.P. special study on special education costs and the cost indices which serve as the basis for funding special education programs under the current state school funding programs.

Data pertinent to the study were collected from a survey of special education cost by the Oklahoma State Department of Education, information gathered by a school district for purposes of determining inter-district transfer fees for special education, and from personal interviews. Records and publications kept at the State Department of Education were used to determine the cost of educating non-handicapped students and to check obtained data for accuracy.

Findings

Research Question 1

What differences exist among the various size school districts in the per pupil expenditure for the education of handicapped students?

The data indicate very little difference in the cost of educating educable mentally retarded students. These costs \$2,416.92, \$2,093.43, and \$2,247.90 beginning with the largest and moving to the smallest group of school districts show little variance in the cost of educating this relatively high incidence group. However, when viewing the lower incidence handicapping conditions, it became apparent that the larger school districts in the study operate in a more cost efficient manner than do the smaller school districts. This was evidenced in the reported per pupil costs of trainable mentally retarded students, \$3,931.15 and \$3,831.13 in the larger two groups of school districts compared with \$8,519.72 in the smallest school districts and again in the reported costs of programs for the emotionally disturbed, \$3,492.42 and \$3,598.95, in the two larger groups, compared with a per pupil expenditure of \$8,075.56 in the smaller. Mainstreamed program costs for physically handicapped students were likewise twice as expensive in the smallest school districts where a per pupil expenditure of \$8,526.49 was reported as were similar programs in the intermediate size school districts with a per pupil expenditure of \$3,221.87. No comparable data were reported in the largest school district.

Research Question 2

What differences exist among the various size school districts in the excess cost for providing education to handicapped students?

As was the case in per pupil cost, the least variance in excess cost among the schools was found in programs for the educable mentally retarded. The lowest excess cost, \$393.83 was found among the smallest school districts.

This figure reflects the higher per pupil cost of educating non-handicapped students found in this group of school districts. This cost was \$1,852.07 compared with \$1,623.51 in the largest and \$1,663.58 in the intermediate group.

However, in the lower incidence handicapping conditions, the diseconomy of scale favoring the larger school districts became apparent. The larger school district's programs were more cost efficient than were the smaller school districts programs. The one exception was a slightly less costly program for the trainable mentally retarded in the intermediate group of school districts with an excess cost of \$2,167.45 compared with \$2,307.64 excess cost in the largest group.

Research Question 3

What differences exist among the various size school districts in the cost indices for providing education to handicapped students?

The same pattern of costs described in the previous research is repeated in the cost indices calculated to address Research Question 3. The lowest cost index, 1.21, was found in the smallest school districts in the category of educable mental retardation. This figure reflects the higher per pupil cost of educating non-handicapped children in these school districts. The diseconomy of scale favoring the larger school districts seen in the excess cost was repeated in the cost indices. The highest cost indices reported were for visual and hearing impairments. Both of these extremely low incidence handicapping conditions were less expensive in the largest group where per pupil cost indices were found to be 3.89 and 2.65 respectively than in the intermediate size school districts where cost indices of 5.41 for the visually impaired and 6.41 for the hearing impaired were reported. The larger schools studied enjoyed considerably lower cost indices among the low incidence handicapping conditions than do the smaller school districts.

Research Question 4

What differences occur when the program costs, excess costs and cost indices are adjusted to reflect the amount of federal categorical monies applied to the cost of educating handicapped students in the various sized school districts?

This research question was directed at the differences that exist when the program cost, excess cost and cost indices in each of the three groups of school districts were adjusted to reflect the categorical monies for special education provided by the federal government. This allocation was found to be \$204.66 per pupil for the largest school district and \$261.40 and \$223.47 respectively for the intermediate and smallest size school districts. The effect of subtracting these monies from the program costs was most apparent in the excess cost and cost index of programs for the educable mentally retarded. Whereas the lowest excess cost and cost index had been in the smallest school district prior to this adjustment, after the adjustment the lowest figures were in programs for educable mentally retarded students found in the intermediate school district, \$168.42 excess cost and a cost index of 1.10.

The effect of the federal allotment was greatest on the educable mentally retarded because it had the lowest per pupil cost. The pattern of funding reflecting a diseconomy of scale with the larger two groups of school districts operating more cost efficient programs in the lower incidence areas described in the findings of research questions 1, 2, and 3 was essentially unchanged. The effect of federal categorical monies in sum appeared to be so slight as not to be noticed in any but the most inexpensive programs.

Research Question 5

What are the mean and median program costs, excess costs, and cost indices for the handicapped students being educated in the school district?

Research Question 5 dealt with determining mean and median program costs, excess costs, and cost indices for all eleven school districts studied. The pattern of the relatively high incidence handicapping conditions, especially the educable mentally retarded, per pupil program costs being well below those of the other, less common handicapping conditions found in the earlier research questions was repeated in both mean and median cost figures. This pattern remained unchanged when grouped by size of school district or when viewed as mean or median costs and is a reflection of the diseconomy of scale inherent in special education programs per se. Serving such extremely small numbers of children such as those classified as multi-handicapped, visually impaired, and hearing impaired resulted in higher per pupil educational expenditures than those of the higher incidence handicapping conditions.

Research Question 6

What differences exist in the projected cost indices for special education predicted by a National Education Finance Project study and the actual indices in a comparable school district for school year 1980-81?

Research Question 6 concerned the differences between the cost indices for educating handicapped children in 1980 predicted for a particular size school district by an N.E.F.P. special study published in 1970 and the actual cost indices for a school district of comparable size in school year 1980-81. The closest comparison of cost indices were found in the area of hearing impairments, 2.68 for the actual one and 2.99 for the projected cost index. Three other categorical areas, educable mentally retarded, trainable mentally retarded, and the emotionally disturbed had a similar degree of variance. The greatest variance was found in the programs for the visually impaired which had an actual cost index of 3.94 and a projected cost index of 2.97.

The N.E.F.P. projected cost indices appeared to be rather close to the actual cost indices when viewed in light of the tremendous changes in the

federal government's role in special education and in the economic factors that affected education in the period between 1970 and 1980. This may lend some measure of credibility to the value of N.E.F.P.-style cost studies as predictors of future cost and to the worth of such studies generally.

Research Question 7

What differences exist between the categorical cost indices established by the current school funding formula and the mean categorical cost indices for the school districts studied?

Research Question 7 compared the cost indices established by the Oklahoma legislature with those derived from the school districts studied. The actual cost index closest to the established one was that for the hearing impaired, 3.83 and 3.90 respectively. Actual and established cost indices for the trainable mentally retarded, multihandicapped, visually impaired, and physically handicapped were also quite close. The greatest degree of variance between the actual cost indices and the established ones was found in those figures representing the emotionally disturbed population with an actual cost index of 2.25 and an assigned cost index of 3.5. Another overestimation of cost is found in the educable mentally retarded category which reports an actual cost index of 1.31 and an assigned cost index of 2.30.

Ancillary Findings

The basic findings of the study resulted in ancillary findings related to the research questions under investigation. It was found that inter-district transfers seemed to be a cost efficient means of serving handicapped students. By viewing the per pupil cost data for school district "E" in Table 7 in the previous chapter, it can be seen that utilizing inter-district transfers for students classified as trainable mentally retarded, emotionally disturbed, multi-

handicapped, and hearing impaired kept per pupil costs at or below mean and median figures. It should be noted that school district "E" is located near a large metropolitan area which minimized time and cost factors regarding transportation.

The data in Table 7 also illustrate how costs for similar programs may vary from school district to school district. The largest variance in cost is found in the per pupil costs was between programs for the hearing impaired in school district "B", \$18,479.18, and those hearing impaired children found in school district "G", \$1,163.98. School district "B's" extremely high costs were a result of a low F.T.E. program enrollment, only one student.

School district "G's" costs, much below those of a non-handicapped student, were possible because this student had been institutionalized at the Oklahoma State School for the Deaf. Institutional placements, while appropriate for some students, are not generally in keeping with the mandate to educate children in the least restrictive environment.¹ Additionally, while saving the school district money, institutionalization of students was far more expensive to the state. The reported per pupil costs for institutional placement in the Oklahoma School for the Deaf in school year 1980-81 was \$28,935.00,² a figure far greater than any in-school educational placement reported in this study or in any found in the literature by this writer.

It would appear this same false economy came into play again in school district "G's" reported per pupil cost of \$2,225.48 for visually impaired

¹U. S. Department of H.E.W., Federal Register, Implementation of Part B of E.H.A.-B, sec. 121a. 132.

²"Financial Statement - Public Residential Schools in the United States, October 1, 1981," American Annals of the Deaf, vol. 39, no. 2 (April 1982), p. 174.

students served at the Oklahoma School for the Blind. While well below the reported costs of any in-school programs for the visually impaired, this figure does not reflect the true per pupil cost of institutionalizing the visually impaired students reported to be \$32,844.96³ in Oklahoma during school year 1981-82.

Conclusions

The findings and ancillary findings of this study resulted in the following conclusions:

1. The size of the school district was related to the cost of providing special education services to handicapped students. It is certain that a diseconomy of scale favoring the larger school districts in this study exists. This advantage was more pronounced among the lower incidence handicapping conditions than it was among conditions such as educable mental retardation.

2. Federal categorical monies for special education had little effect in lessening the burden of cost of educating the handicapped. The findings of this study demonstrated that federal monies had little real effect on the cost of the special education programs studied. They were most likely to affect the least costly programs involving high incidence handicapping conditions which had relatively large numbers of students and were, therefore, more likely to be the most cost efficient programs.

3. The cost indices which serve as the basis for financing educational programs for handicapped students would adequately fund the special education programs in the study if they were utilized as originally designed.

³ Oklahoma Department of Human Services, Report on Oklahoma Department of Human Services - Its Size, Its Scope, Its Future (Oklahoma City, OK: Oklahoma Department of Human Services, 1983), p. 86.

When these cost indices were originally established, they were intended to be applied to the total allocation of state monies. This was changed so that the cost indices are only applied to schools' foundation aid. Changing its application without adjusting the cost index to reflect this change resulted in a situation which negates many of the advantages found in cost index based funding approaches including the ability to generally determine how adequately the established cost indices address as the per pupil cost of educating the handicapped.

4. Inter-district transfers among school districts allowed school systems to serve students with low incidence handicapping conditions in a relatively cost efficient manner. High per pupil expenditures could be lessened by a transferring some handicapped students to neighboring school districts for educational services. In addition to a cost advantage, it is likely that such programs would be more beneficial to the handicapped student than would a much smaller program at the home school district. This is because it is likely the larger programs will offer more and better quality services for students with low incidence handicapping conditions.

5. There currently exists in Oklahoma a fiscal incentive for public schools to institutionalize certain handicapped students. From the perspective of the cost to a school district, it was much more economical to institutionalize visually impaired and hearing impaired students than it was to serve these students in the public schools which comprise the sample of this study.

Recommendations

The study suggests several recommendations for more cost efficient special education program and for further research:

1. The state adopted cost indices should be applied to both foundation aid and incentive aid. Leppert and Routh⁴ stated that one major advantage of weighted pupil education finance systems was that they were "generally more understandable." By applying the state adopted cost indices to only the foundation aid, the advantage is diminished. Educators are denied an incentive to view special education in terms of program costs. This, coupled with the finding that the cost indices in the categories studied either compensated adequately or considerably over compensated schools districts for the excess cost of educating handicapped students if applied to both categories of aid, supports the notion that the cost indices should be applied to the total allotment of state aid as originally intended. This step would also simplify the determination of compliance by school districts with federal excess cost requirements by making the amount of state categorical monies easier to determine.

2. The state should establish incentives to encourage cost efficient special education programming. A system of fiscal incentives to encourage inter-district transfers and cooperative arrangements for services to low incidence handicapping conditions and handicapped students living in remote areas would be of tremendous assistance in this area. Such a system might award school districts which accepted special education student transfers by increasing the state funding for these pupils. This action would likely result in special education programs that are of higher quality as well as more cost efficient on a per pupil cost basis because services and resources could be centralized.

⁴Leppert and Routh, A Policy Guide to Weighted Pupil Education Finance Systems: Some Emerging Practical Advice, p. 6.

3. The federal government should remove the non-supplanting requirement placed on federal categorical monies for special education. This requirement was originally intended to insure local effort for special education programs when federal monies were to cover 40 percent of the cost of special education. Since it is now widely acknowledged that this projection will not be met, it would be appropriate to remove the requirement.

Non-supplanting requirements actually create a disincentive for cost efficient programming by prohibiting school districts which had used local and state monies to establish comprehensive services for handicapped students to pick-up any of these costs with federal funds. The result is often that the federal money must be spent on less than essential items or returned. Also, by eliminating the non-supplanting requirement, Oklahoma would be freed of a major stumbling block in removing the 5 percent pay incentive provided for special education teachers. This requirement, originally established to encourage prospective teachers to enter the field of special education, is now only an additional burden on a system already over-burdened by the often extremely high per pupil program costs of special education.

4. The state should review its current system of institutionalization of handicapped individuals with the intention of creating more effective and cost efficient systems of education for those handicapped students now being educated in institutions throughout the state. A similar recommendation was made recently in a cost study regarding the operation of these institutions,⁵ and by a report done by the Oklahoma Department of Human Services which stated:

⁵"Report Suggests Ways D.H.S. Could Save \$43 Million," The Sunday Oklahoman, 15 January 1984, sec. A, p. 14.

Substantial opportunities exist for savings in (state institutions). Major savings in institutional costs will be achieved as the Department shifts to greater reliance on community alternatives. While it is not possible to project precisely the savings that can be realized by placing less emphasis on institutionalization and more emphasis on community - based services, it is obvious that the potential for savings is great.⁶

Representatives from the various agencies interested in educating the handicapped should meet and develop effective means of insuring educational services for formerly institutionalized handicapped individuals without overburdening public schools. Group homes and community care centers should be established in a manner that would insure that adequate provisions are made for the educational needs of such individuals.

5. The pupil weighting factors in the state finance formula should be continually reviewed to determine that adequate funding is provided for special education programs. The social and legal factors that brought about greater inclusion of the handicapped into society have also changed the level of involvement of Oklahoma's public schools with the handicapped. These changes will undoubtedly be reflected in cost of services. It is essential that costs be studied on a statewide basis to insure that programs for the handicapped are adequately funded and do not create too great a burden on public schools.

In addition to the need for such information in terms of state planning purposes the amendments relating to evaluation found in, Public Law 98-199, Education of the Handicapped Act Amendments of 1983 requires states to conduct a series of studies including:

At least one study (which) shall focus on obtaining and compiling current information available through State educational agencies and local educational agencies and other service providers,

⁶ Oklahoma D.H.S., Report on Oklahoma D.H.S., p. 54.

regarding State and local expenditures for educational services for handicapped students..., and gather information needed in order to calculate a range of per pupil expenditures by handicapping conditions.

It would appear that the federal government has recognized the significance of making schools aware of the cost of educating handicapped children and has taken this step to insure that action is begun regarding this matter.

⁷"E.H.L.R. Special Report: Amendment of E.H.A. by Pub. L. 98-199," Education For the Handicapped Law Report, no. 112 (January 20, 1984), p. SA-71.

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Appendix A

PER PUPIL EDUCATIONAL COSTS OF HANDICAPPED STUDENTS

School District _____ Category _____

Program Design

Actual No. of Students Served

F.T.E. No. of Students Served

Teacher Salary _____

+Fixed Charges

TOTAL _____ / _____ = _____
F.T.E. No. of Children (I) P/P Ex

Aide Salary _____

Fixed Charges

Administrative Costs

+Fixed Charges

TOTAL _____ / _____ = _____
F.T.E. No. of Children (II) P/P Ex

School Supplies _____ / _____ = _____ (III) P/P Ex
Actual No.
of Children

Per Pupil General Fund Expenditures

0100 Series

0200 Series

0300 Series

0400 Series

0500 Series

0600 Series

0700 Series

0800 Series

0900 Series

1000 Series

+1190 Series

TOTAL _____
(IV) P/P Ex

Related Services

Transportation	_____
Psychological Services	_____
Child Indent. Efforts	_____
Counseling Services	_____
School Health Services	_____
Speech Therapy	_____
Audiological Services	_____
Physical Therapy	_____
Occupational Therapy	_____
+Other	_____

TOTAL _____ / _____ = _____
Actual No. of Children (V) P/P Ex

TOTAL PER PUPIL COST (I+II+III+IV+V)

Appendix B

PER PUPIL EDUCATIONAL COST OF NON-HANDICAPPED STUDENTS

School District _____

$$\frac{\text{ADM}}{\text{ADM}} - \frac{\text{Handicapped Child Count}}{\text{Handicapped Child Count}} = \frac{\text{Adjusted ADM}}{\text{Adjusted ADM}}$$

100 Administrative Services

Administration _____
 -Special Education Administration _____

$$\text{TOTAL ADJUSTED ADMINISTRATION} \frac{\text{ADM}}{\text{ADM}} / \frac{\text{Adjusted ADM}^*}{\text{Adjusted ADM}^*} = \frac{\text{P/P Ex}}{\text{P/P Ex}}$$

TOTAL 100 Series _____

200 Instruction Services

Salaries _____
 -Special Education Salaries _____

$$\text{Total Adjusted Salaries} \frac{\text{ADM}}{\text{ADM}} / \frac{\text{Adjusted ADM}^*}{\text{Adjusted ADM}^*} = \frac{\text{P/P Ex}}{\text{P/P Ex}}$$

$$\text{Textbooks} \frac{\text{ADM}}{\text{ADM}} / \frac{\text{ADM}}{\text{ADM}} = \frac{\text{P/P Ex}}{\text{P/P Ex}}$$

$$\text{Libraries \& AV} \frac{\text{ADM}}{\text{ADM}} / \frac{\text{ADM}}{\text{ADM}} = \frac{\text{P/P Ex}}{\text{P/P Ex}}$$

$$\text{Other} \frac{\text{ADM}}{\text{ADM}} / \frac{\text{ADM}}{\text{ADM}} = \frac{\text{P/P Ex}}{\text{P/P Ex}}$$

Teaching Supplies _____
 -Special Education Teaching _____

$$\text{TOTAL} \frac{\text{ADM}}{\text{ADM}} / \frac{\text{Adjusted ADM}^*}{\text{Adjusted ADM}^*} = \frac{\text{P/P Ex}}{\text{P/P Ex}}$$

TOTAL 200 Series _____

$$\text{300 Attendance Services} \frac{\text{ADM}}{\text{ADM}} / \frac{\text{ADM}}{\text{ADM}} = \frac{\text{P/P Ex}}{\text{P/P Ex}}$$

$$\text{400 Health Services} \frac{\text{ADM}}{\text{ADM}} / \frac{\text{ADM}}{\text{ADM}} = \frac{\text{P/P Ex}}{\text{P/P Ex}}$$

500 Transportation	_____		
-Special Education Transportation	_____		
TOTAL 500 Series _____/	Adjusted ADM*	=	P/P Ex
600 Operation of Plant _____/	ADM	=	P/P Ex
700 Maintenance of Plant _____/	ADM	=	P/P Ex
800 Fixed Charges _____			
-Special Education Charges _____			
TOTAL 800 Series _____/	Adjusted ADM*	=	P/P Ex
900 Food Services _____/	ADM	=	P/P Ex
1000 Student-Body Activities _____/	ADM	=	P/P Ex
1190 Outgoing Transfers _____/	ADM	=	P/P Ex
TOTAL PER PUPIL EXPENDITURES	<u>P/P Ex in 100, 200, 300, 400, 500, 600,</u> <u>700, 800, 900, 1000, 1190</u>		

*If no special education expenditures are reported, the ADM serves as the divisor.

Appendix C

WEIGHTED MEAN PER PUPIL
EDUCATIONAL COSTS OF HANDICAPPED STUDENTS

School District _____ Category _____

Program Design _____

Actual No. of Students Served _____

F.T.E. No. of Students Served _____

Teacher Salary _____

+Fixed Charges _____

(I) TOTAL _____

Aide Salary _____

Fixed Charges _____

Administrative Costs _____

+Fixed Charges _____

(II) TOTAL _____

(III) TOTAL School Supplies _____

Per Pupil General Fund Expenditures

0100 Series _____

0200 Series _____

0300 Series _____

0400 Series _____

0500 Series _____

0600 Series _____

0700 Series _____

0800 Series _____

0900 Series _____

1000 Series _____

1190 Series _____

<div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="margin: 0 5px;">x</div> </div>	<div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="margin: 0 5px;">=</div> </div>	<div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 100%;"></div> </div>
Total P/P Ex	F.T.E. H/C Children Served	(IV) Total

Related Services

Transportation	_____
Psychological Services	_____
Child Indent. Efforts	_____
Counseling Services	_____
School Health Services	_____
Speech Therapy	_____
Audiological Services	_____
Physical Therapy	_____
Occupational Therapy	_____
Other	_____

(V) TOTAL _____

TOTAL PROGRAM

COSTS

$\frac{I+II+III+IV+V}{}$	$\frac{\text{FTE No. of H/C Children}}{}$	=	$\frac{\text{Weighted Mean Per Pupil Ex}}{}$
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Appendix D

WEIGHTED MEAN PER PUPIL
EDUCATIONAL COST OF NON-HANDICAPPED STUDENTS

School District _____

_____	-	_____	=	_____
ADM		Handicapped Child Count		Adjusted ADM

100 Administrative Services

Administration	_____
-Special Education Administration	_____

TOTAL 100 Series _____

200 Instruction Services

Salaries	_____
-Special Education Salaries	_____

Total Adjusted Salaries	_____
-------------------------	-------

Textbooks	_____
-----------	-------

Libraries & AV	_____
----------------	-------

Other	_____
-------	-------

Teaching Supplies	_____
-------------------	-------

Special Education Teaching	_____
----------------------------	-------

Total Adjusted Teaching Supplies _____

TOTAL 200 Series _____

300 Attendance Services _____

400 Health Services _____

500 Transportation _____

-Special Education Transportation _____

TOTAL Adjusted Transportation _____

600 Operation of Plant _____

700 Maintenance of Plant _____

800 Fixed Charges _____

-Special Education Charges _____

TOTAL Adjusted Fixed Charges _____

900 Food Services _____

1000 Student-Body Activities _____

1190 Outgoing Transfers _____

TOTAL EXPENDITURES

_____ /	_____ =	_____
Combined Expenditures in	Adjusted ADM	Weighted Mean
100, 200 300, 400, 500,		Per Pupil Educational
600, 700, 800, 900, 1000		Cost of Non-Handicapped
1190		Students

Appendix E

FEDERAL CATEGORICAL AID FOR SPECIAL EDUCATION

School District _____

P.L. 94-142 Allotment _____

+P.L. 89-313 Allotment _____

TOTAL FEDERAL ALLOTMENT _____

_____ /	_____ =	_____
Total Federal Allotment	Total number of Handicapped Children	P/P Federal Allotment

Appendix F

GENERAL INFORMATION REGARDING SCHOOL DISTRICTS STUDIED

	I	II	III	IV	V	VI
School District	Total Enrollment A.D.M.	Total Handicapped Student Enrollment	Adjusted Enrollment (I-II)	Total Federal Allotment For Handicapped Students	Per Pupil Expenditures for Non-Handicapped Students	Per Pupil Federal Allotment for Special Education
A	17,424.51	1,793	15,631.51	\$366,850.51	\$1,604.57	\$204.60
B	8,548.96	672	7,876.96	250,437.40	1,659.16	372.62
C	5,432.74	523	4,909.74	97,230.34	1,690.88	185.91
D	5,156.24	508	4,648.24	65,256.69	1,591.66	128.46
E	3,580.95	284	3,296.95	63,258.00	1,478.74	222.74
F	3,083.13	433	2,650.13	172,000.00	1,739.28	397.23
G	2,077.58	255	1,822.58	46,030.11	1,784.11	180.51
H	1,354.27	109	1,245.27	17,002.24	1,760.60	155.98
I	1,060.65	134	926.65	59,598.57	1,656.40	443.44
J	861.81	113	748.81	15,632.00	1,644.08	138.34
K	396.34	51	345.34	9,633.97	2,228.98	188.90

Appendix G

PER PUPIL COST INDICES ADJUSTED
FOR ALLOCATION OF FEDERAL CATEGORICAL MONIES

School District	E.M.R.	T.M.R.	E.D.	M.H.	H.I.	V.I.	P.H.
A	1.38	2.32	2.05	3.68	2.55	3.81	—
B	1.12	1.43	2.04	2.47	10.92	4.60	—
C	1.16	3.46	—	3.75	5.00	—	—
D	1.30	1.96	2.00	4.52	—	—	—
E	1.07	2.39	2.98	2.78	3.37	—	—
F	.86	1.87	—	4.68	—	—	1.62
G	1.40	4.67	4.97	4.08	—	—	—
H	1.01	—	—	4.32	—	—	—
I	1.48	—	—	1.61	—	—	4.88
J	2.28	—	—	—	—	—	—
K	1.06	—	—	—	—	—	—

Appendix H

PER PUPIL EDUCATIONAL COSTS OF HANDICAPPED STUDENTS

School District B Category T.M.R.Program Design self-containedActual No. of Students Served 15F.T.E. No. of Students Served 15Teacher Salary \$22,942.00+Fixed Charges 1,541.00

TOTAL \$24,483.00 / 15 = \$1,632.20
 F.T.E. No. of Children (I) P/P Ex

Aide Salary 0Fixed Charges 0Administrative Costs \$1,138.00+Fixed Charges 147.94

TOTAL \$1,285.94 / 15 = \$85.73
 F.T.E. No. of Children (II) P/P Ex

School Supplies \$1,116.00 / 15 = \$74.40
 Actual No. of Children (III) P/P Ex

Per Pupil General Fund Expenditures

0100 Series	<u>\$ 58.88</u>
0200 Series	<u>68.17</u>
0300 Series	<u>0.00</u>
0400 Series	<u>3.30</u>
0500 Series	<u>0.00</u>
0600 Series	<u>203.69</u>
0700 Series	<u>34.80</u>
0800 Series	<u>0.00</u>
0900 Series	<u>0.00</u>
1000 Series	<u>0.00</u>
+1190 Series	<u>18.46</u>

TOTAL \$387.30
 (IV) P/P Ex

Related Services

Transportation	<u>\$4,101.00</u>
Psychological Services	<u>751.00</u>
Child Indent. Efforts	<u>0.00</u>
Counseling Services	<u>798.00</u>
School Health Services	<u>21.00</u>
Speech Therapy	<u>0.00</u>
Audiological Services	<u>0.00</u>
Physical Therapy	<u>2,756.00</u>
Occupational Therapy	<u>0.00</u>
+Other	<u>0.00</u>

TOTAL	<u>\$8,427.00</u>	/	<u>15</u>	=	<u>\$561.80</u>
			Actual No. of Children		(V) P/P Ex

TOTAL PER PUPIL COST	<u>\$2,741.43</u>
	(I+II+III+IV+V)

Appendix I

PER PUPIL EDUCATIONAL COST OF NON-HANDICAPPED STUDENTS

School District B

$$\frac{8,548.96}{\text{ADM}} - \frac{672}{\text{Handicapped Child Count}} = \frac{7,876.96}{\text{Adjusted ADM}}$$

100 Administrative Services

Administration	<u>\$533,049.00</u>
-Special Education Administration	<u>69,264.00</u>

TOTAL ADJUSTED ADMINISTRATION

$$\frac{\$463,785.98}{\text{Adjusted ADM}^*} = \frac{7,876.96}{\text{Adjusted ADM}^*} = \frac{\$58.88}{\text{P/P Ex}}$$

200 Instruction Services

Salaries	<u>\$9,019,502.08</u>
-Special Education Salaries	<u>780,160.00</u>

$$\text{Total Adjusted Salaries } \$3,239,342.08 / \frac{7,876.96}{\text{Adjusted ADM}^*} = \frac{\$1,046.01}{\text{P/P Ex}}$$

$$\text{Textbooks } \frac{\$70,112.17}{\text{ADM}} = \frac{8,548.96}{\text{ADM}} = \frac{\$8.20}{\text{P/P Ex}}$$

$$\text{Libraries \& AV } \frac{\$117,052.75}{\text{ADM}} = \frac{8,548.96}{\text{ADM}} = \frac{\$13.69}{\text{P/P Ex}}$$

$$\text{Other } \frac{\$202,915.29}{\text{ADM}} = \frac{8,548.96}{\text{ADM}} = \frac{\$23.74}{\text{P/P Ex}}$$

Teaching Supplies	<u>\$232,798.59</u>
-Special Education Teaching	<u>53,219.00</u>

$$\text{TOTAL } \frac{\$177,579.59}{\text{Adjusted ADM}^*} = \frac{7,876.96}{\text{Adjusted ADM}^*} = \frac{\$22.54}{\text{P/P Ex}}$$

$$300 \text{ Attendance Services } \frac{0.00}{\text{ADM}} = \frac{0.00}{\text{P/P Ex}}$$

$$400 \text{ Health Services } \frac{\$28,200.70}{\text{ADM}} = \frac{8,548.96}{\text{ADM}} = \frac{\$3.30}{\text{P/P Ex}}$$

500 Transportation	<u>\$383,964.70</u>		
-Special Education Transportation	<u>39,370.00</u>		
TOTAL 500 Series <u>\$344,594.70</u> /	<u>\$7,876.96</u>	=	<u>\$53.74</u>
	Adjusted ADM*		P/P Ex
600 Operation of Plant <u>\$1,741,307.02</u> /	<u>8,548.96</u>	=	<u>\$203.69</u>
	ADM		P/P Ex
700 Maintenance of Plant <u>\$297,538.97</u> /	<u>8,548.96</u>	=	<u>\$34.80</u>
	ADM		P/P Ex
800 Fixed Charges	<u>\$1,391,694.33</u>		
-Special Education Charges	<u>35,987.50</u>		
TOTAL 800 Series <u>\$1,355,706.83</u> /	<u>7876.96</u>	=	<u>\$172.11</u>
	Adjusted ADM*		P/P Ex
900 Food Services <u>0.00</u> /	<u>ADM</u>	=	<u>0.00</u>
			P/P Ex
1000 Student-Body Activities <u>0.00</u> /	<u>ADM</u>	=	<u>0.00</u>
			P/P Ex
1190 Outgoing Transfers <u>\$157,779.30</u> /	<u>8,548.98</u>	=	<u>\$18.46</u>
	ADM		P/P Ex
TOTAL PER PUPIL EXPENDITURES	<u>\$1,659.16</u>		
	<u>P/P Ex in 100, 200, 300, 400, 500, 600,</u>		
	<u>700, 800, 900, 1000, 1190</u>		

*If no special education expenditures are reported, the ADM serves as the divisor.

Appendix J

WEIGHTED MEAN PER PUPIL
EDUCATIONAL COSTS OF HANDICAPPED STUDENTS

School District B Category T.M.R.

Program Design self-contained

Actual No. of Students Served 15

F.T.E. No. of Students Served 15

Teacher Salary \$22,942.00

+Fixed Charges 1,541.00

(I) TOTAL \$24,483.00

Aide Salary 0.00

Fixed Charges 0.00

Administrative Costs \$1,138.00

+Fixed Charges 147.94

(II) TOTAL \$1,285.94

(III) TOTAL School Supplies \$1116.00

Per Pupil General Fund Expenditures

0100 Series	<u>\$ 58.88</u>
0200 Series	<u>68.17</u>
0300 Series	<u>0.00</u>
0400 Series	<u>3.30</u>
0500 Series	<u>0.00</u>
0600 Series	<u>203.69</u>
0700 Series	<u>34.80</u>
0800 Series	<u>0.00</u>
0900 Series	<u>0.00</u>
1000 Series	<u>0.00</u>
1190 Series	<u>18.46</u>

<u>\$387.30</u>	x	<u>15</u>	=	<u>\$5,809.50</u>
Total P/P Ex		F.T.E. H/C Children Served		(IV) Total

Related Services

Transportation	<u>\$4,101.00</u>
Psychological Services	<u>751.00</u>
Child Indent. Efforts	<u>0.00</u>
Counseling Services	<u>798.00</u>
School Health Services	<u>21.00</u>
Speech Therapy	<u>0.00</u>
Audiological Services	<u>0.00</u>
Physical Therapy	<u>2,756.00</u>
Occupational Therapy	<u>0.00</u>
Other	<u>0.00</u>

(V) TOTAL \$8,427.00

TOTAL PROGRAM

COSTS	$\frac{\$41,121.44}{\text{I+II+III+IV+V}}$	$\frac{15}{\text{FTE No. of H/C Children}}$	=	$\frac{2,741.43}{\text{Weighted Mean Per Pupil Ex}}$
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600 Operation of Plant	<u>\$1,741,307.02</u>
700 Maintenance of Plant	<u>\$297,538.97</u>
800 Fixed Charges	<u>\$1,391,694.33</u>
-Special Education Charges	<u>35,987.50</u>
TOTAL Adjusted Fixed Charges	<u>\$1,355,706.83</u>
900 Food Services	<u>0.00</u>
1000 Student-Body Activities	<u>0.00</u>
1190 Outgoing Transfers	<u>\$157,779.30</u>
TOTAL EXPENDITURES	

<u>\$13,195,915.38</u>	/	<u>7,876.96</u>	=	<u>\$1,675.25</u>
Combined Expenditures in		Adjusted ADM		Weighted Mean
100, 200 300, 400, 500,				Per Pupil Educational
600, 700, 800, 900, 1000				Cost of Non-Handicapped
1190				Students

Appendix L

FEDERAL CATEGORICAL AID FOR SPECIAL EDUCATION

School District B

P.L. 94-142 Allotment	<u>\$246,931.87</u>
+P.L. 89-313 Allotment	<u>3,505.53</u>

TOTAL FEDERAL ALLOTMENT

<u>\$250,437.40</u>	/	<u>672</u>	=	<u>\$372.62</u>
Total Federal Allotment		Total number of Handicapped Children		P/P Federal Allotment