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November 22, 1978

Representative Burton S. Barr, Chairman
Senator Polly Getzwiller, Vice Chairman
Joint Select Committee on Property
Tax Reform and School Finance
Arizona State Legislature
State Capitol Building
Phoenix, AZ 85007

Dear Representative Barr and Senator Getzwiller:

In response to your request for a written report on the Arizona Department of Education's school finance project, I am enclosing a report entitled "School Finance Equalization Project—A Description."

The report is divided into three sections. Section I (Purpose) aims at providing some background discussion on why we structured our project as we did. This section also contains a summary of the two major elements of the project.

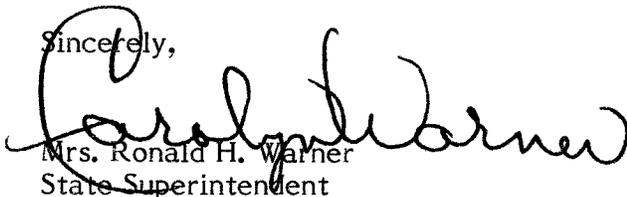
Sections II and III go into considerably more detail on these two segments. They are primarily intended for those persons, including your staffs, who wish to understand more of the method that has been used to develop a cost analysis for a sample of school districts (Section II). The capabilities of our school finance computer simulator are explored in more depth in Section III.

Because we are not yet at the "product" point, this report is limited to a description of the product. As you will note, however, we are well along in the process. I expect the major portion of the simulator to be ready in the near future. This means that we should be in a position to start testing the fiscal impact on school districts from various financing proposals at that time. Significant portions of our analysis of school district expenditures should be ready for dissemination by about January 1, 1979.

I am very much looking forward to sharing the results of our effort with you. The task which you face in 1979 is a most difficult one. I do believe, however, that our work in the Department of Education can assist you in preparing for the special session in a manner which is clearly more substantive and informative than has ever before been the case.

I look forward to working with you.

Sincerely,



Mrs. Ronald H. Warner
State Superintendent

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Enclosure

ARIZONA DEPARTMENT OF EDUCATION
SCHOOL FINANCE EQUALIZATION PROJECT
A DESCRIPTION

Early in 1978, the Arizona Department of Education (ADE) undertook a school finance equalization project. Funding for this project was made available by the United States Office of Education under the provisions of Section 842 of the Educational Amendments of 1974 (P.L. 93-380). The intent of Congress was to provide limited resources to the states to assist them in developing state equalization plans for financing public elementary and secondary education. Under a statutory formula, Arizona's grant entitlement is \$179,000.

The grant was initially made available for the federal fiscal year 1977-1978. In September 1978, the Arizona Department of Education was granted an extension to utilize the unexpended portion of the grant through September 30, 1979.

I. PURPOSE

Beginning in February 1978, the Department undertook the task of defining the primary, specific purposes of the project. Coincidentally, at about this same time, legislative leaders announced plans to convene in special session in 1979 to address the broad issue of "tax reform and school finance." Given this timing of events and because of the Legislature's ultimate responsibility for policy development in the school finance area, the Department has structured its project to fit into the legislative attempt to deal with the issues and to avoid, as much as possible, duplication of effort between this project and the work of the legislative staff. Furthermore, our intent has been to focus on the education delivery side of school finance. We have viewed the wide array of tax questions and issues to be outside the primary thrust of our project, both in terms of appropriateness and the availability of resources within this department.

At the time the project began, the specific issues to be addressed by the Legislature were not known, but there were broad areas which could be considered and which directly affect school finance. We judged these areas to include:

1. Reduction in the reliance on property taxes at the school district level which would necessitate an increase in the total level of state aid;
2. A complete review of the property classification system, assessment ratios applicable to property classes and deficiencies in the property valuation methods used to establish full cash values for tax purposes and distribution of state aid to school districts;
3. A review of proposals to expand the school finance system to reflect cost variations among school districts attributable to size, enrollment trends, and special needs of certain targeted pupils;
4. A reappraisal of the existing statutory provisions which impose fiscal and other controls on the school districts; and
5. Consideration of proposals for inclusion of capital expenditures in the state aid support system.

These broad areas combined have the potential for affecting (1) the flow of state funds to the school districts, (2) the aggregate level of funds (expenditures) available to the school districts, and (3) resultant tax impact on the district residents.

In approaching a review of the school finance system, it seems to us essential that we recognize a few fundamentals. School districts are basically production organizations which utilize resources (inputs) to deliver certain services (education programs) which are made available to clients (students) to give them the opportunity to attain some level of "educated citizen" (broad result or product). Within this general framework, school finance equalization is frequently construed to mean availability of resources to individual school districts. Given that the districts are presently limited to the property tax as their own source of public revenue, variations in the assessed valuation base of the districts can lead to highly disparate tax rates among the districts to command resources to deliver comparable services. To counter this characteristic, state governments have moved to use their broader tax bases to enlarge state aid and to distribute these funds to districts through equalization formulas. Depending on the formula and level of state funding, the target results can be (1) reduction in overall reliance on the property tax for education funding, and (2) reduction in the tax load disparities on individual taxpayers among the several districts.

Implementation of this concept, however, requires that decisions be made as to the level of resources which will be state supported in delivering education programs within school districts and what effort will be required of district taxpayers. In our terminology in Arizona, these key decisions are reflected in the basic or weighted support levels and the qualifying tax rate. The major point to be made here is that financial equalization does not stand alone as an end in itself. Rather, it is a means to equalize the tax effort for some purpose. An inherent part of this purpose must be to establish the dollar level of resources to be made available to districts to deliver education programs and for which state aid is intended to be tax equalizing, but the dollar level of resources is not in itself the purpose. The real purpose is to equalize tax effort to deliver education programs. The state, either knowingly or unknowingly, addresses this real purpose when it establishes the dollar support level in a state aid formula. It then follows that we, either knowingly or unknowingly, address the question, "Equalization for what purpose?"

In 1974 the state solidly established the principle of basic state aid through an equalization formula. Basic state aid is distributed to the districts each year on the basis of a statutory formula. Essentially, this formula prescribes the following:

1. Determine the total dollar support level for the district.
2. Determine how much a qualifying tax rate of \$1.30 (\$2.60 for unified districts) would raise on the district's assessed valuation.
3. If the amount which could be raised by the qualifying tax rate is less than the support level, the difference is the district's entitlement to state aid.

The support level was statutorily established for the year 1973-1974 at \$745 for each elementary student and \$1,015 for each high school student. Under the statutory provisions, these original support levels have increased by seven percent each year until in 1978-1979 they are \$1,045 for each elementary student and \$1,423 for each high school student. This system of aid guarantees that each district will have available for its use a combination of state aid and district dollars equal to the support level and with a tax rate that will not exceed an upper limit.

Closely tied to the establishment of support levels is the annual determination of the general fund budget limitation for each district. With the exception of certain revenue sources (including override elections) each district is allowed to increase its budget for general fund expenditures by an amount per student equal to the increase in the state support level per student.

While this description of the basic state aid and general fund budget limitation provisions is obviously an incomplete discussion of the school financing system in the state, it does highlight those features which underpin the direction of our project. When the state constructed its present basic aid system, there was a large dose of the unknown in the selection of the support levels established for elementary and high school students. Little was available about the resources which these levels would support as they translated into the various educational (instructional) programs offered by the school districts. The support levels were stated in terms of dollars per student (statutorily expressed as dollars per classroom unit). What this meant in terms of school district ability to deliver education programs was largely unknown. In simple terms and at today's support levels, all this can be summarized into a question, "Does anybody know what \$1,045 per elementary student or \$1,423 per high school student mean?"

Project Purpose

It is to this area that our project is oriented. If we are to better understand the impact of different state aid proposals and budget limitation provisions, we must have greater knowledge of the costs of various instructional programs in the school districts. We should be able to state with reasonable certainty which instructional programs and what proportion of their costs will be covered by any state aid proposal. Equally important is our ability to recognize variations in expenditures among programs and among districts and the major contributors to these variations. Only in this way is it possible to begin to build a bridge between resources (dollars) available to school districts and the operational delivery of education programs as they presently exist.

Although significant improvements have occurred in the financial accounting system established in the school districts, the format and level of detail will not permit direct accounting of expenditures for education programs within districts. The first major purpose of our project is to complete a cost analysis of this type for a sample of school districts for the year 1977-1978.

Paralleling the cost analysis is the development of a computer simulator designed to estimate the fiscal impact on each of the state's school districts from state aid and budget limitation proposals. It is designed to be a technical tool to reflect how revenue flow and property taxes will be altered under various funding proposals.

In summary form, the Arizona Department of Education school finance equalization project is structured to:

1. Complete a cost analysis of 1977-1978 expenditures for a sample of Arizona school districts which will:
 - a. Establish existing costs of delivering various education programs among different types of districts;
 - b. Analyze the causes of cost differentials among the districts;
 - c. Determine whether a sufficient pattern exists to establish a "benchmark" cost approach which can assist in determining support levels for state aid;
 - d. Serve as a reference point for evaluating various state aid and budget limitation proposals.
2. Design and operate a computer simulator to test the fiscal impact on individual school districts for a wide variety of state aid and budget limit proposals. The simulator will:
 - a. Estimate changes in state aid;
 - b. Estimate changes in district property tax levies;
 - c. Estimate changes in property taxes and rates on various classes of property.

For the benefit of those who are interested in greater detail about the cost analysis process and expected results, Section II is provided. A more detailed description of the simulator's capabilities is found in Section III.

We now expect that the cost study will start to provide usable results by January 1, 1979. The simulator should be operational in the near future.

II. SAMPLE DISTRICT COST ANALYSIS

The following discussion is divided into four parts. Part A describes the methods used or planned to complete the analysis. Part B describes the information product expected. Part C discusses use of the data. Part D provides a status report on completion of this part of the project.

A. Method

1. Selection of school district sample
 - a. Judgment sample selected to provide representation based on the following criteria:
 - (1) Student population - small to large
 - (2) Assessed valuation per student - low to high
 - (3) Expenditure levels per ADM - low to high
 - (4) Geographical and rural - urban dispersion
 - (5) Growing, stable, and declining enrollment
 - b. Sample includes:
 - (1) 24 elementary districts or elementary portions of unified districts. Sample comprises 47 percent of the total state elementary ADM in 1977-1978;
 - (2) 13 high school districts or high school portions of unified districts. Sample comprises 57 percent of the total state high school ADM in 1977-1978;
 - (3) See Appendix A for a list of the sample districts.
2. Development of data for the sample districts, beginning in May 1978
 - a. Arizona Department of Education internal auditors were used in the field to obtain or develop the specific data items within each sample district. An estimated three man-years of auditor time will be utilized in data development.
 - b. Phase I field work was structured to obtain the following data (see Appendix B for greater detail):
 - (1) 1977-1978 expenditures by fund, function, and object;
 - (2) Full-time equivalent (FTE) staff within fund and function. Separation between elementary and high school for unified districts;
 - (3) Direct instructional FTE staff by school and by grade level (elementary districts) for instructional staff paid from the general fund;

- (4) Direct instructional FTE staff by handicap category of assignment for instructional staff paid from the Special Education fund;
 - (5) 1977-1978 district salary schedule and count of certified staff in each level and step of the schedule.
- c. Phase II field work was structured to obtain the following data:
- (1) Schedules, instructional time, enrollment, and subject matter areas of teaching assignment to allocate teachers and students to instructional programs on an FTE basis. Allocations are compiled by instructional program within grade level (except kindergarten) at the elementary level;
 - (2) See Appendix C for a listing of instructional program areas.
3. Allocate 1977-1978 expenditures to instructional programs.
- a. General Fund expenditures (Fund 001):
- (1) Allocate unified district expenditures to elementary and high school shares (see Appendix D for allocation method);
 - (2) Allocate elementary or elementary share of unified expenditures and high school or high school share of unified expenditures to three areas (see Appendix E for allocation specifics):
 - (a) General fund expenditures assignable to Special Education;
 - (b) General fund expenditures to be distributed to instructional programs on the basis of the number of FTE teachers in each instructional program area;
 - (c) General fund expenditures to be distributed to instructional programs on the basis of the number of FTE students in each instructional program area.
 - (3) Allocate elementary and high school expenditures to instructional program areas:
 - (a) Allocate expenditures to be distributed on the basis of teachers to instructional programs in proportion to the number of FTE teachers in each program;
 - (b) Allocate expenditures to be distributed on the basis of students to instructional programs in proportion to the number of FTE students in each program.

- b. Special Education fund expenditures (Fund 002):
 - (1) Allocate unified district expenditures to elementary and high school shares (same basic procedure as used for the General Fund);
 - (2) Allocate elementary and high school expenditures to two areas (see Appendix F for allocation specifics):
 - (a) Special Education expenditures to be distributed to handicap categories on the basis of the number of FTE teachers in each handicap area;
 - (b) Special education expenditures to be distributed to handicap categories on bases other than teachers.
 - (3) Allocate elementary and high school expenditures to handicap categories:
 - (a) Allocate expenditures to be distributed on the basis of teachers to handicap categories in proportion to the number of FTE teachers assigned to each handicap category;
 - (b) Allocate other expenditures directly to handicap categories.
- c. Other Funds (Transportation-004, Capital Outlay-410, Capital Levy-420, Other Capital Projects-490, Federal Funds) are not allocated to instructional programs.

B. Analysis of Expenditure Levels

The availability of data as described in Part A will permit extensive analysis of expenditure levels and their differences among the sample districts. While the following discussion does not list all of the comparative data which can be developed, it is indicative of the type of analysis which will be performed. It is important to note that this examination is strictly intended to be descriptive. Our purpose is to develop the facts, as best they can be determined or estimated, concerning expenditure patterns and primary sources of variations among the districts. It is our intent that the detail in this fact base should be useful to the legislature and education interest groups in answering questions on expenditure levels and patterns and in formulating the specifics of changes in the state's school finance system. Possible utilization of this data for policy-making is discussed in Part C.

1. Broad expenditure levels
 - a. Total district expenditure and percentage distribution by fund;
 - b. Total expenditure per student by fund;
 - c. Total expenditure and percentage distribution by function within fund (Fund 001 and 002);
 - d. Total expenditure per student by function within fund (Fund 001 and 002).
2. Detailed expenditure per student and source of variation among districts (see Appendix G for additional detail)
 - a. General Fund (001):
 - (1) Instruction (Function 200)
 - (2) Education and Curriculum Services (Function 140 and 350)
 - (3) Other Administration (Function 130 and 1XX)
 - (4) Principal's Office (Function 310)
 - (5) Guidance and Psychological Services (Function 330)
 - (6) Library (Function 360)
 - (7) Interscholastics (Function 370)
 - (8) Other Instructional Support (Function 3XX)
 - (9) Operations and Maintenance of Plant, Excluding Utilities (Function 410)
 - (10) Utilities and Communications (Function 410)
 - (11) Other Operations (Function 4XX)
 - b. Special Education Fund (002):
 - (1) Instruction (Function 200)
 - (2) Administration (Function 100)
 - (3) Guidance and Psychological Services (Function 330)
 - (4) Other Instructional Support (Function 3XX)
 - (5) Operations (Function 400)

- c. Transportation Fund (004)
 - d. Capital Outlay Fund (410)
 - e. Capital Levy Fund (420)
 - f. Federal Funds (Specific funds identified in Appendix B)
3. Expenditure levels by instructional program
- a. Regular programs (General Fund-001) (See Appendix C for a listing of instructional programs)
 - (1) Percent of general fund expended on grade level groups and instructional programs
 - (a) Grade level groups are:
 - Kindergarten
 - Grades 1-3
 - Grades 4-6
 - Grades 7-8
 - Grades 9-12
 - (b) Instructional programs within each grade level group (except kindergarten)
 - (2) Expenditure per FTE student
 - (a) Within grade group
 - (b) By instructional program within grade group
 - (3) Ratios of FTE students to FTE teachers
 - (a) Within grade group
 - (b) By instructional program within grade group
 - b. Special Education (Fund 002)
 - (1) Percent of special education fund expended on handicap categories
 - (a) Handicap categories operated as resource programs
 - (b) Handicap categories operated as self-contained programs
 - (2) Expenditure per student by handicap category
 - (3) Ratios of students to teachers by handicap category

C. Use of the Data

As discussed earlier, this expenditure analysis of a sample of school districts is intended only to be descriptive--to establish the detail of existing expenditure levels and the sources of variation in the levels among the school districts. The next question is to determine whether this description can usefully be brought to bear on the difficult policy issues of state aid provisions and school district budget limitations.

With this in mind, there is a major point which should be made concerning what the school district expenditure analysis will not directly do. It will not establish that the existing levels and patterns of expenditure are "right" or "wrong." To carry an expenditure analysis to this point implies an ability to specify (a) clearly stipulated and measurable functions to be performed and outcomes expected within the school districts and (b) a way to clearly prescribe the necessary resources to accomplish (a). To the best of our knowledge, the state of the art will not permit these requirements literally to be met. At this point, there is no substitute for reasoned, informed judgment in establishing the elements of a sound school finance system.

In reaching this judgment, we believe that several key questions need to be surfaced and answered in the process of revising our school finance system. It is our intent that the expenditure analysis can help in providing some of the information regarding these questions. The following represent examples of what we mean:

1. It is argued by some that a relatively higher level of district and state resources should be programmed into lower elementary grades than into higher grades.
 - a. What is the existing distribution of expenditures within elementary districts among the grade groups of kindergarten, 1-3, 4-6, and 7-8?
 - b. Are expenditure levels per student significantly different now?
 - c. What are the effective student/teacher ratios now existing among the different grade levels?
 - d. To what extent are the districts presently programming their resources into language arts, arithmetic, and other basic instructional areas at the lower grade levels?
2. Given that school districts differ in their overall expenditure levels, teacher salary schedules, seniority of instructional staff, enrollment growth or decline trends, and other characteristics is there a pattern of expenditures for some districts which are similar and could be judged to be "normal?"
 - a. If so, what are the factors that primarily contribute to other districts being different from this "norm?" (student/teacher ratios, overall seniority of staff, salary schedules, noninstructional functions, emphasis on higher cost programs)
 - b. Should some of these factors be considered in establishing individual district support levels in a state aid formula? (e.g., size of district, vocational education programs, seniority of teaching staff)

3. Should the present disparity in funding support between elementary and high school grades be perpetuated?
 - a. What are the principle sources of variation now? (total instructional costs per student, other functional areas, specific higher cost instructional programs, salary schedule levels)
 - b. How do teacher/student ratios compare between elementary and high school districts?
4. Is it realistic to construct a base state support level which is a total amount per student but which is developed from the major expenditure elements as determined in the sample district cost analysis?

These examples are intended only to be indicative of the usage to which we believe the cost analysis data can be put once completed. We trust that they will contribute to providing some answers to questions like, "What does a support level of \$1,045 per elementary student mean?"

D. Status of the Cost Analysis

1. Field work in the sample districts as originally designed is completed.
2. Review of data, correction of deficiencies, call-back on districts if necessary, and finalization of basic data development are expected to be completed by the end of November 1978.
3. Selected data items will be sent to the sample districts for their review concerning accuracy. This step will be undertaken for each district as we reach what we judge to be accurate results based on the information obtained at the district level.
4. Analysis of the expenditure levels, as discussed in Part B, will be undertaken in December 1978. Usable results should be available shortly after January 1, 1979.

III. COMPUTER SIMULATOR

This section is devoted to a description of the computer simulation portion of the project. Part A describes the major capabilities of the simulator as it is now designed. Part B addresses the information which will be produced for any simulation run. Part C discusses the status in bringing the simulator to operational use.

A. Simulator Capabilities

In general terms, the simulator is designed to estimate the major fiscal impact on any school district from a proposed change in state aid formulas, property assessment levels, and budget limitations. Major fiscal impact is defined to include (1) the expected level of state aid, (2) the expected district tax levy, (3) the expected level of assessed valuation by class of property, (4) the expected distribution of the district tax levy on each class of property, (5) the expected district tax rate, and (6) the expected level of total revenue available for expenditure by the district.

The significant characteristics of what the simulator can accommodate are described below under major headings.

1. District Assessed Valuation

- a. Assessed valuation for the existing statutory property classes which can be changed to reflect:
 - (1) adjustments to assessed valuation within classes to depict what the assessed valuation should be if valuation practices are not uniform across the state and if the Department of Revenue can establish what the adjustments should be within class of property within districts;
 - (2) adjustments to assessed valuation to reflect proposed changes in the assessment percentages by class of property;
 - (3) proposals to reserve certain classes of property for taxation at the state level.
- b. Assessed valuation for one to ten classes of property if a major redo of the property class system is proposed and if the valuation levels for redefined classes can be established by the Department of Revenue and/or legislative staff

2. Revenue Available to Districts

- a. The simulator will establish estimated revenue flows separately for the following school district funds and sources of revenue:

- (1) School District Funds
 - (a) General Fund (001)
 - (b) Special Education Fund (002)
 - (c) Transportation Fund (004)
 - (d) Capital Outlay Fund (410)
 - (e) Capital Levy Fund (420)
 - (f) Adjacent Ways Fund (430)
 - (g) Federal-Title I (110)
 - (h) Federal-Title I-Migrant (120)
 - (i) Federal-J.O.M. Supplemental (200)
 - (j) Federal-Title VI-B-Handicapped (210)
 - (k) Federal-Title VII-Bilingual (220)
 - (l) State-Federal-Vocational Education (240)
 - (m) Federal-Indian Education (280)
 - (n) State-Special Projects
 - (o) Debt Service
2. Revenue Sources for each fund as applicable
 - (a) Basic State Aid--includes general formula aid as applicable to each fund
 - (b) Other State Aid--includes categorical or minor special state aid provisions
 - (c) Federal Aid--as applicable for each fund, including impact aid in the general fund
 - (d) District property tax levy
 - (e) Other--includes a variety of revenue sources such as cash balance, interest earnings, county school fund, and miscellaneous revenue

b. Revenue flows can be estimated for the following years:

- (1) Base or actual year--currently defined as 1977-1978. Revenue flows will be actuals as they become available. The base year can be set for any time period (e.g., 1978-1979) depending on the availability of revenue data.
- (2) Proposed year--same as the base year but revenue flows reflect proposed changes in the financing system (e.g., change in the state aid formula).
- (3) Projected year--currently defined as 1980-1981. Revenue flows reflect estimated levels which will exist under proposed changes in the financing system.

c. Estimating State Aid

(1) General Fund

- (a) Core formula for computing entitlement to state aid is:

$$\text{District Aid} = (W^*)(WADM)(SSL) - (QTR)(A.V.)$$

- (b) General explanation of the equation:

Essentially, the equation states that a district's entitlement to state aid depends on (1) the number of students it has, (2) weighting of student's to account for a number of conditions which may vary from district to district (3) a specified dollar support level per student, (4) a stipulated tax rate to be levied in the district, and (5) the district's assessed valuation. There is inherent in this general equation a wide range of possibilities for testing and evaluating state aid proposals. The following sections explain in more detail how this entitlement equation can be used.

(c) $(W^*)(WADM)(SSL)$

- 1) This portion of the equation establishes the gross dollar amount of district revenue (or expenditures) toward which state aid could be contributed.
 - a) W^* permits a district's student body to be weighted for a number of conditions which differ from district to district and which might be considered in distributing state aid. Examples are: ADM size of a district, enrollment trend (declining), geographical location (isolation), seniority of teaching staff (concentration in higher portion of salary schedule), or other characteristics.

- b) WADM permits segments of a district's student body to be weighted for higher expenditures per student and for distributing state aid. The simulator is designed to accept up to fifteen different groupings for general fund weighting. Specific groupings for which student count will be available initially to permit weighting are grade levels of kindergarten, 1-3, 4-6, 7-8, 9-12, and four groups of vocational education enrollment at the high school level. (Special education categories are handled in the special education module of the simulator.)
- c) SSL is a dollar amount per student, representing a proposed state support level.

2) The simulator will permit this calculated gross support level to be used in establishing state aid or it can be adjusted to reflect district budget limits which may be lower or higher than the computed support level. Options presently designed into the simulator are:

- a) Use the gross state support level as it is calculated.
- b) For districts with budget limits below the support level, adjust the support level down to the budget limit or to some level between the two.
- c) For districts with budget limits in excess of the support level, the support level can be adjusted up to a specified maximum over the computed support level.

(d) (QTR)(A.V.)

This portion of the equation establishes the proposed local district property tax effort toward the funding of the support level.

- 1) QTR represents the proposed district tax rate.
- 2) A.V. represents the district assessed valuation as it is or as adjusted. (See Section 1 on District Assessed Valuation)

(e) Special options which can be used in establishing state aid:

- 1) **Negative Aid:** Indicates the amount of revenue which would be raised in excess of the support level by the qualifying tax rate in districts with high assessed valuation.
- 2) **Impact Aid Deduction:** Permits reduction in state aid by some percentage of the district's Federal Impact Aid (874).
- 3) **Minimum Aid:** Permits state aid to be established at not less than some minimum level per ADM.

- 4) Hold Harmless: Permits state aid to be established at not less than some percentage of aid entitlement under present statutory provisions.

(2) Special Education Fund

- (a) Core formula for computing entitlement to state aid is the same equation as for the General Fund:

$$\text{District Aid} = (W^*)(WADM)(SSL) - (QTR)(A.V.)$$

- (b) General explanation of the equation:

The basic form of the General Fund simulation equation for state aid is carried forward to Special Education. The values used in the equation, however, are tailored to the characteristics of the Special Education area, except where they are common to both General Fund and Special Education operations (e.g., district assessed valuation).

- (c) $(W^*)(WADM)(SSL)$

- 1) Establishes the gross dollar amount of district revenue (expenditure) for Special Education toward which state aid could be contributed.

- a) W^* permits weighting a district's Special Education students as a whole, to reflect specific circumstances (e.g., small size of the Special Education ADM).

- b) $WADM$ permits weighting of the Special Education categories to reflect variations in the expenditure levels among the different handicap categories. The simulator is designed to permit weights for each of the statutory categories further classified by resource program, self-contained program, and tuitioned students.

- c) SSL is the same value as proposed for the General Fund. It is the selection of the weights for $WADM$ which establishes the dollar difference in the total support level for Special Education students relative to the General Fund regular students.

- 2) The simulator will permit the calculated gross support level to be adjusted in ways similar to those described for the General Fund.

- (d) $(QTR)(A.V.)$

- 1) QTR represents the proposed district tax rate for Special Education.

- 2) $A.V.$ is the same assessed valuation as described for the General Fund.

- (e) Special options which can be used in establishing state aid for the General Fund can also be exercised for the Special Education Fund (i.e., negative aid, impact aid, deduction, minimum aid, and hold harmless).

3. Other Funds

Simulation capabilities to accept a variety of proposals for state aid for transportation, capital outlay, capital levy, or debt service have not yet been designed. As soon as practicable, these modules in the simulator will be completed. In the interim, the simulator will simply produce the base year aid flows (i.e., existing transportation aid and no aid in the capital area).

d. Budget Limits and Estimating District Levies

(1) General Fund

- (a) Budgetarily, the district levy for the General Fund is a residual. Given the adopted budget, the levy is the amount of revenue necessary to balance the budget after allowing for state aid and other sources of revenue.
- (b) To estimate the district levy, the simulator requires that the level of the General Fund budget be specified. As designed, the simulator allows the following options in specifying the budget level for districts:
 - 1) District will budget at its calculated gross support level, $(W^*)(WADM)(SSL)$.
 - 2) Districts budgeting less than their gross support level will increase to their support level.
 - 3) Districts will maintain their current relative budget levels under the present budget limitation provisions.
 - 4) Higher spending districts will budget an amount not to exceed some specified percentage in excess of their support level.
 - 5) Lower spending districts will increase by some specified amount over the present statutory limitation.

(2) Special Education Fund

The same basic provisions and capabilities as described for the General Fund also apply to the Special Education Fund.

(3) Other Funds

Until the modules are designed for simulating state aid proposals for the transportation, capital outlay, capital levy, and debt services funds, the simulator will produce only the base year levies for these funds.

B. Simulator Report

At the end of each simulation a printout will be prepared which will show the estimated fiscal impact on each school district. The printout formats are shown in Appendix H.

These formats are intended to show the following major types of financial information for the districts:

1. Revenue available for expenditure for each of the designated funds

a. Revenue is categorized as:

- (1) Basis State Aid
- (2) Other State Aid (minor or smaller categorical state programs)
- (3) Federal Aid
- (4) District Levy
- (5) Miscellaneous District Revenue (Other)

b. Available revenue by source is shown for each of the following years:

- (1) Actual revenues for a base year (currently defined as 1977-1978).
- (2) Estimated revenue which would have been available in the base year had the simulated proposal been in effect (defined as 1977-1978, Proposed).
- (3) Estimated revenue which will be available in a future year if the simulated proposal is implemented (defined as 1980-1981, Projected).
- (4) For the Special Education Fund, an adjusted base year is also shown (1977-1978 Adjusted). This line adjusts the actual levy of the district as an offset to the dollar variation between estimated state aid at the time the budget was adopted and actual entitlement at the end of the year.

2. District Assessed valuation

- a. Actual for the base year
- b. As modified and adjusted for the base year

3. Property tax levies and rates for each fund where property taxes are involved.

- a. Tax rates are calculated for the actual, proposed, and projected years.
- b. Levies are calculated for each class of property for the actual and proposed years only. Total levy is calculated for the projected year.

C. Status of the Simulator

The simulator is presently in the testing stage. It is expected to be operational in December 1978. As soon as practicable, thereafter, simulation capabilities for the transportation and capital expenditure funds will be designed and programmed.

Systems analysis and programming is being provided by the Data Center, Department of Administration, under contract with the Arizona Department of Education. The simulator will operate on the Data Center's computer.

APPENDIX A
School District Sample

<u>District and Type</u>	<u>County</u>	<u>1977-1978 ADM and Size Category*</u>	
<u>ELEMENTARY:</u>			
Alhambra	Maricopa	7,363	(HM)
Amphitheater	Pima	5,770	(LM)
Balsz	Maricopa	1,785	(LM)
Catalina Foothills	Pima	936	(L)
Eloy	Pinal	1,374	(L)
Glendale	Maricopa	7,083	(HM)
Kingman	Mohave	2,362	(LM)
Oracle	Pinal	433	(L)
Osborn	Maricopa	2,633	(LM)
Phoenix	Maricopa	6,514	(HM)
Roosevelt	Maricopa	9,056	(HM)
Salome	Yuma	61	(L)
Sierra Vista	Cochise	3,100	(LM)
Washington	Maricopa	24,031	(H)
<u>HIGH SCHOOL:</u>			
Glendale	Maricopa	15,617	(HM)
Marana	Pima	852	(L)
Phoenix	Maricopa	25,491	(H)
Sierra Vista	Cochise	2,118	(LM)
<u>UNIFIED:</u>			
Flagstaff (Elementary)	Coconino	5,466	(LM)
Flagstaff (High School)	Coconino	2,672	(LM)
Globe (Elementary)	Gila	1,525	(L)
Globe (High School)	Gila	749	(L)

<u>District and Type</u>	<u>County</u>	<u>1977-1978 ADM and Size Category*</u>	
<u>UNIFIED (continued)</u>			
Joseph City (Elementary)	Navajo	278	(L)
Joseph City (High School)	Navajo	156	(L)
Mesa (Elementary)	Maricopa	20,399	(H)
Mesa (High School)	Maricopa	9,082	(HM)
Page (Elementary)	Coconino	1,138	(L)
Page (High School)	Coconino	590	(L)
Prescott (Elementary)	Yavapai	2,753	(LM)
Prescott (High School)	Yavapai	1,598	(LM)
Santa Cruz** (Elementary)	Santa Cruz	86	(L)
Scottsdale (Elementary)	Maricopa	14,521	(H)
Scottsdale (High School)	Maricopa	10,143	(HM)
Tucson (Elementary)	Pima	36,894	(H)
Tucson (High School)	Pima	18,432	(H)
Window Rock*** (Elementary)	Apache	1,897	(LM)
Window Rock (High School)	Apache	834	(L)
Total Sample (Elementary)		157,458	
Total Sample (High School)		88,334	
State Total (Elementary)		331,693	
State Total (High School)		154,101	

* L = Low ADM
 LM = Low Medium ADM
 HM = High Medium ADM
 H = High ADM

** Elementary, not in a high school district

*** Elementary teaching high school

APPENDIX B
Expenditures and FTE Staff Items Obtained
for Sample School Districts for 1977-1978

<u>Fund</u>	<u>Function/Subfunction</u>	<u>Object*</u>	<u>Staff FTE</u>	
001-General Fund	100-Administration	Salaries-Cert.	X	
		Employee Benefits-Cert.		
	130 Business and Fiscal Serv.	Salaries-Class.	X	
		Employee Benefits-Class.		
	140-Education Services	Other Expenditures		
	200-Instruction		Salaries-Teacher	X
			Employee Benefits-Teacher	
			Salaries-Class.	X
			Employee Benefits-Class.	
			Supplies and Materials	
			Tuition	
			Other Expenditures	
	300-Instr. Support		Salaries-Cert.	X
			Employee Benefits-Cert.	
310-Principal's Office			Salaries-Class.	X
			Employee Benefits-Class.	
330-Guidance and Psych. Serv.			Other Expenditures	
350-Curriculum Services				
360-Library				
370-Interscholastic				
400-Operations		Salaries-Class.	X	
		Employee Benefits-Class.		
	410-Ops. and Maint.of Plant		Supplies and Materials	
			Utilities and Comm.	
002-Special Education	100-Administration	Salaries-Cert.	X	
		Employee Benefits-Cert.		
		Salaries-Class.	X	
		Employee Benefits		
		Other Expenditures		

APPENDIX B (continued)

<u>Fund</u>	<u>Function/Subfunction</u>	<u>Object*</u>	<u>Staff FTE</u>
	200-Instruction	Salaries-Teacher	X
		Employee Benefits-Teacher	
		Salaries-Class.	X
		Employee Benefits-Class.	
		Tuition	
		Other Expenditures	
	300-Instr. Support	Salaries-Cert.	X
		Employee Benefits-Cert.	
	330-Guidance and Psych.Serv.	Salaries-Class.	X
		Employee Benefits-Class.	
		Other Expenditures	
	400-Operations	Salaries-Class.	X
		Employee Benefits-Class.	
		Utilities and Comm.	
		Other Expenditures	
004-Transportation		Salaries-Class.	X
		Employee Benefits	
		Supplies and Materials	
		Capital Outlay	
		Other Expenditures	
410-Capital Outlay		Land and Improvements	
		Buildings and Improvements	
		Furniture and Equipment	
		Vehicles	
		Library Books	
		Textbooks	
		Aids	
		Other Expenditures	
420-Capital Levy		Land and Improvements	
		Buildings and Improvements	
		Furniture and Equipment	
		Other Expenditures	

APPENDIX B (continued)

<u>Fund</u>	<u>Function/Subfunction</u>	<u>Object*</u>	<u>Staff FTE</u>
490-Other Capital Proj.		Land and Improvements	
		Buildings and Improvements	
		Other Expenditures	
110-ESEA Title I 120-ESEA Title I-Mig. 200-Johnson-O'Malley 200-ESEA Title VII-Biling. 240-270-Voc. Educ. 280-Indian Educ.-Title IV	100-Administration	Salaries-Cert.	X
		Employee Benefits-Cert.	
		Salaries-Class.	X
	200-Instruction	Employee Benefits-Class.	
		Other Expenditures	
		Salaries-Teacher	X
		Employee Benefits-Teacher	
		Salaries-Class.	X
	300-Instr. Support	Employee Benefits	
		Other Expenditures	
		Salaries-Cert.	X
		Employee Benefits-Cert.	
400 Operations	Salaries-Class.	X	
	Employee Benefits-Class.		
	Other Expenditures		
	Capital Outlay		
		Other Expenditures	

* Employee benefits have been allocated from Function 400 (Operations) to the appropriate functional areas to obtain a more accurate picture of expenditures on staff in each functional area.

APPENDIX C
Regular Instructional Program Areas*

- (A) Language Arts (X)
 - 1. English
 - 2. Composition
 - 3. Language
 - 4. Literature
 - 5. Reading
 - 6. Handwriting
 - 7. Spelling

- (B) Communication (X)
 - 1. Speech
 - 2. Debate
 - 3. Journalism
 - 4. Media

- (C) Mathematics (X)

- (D) Social Studies (X)
 - 1. History
 - 2. Government
 - 3. Geography
 - 4. Free Enterprise
 - 5. Economics
 - 6. Humanities
 - 7. Anthropology
 - 8. Sociology
 - 9. Civics
 - 10. Other

- (E) Science (X)
 - 1. Chemistry
 - 2. Biology
 - 3. Physics
 - 4. Astronomy
 - 5. Earth Science
 - 6. General Science
 - 7. Other

- (F) Foreign Language (X)

- (G) Business (Non-Voc. Ed.) (X)
 - 1. All business type courses not classified as Business and Office Education-Voc. Ed.

- (H) Home Economics (Non-Voc. Ed.) (X)
 - 1. All home economics courses not classified as Home Economics Consumer and Homemaking or Home Economics Occupational-Voc. Ed.

- (I) Industrial Arts (Non-Voc. Ed.)(X)
 - 1. All industrial arts type courses not classified as Technical or Trades and Industries-Voc. Ed.

APPENDIX C (continued)

- (J) Physical Education (X)
1. Physical Education
 2. Sports
 3. Dance
 4. Gymnastics
 5. Swimming
 6. Other

- (K) Music (X)
1. Music
 2. Band
 3. Chorus
 4. Orchestra
 5. Other

- (L) Art (X)
1. Art
 2. Crafts
 3. Photography
 4. Drawing
 5. Design
 6. Graphics
 7. Sculpture
 8. Other

- (M) Dramatic Arts (X)
1. Drama
 2. Acting
 3. Filmmaking

- (N) Vocational Education
1. Agriculture (X)
 2. Distributive Education (X)
 3. Health Occupations (X)
 4. Home Economics (Homemaking)
 5. Home Economics (Occupational Prep.)) (X)
 6. Business and Office Education (X)
 7. Trades and Industry (X)

- (O) Other Programs(X)**

* Generally, teacher staff and student enrollment hours were developed for the broad instructional programs marked with an (X). Exceptions include combining Music, Art, and Dramatic Art into a Fine Arts category and combining Home Economics and Industrial Arts for the elementary grades.

** Specifically identified as encountered; e.g., Driver Education, Junior ROTC, special district funded remedial programs.

APPENDIX D
 Allocation Method to Distribute General Fund
 Expenditures to Elementary and High School Shares

<u>Function</u>	<u>Allocation Method</u>
130-Business and Fiscal Services	Number of FTE staff in Elementary and High School
140-Education Services	Number of FTE teachers in Elementary and High School
1XX-Other Administration	Number of FTE staff in Elementary and High School
200-Instruction	<div style="border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black; padding: 5px;"> Certified salaries and benefits allocated by number of certified FTE staff in Elementary and High School Classified salaries and benefits allocated by number of classified FTE staff in Elementary and High School Other expended allocated by total FTE staff in Elementary and High School </div>
310-Principal's Office	
330-Guidance and Psych. Serv.	
350-Curriculum Services	
360-Library	
370-Interscholastic	
3XX-Other Instruction Support	
400-Operations	Information from district business manager

APPENDIX E
Expenditures to Special Education, Teacher Distribution Pool
and Student Distribution Pool

- I. General Fund Expenditures to Special Education
 - A. Function 100 (Administration) except subfunction 140 (Education Services)
 - 1. Establish General Fund and Special Education Fund share on the basis of total FTE staff charged against each fund.
 - 2. If the district direct charged less than this computed share to administration in the Special Education Fund, an allocation from the General Fund to Special Education was completed.
 - B. Function 400 (Operations)
 - 1. Establish General Fund and Special Education Fund share on the basis of total FTE teachers charged against each fund.
 - 2. Allocate Special Education share from the General Fund to the Special Education Fund.
- II. General Fund Expenditures Assigned to Teacher Distribution Pool
 - A. Function 140 Education Services
 - B. Function 1XX All Other Administration
 - C. Function 200 Instructional Salaries and Benefits
 - D. Function 310 Principal's Office
 - E. Function 350 Curriculum Services
 - F. Function 400 Operations
- III. General Fund Expenditures Assigned to Student Distribution Pool
 - A. Function 200 Instructional Expenditures Other Than Salaries
 - B. Function 330 Guidance and Psychological Services
 - C. Function 360 Library
 - D. Function 370 Interscholastics
 - E. Function 3XX Other Instructional Support

APPENDIX F
Allocation Method to Distribute Special Education Fund Expenditures
to Teacher Distribution Pool and on Other Bases

- I. Special Education Fund Expenditures to Teacher Distribution Pool
 - A. Function 100 Administration
 - B. Function 200 Instructional Salaries and Benefits
 - C. Function 400 Operations

- II. Special Education Fund Expenditures Allocated by Other Means
 - A. Function 200 Instructional expenditures other than salaries allocated directly to handicap categories
 - B. Function 330 Guidance and Psychological Services expenditures allocated directly to handicap categories
 - C. Function 3XX Other Instructional Support expenditures allocated directly to handicap categories

APPENDIX G
Specific Components of Expenditures per Student
and Sources of Variation in These Components Among Districts

I. General Fund (001)

A. Instruction

1. Component Expenditures

- a. Teacher compensation--includes teacher salaries, benefits, and payment for substitutes
- b. Aide compensation--includes teacher aide salaries and benefits
- c. Other instructional expenditures--includes supplies and materials and all other expenditures

2. Dollar amount of variation among districts attributable to specific characteristics

- a. Teacher compensation
 - (1) Student/teacher ratio
 - (2) Relative level of the district salary schedule
 - (3) Location mix of teachers on the salary schedule; i.e., proportion of teachers in the lower vs. higher portion of the schedule
- b. Aide compensation
 - (1) Student/aide ratio
 - (2) Average compensation for aides
- c. Other instructional expenditures--source of variation not identifiable

B. For The Following Functions:

Education and Curriculum Services

Other Administration

Principal's Office

Guidance and Psychological Services

Library

Interscholastics

Other Instructional Support

Operations and Maintenance of Plant, excluding utilities

Other Operations

APPENDIX G (continued)

1. Component Expenditures
 - a. Staff compensation--includes salaries and benefits
 - b. Other expenditures
2. Dollar amount of variation among districts attributable to specific characteristics
 - a. Staff compensation
 - (1) Student/staff ratio
 - (2) Average compensation for staff
 - b. Other expenditures--source of variation not identifiable

II. Special Education Fund (002)

A. Instruction

1. Component Expenditures
 - a. Teacher compensation--includes teacher salaries, benefits, and payment for substitutes
 - b. Aide compensation--includes teacher aide salaries and benefits
 - c. Other instructional expenditures--includes supplies and materials and all other expenditures
2. Dollar amount of variation among districts attributable to specific characteristics
 - a. Teacher compensation
 - (1) Student/teacher ratio
 - (2) Relative level of the district salary schedule
 - (3) Location mix of teachers on the salary schedule
 - b. Aide compensation
 - (1) Student/aide ratio
 - (2) Average compensation for aides
 - c. Other instructional expenditures--source of variation not identifiable

APPENDIX G (continued)

B. For The Following Functions:

Guidance and Psychological Services

Other Instructional Support

1. Component Expenditures

a. Staff compensation--includes salaries and benefits

b. Other expenditures

2. Dollar amount of variation among districts attributable to specific characteristics

a. Staff compensation

(1) Student/staff ratio

(2) Average compensation for staff

b. Other expenditure--source of variation not identifiable

C. For The Following Functions:

Administration

Operations

Establishing source of variation in expenditure per student will be somewhat indeterminate. Both the administrative and operative functions of the Special Education Fund have been increased by General Fund administration and operations expenditures allocated to Special Education. (See Appendix E for a discussion of these allocations.)

III. Analysis methods of the Transportation, Capital Outlay, Capital Levy, and Federal Funds have not yet been developed.

APPENDIX H

The general format for the Revenue Availability format is shown on H-1. The Assessed Valuation format is presented on H-2. The Property Tax format appears on H-3.

H - 1
REVENUE AVAILABILITY

<u>Fund/Year</u>	<u>State Aid</u> <u>Basic</u>	<u>Other</u>	<u>Federal</u> <u>Aid</u>	<u>Levy</u>	<u>Other</u>	<u>Total</u>
<u>General Fund</u>						
1977-78 (Actual)	XXX	XXX	XXX	XXX	XXX	XXX
1977-78 (Proposed)	XXX	XXX	XXX	XXX	XXX	XXX
1980-81 (Projected)	XXX	XXX	XXX	XXX	XXX	XXX
<u>Special Education</u>						
1977-78 (Actual)	XXX	XXX	XXX	XXX	XXX	XXX
1977-78 (Adjusted)	XXX	XXX	XXX	XXX	XXX	XXX
1977-78 (Proposed)	XXX	XXX	XXX	XXX	XXX	XXX
1980-81 (Projected)	XXX	XXX	XXX	XXX	XXX	XXX
Other funds individually, as discussed in the section on simulator capabilities						
<u>Total Funds</u>						
1977-78 (Actual)	XXX	XXX	XXX	XXX	XXX	XXX
1977-78 (Adjusted)	XXX	XXX	XXX	XXX	XXX	XXX
1977-78 (Proposed)	XXX	XXX	XXX	XXX	XXX	XXX
1980-81 (Projected)	XXX	XXX	XXX	XXX	XXX	XXX

H - 2
 ASSESSED VALUATION

<u>Property Class</u>	<u>1977-78 Assessed Valuation</u>	<u>1977-78 Modified Assessed Valuation</u>	<u>1977-78 Adjusted Assessed Valuation</u>
(1) Class Name (e.g., Residential)	XXX	XXX	XXX
(2) Class Name	XXX	XXX	XXX
(3) Class Name	XXX	XXX	XXX
(4) Class Name	XXX	XXX	XXX
(5) Class Name	XXX	XXX	XXX
(6) Class Name	XXX	XXX	XXX
(7) Class Name	XXX	XXX	XXX
(8) Class Name	XXX	XXX	XXX
(9) Class Name	XXX	XXX	XXX
(10) Class Name	XXX	XXX	XXX
Total	XXX	XXX	XXX

