

DOCUMENT RESUME

ED 254 035

EC 171 744

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 TITLE An Analysis of State Special Education Finance Formulas. Final Report.
 INSTITUTION Virginia Polytechnic Inst. and State Univ., Blacksburg.
 SPONS AGENCY Special Education Programs (ED/OSERS), Washington, DC.
 PUB DATE Jul 84
 GRANT G008300038
 NOTE 109p.; Submitted to the Student Research Program.
 PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
 DESCRIPTORS *Disabilities; Elementary Secondary Education; Financial Policy; Program Costs; *Special Education; *State Aid
 IDENTIFIERS *State Aid Formulas

ABSTRACT

State special education finance formulas were collected and analyzed from the perspectives of both special and general education administrators at state and local levels. The 50 state formulas used in 1980-81 were classified into major categories (flat grant, minimum foundation program, percentage equalizing, percentage matching, full state funding of excess cost of special education). Advantages and disadvantages of the formulas were then examined according to five evaluative criteria: equity, administrative efficiency, adequacy, objectivity, and flexibility. A panel of experts evaluated the performance of the evaluative criteria from the four administrative perspectives through a questionnaire. Major findings included the following: a common terminology for describing formulas may be applied to both special education and general education finance formulas; flat grant and minimum foundation programs were the most commonly used formulas; fiscal equalization was an important factor in classifying formulas and in formula performance, particularly when funding was limited; weighting may influence placement of special education students; the influence of administrative role on preferences was present but not pervasive; and full state funding of excess costs achieved the most satisfactory overall performance on the evaluative criteria. (Author/CL)

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An Analysis of State Special Education Finance Formulas

Final Report

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July, 1984

Funded through Grant No. G008300038
Research in Education of the Handicapped
CFDA: 84.023A Student Initiated Research

EC171744

AN ANALYSIS OF STATE SPECIAL EDUCATION FINANCE FORMULAS

by

Sandra McQuain

(ABSTRACT)

Special education programs are serving large numbers of children and claiming a growing proportion of the school budget. State policymakers responsible for designing school finance formulas need information on the advantages and disadvantages of special education finance formulas in the context of the total school finance system.

In this study state special education finance formulas were collected and were analyzed from the perspectives of both special and general education administrators at both the state and local levels. The fifty state formulas used in 1980-81 were classified into major categories. The author determined advantages and disadvantages of the formulas according to five evaluative criteria: equity, administrative efficiency, adequacy, objectivity, and flexibility. The analysis considered four administrative perspectives on the assumption that administrative role influenced perception of advantages and disadvantages. A panel of experts evaluated the performance of the formulas and the importance of the evaluative criteria from the four administrative perspectives through a questionnaire.

As a result of the study, advantages and disadvantages were listed for each formula on each of the evaluative criteria. Major findings included: (1) a common terminology for describing formulas may be

applied to both special education and general education finance formulas; (2) the five major types of state special education finance formulas in 1980-81 were flat grant, minimum foundation program, percentage equalizing, percentage matching, and full state funding of the excess cost of special education, (3) flat grant and minimum foundation program were the most commonly used formulas, (4) fiscal equalization was an important factor in classifying formulas and in formula performance, particularly when funding was limited, (5) weighting may influence placement of special education students, (6) influence of administrative role on preferences was present but not pervasive, and (7) full state funding of the excess cost of special education achieved the most satisfactory overall performance on the evaluative criteria.

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INTRODUCTION

The Education for All Handicapped Children Act of 1975 (P.L. 94-142)¹ mandates free, appropriate public education for all handicapped children. Because it is the intent of P.L. 94-142 to fund only the excess costs of special education, leaving the remaining costs to the states and localities, state provisions for funding have a profound impact upon available services.

Not only the level of funding, but also the way in which funds are allocated to local education agencies (LEAs) is important. The special education finance formulas used to determine state allocations to LEAs may influence administrative and programmatic decisions at the local level. When a formula's incentives and disincentives are incongruent with the intent of state policy or federal law, state funding is unlikely to satisfactorily achieve its intended purposes.

In the wake of both federal and state statutes and case law establishing a requirement for education of all handicapped children, the number of children served in special education programs and the variety of services offered have increased dramatically in recent years. In 1980-81, 4.2 million children were being served in special education programs.² The proportion of state aid to education going to special education reportedly increased in thirty-four states between 1975-76 and 1978-79, with eight states reporting growth rates in their special education budgets of over 20 percent.³ In 1978-79 state aid to special education was estimated to total between \$2.9 and \$3.4 billion.⁴ Surveying 261 school districts nationwide, the National School Boards Association found that

administrators recognized special education as an area of rapidly rising cost in the school budget, as special education budgets increased to meet the needs of expanding programs.⁵

Having limited financial resources, states have an interest in allocating and managing education funds in the most efficient manner possible. Although many states have changed their special education finance formulas in recent years, in 1980 special education directors in seventeen states anticipated further changes.⁶ Typically state legislatures make formula changes frequently. With a number of states recently having had their state education finance systems declared unconstitutional, revisions in special education finance formulas seem inevitable. A research base upon which to make decisions about state special education finance formulas could assist policymakers in their task.

Purpose

The purpose of this study was twofold. First, special education finance formulas were classified according to an accepted classification system in order to provide state policymakers a framework that was compatible with general school finance formula classifications and research. Second, this classification formed the framework for an analysis of major special education finance formulas in which advantages and disadvantages of the formulas were determined. The research question that guided the formula analysis was as follows:

What are the advantages and disadvantages of the major types of special education finance formulas from the perspectives of both special and general education administrators at both the state and local levels, relative to selected criteria for evaluating finance formulas?

Need for the Study

Three previous authors have developed special education finance formula classifications and have posited the policy effects of each type. The Thomas classification consists of the following types of formulas: (1) unit financing, a fixed sum for each unit of classroom instruction, administration, and transportation, (2) weighted formula system, based on per pupil reimbursement multiplied by a factor to compensate for higher educational costs of certain types of programs, (3) percentage reimbursement, in which the state pays a given percentage of the costs of special education, (4) reimbursement for personnel, in which all or a portion of personnel salaries are paid by the state, (5) straight sum reimbursement, in which the state provides a set amount per pupil and (6) excess cost formula, in which the state pays for the cost of the education of handicapped students over and above the cost of the regular program.⁷

Hartman has suggested grouping these categories together according to what he considers to be the main factor upon which allocation is based, in the following manner: (1) resource based formulas, including unit, personnel, (2) child based formulas, including weighted and straight sum, and (3) cost based formulas, including percentage and excess costs.⁸ Elaborating upon the Hartman classification by adding three funding mechanisms, Moore, Walker, and Holland described the following formulas: (1) flat grant/student, (2) flat grant/classroom or teacher unit, (3) percentage of personnel salaries, (4) percentage cost or excess cost, (5) pupil weighting, and (6) weighted teacher or classroom units.⁹

In the present study, none of these classifications was deemed

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satisfactory for describing special education finance formulas in the context of the total school finance system. While all the elements included in these previous classifications were important, a classification system broad enough to include these elements as well as additional characteristics and to organize them in such a way as to provide discrete formula categories was sought. The categories in Thomas's classification are not mutually exclusive. For example, a unit formula also may be weighted; a personnel formula actually is a type of unit formula. While Hartman's child based, resource based, or cost based formula categories facilitate separate classification, Moore, Walker, and Holland found these elements alone were not sufficient to describe how funds are allocated. Describing only how the level of educational need is determined, this classification offers little information about the way in which LEA allocations are calculated. According to Moore, Walker, and Holland a flat grant per student and a weighted pupil formula, though both are child based, operate in very different ways. In their classification, they attempted to improve upon Hartman's classification by incorporating three funding mechanisms: flat grant, percentage, and weighted formulas.¹⁰ While an expansion of the classification is needed, these funding mechanisms and the definitions ascribed to them in the Moore study neither include all types of mechanisms nor define the mechanisms in a way that is consistent with the school finance literature.

In addition to allowing discrete formula categories, the classification should include the dimension of equalization in order to be

comprehensive. Contrary to the contention that given the same assumptions various formulas yield the same amount of funding, equalizing formulas generate varying amounts of funds according to LEA fiscal capacity. None of the three previous classifications included equalization as a formula characteristic.

A more comprehensive classification, which allows separate formula classification and yet is broad enough to encompass the elements addressed in the above studies, is the classification developed by the National Educational Finance Project (NEFP) and used throughout the school finance literature. As described by Johns, Morphet, and Alexander the classification is as follows:

- I. Flat (unit) grants
 - A. Uniform flat grants per distribution unit
 - B. Variable flat grants reflecting unit cost variations
- II. Equalization grants (cost units uniform or reflecting cost variations)
 - A. Strayer-Haig-Mort (foundation) programs
 - B. Percentage equalization, state-aid ratio, or guaranteed valuation programs
 - C. District power equalizing programs
- III. Nonequalizing matching grants¹¹

An additional category often ignored because it is used in only one state is that of full state funding. The elements addressed by the three previous classifications of special education finance formulas may be subsumed under this NEFP classification. While the operation of these formulas has been modified somewhat for use in special education, they remain the basic formula types.

Developing a framework for classifying the special education finance formulas provided the basis for a new analysis of the formulas. In determining advantages and disadvantages of formulas, a "macro" analysis of the performance of the formulas in relation to the total school finance system rather than the "micro" effects on individual classrooms was emphasized. This "macro" analytical perspective frequently is representative of the point of view of state policymakers. Effects on individual classrooms, although important, may be confounded by many local factors unrelated to the special education finance formula.

State policymakers also should be aware of the needs and opinions of administrators at other levels of the educational organization. According to McCarthy and Sage, what one sees as an advantage or disadvantage may depend upon one's role.¹² Thus the evaluative perspectives of school administrators at both the state and local levels who implement the finance formula were considered in the analysis.

METHODOLOGY

Given the parameters of previous research and the current need for comprehensive information on special education finance formulas, the following research question evolved:

What are the advantages and disadvantages of the major types of special education finance formulas from the perspectives of both special and general education administrators at both state and local levels relative to selected criteria for evaluating finance formulas?

In order to study this question, a methodology consisting of three phases was employed. First, state special education finance formulas were classified. Second, within this classification the advantages and disadvantages of the formulas were analyzed according to accepted criteria for evaluating school finance formulas. Third, a panel of experts evaluated the major types of formulas according to the accepted criteria. Finally, the researcher's analysis and the panel's evaluation were synthesized into a comprehensive outline of the advantages and disadvantages of each major formula to be used by state policymakers involved in designing special education finance formulas.

Classification of Special Education Finance Formulas

Both special education and general education finance formulas for 1980-81 were requested from the chief state school officer in each of the fifty states. The general education finance formulas were collected in addition to the special education formulas, because in some states special education funding is allocated through the general education formulas. Since special education formulas were to be analyzed in the

context of the overall system, information concerning the goals of the general education finance system was useful in determining whether a state's special education formula was consistent with those goals. When the formulas were requested, each chief state school officer was asked whether special education funding was: (1) forward, paid to the districts before expenses were incurred, (2) current, paid when expenses were incurred, or (3) reimbursement, paid after expenses had been incurred. It was anticipated that this information might not be included in the state statutes describing the formulas. In addition to the formulas, studies of the state's special education finance formula also were requested, if available. Formulas were received from all fifty states, with the exception of North Dakota, which sent only its general education formula. When the special education finance formula was not forwarded, a 1982 description of North Dakota's formula was substituted.¹³ Studies were received from fifteen states.

In order to develop the formula classification, each state general education and special education finance formula was studied, and the major characteristics of each special education finance formula were outlined on note cards. A chart was developed to display the major characteristics of the formulas. In addition to the major types of formulas, characteristics describing the special education finance formula's relationship to the general education finance formula, the measures of educational need employed by the formula, and the timing of funding distribution were included in the chart.

From among the types of formulas commonly found in the school

finance literature, five major types of special education finance formulas were identified through the charting process: (1) flat grant, (2) minimum foundation program, (3) percentage equalizing, (4) percentage matching, and (5) full state funding of the excess cost of special education. With the exception of the full state funding of excess cost formula, these formulas form the basis for school finance systems as described by major textbooks in the field of school finance.¹⁴ Full state funding of the excess cost of special education is by definition unique to special education finance, and it has been described in the special education finance literature.¹⁵

Within each of the major types of formulas, there was much variation in how the formulas operated. After reviewing all formulas and charting the characteristics found therein, it was determined that the following characteristics would be included in the classification, in order to adequately describe the five major formulas: (1) internal or external to the general education finance formula, (2) unweighted or weighted grant, (3) pupil unit, instructional unit, or formula based on program cost, (4) weighted dollar amount per unit, weighting factor, weighting by class size limits, bracketed class size limits, (5) type of pupil count: enrollment, average daily attendance (ADA), average daily membership (ADM), full time equivalent (FTE), and (6) forward, current, or reimbursement funding. Item (1) describes the formula's relationship to the general education finance formula. Items (3) through (5) describe the measures of educational need, and item (6) describes the timing of funding.

The chart resulting from this process displays the states along the side and the above types of formulas and characteristics across the top (see Table 1). After having charted the characteristics of each state special education formula, the most common types of formulas and combinations of characteristics were determined (see Tables 2 through 7).

Analysis of Special Education Finance Formulas

By identifying the major types of special education finance formulas and describing their essential characteristics, the classification of the formulas in the first phase of this study provided the framework through which the research question could be answered. The research question had two aspects. It required not only an analysis of the advantages and disadvantages of the formulas, but also that the analysis consider the evaluative perspectives of different kinds of administrators.

According to McCarthy and Sage, what one sees as an advantage or disadvantage may depend upon one's role and responsibilities.¹⁶ Therefore, the formulas were analyzed from the following viewpoints:

(1) state education agency (SEA) special education administrator, (2) SEA general education finance administrator, (3) local education agency (LEA) special education administrator, and (4) LEA general education finance administrator. These four administrators were chosen because they are representative of the administrators who actually operate school finance formulas and administer the programs funded by them. As each formula was examined, the researcher hypothesized the advantages and disadvantages

of the formula for each of the above administrators in light of the responsibilities and concerns associated with the position.

In order to systematically analyze the formulas in a comprehensive and consistent manner, evaluative criteria and subcriteria were selected for the analysis of all formulas. Upon reviewing the accepted criteria for evaluating school finance formulas,¹⁷ the following five criteria emerged as common to most suggested evaluation frameworks: equity, administrative efficiency, adequacy, objectivity, and flexibility. Advantages and disadvantages were defined by how well each formula performed on these criteria. Although a formula ideally should satisfy all five of the evaluative criteria, it should be noted that a high rating on one criterion may contribute to a low rating on another. For example, a highly flexible formula may tend to exhibit low administrative efficiency. The five major criteria and subcriteria specifying their application to special education are defined below.

Equity

Equity means that each child has an equal opportunity for education independent of the fiscal capacity of the LEA in which he lives. For a formula to exhibit equity, LEAs should have equal access to financial resources for providing an appropriate education to all students.

Ability to equalize fiscal capacity. The effects of LEA fiscal capacity are neutralized, that is, state funds are distributed in inverse proportion to the LEA's ability to generate financial resources.

Congruency with goals of the overall finance system. The special education finance formula ideally should be compatible with the general

education finance formula. Since most general education finance formulas have fiscal equalization as a major goal, the special education finance formula should enhance fiscal equalization.

Ability to vary allocation of funds according to educational need.

The level of need for educational services and the costs associated with meeting those needs varies among LEAs. For example, some LEAs may have a larger population of handicapped students than others, thus requiring more special education services. Other LEAs may have a high concentration of severely handicapped students, requiring more intensive and generally more expensive services. Promoting equity involves providing funds according to educational need, so that LEAs with high service needs will not be more heavily burdened financially than those with lesser needs.

Ability to vary allocation of funds according to the cost (price)

of services. The cost of purchasing services may be higher in some geographic locations than others. Theoretically, varying the LEA's allocation to allow for differences among LEAs in the price of services (e.g. salaries, contracted services, facilities) contributes to equity by providing financial resources needed to support appropriate special education, which all LEAs must provide regardless of cost. In practice, identifying factors that indicate the cost of education is difficult. High expenditures may be associated with high fiscal capacity. If so, a cost based formula may result in more state aid flowing to high fiscal capacity districts than to low fiscal capacity districts.

Administrative Efficiency

A formula that exhibits administrative efficiency is one in which the time, expense, and effort required to operate the formula are reasonable in relation to the return yielded. Unproductive practices are discouraged, and economical practices are encouraged.

Amount of reporting and paperwork associated with the formula is minimized. Although all formulas require reporting and paperwork, the amount should be kept to a level that is reasonable in relation to the administrator's other duties and in relation to the level of funding received by the LEA.

Provision of incentive for the LEA to control costs. Funds are expended in an economical manner, so that the LEA obtains the greatest amount of services possible for the smallest amount of funding. The formula encourages restraint in budget growth.

Predictability of LEAs' funding allocation. LEAs may predict the amount they will receive in state funds. SEAs may predict the amount they will be obligated to pay the LEAs.

Ease of understanding how the formula operates. This is the sub-criterion of simplicity.

Availability of accurate data for operating the formula. Child counts, unit counts, or cost data are readily available and accurate.

Adequacy

Adequacy of the special education finance formula generally depends upon the level of funding appropriated by the state legislature for distribution through the formula. Because this study did not analyze the level of state funding in dollar terms, adequacy is evaluated according to the formula's potential for attaining its intended purposes.

Congruency of the special education finance formula with the state's philosophy of school finance and control of the schools. Some states assume the major responsibility for financing special education, while others leave responsibility to the LEAs. The state may have a tradition of local control, or the SEA may play a major role in education policy. Finance formulas may either reflect or hinder these philosophies.

Inclusion of all mandated special education services in the formula. Both state and federal special education laws mandate appropriate special education and related services. In order to ensure that the mandates are implemented, the state may provide adequate funding for services.

Objectivity

Objectivity may be defined as the formula's resistance to manipulation by either the SEA or the LEA. An objective formula is precisely stated, so that it is not subject to manipulation in placement of special education students, data reporting, or in calculations for deter-

mining allocations. Its operation relies on following a well-defined procedure rather than on subjective decisionmaking.

Verifiability of formula data. Upon inspection it may be determined that child count, unit count, or expenditure data are accurate.

Resistance of formula calculations to manipulation. The calculations required for determining the allocation to the LEA are mechanical or mathematical, rather than requiring subjective judgment on the part of the SEA administrator.

Neutrality of the special education formula toward individual program placements. A neutral formula is one that does not provide financial incentives for favoring one kind of special education placement over another, thus possibly influencing erroneous "labeling" and placement of students to attain maximum special education funds.

Resistance of data to manipulation. Objectivity is influenced by the degree to which LEAs or SEAs may manipulate data such as child counts, unit counts, or cost data to their financial advantage.

Flexibility

Flexibility traditionally has been defined as the ability of the formula to accommodate changes in the prices of services. As it applies to special education formulas, flexibility also refers to the ability to respond to needs of LEAs in varying geographic areas, of various sizes, and with different economic conditions, and the ability to respond to changes in service needs midyear or from year to year.

Ability to accommodate changes in educational need and cost. The formula is flexible in assisting LEAs in financing services in response to changes in educational need and cost, such as changes in numbers of handicapped students exhibiting various handicapping conditions or increased prices of services. The flexible formula would automatically account for these changes yearly, and might provide additional funds in response to changes in midyear.

Facilitation of program innovations and new programs. The flexible formula allows LEAs the opportunity to make changes in their program designs or to add new programs and services by allowing them to generate funds or to shift funds to these services.

Ability to fund various program structures designed by LEAs. Rather than funding according to a specific program structure, the special education formula allows LEAs the option to design their own programs to meet local needs without being penalized financially.

Promotion of a continuum of placements consistent with the principle of placement in the least restrictive environment. The formula provides funds for a continuum of alternative service configurations for the various exceptionalities, from the least restrictive placement in a regular classroom with consulting services to the most restrictive special classroom or residential placement. (Many states fund residential placements through a separate formula).

Adaptability to needs of LEAs of various sizes and locations. The formula makes it possible for both small and large LEAs to generate enough funds to maintain the necessary range of programs as well as meets the needs of LEAs in various locations such as rural and urban areas.

Formula Analysis

The analysis of the formulas was based primarily on the judgment of the researcher, who hypothesized the advantages and disadvantages of the formulas relative to the evaluative criteria by taking the viewpoint of each of the four kinds of administrators. The researcher drew upon the literature review, a review of studies on individual state formulas, and a limited number of personal interviews and telephone interviews conducted to gather further information on special education finance formulas. Although a delimitation of this study was that it was not based on information from actual users of the formulas, the scarcity of literature on special education finance made it advisable to generate further information through interviews. Personal interviews were conducted with William Schipper, National Association of State Directors of Special Education (NASDSE), Gary Snodgrass, NASDSE, and Frederick J. Weintraub, Council for Exceptional Children. Administrators in the following states were contacted by telephone for clarification of their state's formula: Alaska, Arizona, Kansas, Kentucky, Louisiana, Montana, New Hampshire, Oklahoma, Pennsylvania, West Virginia, Washington, Oregon, and Alabama.

Panel Evaluation of the Major Formulas

The researcher's analysis of special education finance formulas was supplemented by an evaluation by a panel of experts representing general education and special education finance and administration. Although little had been published in the literature regarding the advantages and disadvantages of special education finance formulas, this was not considered to be indicative of the information available in the field among researchers and practitioners who have worked with individual states. A number of states have conducted studies of their own formulas, and finance experts have consulted with state legislatures in developing a number of state special education finance formulas. In view of the lack of published studies, which otherwise would have been used to support the analysis, expert opinion was sought as a valuable source of information for evaluating the analysis.

A panel of ten experts in the field of school finance and special education finance and administration was selected on the basis of their knowledge, experience, and research conducted (see Appendix B for vitae of panel members). Each panel member was offered an honorarium of \$100. Dr. K. Forbis Jordan elected to participate in the study without receiving the honorarium.

The panel members were as follows:

William H. Cochran, Deputy Superintendent of Public Instruction,
Virginia Department of Education, Richmond, Virginia

Nelda H. Cambron-McCabe, associate professor, Department of Educational Leadership, Miami University, Oxford, Ohio.

James F. Dyk, Director of Special Education, Wichita City Schools, Wichita, Kansas

K. Forbis Jordan, Senior Education Specialist, Congressional Research Service, Library of Congress, Washington, D.C.

John W. Melcher, former assistant superintendent of Division for Handicapped Children, Wisconsin Department of Public Instruction, Madison, Wisconsin

Van Mueller, Department Head, Department of Educational Administration, University of Minnesota, Minneapolis, Minnesota

Richard A. Rossmiller, Chairman, Department of Educational Administration, University of Wisconsin, Madison, Wisconsin

Angele Thomas, Director of Alternative Education, Manassas Park City Schools, Manassas Park, Virginia

L. D. Vuillemot, Superintendent, Special Education District of Lake County, Gurnee, Illinois

William R. Wilkerson, professor, Department of Educational Administration, Indiana University, Bloomington, Indiana

Questionnaire

Each panel member was mailed a questionnaire and materials explaining the study. The questionnaire was designed to obtain ratings of the formulas using the same evaluative framework and the same four administrative perspectives the researcher employed in hypothesizing the advantages and disadvantages of the formulas. The five evaluative criteria and subcriteria were defined for the panel, and the five major formulas were described (see Appendix A for evaluation materials). Each panel member was asked to assume the role of one of four kinds of administrators: (1) SEA special education administrator, (2) SEA general educa-

tion finance officer, (3) LEA special education administrator, or (4) LEA general education finance officer.

The questionnaire consisted of two sets of rating scales upon which the respondent was asked to rate the five formulas for each evaluative criterion and subcriterion. First, the respondent was asked, "How does the formula rate?" on each criterion and subcriterion. A four-point scale was provided for the response, with the scale values as follows: 1--poor performance on this criterion, 2--fair performance on this criterion, 3--good performance on this criterion, and 4--excellent performance on this criterion.

How well the formula performed gave no indication of whether the administrator would favor a formula having good performance on that criterion, however. Therefore, the panel member also was asked to rate the importance of the evaluative criteria for each formula. On this second scale the respondent was asked, "How important is this criterion?" that is, how important was good performance on this criterion to the administrator whose role the respondent had taken. The scale values for this four-point scale were: 1--not important, 2--limited importance, 3--important, 4--highly important. Space was provided for additional comments related to the ratings.

A second part of the questionnaire asked whether the respondent's answers would have been different if another role had been assigned, and if so, how would they have differed. Responses were open ended. Panel members were asked to respond to the above questions for each of the five major types of special education finance formulas.

Assigned roles for panel members were divided into equal numbers of special education administrators and general education finance administrators and equal numbers of state and local administrators as follows:

William H. Cochran--SEA general education finance administrator

Nelda H. Cambron-McCabe--SEA general education finance administrator

James P. Dyk--LEA special education administrator

K. Forbis Jordan--SEA general education finance administrator

John W. Melcher--SEA special education administrator

Van Mueller--LEA general education finance administrator

Richard A. Rossmiller--SEA special education administrator

Angele Thomas--LEA special education administrator

L. D. Vuillemot--LEA special education administrator

William R. Wilkerson--LEA general education finance administrator

Wherever possible, panel members were asked to take the role most closely matching their professional position. For panel members not currently holding a position comparable to one of the four administrative roles, the role associated with the university teaching responsibilities, research, and consulting experience of the panel member was chosen.

Data Analysis

Questionnaire data were analyzed both quantitatively and qualitatively. For the two sets of rating scales applied to each of the five formulas, analysis was as follows:

(1) The mean rating for each formula on each evaluative criterion and subcriterion was determined for all respondents as a group.

(2) The mean rating for each formula on each evaluative criterion and subcriterion was determined for each of the administrator subgroups: SEA special education administrator, SEA general education finance administrator, LEA special education administrator, and LEA general education finance administrator.

(3) The mean ratings for each formula on each evaluative criterion and subcriterion for the following subgroups were determined: all SEA administrators, all LEA administrators, all special education administrators, and all general education finance administrators.

(4) The mean overall rating for each formula was determined.

In addition to the quantitative data, two kinds of qualitative data were analyzed: comments related to items on the rating scales and answers to the questions regarding the effect of a change in administrative role on the ratings. Comments related to items on the rating scales were grouped according to the four administrative categories. This information then was used in interpreting the means on individual items and in relating the quantitative data to the researcher's hypothesized analysis of the formulas' advantages and disadvantages. Responses to

the three open-ended questions asking whether the formulas would have been rated differently had the respondents been given each of the other three administrative roles also were grouped according to the administrative role to which they referred. These data were used to identify sources of conflicting preferences among the four types of administrators.

In order to evaluate the hypothesized analysis of the five major types of formulas through the data provided by the panel of experts, a content analysis of the researcher's analysis was employed. A chart was developed for each criterion, listing the researcher's hypothesized advantages and disadvantages for each of the five formulas on that criterion.¹⁸ Next, panel members' comments taken from the questionnaires were listed on the chart. Finally, the quantitative ratings for each formula on each criterion were listed on the chart.

The final goal of this process was to produce a composite list of the advantages and disadvantages of each formula on each evaluative criterion. The final outcome is displayed in Tables 13 through 17.

RESULTS OF FORMULA CLASSIFICATION AND PANEL EVALUATION

The results of the three phases of this study are reported in this section. In the first phase, the formulas collected from the fifty states were classified into five major types of formulas. These formulas will be defined and the results of the classification of 1980-81 state special education finance formulas will be reported.

In the second phase of the study, the advantages and disadvantages of the five types of formulas were analyzed from the perspectives of SEA and LEA administrators in both special education and general education. Because the researcher's analysis was revised in light of the panel evaluation of the formula's, the analysis will be summarized.¹⁹

In the third phase of the study a panel of experts was asked to evaluate the formulas through completion of a questionnaire. Results of the questionnaire will be presented in the last part of this section.

Formula Classification

Within the context of the total school finance system, special education formulas may be classified into five basic categories: flat grant, minimum foundation program, percentage equalizing, percentage

matching, and full state funding of the excess cost of special education. While the basic structure and philosophies of these formulas differ, they nevertheless have some common characteristics. Knowing that a formula is a flat grant or percentage equalizing is not sufficient to describe how the formula operates. To facilitate the discussion of the major formulas, the pupil accounting systems or measures of educational need, which may be applicable to more than one formula and which provide the details of operation, will be described first. Then each of the five major types of formulas will be discussed.

Measures of Educational Need

In Table 1 the formula classification is presented. For each state, the formula is classified as one of the five major types. Beyond that major classification, a number of additional characteristics describing the formula are provided. First, the formula may be either internal to the state's basic grant-in-aid to LEAs for education or it may be external, allocated through a categorical grant separate from general education funding. Theoretically all the special education finance formulas except the full state funding of the excess cost of special education formula could operate either internal or external to the general education finance formula. In other words, these essentially are the same formulas used for general education funding. Since full state funding of excess cost applies only to special education costs, it automatically becomes a categorical grant. In practice, the percentage matching formula also is categorical for special education,

Table 1

Characteristics of State Special Education Finance Formulas
Classification of Formulas for 1980-81

State	Flat Grant	Minimum Foundation Program	Percentage Equalizing	Percentage Matching	Full State Funding of Excess Cost	Internal	External	Weighted	Unweighted	Pupil Unit	Instructional Unit	Program Cost	Weighted Amount	Weighting Factor	Weighted Class Size	Bracketed	Enrollment	ADA	ADM	FTE	Forward	Current	Reimbursement
Alabama	x																						
Alaska	x																						
Arizona		x																					
Arkansas	x																						
California	x																						
Colorado				x																			
Connecticut			x																				
Delaware	x																						
Florida		x																					
Georgia		x																					
Hawaii				x																			
Idaho		x																					
Illinois	x																						
Indiana	x																						
Iowa		x																					
Kansas	x																						
Kentucky	x																						
Louisiana		x																					
Maine		x																					
Maryland			x																				
Massachusetts			x																				
Michigan				x																			
Minnesota				x																			
Mississippi		x																					
Missouri	x																						
Montana				x																			
Nebraska				x																			
Nevada		x																					
New Hampshire					x																		
New Jersey	x																						
New Mexico		x																					
New York			x																				
North Carolina	x																						

Table 1 (continued)

State	Flat Grant	Minimum Foundation Program	Percentage Equalizing	Percentage Matching	Full State Funding of Excess Cost	Internal	External	Weighted	Unweighted	Pupil Unit	Instructional Unit	Program Cost	Weighted Amount	Weighting Factor	Weighted Class Size	Bracketed	Enrollment	ADA	ADM	FTE	Forward	Current	Reimbursement
North Dakota	X																						
Ohio	X																						
Oklahoma	X																						
Oregon				X																			
Pennsylvania					X																		
Rhode Island	X																						
South Carolina		X																					
South Dakota				X																			
Tennessee		X																					
Texas		X																					
Utah		X																					
Vermont				X																			
Virginia	X																						
Washington	X																						
West Virginia		X																					
Wisconsin				X																			
Wyoming	X																						

¹Where 1 is used to denote weight, the formula has only one weight for special education.

because this formula was not used for general education in any of the states in 1980-81.

Whether internal or external to the basic grant, special education finance formulas incorporate an assortment of measures of educational need for determining the allocation for each district. Attempting to promote equity in their finance formulas, states may equalize fiscal capacity among LEAs, and they may allocate funds in proportion to the level of need for educational services. Providing the same amount of funds for each district would not be equitable if some districts served more students than others, or if some needed to provide more expensive services than others. The extent to which one LEA is entitled to more funds than another in order to meet a higher level of educational need is measured in one of three ways. Number of pupil units or number of instructional units may represent the LEA's level of need, or the state may elect to pay a percentage of the actual expenditures reported by LEAs.

Pupil unit formulas obviously require a method of counting pupils for whom the LEA will receive funding. The instructional unit formulas may require a pupil count, a count of classrooms or personnel, or units may be approved subjectively by the state. When a pupil count is used in determining instructional units, the total number of pupils generally is divided by the number of pupils the state has defined as a unit.

For either pupil units or instructional units, pupils may be counted in one of several ways. Among the 1980-81 special education finance formulas, three methods of pupil accounting were found: average daily attendance (ADA), average daily membership (ADM), and enrollment

or headcount. To compute ADA, attendance might be taken every half day and averaged over a specified period of time. For the ADM method, the number of pupils in membership over a specified period of time is averaged. For example, a pupil might have to be in attendance one out of fifteen days to be counted a member. Enrollment or headcount includes pupils who are on the school roll, for example, those identified as handicapped and having an Individualized Educational Program (IEP) on file on any specified day during the year.

In addition to ADA, ADM, or enrollment, LEAs may wish to consider not only the number of pupils in school or enrolled in special education, but also the amount of time the pupils spend in special education. Since federal law requires that handicapped students be educated with nonhandicapped students as much as possible, many special education students spend part of their day in the special education classroom and part in the regular classroom. By specifying how much time is spent in special education, special education funds may be allocated only for that period of time. This is the full time equivalent (FTE) accounting method, which may be used in conjunction with ADA, ADM, or enrollment counts. Prorating part-time special education pupils rather than counting them as one pupil results in a lower count for special education than counting every pupil in special education for any period of time as one.

Whether they are based on a pupil unit or an instructional unit, formulas may provide for further differentiation of educational need by assigning weights to the unit count for higher cost programs. For example, the number of pupils identified as educable mentally retarded might

be multiplied by a factor of 2.0, while the number of pupils identified as multiple handicapped might be multiplied by a factor of 3.5 to reflect the greater cost of these programs relative to the cost of regular education, which might be weighted 1.0. Another method of providing for differential costs is to set the number of pupils required for an instructional unit lower for the higher cost programs. For example, a unit for the educable mentally retarded might allow fifteen pupils, while a unit for the multiple handicapped might allow only eight pupils. A third method is to provide different amounts of funding for different kinds of instructional units, for example, \$2600 for a unit for mildly handicapped and \$4000 for a unit for severely handicapped pupils. One weight may be assigned to special education, vocational education, and other programs, or weights may be assigned for each handicapping condition, service configuration (e.g. self-contained class, resource room), or severity of handicap (e.g. mild, moderate, severe).

The third method of measuring educational need is based on program cost. Rather than counting pupils or classrooms, this method requires that actual expenditures be reported by the LEA. Assuming that LEA expenditures are an indicator of educational needs, no further measurement of need is necessary.

Flat Grant Formula

A flat grant formula is one in which a specified amount per unit of need is allotted. The amount of funding per unit is established by the state, and no provision is made for adjusting the LEA's allocation according to fiscal capacity.

Flat grants may be either unweighted or weighted. An unweighted flat grant provides one amount for each pupil or instructional unit, regardless of the cost of the classes or services being funded. For example, every instructional unit might be allotted \$2600, even though the cost of operating some classes would exceed this amount. In a weighted flat grant, the instructional unit or pupil unit is weighted by one of the previously described methods to reflect the differential cost of services.

The flat grant formula may be written as follows;

$$\text{State Aid} = K \times N(\text{wt}), \text{ in which}$$

K = constant dollar amount per unit

N = number of units (pupil or instructional)

wt = factor representing cost differential (optional)

Designed to offset the cost of meeting state standards for education, the flat grant was the earliest type of school finance formula.²⁰ In special education, it still serves the function of assisting states in meeting program mandates.

In Table 2 the eighteen states that used a flat grant as their major special education finance formula in 1980-81 are listed. A substantial majority of sixteen states operated the formula as a categorical grant, external to the state's general education finance formula, as indicated in Table 3. Because states often prefer to consider LEA fiscal capacity when allocating general education funds, a flat grant may

Table 2
Major Types of State Special Finance Formulas
Classification of the States for 1980-81

Flat Grant	Minimum Foundation Program	Percentage Equalizing	Percentage Matching	Full State Funding of Excess Cost Cost of Special Education
Alabama	Arizona	Connecticut	Colorado	Hawaii ⁸
Alaska ¹	Florida	Maryland	Michigan	New Hampshire
Arkansas ²	Georgia	Massachusetts	Minnesota	Pennsylvania
California	Idaho	New York ⁷	Montana	
Delaware	Iowa		Nebraska	
Illinois	Louisiana		Oregon	
Indiana	Maine		South Dakota	
Kansas	Mississippi		Vermont	
Kentucky	Nevada		Wisconsin	
Missouri	New Mexico			
New Jersey	South Carolina			
North Carolina	Tennessee			
North Dakota ⁴	Texas			
Ohio	Utah			
Oklahoma	West Virginia			
Rhode Island ⁵	Wyoming			
Virginia				
Washington ⁶				

¹ Full state funding for Rural Education Associations.

² Special class funded as excess cost; salaries funded up to state average.

³ Division I and II funding.

⁴ National Association of State Directors of Special Education, A Description of State Funding Procedures for Special Education in the Public Schools, July, 1982.

⁵ Excess cost formula with a limitation on reimbursement.

⁶ Intended to be full state funding.

⁷ Public Excess Cost Aid Formula.

⁸ Full state funding of all education expenditures.

Table 3

State Special Education Finance Formulas-Flat Grant
1980-81

States	Internal	External	Weighted	Unweighted	Pupil Unit	Instructional Unit	Program Cost	Weighted Amount	Weighting Factor	Weighted Class Size	Bracketed	Enrollment	ADA	ADM	FTE	Forward	Current	Reimbursement
Alabama		x		x		x						x					x	
Alaska ¹		x	x			x		x										
Arkansas ²		x	x	x			x					x				x		
California ³		x	x			x			x			x					x	
Delaware	x		x			x				x		x						
Illinois		x		x		x							x				x	x
Indiana		x	x		x				x					x			x	x
Kansas		x		x		x									x		x	x
Kentucky ⁴	x		x			x				x							x	
Missouri ⁵		x	x			x		x			x						x	
New Jersey		x	x		x				x			x					x	
North Carolina ⁶		x	x		x			x				x						
North Dakota ⁶		x	x			x		x				x						x
Ohio		x	x			x		x						x				x
Oklahoma		x		x		x												
Rhode Island ⁷		x	x				x	x										x
Virginia		x	x		x			x		x	x							x
Washington ⁸		x	x			x				x		x			x			x
Total	2	16	14	4	4	12	2	7	3	4	2	9	2	4	3	4	10	3

¹ Amount per unit based on district costs for special education; full funding for Rural Education Associations.

² Special class funded as excess cost; salaries funded up to state average.

³ For Division I and II funding.

⁴ Weights taken from administrative regulations.

⁵ Weighted as approved by State Board.

⁶ From National Association of State Directors of Special Education, A Description of State Funding Procedures for Special Education in the Public School, July, 1982.

⁷ Calculated as an excess cost formula with a limitation.

⁸ Intended to be full state funding.

be viewed as inappropriate for general education, even though it is used for special education. Second, if a flat grant is used for both the general education and special education formulas it matters little, whether the special education funding is internal or external to the general education grant, as long as it is identified as special education's entitlement.

Among the three measures of educational need listed in Table 3, the instructional unit was preferred by twelve of the eighteen states. Four states relied on the pupil unit, and two states classified under the flat grant category used the program cost method of determining need. Although the Arkansas formula has been classified as cost based, it actually incorporated a variety of need measures. For example, for itinerant and resource room configurations, the state funded teacher salaries up to state average plus an amount for supplies. For the special class, an excess cost method was incorporated into the formula. Total instructional costs less district required effort funds for instructional costs plus state average salary were funded by the state. In Rhode Island's formula the LEA's excess cost per pupil for each handicapping condition served as the measure of need. The formula was classified as a flat grant, because it did not provide full state funding of excess cost. A limit of 110 percent of the state median per pupil cost was established, resulting in the formula's becoming a flat grant for high spending LEAs.

Referring again to Table 3, seven of the states weighted by providing different dollar amounts per pupil unit or instructional unit. Three states used weighting factors by which either their instructional unit

or pupil unit count was multiplied. Four states weighted their instructional units by setting class sizes to reflect the cost and intensity of services.

Minimum Foundation Program

The minimum foundation program formula is designed to fund a minimum level of education for all LEAs within the state. Being a popular choice for allocating aid to general education, this formula also is one of the most common types of special education finance formulas. When the minimum foundation formula is used for special education, general education funding, special education funding and funding for other programs such as vocational education usually are incorporated into one formula.

In the minimum foundation program formula, the state delineates the minimum level of education for which it will be responsible and establishes the amount it will fund to achieve this level. LEAs are required to levy a uniform tax as their contribution to the minimum program, but they are free to go beyond the minimum program, if they choose. The state funds the amount above the local required effort needed to bring the contribution up to the minimum foundation level. Thus, state funds are allocated in inverse proportion to LEA fiscal capacity.

The formula may be written as follows:

State Aid = $(K - \text{local required effort}) \times X(wt)$, in which

K = cost of minimum foundation program per unit,
 L = required effort = amount generated per unit by local unit levy,
 X = number of units (pupil or instructional), and
 wt = factor representing cost differential (optional).

Any expenditures and additional programs beyond the minimum foundation level theoretically are not essential to adequate education. Because all LEAs can maintain the minimum level of education, educational services are no longer entirely a function of the fiscal capacity of the district in which a student lives.

By limiting the total amount to be equalized through state funds, the minimum foundation program formula achieves equalization efficiently. Requiring a local tax effort in effect allows the state to use local taxes to defray part of the cost of the minimum foundation program. In reality, the local school tax functions as a state tax, although it is collected locally to avoid usurping the traditionally local power to tax property.²¹

As with the flat grant, the measure of educational need may be either number of pupils or number of instructional units. If weighting is used, there may be one weight for special education, vocational education, and elementary education, for example, or the formula may further differentiate costs of special education by weighting for each handicapping condition, service configuration, or degree of severity of handicap.

In the classification of 1980-81 state special education finance formulas, a total of sixteen states used the minimum foundation program formula, as displayed in Table 2. Of the sixteen states, fifteen included special education in their general education finance formula, as illustrated in Table 4. While Arizona's formula operated in the same way as a minimum foundation program formula (cost of special education less required local effort), the special education grant was external to the general education grant. Arizona no longer uses this formula:

Among the minimum foundation program formulas, eight used pupil units, seven used instructional units, and one was based on program cost. Maine, the state using program cost as a measure of educational need, included only personnel and tuition costs in the minimum foundation program.

In six states weighting factors for either pupil units or instructional units were employed, and two states had only one weight to differentiate the special education program from other educational programs. Two states weighted instructional units by setting class sizes, while three additional states had one class size established for special education to differentiate it from general education. West Virginia's formula used a combination of pupil unit and instructional unit, although it was classified as an instructional unit. In that state, special education pupils were assigned a weight of three in relation to general education. Funding was provided for salaries and other operating costs, however, rather than on a per pupil basis. An LEA could receive funds for no more than fifty-five staff per 1000 students.

Table 4

State Special Education Finance Formulas-Minimum Foundation Program
1980-81

States	Internal	External	Weighted	Unweighted	Pupil Unit	Instructional Unit	Program Cost	Weighted Amount	Weighting Factor	Weighted Class Size	Bracketed	Enrollment	ADA	ADM	FTE	Forward	Current	Reimbursement
Arizona		x	x		x				x					x				
Florida	x		x		x				x			x			x			
Georgia	x			x		x				1			x				x	
Idaho	x			x		x				1			x				x	
Iowa	x		x		x				x			x						
Louisiana	x		x			x				x	x		x					x
Maine	x			x			x											x
Mississippi	x			x		x						x	x					x
Nevada	x			x	x							x					x	
New Mexico	x		x		x				x					x			x	
South Carolina	x		x		x				x					x				
Tennessee	x			x	x				1			x						x
Texas	x			x		x				1			x				x	
Utah	x		x		x				x				x					x
West Virginia ²	x			x		x			1			x					x	
Wyoming	x		x			x				x				x			x	
Total	15	1	8	8	8	7	1		8	5	1	6	6	4	1		7	4

¹ Cost of personnel salaries and tuition only.

² Based on instructional units, but limited to 55 instructional units per 1000 enrollment.

Percentage Equalizing

The percentage equalizing formula as originally designed by Updegraff and, promoted by Benson was intended to provide equalization of educational opportunity while allowing the LEAs the freedom to set their own level of educational expenditures.²² The state would pay a percentage of the LEA's expenditures, adjusted for LEA fiscal capacity.

In practice, modifications of the percentage equalizing formula have transformed it into a minimum foundation program. For both special education and general education, states have placed limits on LEA expenditures, which have detracted from the philosophy of local control. Limitations on the percentage equalizing formula have been implemented for several reasons. Allowing unlimited LEA expenditures, places the SEA in the uncomfortable position of having little control over its obligations. Generating enough state funds to level up, or to equalize the full cost of the program up to the level of the district with the highest fiscal capacity, is quite expensive for the state. One way to control state spending without limiting local control, however, is through manipulation of the constant (K) in the formula, that is, to reduce the percentage of the state's share.²³

In this study, a percentage equalizing formula has been defined as one in which the level of need may be determined by the state, and the state then funds a percentage of this level, adjusted for LEA fiscal capacity.

The formula may be written as follows:

State Aid = $(1 - Y/X K) C$, in which

Y = local fiscal capacity,
 X = state average fiscal capacity,
 K = state percentage of LEA expenditures,
 C = cost of the local program.²⁴

The cost of the local program may be determined in several ways. For example, the per pupil or per instructional unit cost of special education may be multiplied by the number of pupils or instructional units in the LEA. Units may be weighted. In an alternative method, actual LEA expenditures serve as the measure of educational need, similar to the original intent of the percentage equalizing formula.

Table 2 lists four states using the percentage equalizing formula, as defined in this study, for special education in 1980-81. In that year, New York had five separate formulas for special education, including funding for private schools residential funding, and funding for regional service agencies. The formula used in this study for classification and comparative purposes was the Public Excess Cost/Aid Formula, which provided the bulk of funds to LEAs. Of the four formulas in Table 5, only the Connecticut formula was based on actual program cost. The remaining three formulas used pupil units, all of which were weighted by a factor. Only Massachusetts administered its special education funding as part of the state's general education finance formula.

Table 5

State Special Education Finance Formulas-Percentage Equalizing
1980-81

States	Internal	External	Weighted	Unweighted	Pupil Unit	Instructional Unit	Program Cost	Weighted Amount	Weighting Factor	Weighted Class Size	Bracketed	Enrollment	ADA	ADM	FTE	Forward	Current	Reimbursement
Connecticut ¹		x	x				x											
Maryland		x	x		x				x			x						x
Massachusetts	x		x		x				x			x			x			x
New York ²			x		x				x			x						
Total	1	3	4		3		1		3			3			1			2

¹ Per pupil cost for 1976 is part of the equalization factor.

² Public Excess Cost Aid Formula.

Percentage Matching

Percentage matching formula allows local district determination of expenditures for special education. No minimum level of expenditure is mandated by the state, and usually no upper limits on LEA expenditures are established. Specifying allowable costs, however, the state usually reserves the right to prorate funds or to lower its share if state appropriations are insufficient. The state will pay a percentage of LEA expenditures, which are limited only by the LEA's ability to fund its share.

Because there is no adjustment for LEA fiscal capacity, a district with higher fiscal capacity may be able to spend more and thus to get more state matching funds than a low fiscal capacity district. The impact of the effect is dependent upon the size of the state share, which varied from 30 to 90 percent among the states in 1980-81.

In 1980-81 nine states used the percentage matching formula, as indicated in Table 2. All were external to the state's general education finance formula, as shown in Table 6, and all were based on program cost.

Full State Funding of the Excess Cost of Special Education

In a full state funding of excess cost formula, the state takes responsibility for the cost of special education over and above the district's cost for general education. Unlike the other major types of special education finance formulas, which originated in general education, the excess cost formula was developed specifically for special education.²⁵

Table 6

State Special Education Finance Formulas-Percentage Matching
1980-81

States	Internal	External	Weighted	Unweighted	Pupil Unit	Instructional Unit	Program Cost	Weighted Amount	Weighting Factor	Weighted Class Size	Bracketed	Enrollment	ADA	ADM	FTE	Forward	Current	Reimbursement
Colorado		x	x				x											x
Michigan		x	x				x						x		x		x	
Minnesota		x	x				x											
Montana		x	x				x					x				x		
Nebraska		x	x				x						x	x	x			
Oregon		x	x				x											x
South Dakota		x	x				x											x
Vermont		x	x				x											x
Wisconsin		x	x				x						x					x
Total		9	9				9					1	1	2	2	2	1	4

Although fiscal capacity often will have been considered in the allocation of state aid to help fund the per pupil cost of regular education, which also is funded for each special education pupil, excess costs are assumed by the state regardless of the LEA's fiscal capacity. No upper limit is placed on LEA excess costs, but allowable costs are specified. Because all excess costs are state funded, equalization of excess costs among LEAs results. The overall equalization of state aid may be lessened if high fiscal capacity districts spend more, however.

Several methods of figuring excess costs have been devised. One method may be written as follows:

$$\text{State Aid} = \text{Total allowable cost of special education} - (\text{per pupil cost of regular education} \times \text{number of special education pupils}).$$

An alternative method would be to determine the per pupil cost of special education, subtract the per pupil cost of regular education, and then multiply the remainder by the number of special education pupils.

Since it applies only to special education costs, the excess cost formula is a categorical grant. Three states had formulas classified as full state funding of excess cost in 1980-81. Hawaii is included in this category as indicated by Table 7, although Hawaii has full state funding of all education expenditures rather than an excess cost formula. Of the remaining states, New Hampshire no longer uses the total excess cost formula, because of the unpredictable fiscal burden it placed on the state. Pennsylvania still uses its excess cost formula. By definition, the excess cost formula is based on program cost.

Table 7

State Special Education Finance Formulas
Full State Funding of Excess Cost of Special Education
1980-81

States	Internal	External	Weighted	Unweighted	Pupil Unit	Instructional Unit	Program Cost	Weighted Amount	Weighting Factor	Weighted Class Size	Bracketed	Enrollment	ADA	ADM	FTE	Forward	Current	Reimbursement	
Hawaii ¹																			
New Hampshire		x	x				x												
Pennsylvania		x	x				x							x					x
Total		2	2				2							1					1

¹Full state funding of all educational expenditures

Formula Analysis and Panel Evaluation

The second phase of the study involved hypothesizing the advantages and disadvantages of the five major types of formulas. Advantages and disadvantages were defined according to the formula's hypothesized performance on five evaluative criteria: equity, administrative efficiency, adequacy, objectivity, and flexibility. For each major criterion several subcriteria were outlined so the analysis of each formula could be structured similarly for comparison purposes. Evaluative criteria are summarized in Table 8. Performance was hypothesized from the perspectives of special education and general education administrators at both the state and local levels.²⁶ In the third phase of the study, a panel of experts rated the five major formulas through a questionnaire. Advantages and disadvantages were defined by the formulas' performance on the evaluative criteria, and by the importance of the criteria. Panel members represented the four evaluative perspectives: SEA special education administrator, SEA general education finance administrator, LEA special education administrator, and LEA general education finance director. Results of these two phases are summarized below.

Summary of Formula Analysis

Providing some assistance with fiscal equalization, the flat grant could vary with LEAs' educational needs if weighted, but low fiscal capacity districts or those with a high level of need for unusually expensive programs could be disadvantaged by a flat grant based on average LEA special education costs. Having high administrative efficiency and objectivity, according to the researcher's analysis, the flat

Table 8
Criteria for Evaluating State Special Education Finance Formulas

Criterion	Definition	Subcriteria
Equity	Equity means that each child has an equal opportunity for education independent of the fiscal capacity of the LEA in which he lives. When a formula exhibits equity, LEAs have equal access to financial resources for providing an education appropriate to meet the needs of students, including the individual needs of special education students.	<ul style="list-style-type: none"> *Ability to equalize fiscal capacity *Congruency with goals of the overall educational finance system *Ability to vary allocation of funds according to educational need *Ability to vary allocation of funds according to the cost (price) of services.
Administrative Efficiency	A formula that exhibits administrative efficiency is one in which the time, expense, and effort required to operate the formula are reasonable in relation to the return yielded. Unproductive practices are discouraged, and economical practices are promoted.	<ul style="list-style-type: none"> *Amount of reporting and paperwork associated with the formula is minimized *Provision of incentive for LEA to control costs *Predictability of LEA's funding allocation *Ease of understanding how the formula operates *Availability of accurate data for operating the formula.
Adequacy	Adequacy of the special education finance formula generally depends upon the level of funding appropriated by the legislature. For this study, adequacy is evaluated according to the formula's potential for attaining its intended purposes.	<ul style="list-style-type: none"> *Congruency of the formula with the state's philosophy of school finance and control of the schools *Inclusion of all mandated special education services in the formula *Extent to which funding level is sufficient to allow all components of the formula to operate

Table 8 (continued)

Criterion	Definition	Subcriteria
Objectivity	Objectivity may be defined as the formula's resistance to manipulation by either the SEA or LEA. An objective formula is precisely stated, so that it is not subject to manipulation in placement of special education students, data reporting, or in calculations for determining allocations.	<ul style="list-style-type: none"> *Verifiability of formula data *Resistance of formula calculations to manipulation *Neutrality of the special education formula toward individual program placements *Resistance of data to manipulation
Flexibility	Flexibility refers to the ability to accommodate changes in the price of services, the ability of the formula to respond to the needs of LEAs in varying geographic areas, of various sizes, and with different economic conditions, and the ability to respond to changes in service needs midyear or from year to year.	<ul style="list-style-type: none"> *Ability to accommodate changes in educational need and cost *Facilitation of program innovations and new programs *Ability to fund various program structures designed by LEAs *Promotion of a continuum of placements consistent with the principle of placement in the least restrictive environment *Adaptability to needs of LEAs of various sizes and locations

grant generally limits LEA flexibility by promoting specific program structures and failing to keep pace with changes in need and cost. The formula may fund mandated services inadequately by omitting needed services or placing limitations on funding and enrollment.

The minimum foundation program varies with LEA fiscal capacity, in keeping with state goals for equalization, but it has the same disadvantages of weighting as does the flat grant. Reporting may be increased, if FTE counts are required, but otherwise the formula has administrative efficiency. Adequacy is dependent upon the inclusion of mandated services and the level of the foundation program. If funds are not designated for special education, they may appear inadequate. On the criteria of objectivity and flexibility, the minimum foundation program performs similarly to the flat grant, although consideration of fiscal capacity may increase flexibility for low fiscal capacity LEAs.

When percentage equalizing is implemented on a pupil unit or an instructional unit basis, it functions much like a minimum foundation program. Formulas funded according to actual program expenditures promote equity in terms of variation with educational need and price, but no minimum level of education is required. Cost based formulas are administratively inefficient, requiring extensive reporting. If the SEA percentage is substantial and allowable costs include all needed services, the formula would be adequate. Problems with data collection and verification impair objectivity, but the cost-based percentage equalizing formula provides good flexibility.

The percentage matching formula may cause disequalization, but a high state percentage may overcome this disadvantage. Variation in need and price are accommodated, and the formula is highly flexible to accommodate changes in price and need, program innovations, and various program structures. Extensive reporting and lack of cost control if the state funds a high percentage detract from administrative efficiency. Predictability may be a problem, particularly for LEAs when the state prorates funding. Adequacy depends upon the state percentage and the allowable costs. Unlike the pupil unit and instructional unit formulas, the percentage matching formula is neutral toward individual placements, but lack of data verifiability and opportunities for manipulation detract from the formula's objectivity.

Full state funding of the excess cost of special education has complete equity for special education funding, adequacy, and excellent flexibility. Administrative efficiency is unsatisfactory, because of extensive reporting and lack of incentives for the LEA to control costs. Neutrality toward placement is excellent, but verifiability problems and manipulation of cost data impair objectivity.

Summary of Panel Evaluation

Performance ratings overall indicated that the flat grant rated good to excellent on administrative efficiency and objectivity. A fair rating was achieved on adequacy, and the formula rated poor to fair on equity and flexibility, as indicated in Table 9.

For the minimum foundation program, positive ratings in the average to good range were achieved for adequacy, objectivity, and administrative efficiency. The formula rated fair on flexibility overall.

Percentage equalizing rated good overall on equity, adequacy, and

Table 9

Mean Overall Performance Ratings for Each
Finance Formula Across Groups

Evaluative Criteria:	Finance Formulas				
	Flat Grant	Minimum Foundation Program	Percentage Equalizing	Percentage Matching	Full State Funding of Excess Cost
Equity	1.5	2.9	3.0	1.9	3.9
Administrative Efficiency	3.2	3.0	2.2	2.5	2.4
Adequacy	2.3	2.9	2.9	2.3	3.6
Objectivity	3.0	2.7	2.6	2.5	3.0
Flexibility	1.5	2.4	2.9	2.9	3.7
Grand X	2.4	2.7	2.7	2.4	3.1

flexibility, and slightly lower on objectivity. The only negative rating was a fair rating for administrative efficiency.

Percentage matching rated fair to average on equity, administrative efficiency, adequacy, and objectivity. Its only positive rating was a good rating for flexibility.

Receiving the highest overall ratings, full state funding of excess cost rated good to excellent on equity and flexibility, and good on adequacy and objectivity. A fair rating on administrative efficiency was its only negative rating. Ratings on evaluative subcriteria are displayed in Table 10.

Panel members generally agreed that all evaluative criteria were important, although some variability among administrative groups was evident (see Tables 11 and 12). Several respondents indicated that their responses would have differed had they been assigned other administrative roles, while others believed no changes would have occurred.

Resulting from these two phases were two sets of formula advantages and disadvantages, one hypothesized by the researcher and one from the panel evaluation. With the goal of providing guidelines to state policymakers for use in designing state special education finance formulas, these two sets of advantages and disadvantages were reconciled in order to produce a single list as the outcome of the study.

Table 10

Panel Evaluation of the Performance of State Special Education Finance Formulas on the Evaluative Criteria

Evaluative Criteria	Mean Ratings on Evaluative Criteria																											
	Flat Grant									Minimum Foundation Program									Percentage Equalizing									
	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	
Equity	1	1.5	1.3	1.0	2.0	1.3	1.6	1.5	1.4	1.4	3.0	1.3	3.0	1.0	1.0	1.2	3.0	1.2	1.1	3.5	1.7	2.0	3.5	2.8	1.6	2.8	1.6	1.2
	2	2.0	1.3	2.0	2.0	2.0	1.6	2.0	1.6	1.8	3.0	1.7	2.8	1.5	2.9	1.6	1.1	1.4	1.3	3.0	1.0	2.0	3.5	2.5	1.2	2.8	1.0	2.9
	3	1.5	1.3	1.0	2.0	1.3	1.6	1.5	1.4	1.4	2.5	1.3	2.0	1.5	2.3	1.4	2.8	1.0	2.9	3.5	1.3	1.5	4.0	2.5	1.6	2.8	1.4	1.1
	4	1.0	1.7	1.0	1.0	1.0	1.4	1.0	1.4	1.2	1.5	1.0	2.0	2.5	1.8	2.8	2.3	2.4	2.3	4.0	1.0	1.5	3.5	2.8	1.2	2.5	1.4	1.0
	5	1.5	1.3	1.5	1.5	1.5	1.4	1.5	1.4	1.5	2.5	1.3	2.5	3.0	2.5	1.2	2.8	1.0	2.9	3.5	1.3	1.5	3.5	2.5	1.4	2.5	1.4	1.0
Administrative	1	3.0	3.3	3.5	3.5	3.3	3.4	3.5	3.2	3.3	2.5	1.0	1.5	3.0	2.0	1.0	2.3	2.8	2.6	2.0	1.7	1.5	2.5	1.8	2.0	2.0	1.8	1.9
Efficiency	2	3.5	1.3	2.5	3.5	3.0	2.2	3.0	2.2	2.6	2.5	1.7	3.0	3.0	2.8	2.2	3.0	2.0	2.4	1.5	1.3	2.5	2.0	2.0	1.6	2.3	1.4	1.8
	3	4.0	3.7	2.5	3.5	3.3	3.6	3.0	3.8	3.4	2.5	1.0	3.0	4.0	2.8	3.4	3.5	2.8	3.1	2.0	2.3	2.0	2.5	2.0	2.4	2.3	2.2	2.2
	4	4.0	4.0	4.0	3.5	4.0	3.8	3.8	4.0	3.9	2.5	1.0	2.5	2.5	2.5	2.8	2.5	2.8	2.7	2.5	2.0	2.5	3.5	2.5	2.6	1.0	2.2	2.6
	5	3.5	3.7	3.5	3.5	3.5	3.6	3.5	3.6	3.6	3.0	1.0	3.0	3.0	3.0	3.2	3.0	3.2	3.1	2.5	2.7	2.0	3.0	2.3	2.8	2.5	2.6	2.6
	6	1.5	3.3	3.0	3.0	3.3	3.2	3.0	3.4	3.2	3.0	1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.3	2.5	2.1	2.2	2.4	2.0	2.2
Adequacy	1	2.0	1.7	3.0	2.0	2.5	1.8	2.5	1.8	2.1	3.0	1.3	3.0	1.5	3.0	1.4	1.3	1.2	1.2	3.5	2.7	3.0	3.5	3.3	3.0	3.3	3.0	1.1
	2	1.5	1.7	2.0	2.5	1.8	2.0	2.1	1.6	1.9	3.5	2.7	2.0	3.0	2.8	2.8	2.5	3.0	2.8	4.0	2.7	2.0	3.0	3.0	2.8	2.5	3.2	2.9
	3	2.0	2.0	2.5	2.5	2.3	2.3	2.5	2.0	2.3	3.0	1.0	2.5	3.0	2.8	3.0	2.8	3.0	2.9	3.5	2.7	2.5	3.0	3.0	2.8	2.8	3.0	2.9
Objectivity	1	3.5	4.0	3.5	3.5	3.5	3.8	3.5	3.8	3.7	3.0	4.0	3.0	1.5	3.0	1.8	1.3	1.6	1.0	3.0	2.7	2.5	2.5	2.8	2.6	2.5	2.8	2.7
	2	4.0	3.3	3.5	4.0	3.8	3.6	3.8	3.6	3.7	1.0	3.0	2.3	1.5	2.7	3.2	2.9	3.0	2.9	3.0	3.0	2.0	2.5	2.5	2.8	2.3	3.0	2.7
	3	1.5	3.0	2.5	3.0	2.0	3.0	2.8	2.4	2.6	2.0	3.0	2.3	3.0	2.1	3.0	2.6	2.6	2.6	4.0	3.0	1.5	3.0	2.8	3.0	2.3	3.0	2.9
	4	3.5	3.0	3.5	4.0	3.5	3.4	3.8	3.2	3.4	2.0	3.0	2.3	3.0	2.1	3.0	2.6	2.6	2.6	3.0	2.3	2.0	2.0	2.5	2.2	2.0	2.6	2.3
	5	2.5	3.0	3.0	3.5	2.8	3.2	3.3	2.8	3.0	2.5	3.0	2.3	3.0	2.4	3.0	2.6	2.8	2.7	3.0	2.7	2.0	2.5	2.5	2.6	2.3	2.8	2.6
Flexibility	1	1.0	2.0	1.0	2.5	1.0	2.2	1.8	1.6	1.7	1.5	2.7	1.3	3.0	1.4	2.8	2.1	2.2	2.2	3.5	3.0	1.7	2.5	2.6	2.8	2.1	3.2	2.7
	2	1.5	1.7	1.0	3.0	1.3	2.2	2.0	1.6	1.8	1.5	2.0	1.5	2.5	1.5	2.2	2.0	1.8	1.9	3.5	2.7	2.0	3.0	2.8	2.8	2.5	3.0	2.8
	3	1.5	2.0	1.5	2.5	1.5	2.2	2.0	1.8	1.9	2.0	2.0	2.3	2.5	2.1	2.2	2.4	2.0	2.2	4.0	3.0	2.8	3.0	3.4	3.0	2.9	3.4	3.2
	4	1.0	2.0	2.5	2.5	1.8	2.2	2.5	1.6	2.0	2.0	2.3	3.0	3.0	2.5	2.6	3.0	2.2	2.6	4.0	2.7	2.5	3.0	3.3	2.8	2.8	3.2	3.0
	5	1.5	1.7	1.0	2.0	1.0	1.8	1.7	1.4	1.5	2.0	1.7	2.0	2.5	2.0	2.0	2.3	1.8	2.0	4.0	3.0	2.0	3.5	3.0	3.2	2.8	3.4	3.1
	6	1.5	1.7	1.0	2.0	1.0	1.8	1.7	1.4	1.5	2.0	2.3	2.3	3.0	2.1	2.6	2.6	2.2	2.4	4.0	2.7	2.1	3.0	3.1	2.8	2.6	3.2	2.9
Grand X		2.3	2.3	2.3	2.7	2.3	2.5	2.5	2.3	2.4	2.5	2.9	2.4	3.0	2.4	2.9	2.7	2.7	2.7	3.2	2.7	2.1	3.0	2.7	2.8	2.5	2.9	2.7

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Table 10 (continued)

Panel Evaluation of the Performance of State Special Education
Finance Formulas on the Evaluative Criteria

Evaluative Criteria	Mean Ratings on Evaluative Criteria																		
	Percentage Matching									Full State Funding of Excess Cost									
	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	
Equity	1	2.5	1.3	1.5	1.5	2.0	1.4	1.5	1.8	1.7	4.0	3.7	4.0	4.0	4.0	3.8	4.0	3.8	3.9
	2	2.5	1.3	2.0	2.5	2.3	1.8	2.3	1.8	2.0	2.5	3.3	3.5	3.5	3.0	3.4	3.5	3.0	3.2
	3	3.0	2.3	2.0	2.0	2.5	2.2	2.0	2.6	2.3	2.5	3.3	3.5	3.5	3.0	3.4	3.5	3.0	3.2
	4	3.0	2.7	2.0	1.5	2.5	2.2	1.8	2.8	2.3	4.0	3.7	4.0	4.0	4.0	3.8	4.0	3.8	3.9
	5	2.5	1.7	1.8	2.0	2.1	1.8	1.9	2.0	1.9	4.0	3.7	4.0	4.0	4.0	3.8	4.0	3.8	3.9
Administrative Efficiency	1	2.0	1.7	2.5	2.0	2.2	1.8	2.3	1.8	2.0	1.5	2.3	2.3	1.5	1.9	2.0	1.9	2.0	1.9
	2	2.5	1.7	2.0	2.5	2.3	2.0	2.3	2.0	2.1	1.0	1.0	1.5	1.0	1.3	1.0	1.3	1.0	1.1
	3	2.5	1.7	2.5	2.0	2.5	1.8	2.3	2.0	2.1	3.0	2.3	3.0	2.5	3.0	2.4	2.8	2.6	2.7
	4	3.0	3.3	3.0	2.5	3.0	3.0	2.8	3.2	3.0	3.0	3.3	3.5	2.0	3.3	2.8	2.8	3.2	3.0
	5	3.0	2.7	2.5	2.5	2.8	2.6	2.5	2.8	2.7	2.5	2.7	3.0	2.0	2.8	2.4	2.5	2.6	2.6
	6	2.5	2.3	2.5	2.5	2.5	2.4	2.5	2.4	2.5	2.5	2.3	2.8	2.0	2.6	2.2	2.4	2.4	2.4
Adequacy	1	2.0	1.3	1.8	2.0	1.9	1.6	1.9	1.6	1.7	1.0	2.0	3.5	3.0	2.7	2.4	3.3	1.8	2.5
	2	3.0	1.7	3.0	2.0	3.0	1.8	2.5	2.2	2.3	4.0	3.7	4.0	3.5	4.0	3.6	3.8	3.8	3.8
	3	2.5	1.7	2.8	2.5	2.6	2.0	2.6	2.0	2.3	3.5	3.3	4.0	3.5	3.8	3.4	3.8	3.4	3.6
Objectivity	1	2.5	2.7	2.0	2.0	2.3	2.4	2.0	2.6	2.3	3.0	3.0	2.5	2.0	2.8	2.6	2.3	3.0	2.7
	2	3.0	2.7	2.5	1.5	2.8	2.2	2.2	2.8	2.5	3.0	3.0	3.5	2.0	3.3	2.6	2.8	3.0	2.9
	3	3.0	2.0	2.5	3.0	2.8	2.4	2.8	2.4	2.6	4.0	3.3	4.0	3.5	4.0	3.4	3.8	3.6	3.7
	4	2.5	2.3	2.5	1.5	2.5	2.0	2.0	2.4	2.2	3.0	2.7	3.0	2.0	3.0	2.4	2.5	2.8	2.7
	5	3.0	2.3	2.5	2.0	2.8	2.2	2.3	2.6	2.5	3.0	3.0	3.3	2.5	3.3	2.8	3.0	3.0	3.0
Flexibility	1	3.5	3.3	3.5	3.0	3.5	3.2	3.3	3.4	3.3	4.0	3.3	4.0	3.5	4.0	3.4	3.8	3.6	3.7
	2	3.5	2.7	3.0	3.5	3.3	3.0	3.3	3.0	3.1	4.0	3.3	4.0	3.5	4.0	3.4	3.8	3.6	3.7
	3	3.5	2.7	3.5	3.0	3.3	2.8	3.3	2.8	3.0	4.0	3.0	4.0	3.5	4.0	3.2	3.8	3.4	3.6
	4	3.0	2.7	3.0	2.5	3.0	2.6	2.8	2.8	2.8	4.0	3.3	3.8	3.5	3.9	3.4	3.6	3.6	3.6
	5	2.5	2.0	3.5	2.5	3.0	2.2	3.0	2.2	2.6	4.0	3.3	4.0	3.5	4.0	3.4	3.8	3.6	3.7
	6	3.5	2.3	3.0	3.0	3.3	2.6	3.0	2.8	2.9	4.0	3.3	4.0	3.5	4.0	3.4	3.8	3.6	3.7
Grand X		2.8	2.2	2.5	2.3	2.7	2.2	2.4	2.4	2.4	3.2	3.0	3.5	2.9	3.3	3.0	3.2	3.1	3.1

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Table 11

Mean Overall Importance Ratings for Each
Finance Formula Across Groups

Evaluative Criteria	Finance Formulas				
	Flat Grant	Minimum Foundation Program	Percentage Equalizing	Percentage Matching	Full State Funding of Excess Cost
Equity	3.6	3.6	3.4	3.4	3.6
Administrative Efficiency	3.0	3.0	3.2	3.2	3.3
Adequacy	3.6	3.6	3.6	3.6	3.6
Objectivity	3.3	3.4	3.6	3.6	3.7
Flexibility	3.4	3.4	3.4	3.4	3.4
Grand X	3.2	3.3	3.4	3.4	3.5

Table 12

Panel Evaluation of the Importance of Evaluative Criteria
for State Special Education Finance Formulas

Evaluative Criteria	Mean Ratings on Evaluative Criteria																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Flat Grant									Minimum Foundation Program									Percentage Equalizing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Equity	1	3.0	3.7	3.5	3.5	3.3	3.6	3.5	3.4	3.4	2.5	3.7	3.5	4.0	3.0	3.8	3.8	3.2	3.5	2.5	3.7	3.5	4.0	3.0	3.8	3.8	3.2	3.4	2	2.5	3.3	2.5	3.0	2.5	3.2	2.8	3.0	2.9	2.5	3.3	2.8	4.0	2.6	3.6	3.4	3.0	3.2	3.0	3.3	2.5	3.5	2.8	3.4	3.0	3.2	3.1	3	4.0	3.3	3.0	4.0	3.5	3.6	3.5	3.6	3.6	4.0	3.3	3.0	4.0	3.5	3.6	3.5	3.6	3.6	4.0	3.3	3.0	4.0	3.5	3.6	3.5	3.6	3.6	4.0	3.0	3.0	3.5	3.5	3.2	3.3	3.4	3.3	4.0	3.0	3.0	3.5	3.5	3.2	3.3	3.4	3.3	4.0	3.0	3.5	4.0	3.8	3.4	3.8	3.4	3.6	3.0	3.3	3.5	4.0	3.3	3.6	3.8	3.2	3.4	5	3.5	3.3	3.5	4.0	3.5	3.6	3.8	3.4	3.6	3.5	3.3	3.5	4.0	3.5	3.6	3.8	3.4	3.6	3.0	3.3	3.5	4.0	3.3	3.6	3.8	3.2	3.4	Administrative	1	2.0	3.0	3.5	3.0	2.8	3.0	3.3	2.6	2.6	2.0	3.0	3.5	3.5	2.8	3.2	3.5	2.6	3.0	2.0	3.0	3.0	3.5	2.5	3.2	3.3	2.6	2.9	Efficiency	2	1.5	2.3	2.5	3.0	2.0	2.6	2.8	2.0	2.3	1.5	2.3	2.5	3.5	2.0	2.8	3.0	2.0	2.4	1.5	3.3	2.0	3.5	1.8	3.4	2.3	2.6	2.7	3	1.5	3.3	3.5	3.0	2.5	3.2	3.3	2.6	2.9	2.0	3.3	3.5	3.0	2.8	3.2	3.3	2.8	3.0	4	2.5	3.3	3.5	3.0	3.0	3.2	3.3	3.0	3.1	3.0	3.3	3.5	2.5	3.3	3.0	3.0	3.2	3.1	4.0	3.3	3.5	2.5	3.7	3.0	3.0	3.5	3.3	5	3.0	3.7	4.0	3.5	3.5	3.6	3.8	3.4	3.6	3.0	3.7	4.0	3.5	3.5	3.6	3.8	3.4	3.6	3.5	4.0	3.5	3.5	3.5	3.8	3.5	3.8	3.7	Adequacy	1	2.0	3.0	3.5	3.5	2.8	3.2	3.5	2.6	3.0	2.5	3.0	3.5	3.0	3.0	3.0	3.3	2.8	3.0	2.5	3.3	3.5	3.5	3.0	3.4	3.5	3.0	3.2	2	4.0	3.3	4.0	4.0	4.0	3.6	4.0	3.6	3.8	4.0	3.3	4.0	4.0	4.0	3.6	4.0	3.6	3.8	4.0	3.3	4.0	4.0	4.0	3.6	4.0	3.6	3.8	3	3.5	3.0	4.0	4.0	3.8	3.4	4.0	3.2	3.6	3.5	3.0	4.0	4.0	3.8	3.4	4.0	3.2	3.6	3.5	3.0	4.0	4.0	3.8	3.4	4.0	3.2	3.6	Objectivity	1	3.0	3.3	3.5	3.5	3.3	3.4	3.5	3.2	3.3	3.5	3.3	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.5	3.7	3.5	3.5	3.5	3.6	3.5	3.6	3.6	2	3.0	3.3	3.5	3.5	3.3	3.4	3.5	3.2	3.3	3.5	3.3	3.5	3.5	3.5	3.4	3.5	3.5	3.4	3.5	3.3	4.0	3.5	3.8	3.4	3.8	3.4	3.6	3	4.0	2.7	3.5	3.5	3.8	3.0	3.5	3.2	3.3	4.0	2.7	3.5	3.5	3.8	3.0	3.5	3.2	3.3	4.0	2.7	4.0	3.5	4.0	3.0	3.8	3.2	3.4	4	2.5	3.3	3.5	3.5	3.0	3.4	3.5	3.2	3.0	3.5	3.3	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.0	3.7	4.0	3.5	3.5	3.6	3.8	3.4	3.6	5	3.0	3.3	3.5	3.5	3.3	3.4	3.5	3.2	3.3	3.4	3.3	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.5	3.3	4.0	3.5	3.8	3.4	3.8	3.4	3.6	Flexibility	1	4.0	2.7	3.5	4.0	3.8	3.2	3.8	3.2	3.4	4.0	2.7	3.5	4.0	3.8	3.2	3.8	3.2	3.4	4.0	2.7	3.0	4.0	3.5	3.2	3.5	3.2	3.3	2	3.5	2.7	3.5	3.5	3.5	3.0	3.5	3.0	3.2	3.5	2.7	3.5	3.5	3.5	3.0	3.5	3.0	3.2	3.5	2.7	3.0	3.5	3.3	3.2	3.5	3.0	3.2	3	3.0	2.7	3.0	4.0	3.0	3.2	3.5	2.6	3.1	3.5	2.7	3.0	4.0	3.3	3.2	3.5	3.0	3.2	2.5	2.7	3.0	4.0	3.3	3.2	3.5	3.0	3.2	4	4.0	3.3	3.5	3.5	3.8	3.4	3.5	3.6	3.6	4.0	3.3	3.5	3.5	3.8	3.4	3.5	3.6	3.6	4.0	3.3	3.5	3.5	3.8	3.4	3.5	3.6	3.6	5	4.0	3.0	3.0	3.5	3.5	3.2	3.3	3.4	3.3	4.0	3.0	3.0	3.5	3.5	3.2	3.3	3.4	3.3	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4	6	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4	Grand X	3.1	3.1	3.3	3.5	3.2	3.3	3.4	3.1	3.2	3.2	3.1	3.4	3.6	3.3	3.3	3.5	3.2	3.3	3.3	3.3	3.3	3.6	3.3	3.4	3.5	3.3	3.4

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Table 12 (continued)

Panel Evaluation of the Importance of Evaluative Criteria
for State Special Education Finance Formulas

Evaluative Criteria	Mean Ratings on Evaluative Criteria																		
	Percentage Matching							Full State Funding of Excess Cost											
	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	SEA Special Education	SEA General Education	LEA Special Education	LEA General Education	Special Education	General Education	LEA	SEA	Total Group	
Equity	1	2.5	3.7	3.5	4.0	3.0	3.8	3.8	3.0	3.4	3.0	3.7	3.5	2.5	3.3	3.2	3.0	3.4	3.2
	2	3.0	3.3	3.0	3.5	3.0	3.4	3.3	3.2	3.2	3.5	3.3	3.0	3.5	3.3	3.4	3.8	3.4	3.3
	3	4.0	3.3	3.0	4.0	3.5	3.6	3.3	3.6	3.6	4.0	3.3	3.5	4.0	3.8	3.6	3.8	3.6	3.7
	4	4.0	3.0	3.0	4.0	3.5	3.4	3.5	3.4	3.4	4.0	3.0	3.5	4.0	3.8	3.4	3.8	3.4	3.6
	5	3.0	3.3	3.5	4.0	3.3	3.6	3.8	3.3	3.4	3.5	3.3	3.5	4.0	3.5	3.6	3.8	3.4	3.6
Administrative	1	2.5	3.0	3.5	3.5	3.0	2.2	3.5	2.8	3.1	2.0	3.0	3.5	3.5	2.8	3.2	3.5	2.8	3.0
Efficiency	2	2.5	3.3	2.0	3.5	2.3	3.4	2.8	3.0	2.9	1.5	3.3	2.5	3.5	2.0	3.4	3.0	2.6	2.8
	3	2.5	3.0	3.5	3.0	3.0	3.0	3.3	2.8	3.0	2.5	3.0	3.5	3.0	3.0	3.0	3.3	2.8	3.0
	4	3.5	3.3	3.5	2.5	3.5	3.0	3.0	3.4	3.2	3.5	3.3	3.5	2.5	3.5	3.0	3.0	3.4	3.2
	5	3.5	3.7	3.5	3.5	3.5	3.6	3.5	3.6	3.6	3.5	3.7	3.5	3.5	3.5	3.6	3.5	3.6	3.6
	6	3.0	3.0	3.5	3.5	3.3	3.2	3.5	3.0	3.2	3.0	3.0	3.8	3.5	3.4	3.2	3.6	3.0	3.3
Adequacy	1	2.5	3.3	2.0	3.5	2.3	3.4	2.8	3.0	2.9	2.0	3.3	2.0	3.5	2.0	3.4	2.8	2.8	2.8
	2	4.0	3.3	3.5	4.0	3.8	3.6	3.8	3.6	3.7	4.0	3.3	4.0	4.0	4.0	3.6	4.0	3.6	3.8
	3	3.5	3.0	4.0	4.0	3.8	3.4	4.0	3.2	3.6	3.5	3.0	4.0	4.0	3.8	3.4	4.0	3.2	3.6
Objectivity	1	3.6	3.7	3.5	3.4	3.5	3.6	3.5	3.6	3.6	3.5	3.3	3.5	3.5	3.5	3.4	3.5	3.4	3.4
	2	3.5	3.3	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.5	3.3	3.5	3.5	3.5	3.4	3.5	3.4	3.4
	3	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4	4.0	2.7	4.0	3.5	4.0	3.0	3.8	3.2	3.4
	4	3.0	3.3	3.5	3.5	3.3	3.4	3.5	3.2	3.3	3.5	3.3	4.0	3.5	3.8	3.4	3.8	3.4	3.6
	5	3.5	3.3	4.0	3.5	3.8	3.4	3.8	3.4	3.6	4.0	3.3	4.0	3.5	4.0	3.4	3.8	3.6	3.7
Flexibility	1	4.0	3.0	3.5	4.0	3.8	3.4	3.8	3.4	3.6	4.0	3.0	3.5	4.0	3.8	3.4	3.8	3.4	3.6
	2	3.5	3.0	3.5	3.5	3.5	3.4	3.5	3.2	3.3	3.5	3.0	3.5	3.5	3.5	3.2	3.5	3.2	3.3
	3	3.5	2.7	3.5	4.0	3.5	3.2	3.8	3.0	3.3	3.5	3.0	3.5	4.0	3.5	3.2	3.8	3.0	3.3
	4	4.0	3.3	4.0	3.5	3.8	3.5	3.8	3.6	3.7	4.0	3.3	4.0	3.5	4.0	3.4	3.8	3.6	3.7
	5	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4
	6	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4	4.0	3.0	3.5	3.5	3.8	3.2	3.5	3.4	3.4
Grand X		3.4	2.9	3.4	3.6	3.4	3.3	3.5	3.3	3.4	3.4	3.2	3.5	3.5	3.5	3.3	3.6	3.3	3.5

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FINDINGS OF THE STUDY

After the areas of agreement and disagreement between the researcher's analysis and the panel's evaluation were ascertained, a list of advantages and disadvantages of each major formula was developed in which the differences were reconciled. Where there was disagreement, both the researcher's and the panel's advantage or disadvantage were included in the list if each could be justified by more accurately specifying the conditions of the statement. When the panel's response was more appropriate it was included and the researcher's response was deleted. The final lists of advantages and disadvantages are presented in Tables 13 through 17.

Relationship of the Study to Previous Research

Three previous studies classified state special education finance formulas and examined their advantages and disadvantages. Thomas classified formulas into six categories, and focused on their implications for special education placement and provision of appropriate services.²⁷ In Hartman's study, formulas were classified according to what have been termed the measures of educational need in the present study: child based formulas, resource based formulas, and cost based formulas. In postulating advantages and disadvantages of these three formulas, Hartman considered criteria such as misclassification, placement, needs of small districts, record keeping, planning, cost control, and formula revision.²⁸ The most recent study by Moore, Walker, and Holland added three funding mechanisms to the Hartman classification:

Table 13

Flat Grant

Advantages	Disadvantages
1.0 <u>Equity</u>	
<ul style="list-style-type: none"> 1.1 High level of funding contributes to fiscal equalization. 1.2 Allocation may be varied according to educational need. 1.3 May provide incentive for offering special education services. 1.4 Weighted instructional unit (most common flat grant) may provide incentive for LEA to offer higher cost programs. 1.5 SEA general education finance administrators and LEA administrators, especially those in special education are likely to be concerned about equity. 	<ul style="list-style-type: none"> 1.1 Does not consider LEA fiscal capacity. 1.2 Incongruent with goals of overall finance system. Special education administrators may not be concerned about this, however. 1.3 General education pupil count is a poor measure of need for special education services. Number of special education units is a poor indicator of related services need. 1.4 Generally does not vary allocation according to price of services. 1.5 Low fiscal capacity LEA is mandated to provide the same level of services as the high fiscal capacity LEA, but has access to fewer financial resources. 1.6 Weights may disadvantage LEAs with high prices or providing a high level of services. 1.7 Unweighted flat grants fail to recognize local variations in educational need. 1.8 SEA special education administrators may not be highly concerned about equity. 1.9 Overall, flat grant has poor to fair equity.

Table 13 (continued)

Flat Grant

Advantages	Disadvantages
<u>2.0 Administrative Efficiency</u>	
<p>2.1 Reporting and paperwork are efficient, but may vary depending on the formula's complexity. Efficiency is a likely concern of all administrative groups with possible exception of SEA special education administrators.</p> <p>2.2 Tends to encourage LEA to control costs, but only LEA general education may view this as important.</p> <p>2.3 Highly predictable for SEA and usually predictable for LEA depending upon state options to prorate funding. Predictability may be less of a concern to SEA special education administrators than to other groups.</p> <p>2.4 Easy to understand how the formula operates.</p> <p>2.5 Accurate data for operating the formula are available (pupil or instructional unit data).</p> <p>2.6 Overall administrative efficiency of the flat grant is good.</p>	<p>2.1 Even if state funds to the LEA are limited, LEA may not withhold appropriate services when funds are insufficient.</p> <p>2.2 Enrollment limitations and proration of funds disadvantage LEAs with a high level of educational need and decrease predictability of funding for the LEA.</p> <p>2.3 FTE formulas may be more complex and may increase reporting burdens; more consideration of need results in more reporting being required.</p>

Table 13 (continued)

Flat Grant

Advantages	Disadvantages
<u>3.0 Adequacy</u>	
<p>3.1 Flat grant funded at a high level could be adequate.</p> <p>3.2 Formulas may be adapted to state philosophy of finance and control.</p> <p>3.3 Special education and LEA general education administrators are likely to regard adequate level of funding as highly important.</p> <p>3.4 Flat grant promotes the philosophy that special education is an optional supplementary program.</p>	<p>3.1 Flat grant usually is incongruent with state's philosophy of finance and control. This may not be important to special education administrators, however.</p> <p>3.2 Flat grants often do not include funding for all mandated services.</p> <p>3.3 Services funded indirectly or included in weights for handicap may be perceived as not being funded.</p> <p>3.4 Related services units generated through number of instructional units may receive no funding in small district or rural area.</p> <p>3.5 The flat grant provides poor to average adequacy overall.</p>
<u>4.0 Objectivity</u>	
<p>4.1 Formula data usually are verifiable (pupil or instructional unit).</p> <p>4.2 Calculations usually resist manipulation.</p> <p>4.3 Data may be manipulated by LEA, but formula rates good to excellent in comparison to other formulas.</p>	<p>4.1 Some states may fund units on a subjective approval basis, subject to manipulation.</p> <p>4.2 If weighted, formula is not neutral toward placement of individuals, especially in low fiscal capacity LEA. Special education administrators recognize this as a problem.</p>

Table 13 (continued)

Flat Grant

Advantages	Disadvantages
<p>4.4 Earmarking increases objectivity of local budgeting.</p> <p>4.5 Objectivity is valued by all administrative groups.</p> <p>4.6 Overall the flat grant provides good to excellent objectivity.</p>	
<u>5.0 Flexibility</u>	
<p>5.1 Provision for funding program innovations and new programs could be included.</p> <p>5.2 Approved units might be more flexible than those based on pupil counts, especially from SEA view.</p> <p>5.3 FTE increases flexibility especially from general education viewpoint.</p> <p>5.4 Cost based formulas although with limits, provide some flexibility for need and price changes and districts of different sizes and locations.</p> <p>5.5 Flexibility is important to all administrative groups.</p>	<p>5.1 Flat grants usually are updated infrequently. Therefore, they do not accommodate changes in need or cost.</p> <p>5.2 Not flexible for funding innovations and new programs.</p> <p>5.3 Tends to promote a specific program structure rather than allowing LEA flexibility.</p> <p>5.4 Continuum of placements may not be promoted, but depends on formula weights.</p> <p>5.5 Small and rural districts or those with high prices are not accommodated.</p> <p>5.6 Flexibility of the flat grant is poor to fair overall.</p>

Table 14

Minimum Foundation Program

Advantages	Disadvantages
<u>1.0 Equity</u>	
<p>1.1 Considers fiscal capacity.</p> <p>1.2 Congruent with goals of overall finance system. This may be more important to general education administrators than to special education administrators.</p> <p>1.3 Special education is part of the comprehensive educational system.</p> <p>1.4 Weighted formulas vary allocation according to educational need.</p> <p>1.5 Minimum level of education is ensured.</p> <p>1.6 Equity of the minimum foundation program may be regarded more positively by general education administrators than by special education administrators.</p> <p>1.7 Overall the formula provides average to good equity.</p>	<p>1.1 In comparison to regular education finance officers special education administrators particularly LEA may view formula weights as less accurately reflecting educational need.</p> <p>1.2 Formula does not adequately reflect variation in prices of services among LEAs. This is of particular concern to special education administrators.</p> <p>1.3 Provides no assistance for achieving more than a minimum level of services.</p> <p>1.4 Unweighted formulas are perceived as providing inadequate funding.</p>
<u>2.0 Administrative Efficiency</u>	
<p>2.1 Level of reporting and paperwork vary with formula's complexity, but are less burdensome than all but the flat grant.</p> <p>2.2 For states basing special education funding on the general education pupil count, special education reporting burden is minimal.</p>	<p>2.1 Formula does not provide strong incentives for LEAs to control costs.</p> <p>2.2 FTE counts may increase reporting burden and may require data not readily available.</p> <p>2.3 Emphasis on efficiency detracts from attention to quality variables.</p>

Table 14 (continued)

Minimum Foundation Program

Advantages	Disadvantages
<p>2.3 LEAs may be encouraged to control costs since SEA funding is limited. LEA general education administrator may view this as important.</p> <p>2.4 Formula is predictable although this is affected somewhat by changes in fiscal capacity.</p> <p>2.5 Fairly easy to understand.</p> <p>2.6 Having all programs funded through one formula may contribute to understanding.</p> <p>2.7 Accurate data (pupil and instructional unit) usually are available.</p> <p>2.8 Administrative efficiency of the formula is good overall.</p>	
<p><u>3.0 Adequacy</u></p>	
<p>3.1 Congruent with state's philosophy of school finance and control.</p> <p>3.2 Mandated services may be included, but adequacy depends on formula weights.</p> <p>3.3 Overall potential for adequacy is good.</p>	<p>3.1 LEA special education administrator may perceive either an unweighted or weighted formula as not adequately funding related services if these are funded indirectly.</p> <p>3.2 If minimum foundation level is insufficient, LEA still must fund appropriate special education.</p>

Table 14 (continued)

Minimum Foundation Program

Advantages	Disadvantages
<u>4.0 Objectivity</u>	3.3 If funds are not designated for special education, both the special education and general education administrator perceive encroachment on their funding by the other program.
<ul style="list-style-type: none"> 4.1 Formula data usually are verifiable. 4.2 Formula calculations resist manipulation. 4.3 Formulas with only one weight for special education are neutral toward individual program placements. 4.4 Designating funds for special education increases objectivity of local budget. 4.5 Overall objectivity of the formula is average to good. 	<ul style="list-style-type: none"> 4.1 Special education administrators recognize that weighted formulas influence individual placement. 4.2 Formula data may be manipulated, and weighting may encourage this. 4.3 Approved units are not objective. 4.4 Use of funds is less objective if not earmarked.
<u>5.0 Flexibility</u>	
<ul style="list-style-type: none"> 5.1 Formula may be designed to accommodate different program structures. 5.2 May promote availability of a continuum of placements. 	<ul style="list-style-type: none"> 5.1 Usually no provision for changes in educational need or prices. 5.2 Usually does not facilitate program innovations/new programs.

Table 14 (continued)

Minimum Foundation Program

Advantages	Disadvantages
5.3 From LEA general education viewpoint, changes in need and price may be accommodated.	5.3 Usually tends to promote one program structure.
5.4 Changes from year to year are reflected through data collection.	5.4 Usually does not adapt well to needs of LEAs of different sizes and locations.
5.5 Approved units may allow increased flexibility.	5.5 Small districts may have difficulty generating adequate funding with FTE or weights for handicapping conditions.
5.6 Personnel unit not tied to child count could facilitate new programs.	5.6 May fail to keep pace with inflation if not updated frequently.
	5.7 Per pupil funding disadvantages small districts.
	5.8 Overall flexibility is fair to average.

Table 15

Percentage Equalizing

Advantages	Disadvantages
<u>1.0 Equity</u>	
<p>1.1 Considers fiscal capacity.</p> <p>1.2 Adaptable to goals of overall finance system; may promote local control or state minimum program.</p> <p>1.3 May be either internal or external to the general education finance formula.</p> <p>1.4 Provides for variation of educational need. Some believe weighting does this best, others prefer cost basis.</p> <p>1.5 Has the ability to vary allocation according to price particularly if cost based.</p> <p>1.6 Overall equity is good.</p>	<p>1.1 May not guarantee a minimum level of education if cost based.</p> <p>1.2 Weights may not reflect cost of providing services in LEAs with high prices or with a high level of severely handicapped students.</p> <p>1.3 LEA special education administrators may not favor this formula as highly as other groups.</p>
<u>2.0 Administrative Efficiency</u>	
<p>2.1 An open formula would be highly predictable for the LEA, subject to changes in fiscal capacity.</p> <p>2.2 A pupil or instructional unit formula would have predictability similar to minimum foundation program.</p> <p>2.3 Cost based formula may be easier to understand than pupil or instructional unit formulas.</p> <p>2.4 Data for operating the formula generally are available, particularly if pupil or instructional units are used.</p>	<p>2.1 Formula may require extensive reporting and paperwork, especially if cost based.</p> <p>2.2 Formula does not provide strong incentives for LEA to control costs, especially if cost based. SEA may object to this.</p> <p>2.3 Predictability may be low particularly if cost based. For SEA, obligations are unpredictable, but LEA predictability may be impaired by proration.</p> <p>2.4 Formula may tend to be complex.</p>

Table 15 (continued)

Percentage Equalizing

Advantages	Disadvantages
<u>3.0 Adequacy</u>	2.5 Limitations placed on funding by SEA disadvantage LEAs with high needs and costs. 2.6 Accurate cost data may be difficult to obtain. 2.7 Overall administrative efficiency is fair.
3.1 Formula may be made congruent with state's philosophy of school finance and control. Adaptable to LEA or SEA control and responsibility. 3.2 May include all mandated services, depending on how formula is weighted or how allowable costs are defined. 3.3 Potential for adequacy overall is average to good.	3.1 Funds that are not designated for special education may appear inadequate. 3.2 Even though SEA may limit fundings, LEA cannot withhold appropriate education. 3.3 Weights may not reflect LEA costs in districts with higher prices or more severely handicapped students.
<u>4.0 Objectivity</u>	
4.1 Data generally are verifiable. 4.2 Formula calculations resist manipulation. 4.3 Cost based formula is more neutral towards individual placement, but if formula is weighted, neutrality depends on weights.	4.1 Cost data may be difficult to verify. 4.2 Weighting may tend to influence placement for fiscal advantage. 4.3 Formula data may be manipulated to LEA advantage.

Table 15 (continued)

Percentage Equalizing

Advantages	Disadvantages
<p>4.4 Objective special education eligibility criteria contribute to neutrality of placements.</p> <p>4.5 Earmarking contributes to objectivity of LEA budgeting.</p> <p>4.6 Equalization may contribute to reduction in manipulation.</p> <p>4.7 Overall objectivity is average to good.</p>	
<u>5.0 Flexibility</u>	
<p>5.1 Has the ability to accommodate changes in need and price particularly if cost based.</p> <p>5.2 May be designed to facilitate innovations and new programs; cost based formulas accommodate this best.</p> <p>5.3 Has the ability to fund program structure designed by LEA, particularly if cost based.</p> <p>5.4 Continuum of placements may be promoted but depends on weights.</p>	<p>5.1 Extent of flexibility depends on weights and enrollment or funding limitations.</p> <p>5.2 Pupil and instructional unit formulas are same as minimum foundation program on accommodation of changes.</p> <p>5.3 Weighted formulas tend not to promote innovations and new programs.</p> <p>5.4 Weights may tend to promote a specific program structure.</p> <p>5.5 Special educators may regard FTE count as detrimental to placement in least restrictive environment.</p>

Table 15 (continued)

Percentage Equalizing

Advantages	Disadvantages
5.5 General education administrators regard FTE count as facilitating placement in least restrictive environment.	5.6 Weighted formulas may disadvantage small or rural districts, particularly for serving children with low incidence handicaps.
5.6 Has the ability to adapt to needs of LEAs of different sizes and locations, especially if cost based.	
5.7 Overall flexibility is good. LEA special education administrators may tend to disagree.	

Table 16

Percentage Matching

Advantages	Disadvantages
<u>1.0 Equity</u>	
<p>1.1 A high percentage of funding from the state may overcome some of the disequalizing effects of this formula.</p> <p>1.2 From SEA special education view, formula may provide good variation of funds according to educational need for high fiscal capacity LEAs or if state percentage is high and if allowable costs permit.</p> <p>1.3 Formula provides for variation in prices, from SEA view, as long as LEA can support its share of needed expenditures and if allowable costs permit.</p> <p>1.4 Formula serves as an incentive for the LEA to provide special education services.</p> <p>1.5 Promotes SEA/LEA partnership.</p>	<p>1.1 Formula does not consider LEA fiscal capacity.</p> <p>1.2 Formula promotes disequalization.</p> <p>1.3 Formula usually is incongruent with goals of the overall finance system.</p> <p>1.4 Formula may not provide good variation with need, perhaps because allocation is partially dependent on LEA fiscal capacity.</p> <p>1.5 Formula may not address price variation well, from LEA view. Proration and LEA fiscal capacity may be factors.</p> <p>1.6 LEAs with higher needs must spend more local funds.</p> <p>1.7 Overall equity is poor to average.</p>
<u>2.0 Administrative Efficiency</u>	
<p>2.1 Cost containment may be promoted if SEA share is low, but this advantages only the SEA.</p> <p>2.2 Predictability for LEA allocation could be good if SEA percentage were guaranteed.</p>	<p>2.1 Formula may require extensive reporting and paperwork.</p>

Table 16 (continued)

Percentage Matching

Advantages	Disadvantages
<p>2.3 Formula is easy to understand, particularly from SEA view.</p> <p>2.4 SEA may view data availability as good.</p> <p>2.5 Provides average administrative efficiency.</p>	<p>2.2 Rated fair on cost control, but this is a similar or better rating than for other formulas. LEA may be encouraged to spend more if SEA percentage is high and/or LEA fiscal capacity is high.</p> <p>2.3 Predictability is fair for both SEA and LEA. SEA may not be able to predict funding requests made by LEAs, and LEAs may be subjected to changes in the state's percentage.</p> <p>2.4 Obtaining accurate cost data may be difficult for some LEAs. Expenditures may be difficult to verify.</p> <p>2.5 FTE and excess cost formulas may result in increased reporting and increased difficulty in maintaining accurate formula data.</p>
<p><u>3.0 Adequacy</u></p>	
<p>3.1 May include all mandated services in formula's allowable costs from special education view.</p> <p>3.2 Can promote philosophy of local control.</p> <p>3.3 Not considered to be a "blank check".</p>	<p>3.1 Not usually congruent with the state's philosophy of school finance and control, but depends on philosophy.</p> <p>3.2 From general education view, formula provides fair inclusion of mandated services, but depends on allowable costs.</p>

Table 16 (continued)

Percentage Matching

Advantages	Disadvantages
4.0 <u>Objectivity</u>	3.3 Adequacy of level of funding is impaired, by proration and by low LEA fiscal capacity. 3.4 Formula provides fair to average adequacy overall.
4.1 From SEA view, formula calculations generally resist manipulation. 4.2 Formula tends to be neutral toward individual placements, although LEA fiscal capacity could affect this. 4.3 Objectivity of eligibility criteria contributes to neutrality of placements. 4.4 Earmarked funding contributes to objectivity of LEA budgeting. 4.5 SEA Special education administrators may be more favorable toward this formula. 4.6 Formula provides average level of objectivity overall.	4.1 Verifiability of formula data may be difficult. 4.2 Formula data may be manipulated by the LEA. 4.3 Excess cost definitions may detract from neutrality of program placements.

Table 16 (continued)

Percentage Matching

Advantages	Disadvantages
<u>5.0 Flexibility</u>	
5.1 Has the ability to accommodate changes in need and price automatically.	5.1 LEA fiscal capacity could limit flexibility.
5.2 Facilitates innovations and new programs, depending on allowable costs.	5.2 Excess cost definition could impair ability to fund a continuum of placements.
5.3 Has the ability to fund program structures designed by the LEA.	5.3 Needs of districts of different sizes and locations may not be met if SEA percentage is low.
5.4 Allows provision of a continuum of placements, depending on allowable costs.	5.4 SEA general education finance administrators may view the formula less positively overall on flexibility.
5.5 May adapt to LEAs of various sizes and locations, but only if SEA percentage is high. LEA special education administrators may favor the formula on this subcriterion.	
5.6 Flexibility is enhanced if formula is funded current or forward.	
5.7 Formula's flexibility is good overall.	

Table 17

Full State Funding of Excess Cost of Special Education

Advantages	Disadvantages
<u>1.0 Equity</u>	
<ul style="list-style-type: none"> 1.1 Fiscal capacity in special education funding is completely equalized. 1.2 Formula enhances the overall level of equalization among LEAs. 1.3 Formula is congruent with the goals of the overall finance system, especially the goal of fiscal equalization. 1.4 Formula varies allocation according to educational need and price. 1.5 Promotes equal educational opportunity for handicapped children. 1.6 Provides excellent equity overall. 	<ul style="list-style-type: none"> 1.1 May be consistent with goals of the overall finance system only if total level of state education funds is adequate.
<u>2.0 Administrative Efficiency</u>	
<ul style="list-style-type: none"> 2.1 From special education view, LEA's funding allocation is predictable, but depends on whether funding is forward, current, or reimbursement. 2.2 Formula usually is easy to understand, but depends on how excess cost is defined. 2.3 Formula provides average administrative efficiency. 	<ul style="list-style-type: none"> 2.1 Extensive reporting and paperwork are required. 2.2 No incentive for LEA to control cost. 2.3 From general education view predictability is fair. 2.4 Availability of accurate cost data may be somewhat of a problem for LEAs. 2.5 This formula will be favored more by the LEA than SEA. 2.6 Determining excess cost could be difficult.

Table 17 (continued)

Full State Funding of Excess Cost of Special Education

Advantages	Disadvantages
	2.7 May be viewed as a blank check for special education. 2.8 Lack of cost control may raise fears of diversion of general education funds into special education.
<u>3.0 Adequacy</u>	
3.1 Congruent with the PL 94-142 philosophy that all services needed for free appropriate public education must be provided regardless of cost. 3.2 Level of funding is totally adequate from LEA view. 3.3 Compatible with PL 94-142 single agency (SEA) responsibility. 3.4 Must include all mandated services in order to allow compliance with federal law. 3.5 Addresses actual not average costs. 3.6 Adequacy is good overall.	3.1 SEA may view formula as incongruent with state's philosophy of school finance and control. 3.2 Encourages the idea that special education is a state program, not part of a comprehensive local program. 3.3 Inadequacy of overall level of state funding for education may create problems for SEA budgeting for general education programs.
<u>4.0 Objectivity</u>	
4.1 Formula calculations usually resist manipulation. 4.2 Formula is the most neutral of all formulas toward individual placements.	4.1 From LEA view formula data may be difficult to verify. 4.2 From LEA general education finance view, formula calculations may allow manipulation.

Table 17 (continued)

Full State Funding of Excess Cost of Special Education

Advantages	Disadvantages
4.3 Formula data resists manipulation. LEA may have little incentive to manipulate data.	4.3 Excess cost definition could affect objectivity.
4.4 Earmarking increases the objectivity of the LEA budgeting process.	4.4 Could promote special education as a "dumping ground".
4.5 Objective eligibility criteria are important for controlling placement.	4.5 LEA general education finance administrators may view this formula less positively than other groups.
4.6 Overall objectivity is good.	
<u>5.0 Flexibility</u>	
5.1 This is the most flexible formula.	5.1 Excess cost definition and allowable costs affect flexibility.
5.2 Has the ability to accommodate changes in educational need and price automatically.	5.2 State administrative regulations could limit flexibility.
5.3 Facilitates innovations/ new programs especially if programs are funded forward or current.	
5.4 Has the ability to fund various program structures designed by the LEA.	
5.5 May promote a continuum of placements, but excess cost definition may influence this.	
5.6 Formula adapts to needs of LEAs of different sizes and locations.	
5.7 May accommodate midyear enrollment changes.	
5.8 Overall flexibility is good.	

flat grant, percentage, and weighting. Their analysis was similar to Hartman's, with the addition of equity issues including variation in educational need, cost, and fiscal capacity.²⁹

The present study differs most significantly from previous research in that the formula classification that provided the framework for the analysis of advantages and disadvantages was substantially different. While previous formula classifications were unique to the special education finance literature, this study used types of formulas described in the school finance literature for use as general education finance formulas. The classification had three advantages: (1) it allowed classification into distinct categories, (2) it included equalization as a major formula characteristic, and (3) it considered the relationship of the special education formula to the general education formula. Consideration of equalization had a strong impact on a formula's advantages and disadvantages. Although Moore, Walker, and Holland considered equity in their evaluative criteria, none of the previous classifications used this element as a basis for categorizing formulas. Equalization emerged as a key factor affecting a formula's performance in relation to student placement, available services, and other similar issues addressed in the earlier analyses.

By using a comprehensive classification system the relationship of the special education formula to the total school finance system could be addressed. The classification was sufficiently broad to include many factors that influence the formula's appropriateness for special education. Within this context the relationship of this analysis to previous

studies may be seen. The elements of the earlier classifications and their concomitant advantages and disadvantages are subsets of the present classification. The Hartman classification was subsumed under this classification as the three measures of educational need, which may apply to various formulas. Moore, Walker, and Holland's funding mechanisms also were present in this classification, defined in a way that was consistent with the school finance literature.

The evaluative subcriteria in the present study were in many ways similar to criteria employed in the previous studies, organized under major evaluative criteria frequently emphasized in the school finance literature. Likewise, many of the advantages and disadvantages of the five major formulas analyzed in this study were similar to those found in all three previous studies. For example, the effects a formula may have on placement and available services, particularly in the instance of weighted formulas, were recognized. As Hartman illustrated, a formula's advantages and disadvantages to some extent are a function of whether the formula is child based, resource based, or cost based. Fiscal capacity highly influences how these formulas affect placement, however, a point not developed by previous analyses. Although Hartman contended that the type of special education finance formula did not affect the amount of funding available to the LEA given the same assumptions,³⁰ this appears to be true only if state aid is unlimited. In the context of state education budgets in a less than ideal world, however, this study has shown that the type of formula may greatly influence the amount of funding available to an LEA, depending upon its approach to equalization.

FindingsFormula Classification

1. Formulas may be classified in the same way as general education finance formulas, with the exception of full state funding of excess cost which is unique to special education. The five major types of state special education finance formulas were flat grant, minimum foundation program, percentage equalizing, percentage matching, and full state funding of the excess cost of special education.
2. Equalization of fiscal capacity is an important factor in differentiating among major types of state special education finance formulas.
3. Special education finance formulas may be either internal or external to the general education finance formula.
4. The measures of educational need, pupil unit, instructional unit, and program cost, are important characteristics for describing major types of state special education finance formulas.
5. Special education finance formulas may be weighted in four ways: weighted amount per pupil unit or instructional unit, weighting factor used to multiply pupil units or instructional units, weighted class size, or bracketed class size in which minimum and maximum pupil counts per instructional unit are established.
6. The most common state special education finance formula in 1980-81 was the flat grant, used in eighteen states. Frequently the flat grant employed weighted instructional units.

7. The second most common state special education finance formula in 1980-81 was the minimum foundation program found in sixteen states. Both weighted and unweighted formulas and both pupil units and instructional units were commonly used.
8. The third most common state special education finance formula in 1980-81 was the percentage matching formula, found in nine states.
9. The least commonly used state special education finance formulas in 1980-81 were percentage equalizing and full state funding of excess cost.
10. Although flat grants and percentage matching formulas seldom were used in general education, they were employed for allocating special education aid in a substantial number of states.

Formula Analysis

1. Equity, administrative efficiency, adequacy, objectivity, and flexibility are important criteria for evaluating state special education finance formulas, as are the subcriteria identified in this study.
2. Fiscal equalization is a key factor in analyzing the performance of a state special education finance formula.
3. A formula's measure of educational need--pupil unit, instructional unit, or program cost--affects both its administrative and programmatic performance.
4. Basing a formula on pupil units or instructional units tends to enhance objectivity and administrative efficiency while providing less flexibility than a cost based formula, provided fiscal

- capacity is not a factor. Adequacy and equity depend on the extent and accuracy of weighting.
5. Formulas with program cost as their measure of educational need are more flexible and accommodate educational needs more adequately for the special education program than pupil unit or instructional unit formulas, if fiscal capacity is not a factor. These formulas provide less administrative efficiency and objectivity than formulas based on pupil units or instructional units.
 6. Formulas with few factors for indicating educational need or for considering LEA fiscal capacity are the most administratively efficient but provide little equity.
 7. Formulas that consider LEA fiscal capacity or provide a high level of state funding are advantageous for LEAs.
 8. Formula weights are a useful means of measuring educational need, but they pose two possible problems: (1) they may influence placement decisions for individual students, and (2) they may not accurately reflect LEA costs.
 9. P.L. 94-142 has created an "open demand" system in which special education and related services needed for a child to benefit from free, appropriate public education must be provided regardless of cost to the LEA or limitations placed on state aid.
 10. The study results indicated some differences in the advantages and disadvantages of formulas depending upon administrative role, but the influence of role was not pervasive. Differences of opinion between LEA and SEA administrators or between general education and

special education administrators were more evident than differences among the four administrative groups (SEA special education, SEA general education finance, LEA special education, LEA general education finance).

11. Administrative groups appeared to have more areas of conflict on evaluation of the percentage matching formula than on the other major formulas.
12. When formulas are funded at a high level, many of their disadvantages may be overcome. Weighted formulas requiring funds to be spent in the category in which they were generated would affect program structures, however.
13. When funding is limited, consideration of equity factors (LEA fiscal capacity, educational need, and price of services) becomes critical.
14. The flat grant is administratively efficient and objective, but it has few advantages for the special education program unless funded at a high level.
15. Minimum foundation program is advantageous from a general education perspective, but may not vary with educational need and price, provide flexibility, meet the needs of small districts, or provide neutrality toward placement as well as a cost based formula.
16. Percentage equalizing has the potential for overcoming the problems of the minimum foundation program, if cost based and funded at a substantial state percentage. The disadvantage is that LEAs with higher need must spend more.

17. Percentage matching may provide good flexibility, variation with need and price, and neutrality toward placements, if adequately funded. Low fiscal capacity LEAs may be disadvantaged by the formula.

18! Full state funding of excess cost of special education is the most advantageous formula for special education, but politically and fiscally it may not be feasible.

Project Evaluation

The project was evaluated throughout its design and implementation as well as being evaluated in terms of outcome. Because this student initiated project served as dissertation research for the project coordinator, the design of the study and the way it was implemented were reviewed and evaluated at various intervals by the dissertation committee at Virginia Polytechnic Institute and State University.

Members of the dissertation committee were Dr. M. David Alexander who was project director, Dr. Richard G. Salmon, associate professor of educational administration, Dr. John A. McLaughlin, associate professor of special education administration, Dr. Philip R. Jones, professor and Coordinator of the Special Education Administration Program, and Dr. Jerald F. Robinson, professor of management.

The following evaluation activities were performed by the committee:

1. Project design approved (prospectus examination), March 14, 1983.
2. Periodic meetings with committee members to evaluate progress and make revisions in the design: November 11, 1983, December 16, 1983, February 9, 1984, April 16, 1984, April 20, 1984, April 27, 1984.
3. Dissertation final defense May 11, 1984.

In addition to the ongoing evaluation by dissertation committee members, the analysis of state special education finance formulas that was developed by the researcher was evaluated by a panel of experts through a questionnaire, as described in the methodology

section of this report. Nine experts in school finance and special education administration responded to the questionnaire. Their vitae are provided in Appendix B.

Dissemination

Project results are being disseminated through national meetings, professional journals, and national organizations in the field of educational administration and special education. On March 16, 1984 results of the project were presented at the American Educational Finance Association annual conference in Orlando, Florida by the project coordinator, Sandra McQuain. In addition, a number of dissemination activities are currently in progress.

1. A summary of the results will be sent to the fifty states that participated in the study by sending their finance formulas.
2. An article for publication in a professional journal is being written by Sandra McQuain and Richard G. Salmon. Potential journals that might publish the article are the Journal of Education Finance and Exceptional Children.
3. An article will be submitted to the Educational Resources Information Center.
4. When the associate directors of the National Association of State Directors of Special Education were interviewed at the inception of the project, they expressed an interest in disseminating the results to their members. NASDSE will be contacted

in this regard.

5. A report will be sent to the National Association of State Boards of Education for possible inclusion in their project, which disseminates information on special education to state policy-makers.
6. A proposal for a presentation of results at the national meeting of the American Educational Research Association will be submitted by August 15, 1984.

ENDNOTES

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4. Ester O. Tron, Public School Finance Programs, 1978-79 (Washington, D.C.: U.S. Government Printing Office, 1980), p. 14-15; C. Kent McGuire, State and Federal Programs for Special Student Populations (Denver, Colorado: Education Commission of the States, 1982), p. 60.
5. National School Boards Association, A Survey of Special Education Costs in Local School Districts (Washington, D.C.: NSBA, 1982) U.S., Educational Resources Information Center, ERIC Document ED 181 577, p. 14.
6. Moore, Walker, and Holland, p. 83.
7. Marie Angele Thomas, "Finance: Without Which There Is No Special Education," Exceptional Children, 39 (1973), 476-478.
8. William T. Hartman, "Policy Effects of Special Education Funding Formulas," Journal of Education Finance, 6 (1980), 139-140.
9. Moore, Walker, and Holland, p. 78-80.
10. Ibid.
11. Roe L. Johns, Edgar L. Morphet, and Kern Alexander, The Economics and Financing of Education (4th ed.; Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1983), p. 242.
12. Eileen F. McCarthy and Daniel D. Sage, "State Special Education Fiscal Policy: The Quest for Equity," Exceptional Children, 48, (1982), 418.

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14. Johns, Morphet, and Alexander, p. 237-259; Walter I. Garms, James W. Guthrie, and Lawrence C. Pierce, School Finance The Economics and Politics of Public Education (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), p. 182-208; Percy E. Burrup and Vern Brimley, Jr., Financing Education in a Climate of Change (3d ed., Boston: Allyn and Bacon, Inc., 1982), p. 182-205; 241-268.
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16. McCarthy and Sage, p. 418.
17. Sandra McQuain, "An Analysis of State Special Education Finance Formulas," (Doctoral dissertation, Virginia Polytechnic Institute and State University, 1984), p. 36-39.
18. See McQuain, p. 106-175 for a full discussion of the researcher's analysis before the panel evaluation.
19. Ibid.
20. Burrup and Brimley, p. 186.
21. Garms, Guthrie, and Pierce, p. 192.
22. Johns, Morphet, and Alexander, p. 253; Charles S. Benson, The Economics of Education (3d ed.; Boston: Houghton Mifflin Company, 1978), p. 306-307, citing Erick L. Lindman, The Development of an Equalized Matching Formula for the Apportionment of State School Building Aid (Seattle, Washington, University of Washington Press, 1948); p. 7-8.
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24. Maureen W. Murphy, M. David Alexander, and Richard G. Salmon, An Analysis of the Allotment of Federal Vocational Education Funds, Department of Education, Office of Vocational and Adult Education, 1980, p. B.6.

25. Frederick J. Weintraub, Alan R. Abeson, and David L. Braddock, State Law and Education of Handicapped Children, Issues and Recommendations (Arlington, Va.: Council for Exceptional Children, 1971), p. 64.
26. See McQuain, p. 106-175 for full discussion.
27. Thomas, p. 475-480.
28. Hartman, p. 138-144.
29. Moore, Walker, and Holland, p.84-88.
30. Hartman, p. 147.

APPENDIX A

Panel Questionnaire and Raw Scores

An Analysis of State Special Education Finance Formulas

Formula _____ Name _____

Please rate this formula as you would if you were a _____

Evaluative Criteria	How does this formula rate?				How important is this criterion?				Comments
	poor			excellent	Not Important			Highly Important	
EQUITY									
Ability to equalize fiscal capacity	1	2	3	4	1	2	3	4	
Congruency with goals of overall finance system	1	2	3	4	1	2	3	4	
Ability to vary allocation of funds according to educational need	1	2	3	4	1	2	3	4	
Ability to vary allocation of funds according to price of services	1	2	3	4	1	2	3	4	
Overall rating for equity	1	2	3	4	1	2	3	4	
ADMINISTRATIVE EFFICIENCY									
Amount of reporting and paperwork required is minimized	1	2	3	4	1	2	3	4	
Provision of incentive for LEA to control cost	1	2	3	4	1	2	3	4	
Predictability of LEA's funding allocation	1	2	3	4	1	2	3	4	
Ease of understanding how formula operates	1	2	3	4	1	2	3	4	
Availability of accurate data for operating formula	1	2	3	4	1	2	3	4	
Overall rating for administrative efficiency	1	2	3	4	1	2	3	4	
ADEQUACY									
Congruency of formula with state's philosophy of school finance and control	1	2	3	4	1	2	3	4	
Inclusion of all mandated special education services	1	2	3	4	1	2	3	4	
Overall rating for adequacy	1	2	3	4	1	2	3	4	
OBJECTIVITY									
Verifiability of formula data	1	2	3	4	1	2	3	4	
Resistance of formula calculations to manipulation	1	2	3	4	1	2	3	4	
Neutrality of formula toward individual program placements	1	2	3	4	1	2	3	4	
Resistance of data to manipulation	1	2	3	4	1	2	3	4	
Overall rating for objectivity	1	2	3	4	1	2	3	4	
FLEXIBILITY									
Ability to accommodate changes in educational needs or prices	1	2	3	4	1	2	3	4	
Facilitation of program innovations/new programs	1	2	3	4	1	2	3	4	

Go to next page.

Evaluative Criteria	How does this formula rate?				How important is this criterion?				Comments
	poor	excellent		Not important	Highly important				
Ability to fund various program structures designed by LEAs	1	2	3	4	1	2	3	4	
Promotion of a continuum of placements	1	2	3	4	1	2	3	4	
Adaptability to needs of LEAs of various sizes and locations	1	2	3	4	1	2	3	4	
Overall rating for flexibility	1	2	3	4	1	2	3	4	

As you know, how one rates a formula may be influenced by one's role and responsibilities. You have been asked to rate the above formula from the perspective of an _____ If you were on _____ would your answers change? If so, how would they change? If not, why would they remain the same?

If you were an _____, would your answers change? If so, how would they change? If not, why would they remain the same?

If you were on _____, would your answers change? If so, how would they change? If not, why would they remain the same?

APPENDIX B

Vitae of Panel of Experts

7

Nelda H. Cambron-McCabe

Education

- B.S. Florence State University, Florence, Alabama, 1969.
 M.Ed. University of Florida, Gainesville, Florida, 1974.
 Ph.D. University of Florida, Gainesville, Florida, 1976.

Selected Experience

- Research Assistant, National Education Finance Project, 1973-74.
 Assistant/Associate Professor, Educational Leadership, Miami University,
 Ohio, 1978-present.
 Executive editor, Journal of Education Finance, 1978-1982.
 Associate director for school finance studies in Arkansas, West
 Virginia, and for Indian education programs.

Selected Publications

- K. Forbis Jordan and Nelda H. Cambron-McCabe, eds. Perspectives in State
 School Support Programs (Cambridge, Mass.: Ballinger Publishing
 Co., 1981).
 Nelda H. Cambron-McCabe and James A. Hale, "Cost of Educational Programs
 in Tennessee," Report to the Tennessee School Finance Study
 Project, March, 1979.
 "Mainstreaming: Implications for Special Education Funding,"
Educational Considerations (Spring, 1978) 32-35.

Organizations

- American Education Finance Association (president 1983-84); American
 Educational Research Association, NOLPE, Phi Delta Kappa.

William H. Cochran

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Department of Education
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Education

A.B. Lynchburg College, 1949, Business Administration.
M.Ed. Duke University, 1958.
Ed.D. University of Virginia, 1968.

Selected Experience

Elementary principal, Martinsville, Virginia, 1957-59.
Supervisor of secondary education, Roanoke, Virginia, 1961-62.
Superintendent of schools, Radford, Virginia, 1962-71.
Assistant Superintendent for Administration and Finance, Virginia
Department of Education, 1971-73.
Deputy Superintendent of Public Instruction, 1973-present.
Governor's Committee on Education of the Handicapped - 1976-77.
Lecturer in school finance, University of Virginia.

Selected Organizations

American Association of School Administrators, Phi Delta Kappa.

K. Forbis Jordan

Education

Ed.D. Indiana University, 1961
 M.A. Western Kentucky State College, 1957
 A.B. Western Kentucky State College, 1950

Selected Experience

Senior Specialist in Education, Congressional Research Service,
 Library of Congress, Washington, D.C., 1977-present.
 Executive Secretary, Commission on Schools, North Central Association
 of Colleges and Schools, 1975-77.
 Professor of Educational Administration, University of Florida,
 1971-75.
 Faculty member, School of Education, Indiana University, 1959-71.
 Research Director, National Educational Finance Project, 1972-74.
 Finance Specialist, National Educational Finance Project, 1970-72.
 Board of Directors, American Educational Finance Association,
 1978-80.
 Major school finance consultancies and studies for: Indiana,
 Illinois, Texas, Massachusetts, Delaware, Bureau of Indian
 Affairs, South Dakota, Virginia, Kentucky, Mississippi.

Selected Publications

Educational Need in the Public Economy, The University Press of
 Florida, Gainesville, FL, 1976 (co-editor and principal author
 with Kern Alexander).
Perspectives in State School Support Programs, Cambridge, Mass.:
 Ballinger Publishing Company, 1981 (editor with Nelda Cambron-
 McCabe).
 "Constitutional Methods of Financing Schools," in Constitutional
 Reform of School Finance, Lexington, Mass.: Lexington Books,
 1973.
 "The Weighted Pupil: An Opportunity for Program Flexibility and
 Improvement," Journal of Education Finance, Spring, 1976,
 p. 534-539.

John W. Melcher

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Madison, WI 53711

Education

- Doctor of Laws (Honorary) Cardinal Striess College, Milwaukee, Wisconsin, 1972.
- M.S. University of Wisconsin, Madison, 1952. Special education and school psychology.
- B.S. University of Wisconsin, Milwaukee, 1942. Education of Exceptional Children.

Experience

- Milwaukee Public Schools and University of Wisconsin, Milwaukee
Critique teacher, special education, 1946-49.
- Wisconsin State Supervisor of Exceptional Children and Consulting Psychologist to Crippled Children Division and Wisconsin School for the Handicapped, 1949-56.
- Lecturer in special education administration and curriculum, University of Wisconsin, Madison, 1960-1975.
- Administrator of the Division for Handicapped Children and Assistant State Superintendent of Schools for Wisconsin Department of Public Instruction, 1956-1975.
- Supervisor, Early Childhood Programs, Division for Handicapped Children, 1975-1983.

Selected Organizations

Council for Exceptional Children, National Association of State Directors of Special Education, American Association on Mental Deficiency, Consultant to U. S. Department of Health Education and Welfare.

Publications

Over 70 articles and book chapters published in national publications.

Van D. Mueller

Dr. Mueller has been a professor of Educational Policy and Administration at the University of Minnesota since 1964, serving as department chairman from 1972-1981. He has had teaching and administrative experiences in Michigan Public Schools and the Michigan Department of Public Instruction. School finance and citizen involvement in education policymaking are his areas of teaching and research specialization.

Recent state government experiences include a full-time assignment with the Minnesota State Planning Agency directing a series of school finance studies; coordinating the Minnesota Site of the Education Policy Fellowship Program; chairing the legislatively established Advisory Council on Fluctuating School Enrollments and two State Department of Education Task Forces on School Finance; Regent's representative to the Education Commission of the States. Dr. Mueller served as a consultant to school districts in 10 states and to state school finance studies in Indiana and Michigan during the late 70s.

Dr. Mueller served for 5 years on the Board of Directors of the National PTA and is a past-president of the Minnesota PTA. He currently serves on the Board of Directors of the Minnesota PTA as legislative chairman. He is an active member of the American and Minnesota Associations of School Administrators, as well as the American Education Finance Association where he has served on the Board of Directors and as co-editor of the Association's Fifth Annual Yearbook. Currently Dr. Mueller is a member of the Center for Urban and Regional Affairs Panel on the Future of Public Education in Minnesota and is staff coordinator for the Improving Education in Minnesota program of Spring Hill Center.

Dr. Mueller is a graduate of Central Michigan and the University of Michigan. His doctorate in educational administration is from Michigan State University. In 1980, MSU honored him with a distinguished alumni award.

Richard A. Rossmiller

Education

B.S. University of Wisconsin, Madison, Agriculture and education.
 M.S. University of Wisconsin, Madison, Educational administration.
 Ph.D. University of Wisconsin, Madison, Educational administration.

Selected Experience

Superintendent, Muskego-Norway (Wis.) Consolidated Schools, 1961-62.
 Professor of Educational Administration, University of Wisconsin,
 Madison, 1962-present. Chair, Department of Educational
 Administration, 1981-present.
 Consultant to State Departments of Education in Tennessee, Pennsylvania,
 and Michigan.
 Expert witness in cases involving state school finance systems in New
 Jersey, Colorado, Maryland, and West Virginia, and in New Mexico
 Association for Retarded Children v. State.

Selected Publications and Research

Expenditures and Funding Patterns in Idaho's Program for Exceptional
 Children. Madison, Wis.: The author, 1979.
 "Dimensions of Need for Educational Programs for Exceptional Children,"
 in Dimensions of Educational Need, eds. R. L. Johns, Kern
 Alexander, and R. A. Rossmiller. (Gainesville, Florida: National
 Education Finance Project, 1968).
 "Resource Configurations and Costs in Educational Programs for
 Exceptional Children," Administrative Leadership, 8 (Fall, 1972)
 13-29.
 "Funding and Entitlement Under P.L. 94-142," Perspectives on
 Implementation of the Education for All Handicapped Children Act of
 1975, eds. R. A. Johnson and A. P. Kowalski (Washington, D.C.:
 Council of Great City Schools, 1977).
 "Program Patterns and Expenditures for Special Education in Smaller
 School Districts," Journal of Education Finance 7(1982) 381-402.

M. Angele Thomas, Ed.D.

Dr. Thomas has spent the past 21 years in the field of special education. Presently, she is the Director of Alternative Education for Manassas Park City Schools, Manassas Park, Virginia; and adjunct professor at Virginia Polytechnic Institute and State University, and Marymount College, Arlington, Virginia. She holds a masters degree in special education from St. Louis University in 1968 and a doctorate in special education administration from Indiana University in 1973. Dr. Thomas has been a teacher of the mentally retarded and a professor of special education both at the graduate and undergraduate levels. For eight years she was editor of a major special education publication, Exceptional Children. She served on boards of many professional associations such as the Indiana Association for Retarded Citizens, President Carter's Commission on Mental Health, and a Consortium on the Representation of Handicapped Individuals in Educational Materials. She has been consultant to school districts, state departments of education and the Institute for the Study of Exceptional Children and Youth, University of Maryland. The National Association of Retarded Citizens named her Educator of the Year, and the American Academy of Achievement presented Dr. Thomas with the Golden Plate Award for her work in special education.

Lawrence Donald Vuillemot

Special Education District of Lake County
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 Gurnee, Illinois 60031
 (312) 623-0021

Education

Bachelor's degree Eastern Michigan University, Special education.
 M.S. University of Michigan, Administration and Supervision of Special Education.

Experience

Consultant to the Cooperative Joint Agreement Model for Minnesota State Department of Education, Indiana University, University of Illinois, Montana State Department of Education, and Western Interstate Commission for Higher Education, 1960-present.

Superintendent of the Special Education District of Lake County, 1960-present.

As the director who started S.E.D.O.L., L. D. Vuillemot has taken the program from four teachers in 1960 to 570 professional and clerical staff serving 2,489 students.

Board of Directors, Lake-McHenry Regional Program, 1967-70.

Selected Organizations

American Academy of Pediatrics, American Association of School Administrators, Council for Exceptional Children, Illinois State Advisory Council for the Education of Exceptional Children.