REPORT OF THE
JOINT LEGISLATIVE
AUDIT AND REVIEW COMMISSION ON

Funding the Standards of Quality Part 1: Assessing SOQ Costs

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

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PREFACE

This report is the first in a series on elementary and secondary education in Virginia. The review of public education was scheduled by Senate Joint Resolution 35 of the 1982 General Assembly, as required by the Legislative Program Review and Evaluation Act. The analysis of the funding of the Standards of Quality (SOQ) was scheduled as the first study in the series in response to the findings of the House Joint Resolution 105 Subcommittee. The subcommittee expressed concern about the State's funding of the standards, and recommended that JLARC assess the method for estimating SOQ costs.

Our analysis of the funding of the Standards of Quality is to be reported in two phases. This first report deals only with the costs of implementing the existing standards, and does not address concerns related to the equity of distribution of State assistance to the school divisions. Our analysis of the distribution of SOQ funds is to be reported to the General Assembly in 1987.

Since the adoption of the Standards of Quality in 1972, questions have been raised about the methods for calculating SOQ costs and about the adequacy of State funding in support of the standards. Our analysis shows that the current methods for estimating costs overestimate the costs for both instructional personnel and support. However, consistent with the findings of our previous report, State Mandates on Local Governments and Local Financial Resources, we found that the State needs to increase funding for the standards.

To address the inadequacies of the current SOQ cost methods, we have proposed alternative statistical and computational techniques. The recommended approach is based on an analysis of the prevailing costs in the school divisions across the Commonwealth. Using the new approach, the total cost of the Standards of Quality for the 1986-1988 biennium is estimated to be $5.162 billion. Of this amount, $3.33 billion is to be funded from State funds, and $1.83 billion must be funded by local governments. The increase in State general fund appropriations necessary in the next biennium to provide for full funding of the State's share is $161.4 million above FY 1986 level funding.

On behalf of the Commission staff, I wish to acknowledge the special contributions of Ray D. Pethtel, the former Director, in preparation of this report. I would also like to express our appreciation for the cooperation and assistance extended to us by the staffs of the Senate Finance Committee, the House Appropriations Committee, the Department of Education, and the Department of Planning and Budget.

Philip A. Leone
Director

February 7, 1986

FUNDING THE STANDARDS OF QUALITY

Part 1: Assessing SOQ Costs

February 1986

Joint Legislative Audit and Review Commission

Since 1971, the State Constitution has required the Board of Education to prescribe standards of educational quality for local school divisions. The legislature may revise these Standards of Quality (SOQ) and enact them into law. The Standards of Quality represent the minimum requirements for a high quality program in all school divisions across the Commonwealth.

Study Overview

The Standards of Quality establish the "foundation" program for public education. They do not, however, prescribe or limit the staffing, programs, expenditures, or other requirements which may be necessary or appropriate for the entire system of public instruction.

In order for the General Assembly to carry out its constitutional responsibilities, it must have an accurate estimate of the cost to provide for the programs required by the standards. The assessment of SOQ costs for this study shows that the total costs are $5.16 billion for FY 1987 and FY 1988.

The estimate of SOQ costs is the minimum necessary to provide for the programs required by the standards. That is, the estimate reflects the cost of providing the "foundation" program only. Most school divisions provide educational programs beyond those required by the SOQ; expenditures for these activities are not included in the calculation of SOQ costs. Thus, the JLARC staff estimate should not be viewed as a recommendation on how much the General Assembly should appropriate for direct aid to public education.

A JLARC REPORT SUMMARY

Using the existing structure for the apportionment of costs between the State and the local governments, the State share of the total cost of $5.16 billion is $3.33 billion, and the local share is $1.83 billion. To achieve full funding of the State share as it is currently defined, an increase of at least $161.4 million in general fund appropriations is necessary in the 1986-88 biennium.

The SOQ cost estimates of the study were made within the constraints of the current framework for defining and funding the standards. The study dealt with existing standards, and did not address the question of what the standards "should" be. The study adopted the current legislative definition of SOQ costs as operating costs, and not capital outlay or debt service costs. In addition, the study did not deal with issues of equity or distribution. Unique circumstances such as higher cost of living were minimized in the calculation because the "foundation" costs represent a base. These issues will be systematically reviewed in the second phase of the study. The current requirement that a major portion of the funding for school divisions be based on a single "per

pupil" amount was not modified.

The JLARC staff methodology for estimating SOQ costs involved two major parts. First, because quantified standards exist for instructional staffing requirements, the standards were applied to school enrollment data to calculate positions necessary in each school division. Second, in areas where quantified standards were not available, an approach was developed to identify the "prevailing costs" across school divisions for providing programs to meet the Standards of Quality.

JLARC staff used the school divisions to calculate SOQ costs because of the purpose and the existing framework for the standards. The Constitution, statutes, and Board of Education mandates are all clear on the point that while the Standards of Quality apply statewide, they are to be implemented by each of the 135 divisions operating schools in Virginia. For example, the Constitution states that "Standards of Quality for the several school divisions" shall be determined and prescribed. In all 12 of the areas covered by the Standards of Quality, the standards state that "each school division" shall meet certain requirements. The *Code* also states that the Board of Education shall have the authority to "seek school division compliance" with the standards.

Analysis of Instructional Positions

The Standards of Quality include quantified standards defining minimum staffing levels for instructional personnel. In the past, the number of positions required by the standards was calculated by dividing statewide pupil enrollment by quantified standards. Based on this approach, the number of instructional positions funded in the Appropriation Act is sufficient to provide for the requirements of the various instructional staffing standards.

However, a limitation of the statewide calculation is that all classrooms cannot be filled to the maximum size permitted by the standards. Due to the configuration of schools and the distribution of the school-age population, it is not always feasible to provide for classes with pupil to teacher ratios exactly as specified by the standards. In many instances, pupil to teacher ratios lower than those required by the standards result from circumstances difficult to control by the school divisions. A statewide analysis is insensitive to these local circumstances.

The JLARC study approach used to calculate required instructional positions, therefore, applied the standards to pupil membership data by grade for each of 1,695 schools in Virginia. The purpose of this analysis was to test the relationship between the number of instructional positions required in the Appropriation Act, and the number of instructional positions that are effectively required by the cumulative impact of all other standards.

The result of this analysis was that the personnel standards, excluding those in the Appropriation Act, require 55.4 positions per 1,000 pupils for basic, special, and vocational education. Thus, the 57 positions per 1,000 pupils currently funded by the legislature for basic, special, and vocational education are clearly sufficient to provide for the cumulative impact of the standards. Because the school divisions must meet the higher staffing requirements of the Appropriation Act, JLARC staff used 57 positions per 1,000 pupils in calculating the cost of basic, special, and vocational education.

In addition to the 57 positions required by the Appropriation Act, the study estimated that an additional 1.2 positions per 1,000 pupils are required for remedial education, that 1.1 positions per 1,000 pupils are required for gifted and talented education, and that 0.3 positions per 1,000 pupils are required for special education aides. The total instructional staffing used for the cost estimate was 59.5 positions per 1,000 pupils in average daily membership.

Analysis of Prevailing Costs

In contrast to instructional staffing requirements, quantified standards are not available for instructional salaries or costs for support services such as administration, health, transportation, and maintenance. In order to calculate the total costs of the SOQ, it is necessary to identify the costs of complying with these unquantified standards.

In lieu of quantified standards upon which to base estimates of costs, the Department of Education has used a statewide average to estimate SOQ costs. The General Assembly has never funded fully the

amount of this estimate, however, and has raised questions about what cost is reasonable to use as a foundation for school division expenditure levels.

One approach which could be used would be to estimate a "minimum reasonable" cost, or the lowest cost level at which a significant number of divisions have been able to provide programs which meet the SOQ. This approach was rejected for use in this study because objective criteria for determining the point that represents a "minimum reasonable" cost cannot be developed.

Instead, the study approach was to define SOQ costs as "prevailing costs," or the expenditure levels around which most school divisions tend to cluster. This approach avoids the problem of defining the point which represents a "reasonable minimum," by basing SOQ cost estimates on the expenditure levels which most divisions find necessary to meet the standards.

Once the concept of prevailing costs was developed, it was necessary to select a statistic which would accurately represent the central location (or amount) around which the expenditure levels clustered. The mean and the median are two of the most common statistics used to represent central tendency. However, depending on the attributes of the data, these are not always the most appropriate statistics.

Because school expenditure data tends to be skewed, JLARC staff tested the use of 15 different statistics for representing the central tendency of different types of distributions. A linear weighted average with a weight of five for the median value was selected as the result of testing the different statistics with a variety of different cost distributions.

The linear weighted average includes all values in the calculation, yet weights central values more than extreme values. It was considered the best statistic for calculating prevailing costs for the distributions reviewed, because it was influenced by all the data, but was not unduly influenced by the extremes.

For most instructional salary and support cost distributions, the result of applying the linear weighted average was a cost calculation less than the statewide average, but greater than the costs incurred by the median, or middle-cost, school division. The impact of using prevailing division costs, rather than statewide average costs, accounts for most of the difference between the JLARC and Department of Education estimates of the costs of fully funding the Standards of Quality.

Fully Funding the State Share

Based on the JLARC estimate of total SOQ costs of $5,162,803,388, the State share is $3,330,931,638 and the local share is $1,831,871,750 for the 1986-1988 biennium. The State thus provides 64.5 percent of the funds necessary to provide for the Standards of Quality.

JLARC's total SOQ cost estimate, when applied under the current distribution framework, leads to the following conclusions about full funding of the State share:

- $472.0 million in additional State funds from all sources will be required for the 1986-1988 biennium when compared to total funding for the prior biennium.

- $273.4 million in additional State funds from all sources will be required in the 1986-1988 biennium when compared to the budget target (FY 1986 funding times two). Of this amount, $161.4 million in additional State general funds will be required for the 1986-1988 biennium.

The $161.4 million substitutes for the $419 million in additional funds necessary to achieve full funding estimated by the Department of Education. A complete summary of SOQ costs and State and local shares for each program is included in Chapter VII of the report.

Recommendation (1): In order to fully fund the State's share of the foundation program required by the Standards of Quality, the General Assembly should increase general fund appropriations for SOQ programs by an amount not less than $161,428,898 for the 1986-1988 biennium.

While providing an estimate of SOQ costs for the 1986-88 biennium was an

important objective for this study, an additional objective was to produce a methodology that could be used to estimate SOQ costs on an annual basis.

Recommendation (2): The Department of Education should use the methodology described in this report to estimate future SOQ costs. The Department should ensure that the most recent financial and statistical data is used to update the estimates each year. Financial and statistical data of the Annual School Report should be validated by the Department. School divisions should be required to cross-check and verify the financial and statistical data they submit to ensure that it is accurate.

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I. INTRODUCTION

This study is the first in a series on elementary and secondary education, as scheduled by Senate Joint Resolution 35 of the 1982 Session of the General Assembly. An assessment of the costs of the Virginia Standards of Quality (SOQ) was selected as the first study in the series because "full funding" has been an important legislative issue in the area of elementary and secondary education.

The JLARC staff analysis included a review of the adequacy of the current approach used by the Department of Education (DOE) to estimate SOQ costs. The approach was established by the Task Force on Financing the SOQ in 1972-73, and has not been critically reassessed since that time.

Over the 12 years since the approach was developed, new data sources and improved analytical techniques have offered opportunities to apply a more thorough and sophisticated approach to estimating costs. In addition, the standards have been modified on several occasions since 1972. As a result, JLARC staff found the current approach to be inadequate.

The JLARC staff developed an alternative approach to calculating SOQ costs which utilizes the new techniques and recognizes the impact of changes in the standards. The method developed can be used to reassess total SOQ costs annually. In addition, the JLARC approach was structured so that the State and local shares of the costs can be calculated based on different policy judgements of the General Assembly.

The Standards of Quality

Since 1971, the *Constitution of Virginia* has required the Board of Education to determine and prescribe standards of educational quality for local school divisions. The legislature may revise and enact the standards into law. The standards represent minimum requirements for school divisions to provide a program of high quality for public elementary and secondary education. The Standards of Quality are a means whereby the General Assembly can fulfill its mandate to "ensure that an educational program of high quality is established and continually maintained." (Article VIII, Section 1, *Constitution of Virginia*)

The Standards of Quality establish the "foundation" program for public education. They do not, however, prescribe the staffing, programs, expenditures, or other requirements which may be necessary or appropriate for the entire system of public instruction. The current Standards of Quality cover 12 major areas. These areas are summarized in Exhibit 1. The full listing of actual procedures which must be implemented in order to fully comply with the SOQ are found in the following documents: the *Code of Virginia,* 1984; the Bylaws and Regulations of the Board of Education, 1980; the Standards for Accrediting Schools adopted by the Board of Education, July 1983; and the Appropriations Act 1984-86.

Exhibit 1

SUMMARY OF CURRENT STANDARDS

1. *Basic Skills* - School divisions must design programs that enable students to master the basic skills in math and verbal language.

2. *Testing* - School divisions, through testing, must assess student progress in attaining basic skills.

3. *Career Preparation* - School divisions must offer career guidance and vocational preparation programs for students.

4. *Education of Handicapped Students* - School divisions must provide a free and appropriate education to the handicapped between the ages of two and 21 years.

5. *Education of Gifted and Talented Students* - School divisions must identify gifted and talented students and provide them with differentiated instructional opportunities.

6. *Alternative Education* - School divisions must offer educational alternatives for students whose needs are not met in the traditional education program.

7. *Responsible Student Conduct* - School divisions must have standards for student conduct and attendance.

8. *Instructional Personnel* - School divisions must employ 57 instructional personnel for each 1,000 students in average daily membership. They must also employ no less than: one teacher for every 25 students in grades K-6 on a division-wide basis; one teacher for every 30 students in classes for grades K-3; one teacher for every 35 students in classes for grades 4-7; and one teacher for every 25 students in each middle and secondary school. A teacher's aide must be employed if the number of students in kindergarten exceeds 25, and additional instructional personnel must be employed to provide remedial instruction for low-achieving students.

9. *Staff Preparation and Development* - School divisions must employ properly certified and endorsed instructional personnel, and provide a program of professional development for teachers and administrators.

10. *Accreditation* - School divisions must file accreditation reports and meet accreditation standards adopted by the Board of Education.

11. *Planning and Public Involvement* - School divisions must involve staff and the community in revising a long-range school improvement plan.

12. *Policy Manual* - School divisions must maintain a policy manual that includes policies or procedures covering certain specified areas.

Since their inception, the Standards of Quality have been frequently revised. For example, class size and pupil to teacher ratio requirements have been changed several times within the instructional personnel standard. Also, the standard covering the minimum number of instructors required per 1,000 pupils in average daily membership (ADM) was recently changed.

It is also important to note that the different standards do not all require the same commitment of resources. Standards which have extensive program or personnel requirements require more resources than standards related to school policy and management practices. Nonetheless, estimates of costs of the individual standards are difficult to make, because data on the expenditures made to provide for each standard are not available. School divisions do not have program budgeting.

Current Approach to Estimating SOQ Costs

The fact that data relating expenditures to the specific standards is not available raises the issue of how the costs of the standards are estimated. The Task Force on Financing the SOQ recommended in 1972 and 1973 that standards requiring direct financial support be clearly identified, and that where possible, standards should be written to facilitate cost analysis. With data available at the time, the Task Force identified two types of operating costs as SOQ costs: instructional personnel costs and support costs.

Task Force Estimation of Costs. The SOQ Task Force issued reports in December of 1972 and July of 1973. In the first report, the task force estimated total SOQ costs of $766 per-pupil. This amount was based on estimating the costs of (instructional) personnel, performance objectives, and support services. Personnel and performance objective costs were calculated by applying specific, quantified standards. Support costs were defined as other operating costs not specifically covered by personnel or performance objective standards, but "necessary" for the operation of the school systems.

The $766 per-pupil estimate was based on 43.1 basic personnel per 1,000 ADM required by the existing standards, and an additional 4.1 positions per 1,000 ADM required for special and vocational education programs. The number of personnel required was calculated by type of position, and the costs were determined by multiplying the number of positions for each type by the average salary for each type of position. The $766 per pupil estimate also included $235 per pupil for support costs, which was estimated by dividing actual statewide expenditures by pupils in ADM.

The Task Force addressed the issue of how to fund the estimated SOQ cost of $766 per pupil in its first report. The report noted that State fringe benefit payments, and other State and federal categorical payments (funding which is earmarked for specific programs) contributed a total of $128 per pupil toward those costs which had been identified as SOQ costs. The task force subtracted this amount from the $766 per pupil to calculate what was termed an SOQ "foundation cost" of $638 per pupil. The foundation cost was to be provided from State general funds and local resources.

The Task Force also made several recommendations in the first report. One of these recommendations was that the Board of Education

consider setting a personnel standard for the 1974-1976 biennium at 50 professional staff members per 1,000 pupils in ADM.

In July of 1973 the Task Force issued its second report, which was intended to further refine the concepts to be used in the long-term funding of the SOQ. The report suggested that an instructional personnel standard of 50 positions per 1,000 students in ADM be adopted. However, the Task Force indicated that SOQ costs could be appropriately estimated by a variety of ratios of instructors to students. The report illustrated the approach by showing the costs for personnel ratios ranging from 48 to 52 instructors per pupil.

In the second Task Force report, the methodology for estimating total SOQ costs was to determine the number of personnel needed (according to whatever overall instructional personnel ratio was adopted), multiply that number times an average instructional personnel salary, and then add the other operational costs (actual support expenditures). Thus, the methodology contained in the second report was different from that used in the 1972 report. The concept of estimating SOQ basic costs based on the number of positions by type required by individual standards, and upon the average salaries by type of position, was not included in the second report.

Two additional changes in the second report should be noted. The costs for activities previously categorized as performance objectives were included in support costs. Also, the second report referred to SOQ foundation costs as "basic costs," because the State share of funding for those costs would come from State basic aid.

DOE Estimation of Costs. The methodology currently used by the Department of Education to estimate SOQ costs is based on the general approach outlined in the second Task Force report. For example, DOE calculates the cost of: (1) SOQ instructional personnel, using legislatively adopted ratios of instructors to pupils, and the actual average statewide salary for all instructional positions, and (2) support services, based upon actual expenditures (minus certain State and local revenues).

Legislative Funding of Costs

The General Assembly determines how much of the SOQ costs estimated by the department must actually be supported from State and local funds. The *Constitution of Virginia* states that:

> the General Assembly shall determine the manner in which funds are to be provided for the cost of maintaining an educational program meeting the prescribed standards of quality, and shall provide for the apportionment of the cost of such program between the Commonwealth and the local units of government comprising such school divisions.

Based on the estimates of SOQ costs made by DOE, the State appears to have provided insufficient funds for its share of the costs of the standards. The perception that the standards have not been fully funded by the legislature has made "full-funding" an important issue of concern to the General Assembly. To some extent, the reluctance of the legislature to fund the full amount of the department's estimate of SOQ costs has been due to a lack

of sufficient revenues. In addition, there has been great concern that the department's method for estimating costs has not been independently assessed since the time of the original Task Force.

Study Scope

The purpose of this study is to provide a current, systematic, and reliable approach to calculate the total costs of implementing the Standards of Quality. This study is an assessment of SOQ costs independent of the Department of Education. In conducting the assessment, certain assumptions were made to define the study scope.

(1) The study focuses on total SOQ costs.

The study approach was designed to estimate all costs related to the standards, regardless of how funded. Once total costs are estimated, then State and local contributions can be assessed.

(2) The study estimates the costs that school divisions incur in implementing existing Standards of Quality. Therefore, the study does not address the question of what the Standards of Quality "should" be.

The State *Constitution* requires that the Board of Education determine and prescribe standards of educational quality, and provides that the legislature may revise and enact the standards into law. This study, therefore, dealt with issues concerning the method for estimating the costs of the current standards. This study did not consider issues involving the need for, or the adequacy of the standards. Thus, the analysis did not use the staff's judgement, the experiences of other states, or an educational literature review to substitute for current standards.

(3) The study estimates instructional personnel and support costs. It was not designed to assess the costs attributable to each of the 12 specific areas covered by the Standards of Quality.

The standards cover 12 specific areas. This study does not assess the costs of these individual areas because expenditure data is not collected in a form that permits such an analysis.

(4) The study focuses on what it actually costs school divisions to implement their programs, rather than on what the standards "should" cost.

This study was not one of "needs," or of the appropriateness of local decisions about how schools should be organized and operated. The analysis instead represented an effort to answer the question of what "is" the cost for educational programs that meet the standards, as localities have implemented them.

(5) Capital costs were not included in SOQ cost estimates.

Capital outlay and debt service costs appear to fit into SOQ costs conceptually. Capital costs are involved in providing for basic educational

programs. Furthermore, a case can be made that SOQ requirements such as caps placed on class sizes may directly contribute to capital outlay needs.

Nonetheless, this study was not designed to review infrastructure costs. Annual operating costs have been the central SOQ funding concern. From the time of the SOQ Task Force, estimates of SOQ costs have been based upon an assumption that only operating costs are part of SOQ costs. The Appropriation Act defines the Standards of Quality as "operations standards" for kindergarten through grade 12, and refers to "basic operating costs." Also, the validation of capital outlay expenditures and the linkage of those expenditures to the SOQ alone could justify a study.

(6) The study does not address equity or distribution issues.

This study represents the first phase of JLARC's work in the issue area of educational costs and funding. The methods and approach for this phase of the study were bound by certain constraints. The analysis was specifically designed to have the least possible effect on the distribution of funds for current programs. The JLARC staff maintained the use of a single per-pupil cost and used the existing composite index for funding basic aid, for example. A second research phase addressing distribution issues is to be carried out during 1986 and 1987.

Study Approach

The JLARC approach to estimating SOQ costs utilized two major concepts: minimum instructional staffing requirements, and "prevailing" costs.

Minimum staffing requirements for instructional personnel can be calculated because the Standards of Quality include a number of quantified standards defining minimum staffing levels for instructional personnel. The codified SOQ, the Standards of Accreditation, Board of Education regulations, and Appropriation Acts all contain quantified instructional personnel standards. The DOE approach to estimating SOQ costs uses Appropriation Act requirements alone, and the department has not tested the relationship between these requirements and the other elements of the SOQ. JLARC's approach was to test the relationship between the various quantified standards pertaining to instructional personnel. This approach required the application of the quantified standards to pupil enrollment data at the grade, school, and division level.

On the other hand, there are no quantified standards for salary levels and the support costs necessary to provide the required program. For example, requirements from the Standards of Accreditation for operation and maintenance simply state that "school plant and grounds shall be kept safe and clean," and that "custodial services shall be available as necessary for health and safety."

In the absence of quantified standards, JLARC's approach to estimating SOQ salary costs and support costs was to calculate the costs which prevail in the school divisions of the Commonwealth. Prevailing costs were defined as those levels around which school division expenditures tend to

cluster. The concept of "prevailing costs" has its origin in a 1973 Attorney General report which states that SOQ cost estimates should relate to expenses prevailing in the Commonwealth. This opinion was rendered in the context that the use of a minimum teacher salary scale which was exceeded by every school division in the State would not reflect current or prevailing practices.

Five primary research activities were implemented to help assess the costs of the Standards of Quality. These activities included: (1) an application of quantified instructional standards to data on pupil membership, (2) an analysis of the variation in the average salary levels offered by school divisions, (3) an analysis of the costs for educational employee fringe benefit plans, (4) an analysis of the variation in the support costs incurred per pupil in the various school divisions, and (5) a review of DOE administrative assessment reports. A brief summary of the technical documentation for these research activities is provided in Appendix A.

Report Organization

The first chapter of this report has provided background information describing what the Standards of Quality cover, and how costs for the standards have been estimated and funded. The chapter also reviewed the general approach for the study.

Chapter II discusses the basic framework of the study methodology in some detail. An understanding of the approach used to estimate the total costs is critical to an understanding of the study findings.

Chapters III, IV, V, and VI discuss study findings relating to the various components of an estimate of total SOQ costs: instructional staffing levels, instructional salaries, fringe benefit costs and support costs. Finally, Chapter VII relates study findings concerning total SOQ costs to questions about the State share of those costs.

II. ANALYSIS OF PREVAILING COSTS

The basic method for calculating SOQ costs involved two major parts. Where quantified standards exist (instructional staffing requirements), the standards were mathematically applied to calculate the positions necessary. Where quantified standards are not available (such as salary levels and support costs), costs were estimated by calculating the costs which generally prevail in the school divisions.

This chapter focuses on estimating costs in areas where there are no quantified standards. The problem to be solved was how to identify the costs of these standards. The solution required a careful consideration of the purpose of the standards, and the selection of a statistic which would best represent the costs incurred by school divisions as they provide programs to meet the standards.

Prevailing School Division Costs

The "prevailing" cost for a given educational cost category was defined as the expenditure level around which most of the school divisions in the State tend to cluster. This concept was used in the study to calculate SOQ costs in areas where quantified standards are not available.

There were several reasons why the prevailing costs of the school divisions were considered most appropriate to represent SOQ costs. These reasons relate to the purpose and the existing framework for the Standards of Quality:

(1) All school divisions are required to meet the standards.

(2) DOE assessments indicate school divisions are generally meeting the standards, so expenditure data from the school divisions reflect at least those costs necessary to meet the standards.

(3) SOQ costs reflect the foundation costs below which school divisions should not fall.

School Divisions Are Required To Meet SOQ. The Standards of Quality represent a minimum program of high quality. No school division is to provide less than this program.

The *Constitution*, statutes, and Board of Education mandates are all clear on the point that while the Standards of Quality apply statewide, they are to be implemented by each of the 135 divisions operating schools in Virginia. For example, the Constitution of Virginia, as revised in 1971, states that "Standards of Quality for the several school divisions" shall be determined and prescribed. The Constitution also indicates that the Board of Education should

"divide the Commonwealth into school divisions of such geographical area and school-age population as will promote the realization of the prescribed standards of quality," and further states that the Board "shall periodically review the adequacy of existing school divisions for this purpose."

In all 12 of the areas covered by the Standards of Quality (Exhibit 1), the standards state that "each school division" shall meet certain requirements. The *Code* also states that the Board of Education shall have the authority to "seek school division compliance" with the standards.

The Standards of Accreditation (SOA) adopted by the Board of Education also reference the mandate upon the several school divisions. For example, the SOA state that the second major function of the accrediting standards is to meet the requirements of the Standards of Quality by providing that "each school division shall maintain schools which meet accrediting standards adopted by the Board of Education."

DOE Assessments Indicate Divisions Meet SOQ. The Department of Education conducts administrative reviews in the school divisions to determine compliance with the Standards of Quality. A sample of approximately 20 percent of the school divisions is reviewed each year. The results of these reviews have indicated general compliance with the standards. For example, the review teams found compliance with 93 percent of SOQ items in school year 1980-81, 96 percent in 1981-82, 97 percent in 1982-83, 98 percent in 1983-84, and 99 percent in 1984-85.

The expenditure data base for the JLARC study was the most recent data available (FY 1984). At the time of this study, the standards had been in effect for many years, and the DOE reviews indicated general compliance with the standards. Thus, the expenditures were considered to be at least the minimum levels necessary to meet the standards.

Two caveats to this statement are necessary. First, it should be recognized that for some school divisions, the expenditures could reflect costs above the standards due to inefficiencies, educational needs not addressed by the standards, or local aspiration to do more than the standards require. Second, it should also be recognized that in some categories, a few school divisions may have deficiencies because their expenditures are insufficient to meet the standards.

SOQ Costs Represent Foundation Costs. SOQ costs represent foundation costs below which school divisions should not fall. The costs should relate to the expenditure levels that are required in most school divisions to provide for a minimum program of high quality. The premise is that if most school divisions fall significantly below that level of effort, they will have difficulty in meeting the standards.

Since the inception of the standards, the State and the local governments have shared in funding the costs of the standards. The Constitution gives the General Assembly the responsibility for determining how the standards should be funded.

The current structure is designed so that a major portion of SOQ funding is based on a single per-pupil amount. This per-pupil amount is to be provided in school divisions from State funds and from "required local expenditures." Appropriation Acts have required that "no locality may maintain a program" at less than 95 percent of the established per-pupil amount, and that a locality must determine that it can meet the standards at the lower cost figure before it is allowed the 5 percent reduction in effort.

This structure recognizes SOQ costs as the costs below which school divisions should not fall. The Task Force recommended that the statewide average be used to set the per-pupil amount; the General Assembly has never funded that cost level.

As a consequence, a key issue is what cost is reasonable to use as a foundation for division expenditure levels. One way to assess this question is to examine the actual variation in division expenditure levels. The variation can be examined for various cost categories, using data from a recent year when department reviews indicate that divisions were generally meeting the SOQ.

In order to review the variation, it is necessary to apply certain criteria to determine a foundation cost. One concept that has been articulated is a "minimum reasonable" cost. Many different approaches could possibly be used in an effort to utilize the "minimum reasonable" cost concept. A member of the Task Force on Financing the SOQ, for example, has stated: "We have never tried to reach an ultimate. We have always said that this cost is the minimum reasonable cost." This member of the Task Force has related the concept of "ultimate" costs to the highest expenditure level of any school division, and the concept of "minimum reasonable" to the statewide average.

Comparisons of where the various school divisions fall with respect to the established standards, and established SOQ costs, have been utilized in opinions rendered by the Attorney General's office. In a response to the SOQ Task Force, the Attorney General indicated that the costs established for the standards must be "realistic in relation to current educational practice." When asked what constituted "realistic current practice", the Attorney General responded that the definition was properly a job for educators, but indicated that a program falling within a lower quartile on a ranking of school divisions by program quality would not be acceptable. A 1973 Attorney General report indicated that a minimum teacher salary scale exceeded by every school division in the State did "not reflect current educational practices in the Commonwealth," and that the General Assembly should rather take into account the practices of the school divisions.

The problem is that objective criteria for determining a cutoff point that defines the "minimum reasonable" cost cannot be developed. Additionally, the limitations of using a statewide average cost in this context are clear. There is no reason to assume that the statewide average reflects a minimum reasonable level. In fact, the use of an average to define a foundation that should be generally met by all school divisions is not a sound practice. The average would be a continually upward-moving target. If school divisions are generally required to expend the statewide average, the end result is to

require a foundation cost in all divisions that may be necessary in only a few divisions. The foundation cost would be strongly influenced by a few locations with the highest expenditures; and the high expenditures of those divisions may reflect factors such as local aspiration, inefficiency, or unique circumstances occurring in just those divisions.

The JLARC approach was to define SOQ costs as prevailing costs, or the expenditure levels around which most school divisions tend to cluster. This approach avoids the problem of defining the point which represents the "reasonable minimum."

Selecting a Statistic to Estimate Prevailing Costs

When analyzing data, there is often a need to represent the central, or most representative, value of a distribution. If the data is distributed normally or symmetrically with respect to the mean, then the selection of a statistic is relatively simple: an arithmetic mean is appropriate. In fact, the arithmetic mean is expected to be equal to other statistics representing central tendency, such as the median.

However, some data are skewed, with extreme values located on the high or low ends. For these data, other statistics using resistant techniques that accomodate the extreme values (the outliers), are useful to estimate the most representative values of the distributions.

The Department of Education presented a funding proposal in 1981 that was based on a recognition that the cost data in the Commonwealth were skewed. The department also recognized the limitations of the use of an average to estimate costs in this case, remarking that "the statewide 'average' does not represent well the variations within the state." The department noted that for 1979-1980 data, "approximately 45 school divisions were represented reasonably well by the statewide average, but nearly two-thirds of them were not."

In working with the most recent educational data available (expenditure data for FY 1984), JLARC found that the attributes of the data had not changed. The underlying expenditure data were still skewed.

Therefore, JLARC staff examined the use of several different methods for representing central tendency. A problem in this examination was that while studies and other theoretical articles have developed useful methods for representing central tendency, a framework and method has not been presented for the practitioner to apply in making a selection. Unfortunately this gap has often resulted in the continued use of the mean or median where other statistics might have more desirable properties.

One way to conceptualize the choice of a statistic representing central tendency is as a trade-off between sensitivity to the data, and the stability of the statistic. When the statistic is sensitive to the data, it is influenced by extreme values and shifts as values become more extreme or as extreme values are added. Stability of the statistic means that the statistic is

not responsive to the extreme values. A "good" statistic is one which is influenced by all the data, but is not so influenced by the extremes that it no longer represents most of the data points.

The mean and the median can be used to illustrate the sensitivity and stability trade-off. The mean is sensitive to extreme values, because: (1) the mean sums all the values and divides by the number of observations, such that (2) the extreme values, by the very magnitude of their difference from most values, have a greater impact on the calculation. For example, a very high-income individual in a room full of individuals with low incomes could result in a mean calculation of a high level of income for those in the room. The mean income for the room is very sensitive to the presence of that one individual; it is also very unstable because it depends on the presence of that individual.

On the other hand, a median is very insensitive to extreme values, because the median is always the value associated with the middle observation. Thus, in the example, a median would be a very insensitive and stable estimate, because the income of the individual at the middle of the income distribution of those in the room would not be strongly affected by the presence or absence of the one wealthy individual.

JLARC staff considered 15 different statistics of central tendency. (A listing and an explanation of each of the statistics is available on request in a technical paper supplementing this report). The purpose was to select a statistic that would consistently reflect the prevailing costs of the school divisions. The methodology to implement this concept involved the trade-off between sensitivity and stability. The mean and the median were among the statistics considered, and generally defined the extremes of this trade-off. Six instructional salary distributions and eight support cost distributions were used as a test database.

Sensitivity was examined by calculating the root mean square error and absolute error between each statistic and each of the actual values of the respective data. Low error on both measures indicated that the statistic achieved a certain balance between the properties of sensitivity and stability. In the JLARC analysis, the statistic that most consistently had a low error across all the distributions was a linear weighted average with a weight of five on the center value.

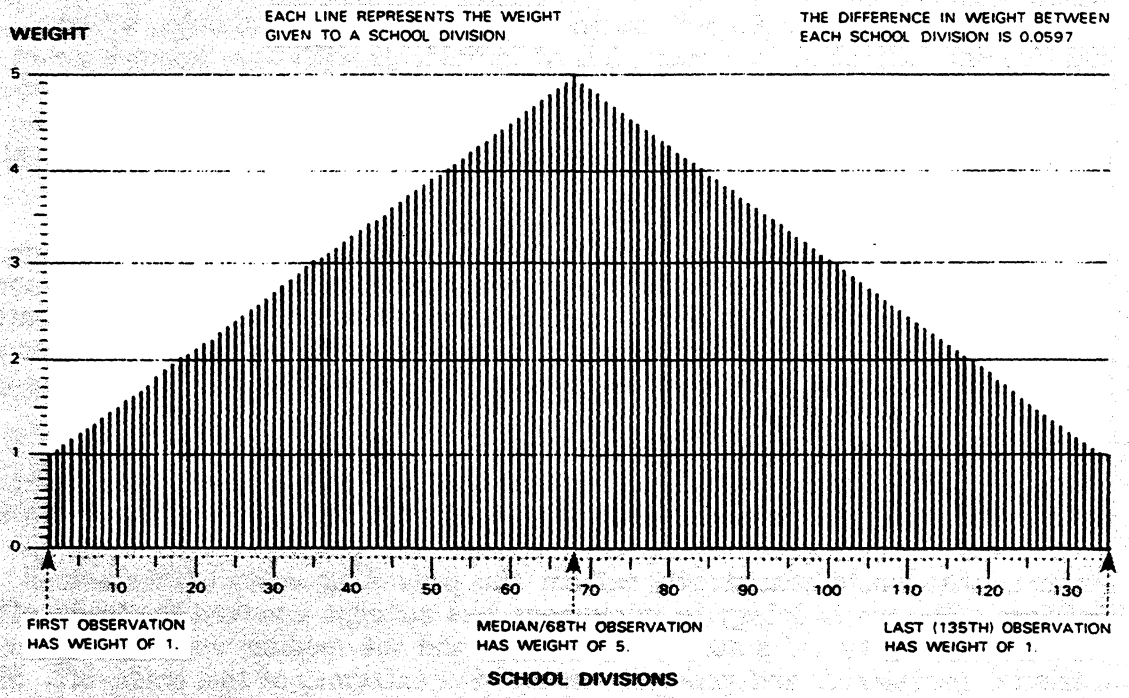
For this statistic, the data is ordered from high to low. The lowest and highest values receive a weight of one. The weights are then incrementally increased from both extremes, until the center value (the median) receives a weight of five. The weights are multiplied times the values, and an average is calculated.

Figure 1 graphically illustrates the weighting component of this calculation. Each line represents the weight given to a school division, based on its relative position within the whole distribution.

The linear weighted average has some sensitivity, because it includes all values in the calculation. This can be contrasted to the median, where the only values in the calculation which are important are the centermost values.

Figure 1

Linear Weighted Average for 135 Observations



Source: JLARC graphic.

Similar to the median, however, the linear weighted average is stable because the extreme values are weighted less than the central values.

Based on this analysis, the linear weighted average was applied to the cost distributions for which quantified standards were lacking. Specifically, the statistic was used to calculate prevailing salary levels and prevailing support costs. With this approach, the costs of all school divisions were included, but the costs incurred by school divisions clustered in the middle were weighted more heavily.

This was considered the most appropriate approach for determining a foundation cost for school divisions. It avoids the problems entailed in setting a "minimum reasonable" cost, which in the absence of standards requires a subjective judgement about what is a minimum. It also limits the problem of using a statewide average that is very sensitive to extreme values and essentially requires a general expenditure level of all school divisions that may be necessary only for a few. This problem is limited because the proposed calculation is weighted most to the costs incurred by the medium-expenditure school divisions. Thus, if most school divisions do not incur costs above a certain level, the cost calculation does not increase substantially beyond that level.

III. ANALYSIS OF INSTRUCTIONAL POSITION REQUIREMENTS

Instructional positions include those personnel who work in the schools and are involved in the process of instructing pupils. This includes principals, assistant principals, teachers, librarians, guidance counselors, and instructional aides. These personnel provide several types of instructional programs required by the standards, including regular classroom (basic), special, vocational-occupational, remedial, and gifted and talented education.

The first step in calculating the SOQ costs associated with instructional personnel is to determine the number of positions that are required by the standards. JLARC staff conducted a comprehensive analysis at the classroom level to determine the cumulative impact of personnel standards exclusive of the Appropriation Act. The cumulative impact of the standards led to a calculation of 55.4 positions per 1,000 pupils for basic, vocational, and special education. The analysis shows that 59.5 positions per 1,000 pupils in ADM are required for school divisions to meet all staffing requirements, including 57 positions required by the Appropriations Act for basic, special, and vocational education.

This chapter outlines the issues related to staffing levels. The JLARC analysis of instructional positions is described in three parts. Standards relating to staffing levels are first identified. A detailed description of the methods employed by JLARC for each instructional program follows. Finally, study conclusions based on the analysis are presented.

INSTRUCTIONAL STAFFING ISSUES

The Standards of Quality include a number of quantified standards defining minimum staffing levels for instructional personnel. The SOQ Task Force in 1972 produced an SOQ cost estimate of required positions based on the standards existing at the time. The number of positions required was calculated by applying the standards to statewide enrollment. The result of this analysis was an estimate that 43.1 instructional positions per 1,000 pupils were required by the various standards for regular classroom, or basic, education. The Task Force actually recommended 50 positions per 1,000 pupils, but suggested that the use of a variety of ratios might be appropriate in estimating SOQ costs. A personnel standard of 48 positions per 1,000 pupils was adopted and has been required since 1974; in FY 1986 the personnel standard was increased to 51 basic instructional positions per 1,000 pupils in ADM. An additional six positions per 1,000 pupils are required to support special and vocational education programs.

In FY 1984, the actual salary costs for all instructional personnel hired by the school divisions were greater than $1.3 billion, and constituted 52 percent of the net operating costs for regular day school programs. This cost

was based upon an average statewide ratio of 67.7 positions per 1,000 pupils, with payment for 2.9 of those positions coming from federal funds. The remaining 64.8 positions paid from State and local funds was significantly greater than the number of instructional personnel positions required in the Appropriations Act (Table 1).

Table 1

ACTUAL INSTRUCTIONAL PERSONNEL LEVELS
FY 1976 - FY 1984

Fiscal Year	End-of-Year ADM	Instructional Positions*	Positions Per 1,000 ADM
1976	1,094,136	61,170.6	55.9
1977	1,090,713	61,699.0	56.6
1978	1,070,411	62,438.1	58.3
1979	1,045,135	63,337.6	60.6
1980	1,022,242	63,547.4	62.2
1981	1,001,412	63,123.4	63.0
1982	979,639	62,476.7	63.8
1983	966,614	61,831.2	64.0
1984	958,087	62,108.0	64.8

* Positions funded from State and local sources.

Source: Department of Education.

In recent years, questions have been raised about the adequacy of the 57 positions per 1000 required by the Appropriations Act. Some educational groups maintain that all instructional staff actually employed are necessary to meet the standards. Others maintain that the linkage of even the minimum of 57 positions to the quantified standards has not been established by independent analysis.

JLARC ANALYSIS

The JLARC analysis was designed to test the relationship between the minimum employment levels required by the Appropriation Act, and the requirements of the other quantified standards. There are two reasons for updating the work done by the 1972 Task Force. First, the widespread availability of computer technology and more sophisticated research techniques permit a more detailed analysis than was previously possible. Second, the standards have undergone substantial change since 1972. For example, class-size ratios have been changed, and requirements for certain personnel have been dropped or are no longer quantified.

Identifying Instructional Staffing Standards

The first step involved in estimating the number of required instructional positions is to identify the standards which define the number of positions which must be offered. Many other standards exist in addition to Appropriations Act requirements. A summary of the additional standards which were identified for this analysis is shown in Exhibit 2.

The standards identified offer quantified requirements for the following types of instructional positions: principals, assistant principals, teachers, instructional aides, librarians, and guidance counselors. This list of positions differs in three respects from the positions which the Department of Education includes in its instructional personnel component. DOE excludes kindergarten instructional aides, and includes instructional supervisory and visiting teachers.

DOE does not include any instructional aide costs in its estimate of SOQ costs. However, instructional aides are instructional personnel, and they are required for kindergarten and special education classes of a certain size. To the extent that instructional aides are utilized to achieve cost-effective staffing under the standards, they should be recognized as SOQ instructional personnel.

On the other hand, DOE classifies instructional supervisors and visiting teachers as instructional personnel, and the salaries for these positions are used by DOE in calculating salary costs for SOQ instructional personnel. This practice is consistent with the methodology employed by the SOQ Task Force.

At the time of the Task Force's work, however, there was a personnel standard that required that one additional State aid professional position be provided for approximately 50 State aid teaching positions. Instructional supervisors and visiting teachers were specifically identified as positions which would fulfill the requirement. This requirement is not part of the current SOQ. Under current standards, instructional supervisory positions are not required, and the requirement for visiting teachers is not quantified. Furthermore, instructional supervisors and visiting teachers provide support services to the instructional program. In the JLARC analysis, these positions are included as support costs.

In summary, specific quantified standards for instructional personnel were found to currently apply to principals, assistant principals, teachers, instructional aides, librarians, and guidance counselors. The calculation of the number of instructional personnel required was based on the cumulative impact of these standards.

Calculating Required Staffing Levels

To calculate the number of instructional personnel required, the standards summarized in Exhibit 2 were applied to fall enrollment data for the 1984-85 school year. The standards were applied in a cumulative fashion, so that the minimum number of positions effectively required by all the standards could be identified. The analysis was segmented to help identify the number of

Exhibit 2

SUMMARY OF STANDARDS
APPLIED TO CALCULATE REQUIRED STAFFING

- Schools are to offer a minimum of 3 hours of kindergarten (from the Standards of Accreditation).

- K-3 classes are not to exceed 30 pupils, and if kindergarten classes exceed 25, an instructional aide must be assigned (from the codified SOQ).

- The ratio of pupils to teaching positions in grades K-6 is not to exceed 25 to 1 divisionwide (from the codified SOQ).

- Classes for grades 4-7 in elementary schools are not to exceed 35 (the Standards of Accreditation).

- Middle and secondary schools are not to exceed an overall ratio of 25 pupils per teacher (the Standards of Accreditation).

- Minimum staffing for principals, assistant principals, librarians, and guidance counselors are specified according to school size (the Standards of Accreditation).

- Handicapped students shall be provided a program of appropriate instruction acceptable to the Board of Education (the codified SOQ). Class size standards for providing the appropriate instruction range from 6 to 16, depending on the handicap, or 8 to 16 for classes taught with the help of an instructional aide.

- Vocational education programs are to be offered (the codified SOQ). Because of the increased level of supervision required in some vocational education classes, class-size maximums for some classes are set below 25 pupils per instructor, creating a need for additional personnel.

- Additional instructional positions must be provided to meet the remedial needs of low-achieving pupils (the codified SOQ).

- Appropriate instructional opportunities must be offered to gifted and talented students (the codified SOQ). Additional instructors to provide this program are not currently required, but consideration is currently being given to funding an additional instructional position per 1,000 ADM.

positions required for (1) basic aid, (2) the special education add-on, (3) the vocational education add-on, (4) remedial education, and (5) gifted and talented education.

Basic Positions

All of the identified standards, with the exception of those designed to provide special pupil-teacher ratios for exceptional students, were used to identify the need for basic instructional positions (Figure 2). Basic instructional positions were thus defined as positions required by standards not specifically designed to cover the additional needs of exceptional students.

Required basic positions were calculated in four categories: kindergarten teachers and aides; elementary classroom teachers; secondary classroom teachers; and other instructional personnel (principals, assistant principals, librarians, and guidance counselors).

Kindergarten Teachers and Aides. The requirements for kindergarten teachers were analyzed separately from the requirements for other elementary teachers, because the standards with respect to kindergarten are unique in two

Figure 2

Basic Education Standards

45.1 Basic Instructional Positions per 1,000 Students.

0.3 Basic Aides per 1,000 Students.

	Basic Instructional Positions For:	Teacher Standard By Class	School Standard	Division Standard	Staffing Ratio Based on School Size: Guidance Counselor	Librarian	Principal	Assistant Principal
ELEMENTARY SCHOOLS	Kindergarten (1/2 day session)	25:1 / 30:1 WITH AIDE		25:1		.5 TO 1	.5 TO 1	0 TO 1
	1st Grade	30:1			ENCOURAGED BUT NOT REQUIRED			
	2nd Grade	30:1						
	3rd Grade	30:1						
	4th Grade	35:1						
	5th Grade	35:1						
	6th Grade	35:1						
	7th Grade	35:1						
MIDDLE & SECONDARY SCHOOLS	8th Grade		25:1		400:1 FOR MIDDLE SCHOOL; 350:1 FOR SECONDARY SCHOOL	.5 TO 2	1	0 TO 2
	9th Grade							
	10th Grade							
	11th Grade							
	12th Grade							

Source: JLARC analysis of instructional position requirements.

ways: (1) the Standards of Accreditation require only a half-day kindergarten program (a minimum of three hours), and (2) school divisions have the option of either assigning an aide to a kindergarten class with an enrollment between 25 and 30, or employing an additional teacher and offering two classes. Consequently, two half-day kindergarten sessions, with 50 pupils assigned to a full-time kindergarten teacher, (or 60 if assisted by a full-time aide), would comply with the minimum requirements of the standards. This arrangement was adopted for use in the analysis.

For each school, JLARC staff identified the least-cost combination of teachers and aides required to meet minimum kindergarten standards. In some cases, for example, it might be more cost-effective to assign an additional teacher and reduce class sizes than to assign several instructional aides and operate the classes with more than 25 pupils.

The least-cost combination was calculated with an assumption that both teachers and aides receive fringe benefits. Elementary teacher salaries and average instructional aide salaries in 1984 for each division were used to compute the likely trade-off in each division. Figure 3 demonstrates the analysis for two school divisions, Dinwiddie and Chesterfield.

With kindergarten enrollment of 90 students in a given school, the possible combinations of teachers and aides is 2 full-time teachers or 1.5 teachers assisted by 1.5 aides. In the case of Chesterfield, with an average elementary teacher compensation of $21,208 and average instructional aide compensation of $7,192, the total cost for these two options is $42,418 and $42,600, respectively. In Dinwiddie, however, with an average elementary teacher compensation of $19,726 and aide compensation of $6,249, the least-cost combination was $38,961, or 1.5 kindergarten teachers assisted by 1.5 aides. This computation was made for each school with kindergarten enrollment in the State.

The analysis indicates that 1,491 kindergarten teachers are required statewide. This figure assumes that 265 kindergarten aides will also be employed to assist in classrooms which exceed the 25 to 1 pupil-teacher ratio.

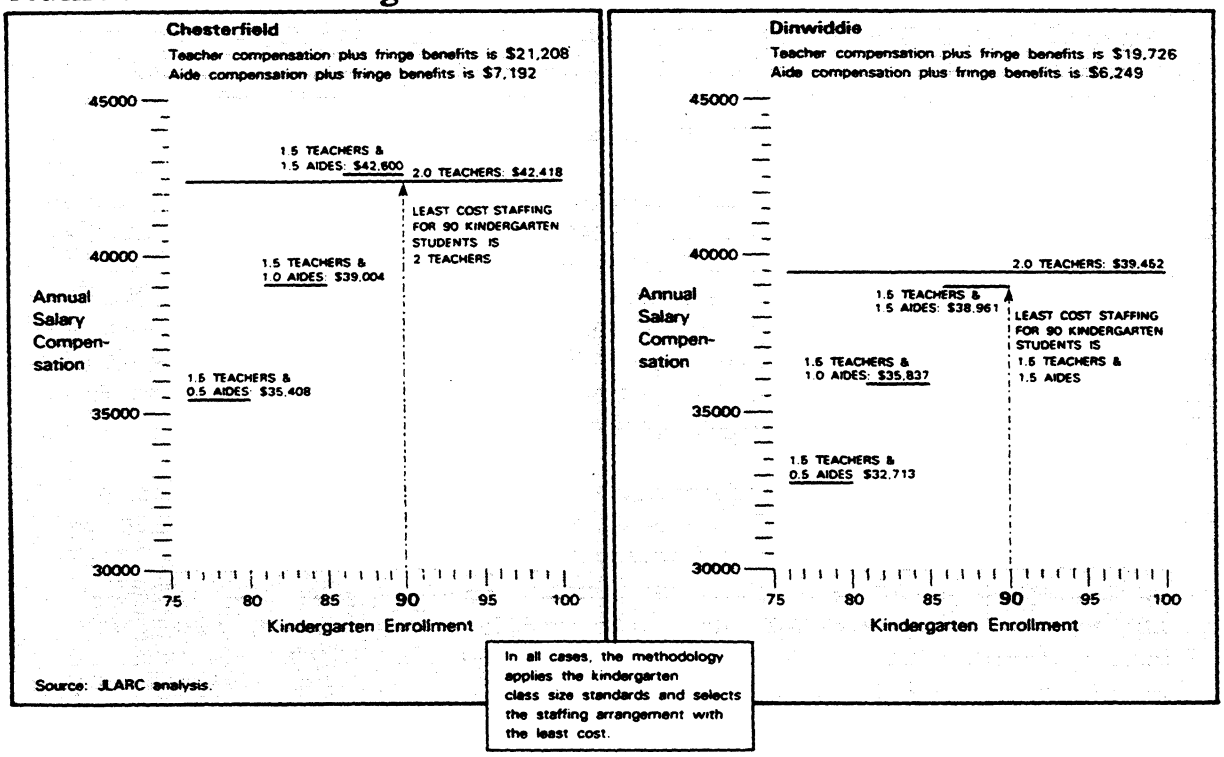
Elementary Classroom Teachers. The number of teachers required for grades 1-7 was first determined by applying class-size standards to enrollment by grade in each school. Applicable standards require that grades 1-3 have no more than 30 students assigned to a single teacher, and that grades 4-7 have no more than 35 students per class. The analysis was therefore conducted on a grade-by-grade, school-by-school basis.

All students listed on a teacher's daily roll were included in the analysis. This included special education students who are "mainstreamed," but did not include special education students who spend no time with a homeroom teacher. Instructors for these pupils were included in the special education analysis.

Once the calculation was completed using class-size standards, the impact of the school-size standard was assessed. This standard requires that the pupil-teacher ratio for grades K-6 in elementary schools may not exceed 25 to 1 division-wide. In all but 12 school divisions, this standard results in a

Figure 3

Least Cost Method for Computing Number of Kindergarten Teachers and Aides



greater number of required elementary teachers. The 12 school divisions were generally small school divisions without sufficient pupils to achieve class sizes above the 25 to 1 standard for many grades.

The analysis indicates that a total of 22,405 elementary classroom teachers are required statewide, or 23.6 teachers per 1,000 pupils in ADM.

Secondary School Teachers. The standard for middle and secondary schools states that schools must maintain a 25 to 1 pupil-teacher ratio. An interpretation of this standard was required, since the standard does not explicitly exclude special and vocational education teachers from being counted in determining whether schools meet the standard. The more liberal interpretation that the school should have a basic position for every 25 pupils enrolled, and that add-on positions for special and vocational education would not be applied against that ratio was used.

The calculation of required secondary teachers involved dividing all pupils enrolled by 25. As a result, a portion of the basic positions calculated are vocational or special education teachers. Positions are calculated for these programs under the basic standard to provide 1 teacher for every 25 pupils. Of course, these two programs generally have lower class size requirements, so add-on positions above the basic positions are also required.

The results of dividing secondary enrollment by 25 were not rounded in order to minimize errors in performing the add-on calculations for special and vocational education. By this method, 15,510.6 classroom teachers for

basic education in secondary schools, or 16.2 teachers per 1,000 pupils in ADM, are required statewide.

Other Instructional Personnel. The final step in the calculation of required basic positions was a computation for other instructional personnel. Quantified standards in the SOA cover four types of positions in addition to elementary and secondary classroom teaching positions: principals, assistant principals, guidance counselors, and librarians.

The standards for other instructional personnel are based on school size. At the elementary school level, schools with enrollments less than 300 must have a half-time principal and a part-time librarian. Schools with memberships of 300 or more must have at least one principal and one librarian. Schools with memberships between 600 and 900 must have a half-time assistant principal. Schools with memberships of 900 or more must employ at least one full-time assistant principal. The employment of guidance counselors in elementary schools is encouraged but not required.

Based on these requirements, JLARC staff calculated that a minimum of 970 principals, 115.5 assistant principals, and 970 librarians are required by the standards in elementary schools. This compares to 1,137.4 elementary principals and 335.2 elementary assistant principals actually employed in 1984. Assistant principals clearly seems to be an area where school divisions employ in excess of the minimum standards. Data for employment levels of librarians is not available. It should be noted that for purposes of calculating salaries, elementary school librarians were included with elementary teachers. This is consistent with current DOE reporting practices for annual school division data.

The standards require slightly higher staffing levels for other instructional personnel in middle and secondary schools, as compared to schools of the same size at the elementary level. All middle and secondary schools must have one full-time principal, and at least a half-time librarian. Schools with enrollments greater than 300 must employ a librarian full-time; schools with enrollments greater than 1,000 must employ an additional librarian. A full-time assistant principal must be employed for every 600 students. Middle schools must have one full-time guidance counselor for the first 400 students, and provide an additional period of counseling for each additional 75 students. Secondary schools must provide a full-time counselor for the first 350 pupils, with an additional period of counseling for each additional 70 students.

There are also a number of combined schools in the State. These schools typically contain a range of grade levels that span the elementary and secondary grades. Because the minimum requirements for middle and secondary schools are greater, these schools were treated as secondary schools in applying the SOA to determine the number of principals, assistant principals, librarians, and guidance counselors required.

Based on the standards, the overall analysis indicates that 549 principals, 535 assistant principals, 669.5 librarians, and 1093 guidance counselors are required in secondary and combined schools in 1984-85. Actual employment of principals in 1984 was 580.2; a total of 963.7 assistant principals were actually employed in 1984. As with elementary schools, employment of assistant principals seems to be far in excess of the minimum

required by the standards. Computation of principals and assistant principals includes positions required for regional vocational education schools and vocational education centers.

Conclusion. Table 2 summarizes the results from all four steps to indicate the basic instructional positions that were required statewide by the standards in the 1984-85 school year. The total number of positions is 43,082.6, or 45.4 positions per 1,000 ADM, including kindergarten aides. This is 2.6 positions per 1,000 ADM less than the 48 Basic Aid positions per 1000 ADM required in the Appropriations Act for that year.

Nine school divisions were required by the standards to provide more than 48 positions per 1,000 ADM in 1984. Analysis shows that all but five school divisions can provide basic instruction within the 51 per 1,000 standard currently specified in the Appropriations Act. A complete listing of the number of basic positions per 1,000 ADM required in each school division is provided in Appendix B.

Add-on Positions for Special Education

The Standards of Quality require all school divisions to offer programs for the identification and individualized education of handicapped students. In the 1984-1985 school year, 94,974 students with one or more identified handicaps were enrolled in public schools.

Table 2

BASIC INSTRUCTIONAL POSITIONS REQUIRED STATEWIDE
1984-85 SCHOOL YEAR

Type of Position	Number of Positions	Positions Per 1,000 ADM**
Elementary Principals	970.0	1.1
Elementary Assistant Principals	115.5	0.1
Elementary Teachers*	23,375.0	24.7
Secondary Principals	549.0	0.8
Secondary Assistant Principals	535.0	0.4
Secondary Teachers*	17,273.1	18.0
Kindergarten Aides	265.0	0.3
Instructional Supervisors	0.0	0.0
Visiting Teachers	0.0	0.0
Total Instructional Positions	43,082.6	45.4

*Includes librarians and guidance counselors.
**Linear weighted average.

Source: JLARC analysis of DOE data.

Special education pupils have been classified by DOE according to the amount of time they spend in classes specifically oriented for the handicapped. Three types of special education pupils can be identified: (1) handicapped pupils who spend all of their time in "self-contained" classrooms, or classes solely composed of handicapped children (not mainstreamed), (2) handicapped pupils who spend more than 50 percent of their time in "self-contained" classrooms, but who also spend some portion of their time in "regular" classrooms (classrooms not specifically oriented to meet the needs of handicapped children), and (3) handicapped pupils who spend more than 50 percent of their time in "regular" classrooms, or resource pupils.

The data used to calculate the required number of special education instructors was an unduplicated count of pupils by primary exceptionality. A survey was sent to each school division requesting the number of students, by exceptionality, in each school as of December 1, 1985. In addition, schools identified each student in terms of the amount of time spent in special education classes.

The Department of Education sets maximum caseload and class-size ratios for special education. These are approved by the Board of Education. Resource caseloads limit each instructor to 24 pupils. The exception to this is speech therapy, where the maximum caseload is 75 pupils to one teacher.

Maximum class sizes for self-contained classes range from 6 to 16, or 8 to 16 if the instructor is assisted by an aide. Preschool caseloads may be 8 or 12 students, depending on whether instruction is center-based or home-based. Class sizes for each exceptionality are shown in Figure 4.

A major assumption of the special education analysis is that classes are not "mixed". That is, students with different exceptionalities are not taught in the same class, even if the class-size ratios are the same. It also assumes that resource students and self-contained students are not placed in the same class, even if they have the same exceptionality. This assumption is perhaps stricter than in actual practice. In many cases, teachers with multiple certification can teach students with different diagnoses in the same classroom, if classes are sufficiently small and the students' abilities are similar. In such cases, however, localities are required to obtain a waiver from DOE. Since a waiver is essentially an exception to the standards, the effect of potential waivers was not included in the analysis.

The analysis was performed in three steps. First, resource instructors were computed. Second, the number of instructors for self-contained classes was determined. This step involved slightly different assumptions and methods for elementary and secondary schools, because of the differences in other standards which apply to each. The third step calculated the required number of preschool instructors in each division. This is a change to the current DOE method since preschool instruction has not previously been included as a part of SOQ costs.

Resource Special Education. The number of resource special education instructors required is computed by dividing special education enrollment in each exceptionality by the appropriate class-size standard. Since resource classes may meet as often as once a day, or as infrequently as once a

Figure 4

Special Education Standards

6.4 Special Education Add-On per 1,000 students.

0.3 Special Education Aides per 1,000 students.

EXCEPTIONALITY	Instructional Positions For:	TYPE OF SPECIAL EDUCATION: Resource	Self-Contained: Elementary	Self-Contained: Secondary	Preschool
	Speech Impaired	75:1			
	Educable Mentally Retarded	24:1	16:1	16:1	
	Learning Disabled	24:1	8:1 / 10:1	8:1 / 10:1	WITH AIDE
	Emotionally Disturbed	24:1	8:1 / 10:1	8:1 / 10:1	
	Hearing Impaired	24:1	8:1 / 10:1	8:1 / 10:1	
	Trainable Mentally Retarded		10:1 / 12:1	10:1 / 12:1	
	Multihandicapped		6:1 / 8:1	6:1 / 8:1	
	Physical Handicapped		8:1 / 10:1	8:1 / 10:1	
Developmentally Delayed	Home Based				12:1
	Center Based				8:1 WITH AIDE

Source: JLARC analysis of instructional position requirements.

RESOURCE TEACHERS + ELEMENTARY SELF-CONTAINED TEACHERS + SECONDARY SELF-CONTAINED TEACHERS

− [SECONDARY SELF-CONTAINED STUDENTS ÷ 25 (already credited in Basic)] + PRESCHOOL TEACHERS = **SPECIAL EDUCATION ADD-ON**

week, it was assumed that a single instructor can teach in several schools. Therefore results were not rounded within schools. All resource instructors are required in addition to the basic aid instructors already calculated for these students. This follows because resource students spend less than half their time in special education classes.

A total of 1,843 resource instructors was computed by this method, or an average of 1.9 positions per 1,000 pupils.

Self-Contained Special Education. Self-contained special education instructors were computed by dividing actual enrollment in each school by the

appropriate maximum class size for each exceptionality. Because larger classsizes can be attained if an instructional aide assists the teacher, the least-cost methodology used for the kindergarten analysis was also used here. However, because different standards are prescribed for elementary and secondary schools, self-contained teachers in elementary and secondary schools are calculated differently.

The standards which apply to elementary schools specify maximum pupil-teacher ratios in each grade. These standards are applied to all students listed on the instructor's homeroom register, regardless of the amount of time the student spends with the instructor. Therefore, students who are "mainstreamed" into regular classes, even for a small portion of the day, must have a place reserved for them with a basic aid instructor, as well as with a special education instructor. Basic aid instructors were not calculated for students who are not "mainstreamed"; only a special education instructor is computed for these students.

These special education positions were considered to be full-time, since the students spend more than half their time in the special education class. The number of teachers calculated in this step is the add-on for special education for self-contained students in elementary schools.

For basic instruction, the standard for secondary schools states that each school must demonstrate an average pupil-teacher ratio of 25 to 1. Students who were not mainstreamed were included in calculating basic aid instructors at the secondary level. Therefore, the number of special education teachers in secondary schools must be adjusted for students who spend less than half their time in "regular" instruction.

An attempt was made to estimate the time these students spend in special versus regular instruction in order to compute a full-time equivalent (FTE) student. Each student, however, has special needs and abilities, even within exceptionalities. Such an estimate could not be made with any degree of accuracy. Therefore, these students were considered to be full-time special education students. The time this student spends with the basic instructor has no effect on basic aid staffing levels. A given class may exceed the 25 to 1 pupil-teacher ratio because this standard is a school, not a classroom, standard.

The number of special education teachers required for this group was determined by applying the class-size standards for each exceptionality to enrollment in each school. Total enrollment in self-contained classes was divided by 25 to determine the number of instructors already included in the calculation of basic aid positions. The difference between these two numbers is the add-on for self-contained special education students in secondary schools.

A total requirement of 3,695 teachers and 42 instructional aides resulted from this analysis (approximately 3.9 positions per 1000). The relatively low number of aides required reflects the low incidence of some exceptionalities in some schools, and the high incidence of small class sizes.

Preschool Handicapped Instruction. Localities are required by the SOQ to identify and provide instruction to handicapped students below the age of 5. In 1985, 3,366 preschool students received special education services.

This program is currently funded categorically, and is not now included in DOE's estimate of SOQ costs. The JLARC estimate of the cost of special education programs includes preschool instruction.

The analysis was conducted on the division level using actual enrollment for 1985. Two caseload standards apply to preschool instruction. Teachers who visit students in their homes or provide instruction on a one-to-one basis may not be assigned more than 12 students. Teachers who provide instruction in a more central location may not have more than 8 students in a class. Teachers in these classes must be assisted by an instructional aide.

An additional 435 instructors and 314 instructional aides are required to provide education to preschool handicapped students. This increases the add-on for special education by 0.5 teachers and 0.3 aides per 1,000 pupils in ADM.

Conclusion. Table 3 summarizes the results of the analysis of instructional positions required by the standards for special education. A total of 5,973 teachers and 357 instructional aides are required. This is about 6.4 teaching positions and 0.3 aide positions per 1,000 students in total ADM.

DOE estimates that 5,587 special education teachers were employed with State and local funds in 1985. An additional 822 teachers are estimated to have been employed from federal funds. The results seem to indicate that localities are to a small extent using federal funds to help them meet the SOQ.

Two aspects of the JLARC approach should be noted. The first point is that the estimate does not account for any exceptions to the standards. This increases the positions required as compared to an approach where waivers are

Table 3

ADDITIONAL SPECIAL EDUCATION POSITIONS

	Position	Positions Per 1000
Resource	1,843	1.9
Self-Contained	3,695	3.9
Preschool	435	0.5
Total Instructors	5,973	6.4*
Special Ed Aides	357	0.3

*Differences due to rounding.

Source: JLARC analysis of positions.

recognized. On the other hand, the estimate counts each student only once, by primary exceptionality. Some students are dually diagnosed and have need for instruction in more than one area. Thus, this aspect of the JLARC approach decreases the number of positions that are calculated.

The analysis was also conducted at the division level, aggregating all students of similar exceptionalities within the division. This assumes that school divisions can place a student in a class anywhere in the division where there is a vacancy. Under this assumption, 5,066 teachers would be required. This is a difference from the school level analysis of about 0.9 positions per 1,000. Small class sizes help keep this difference low; not much centralization is possible when classes must be limited to 8 students. It does seem to indicate, however, that classes of only one or two students occur infrequently.

Add-on Positions for Vocational Education

The preparation of students for the workplace has been identified by the General Assembly and the Board of Education as an important educational goal. Career training is especially important for students who decide not to pursue their academic education beyond high school. The Standards of Quality require all school divisions to offer vocational programs designed to expose students to various career options and to help them develop marketable skills. The standards do not specify what type of career preparation must be offered, although the local school divisions must submit a plan for approval by the State Board of Vocational Education. Vocational education must be made available to all middle and secondary school students.

School divisions currently offer 322 different vocational education courses in nine different service areas: agriculture, distributive education, health occupations, consumer and homemaking, occupational home economics, industrial arts, business, trade and industrial, and specially designed programs for the disadvantaged and handicapped.

Because of specialized equipment and more individualized attention, enrollment in certain classes is restricted. Maximum class size standards are set out in the Vocational Education Management System (VEMS) planning guide, and range from 10 to 25 students per class. These restrictions may result in an increased need for instructional personnel, depending on the number of students enrolled and the class-size limitations.

In calculating basic instructional positions in secondary schools, all enrolled students were included as full-time equivalent (FTE) students when applying the 25 to 1 pupil-teacher ratio. Vocational education students, however, do not spend all their time with basic instructors. Therefore, computation of a vocational education add-on required two steps. The first was to determine the number of FTE vocational instructors needed to teach enrolled vocational education students. The second was to determine the number of instructors which had already been calculated in basic aid positions for these students. This was subtracted from the total vocational education instructors to compute the add-on. The analysis of add-on positions was therefore structured to separately identify the additional instructional positions that would be needed to provide for the pupil time spent in vocational education classes.

The analysis was based upon an assumption that the vocational courses currently offered by school divisions are required by the standards. All school divisions must submit a three-year plan for vocational education to the State Board of Vocational Education. Plans must give evidence that programs "meet the vocational education needs of students in the community served" and that consideration has been given to other resources in the community which may provide this training. School divisions are also required to conduct a survey of employment needs relating to a proposed program. Only approved programs are eligible for State or federal vocational funds. Vocational programs currently in place in local school divisions have all been approved.

The approach made no attempt to determine the efficiency or appropriateness of course schedules as they were offered in 1984-85. Each section of a course, regardless of enrollment, was calculated to require at least one teacher for at least one period. A FTE course, for both instructors and students, was assumed to be one 50-minute period in a five-period day for 36 weeks a year.

The first step in this analysis was to calculate the required number of sections for each course. JLARC staff used actual enrollment by course and by school for 1984-85 provided by the Department of Education. If actual enrollment in a single section exceeded the maximum class-size, the course was divided into two or more sections, as needed. Sections were then converted to FTE courses based on the number of periods and the number of weeks offered. Dividing FTE courses by 5 (periods in a day) yields the total number of FTE instructors required for vocational education.

In the second step, the number of vocational education positions already included in the basic aid analysis was determined. Actual enrollment was converted to FTE students by adjusting for the periods and weeks each course was offered. This figure was then divided by 25 (the secondary school standard for basic instruction) to determine the number of basic aid instructors previously calculated for these students. The add-on is the difference between this figure and the total number of FTE vocational education instructors required.

In addition, eleven vocational education schools operate as regional centers. The teachers calculated for these schools were allocated to the participating school divisions based on the proportion of local students attending the regional school.

This analysis identified a need for 5,887 vocational education teachers -- a slightly higher number than the estimated 5,407 non-federally funded teachers employed in 1984. Of this number, 3,127 teachers had been included in basic aid. The remaining instructors yield a vocational education add-on of 3.3 positions per 1,000 pupils in ADM (Figure 5).

As with other estimates, required units vary greatly with the size of the school division. Required add-on positions ranged from 0 in South Boston and Lexington (cities which do not operate their own high schools) to 9.2 in Fries. (Students in Fries spend about 11 percent of their time in vocational instruction. The additional 3.9 instructors required in this school division translate into a high ratio per 1,000 pupils because of the low ADM of the school division). In addition, enrollment in some vocational education classes

Figure 5

Vocational Education Standards

3.3 Vocational Education Add-On per 1,000 Students.

	Instructional Positions For:	COURSE TYPE: Business	Trade	Disadvantaged/ Handicapped
MIDDLE AND SECONDARY SCHOOLS	8th Grade	25:1	15:1 OR 20:1	10:1
	9th Grade			
	10th Grade			
	11th Grade			
	12th Grade			

Source: JLARC analysis of instructional position requirements.

VOCATIONAL EDUCATION TEACHERS — [FTE VOCATIONAL EDUCATION STUDENTS ÷ 25 (already credited in Basic)] = **VOCATIONAL EDUCATION ADD-ON**

is very low; some classes have as few as one or two students. This results in a high number of instructors required relative to the number of students.

Add-on Positions for Remedial Education

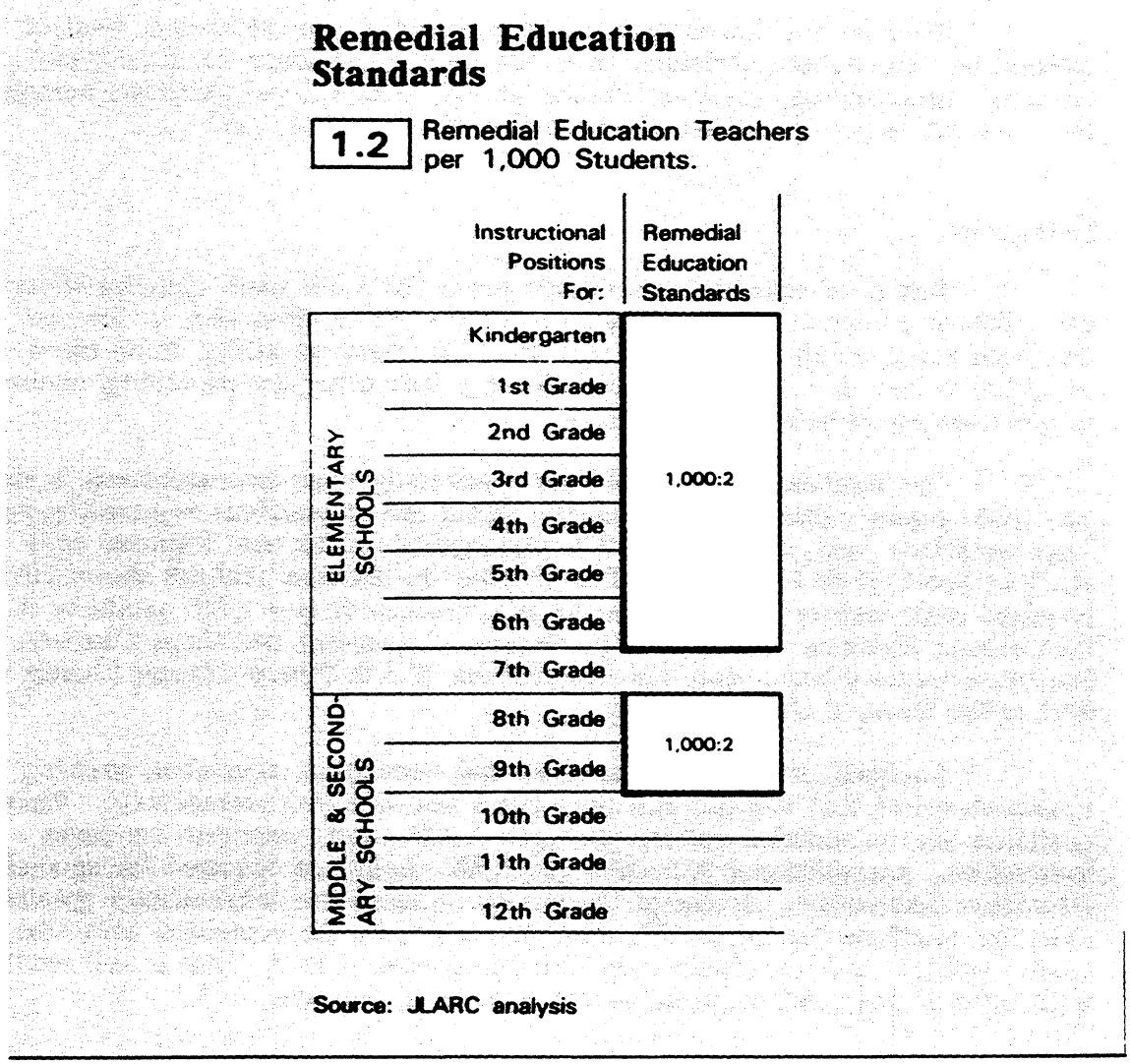
In 1976, the Standards of Quality were revised, giving priority to competency in basic skills and to remedial education. Since 1980, localities with fourth or eighth grade students achieving below specified levels have been required to support additional personnel for remedial training.

School divisions having 25 percent or more of their fourth-graders performing one or more years below grade level are required to provide remedial instruction to primary and intermediate grades. The SOQ provides funding in support of two additional personnel per 1,000 students in grades K-6 for this purpose. Achievement levels are measured by scores on SRA achievement tests. In 1985, 101 school divisions were required to provide remedial education to lower-grade students based on these test scores. This results in an additional 506 teachers required statewide, or an add-on of 0.8 teachers per 1,000 ADM.

Each school division must also offer a program of remedial instruction to eighth and ninth graders in order to address low achievement levels in secondary schools. To test for compliance with this standard, the Department of Education checks whether eighth and ninth grades have an average of 23.8 students per instructor. This average results if two teachers per 1,000 eighth and ninth grade pupils are added to the 40 positions per 1,000 pupils necessary to provide for the basic secondary standard of 1 teacher per 25 pupils. JLARC utilized the interpretation that the standards require two additional personnel per 1,000 students enrolled in the eighth and ninth grades of each division. The analysis indicates that 352 additional instructors are required, or an add-on of 0.4 teachers per 1,000 ADM.

Figure 6 illustrates the major components of the JLARC analysis for remedial education add-on staffing requirements.

Figure 6



Positions For Gifted and Talented Programs

The standards require that each school division identify gifted and talented students, and offer them a differentiated curriculum. However, there have not been quantified standards requiring the provision of staffing above basic instructional levels for gifted and talented instruction. Regulations recently approved by the Board of Education call for State funding of one full-time teacher per 1,000 ADM to support gifted and talented programs.

JLARC staff reviewed the relationship between the Board of Education proposal and the number of gifted and talented positions which school divisions actually offer. In 1984, 83,242 students were identified as gifted. This was about 8 percent of the total student population. Of these students, 78,906, or 95 percent, were enrolled in a gifted program. Local school divisions provided 1,372.5 full-time positions in support of gifted programs. A linear weighted average applied to the number of gifted and talented instructors employed by the school divisions in 1985 produces an estimate of 1.1 positions per 1000 students in ADM.

Because the Board proposal is reasonably related to the level of instruction that school divisions have provided in response to gifted and talented requirements, study estimates of SOQ instructional positions include the 1.0 position per 1,000 that is proposed by the Board of Education.

Conclusion

Ratios of required instructors per 1,000 ADM were calculated for each school division. These ratios were then ordered from high to low and weighted using weights from one to five. The mean resulting from these weighted values is a linear weighted average indicating the prevailing number of positions required to meet the SOQ.

The number of basic positions required by class-size standards is 45.1 per 1,000 pupils. This number is easily within the 51 positions required by the Appropriations Act. In addition, 0.3 kindergarten aides are required at a staffing level of 45.1 positions. The division-by-division analysis shows that required basic instructors (including aides) exceeded 51 per 1,000 pupils in only five school divisions (Bland, Craig, Grayson, Lexington and Cape Charles). Minimum required basic positions ranged from 41.8 in Prince Edward County to 64.1 in the Town of Cape Charles.

Analysis of special education and vocational education staffing standards shows that 6.4 and 3.3 instructors are required respectively. These positions are in addition to the 45.1 per 1,000 pupils required for basic instruction. An additional 0.3 aides per 1,000 pupils are required for special education instruction. Although these requirements are substantially greater than the positions funded in FY 1986, (3.4 and 2.6), the combined total for basic, special, and vocational education programs is 55.4. This is still well within the 57 per 1,000 required by the Appropriations Act.

In addition to the positions specified in the Appropriations Act, 1.2 positions per 1,000 are required for remedial education. Although all school

divisions must provide secondary remedial education, not all must have an elementary program. This figure, therefore, is primarily a cost estimate, rather than an employment mandate for school divisions.

JLARC also included 1 position per 1,000 pupils as an add-on for gifted and talented instruction.

JLARC calculations indicate the total number of instructional positions required by the standards is 57.7 per 1,000 pupils in ADM. This is 0.7 positions less than the level funded in FY 1986. There are two major differences between the JLARC calculations and the positions funded in FY 1986. First, JLARC has excluded instructional supervisors and visiting teachers from the definition of instructional personnel. These positions (1.3 per 1,000 pupils in ADM) are included in calculations for support; in FY 1986 these positions were funded from the basic aid appropriation for 51 instructors per 1,000 ADM. Second, additional positions for gifted and talented were not funded in FY 1986, and are presumed to be included in the basic aid appropriations for 51 instructors per 1,000.

The required number of units which JLARC used to calculate SOQ costs are the result of combining all standards binding on local school divisions. A comparison of the calculated positions and those used to assess SOQ costs is shown in Table 4. In determining costs, JLARC attempted to minimize any change in the current method of distribution. JLARC found that 59.5 positions per 1,000 were necessary to meet all quantified personnel standards currently in force. This reflects 51 positions per 1,000 funded from basic aid, 3.4 teachers plus 0.3 instructional aides in special education, and 2.6 positions per 1,000 in occupational-vocational education. The split between special and vocational education maintains the funding split of the last biennium. Required positions in excess of these six have been folded into basic aid positions. In addition to these three programs, the State must provide funding to support its share of 1.2 remedial positions per 1,000. An additional position per 1,000 is also needed for gifted and talented instruction.

The required number of instructional positions in each division ranges from a low in Waynesboro of 51.2 to a high in Highland County of 83.9. Most differences can be attributed to the size of school divisions. Larger divisions have more schools, but students tend to be evenly divided among schools, and classes tend to be filled. Small school divisions have few schools, but tend to have small class sizes. Divisions with the largest pupil-teacher ratios all have grades with less than 10 students; one school has three students in a grade. Divisions with low ADM also tend to require more special education teachers per 1,000 students than most divisions. When school divisions have fewer handicapped students, special education classes are typically not filled to capacity. School divisions that are not required to provide remedial education in elementary schools also have slightly lower pupil-teacher ratios.

Analysis shows that 56,537 teachers are needed statewide to comply with instructional personnel standards. In 1984, 61,061 positions (including preschool instructors, and adjusted for visiting teachers and instructional supervisors) were funded with State and local funds. This is a difference of 4,524 positions. One hundred twenty-six school divisions had pupil-teacher

Table 4

COMPARISON OF CALCULATED POSITIONS
AND STAFFING USED IN COST CALCULATION
(Positions per 1,000 Pupils in ADM)

Type of Position	Calculated Positions	Staffing Used in Cost Calculation
Basic	45.1	51.0
Basic Aides	0.3	0
Special Education Add-On	6.4	3.4
Special Education Aides	0.3	0.3
Vocational Education Add-On	3.3	2.6
Remedial Education Add-On	1.2	1.2
Gifted and Talented	1.1	1.0
Total	57.7	59.5

Source: JLARC analysis of positions.

ratios in excess of the minimum requirements of the standards. Eighty-four school divisions (62 percent) had five or more positions per 1,000 in excess of minimum requirements. Clearly, school divisions are employing instructional staffing levels which reflect educational needs beyond the requirements of the quantified SOQ.

IV. INSTRUCTIONAL SALARY COSTS

Salary and fringe benefit costs are associated with the required SOQ instructional personnel. The costs for salaries can be calculated by multiplying the number of required positions by the salary levels for those positions. Based on the JLARC approach, SOQ instructional salary costs for the 1986-88 biennium total $2.73 billion, or about 53 percent of the estimated $5.16 billion in total SOQ costs.

Given the estimate of instructional salary costs from the JLARC staff analysis, it appears that the current DOE approach to estimating SOQ salary levels overestimates the costs that prevail in the school divisions across the Commonwealth. JLARC's use of a different statistical measure reflecting prevailing salary levels led to a lower salary estimate. However, the expenditures necessary to bridge the gap between Virginia's average salary, and the projected average salary of the median State in the nation in FY 1988 (a goal recognized by the legislature in its budgeted salary increases) were included as part of JLARC's SOQ estimate. That goal set the level of salary increases used in the calculation of salary costs.

This chapter identifies the issues involved in assessing instructional salary costs, and reviews the current DOE estimation of these costs. JLARC's assessment of instructional salary costs is then presented, and the approach used to project the FY 1984 costs forward to the 1986-88 biennium is discussed.

Salary Issues

The Standards of Quality do not contain instructional salary requirements. The current DOE approach to estimating instructional salary costs uses the statewide average salary level for all instructional positions. The statewide average is the sum of the salary compensation for instructional personnel statewide divided by the number of instructors statewide. While the General Assembly has appropriated funds to provide for salary increases in recent years, legislatively recognized salaries have been less than the statewide average (Table 5).

Because DOE uses the statewide average salary to estimate SOQ costs, its salary level is weighted by the number of instructional personnel which the school divisions actually offer. Salaries for ten types of positions are included in DOE's calculation of the statewide average:

- instructional supervisors
- visiting teachers
- elementary teachers
- secondary teachers
- principals of elementary schools
- principals of secondary schools
- principals of combined elementary and high schools

- assistant principals of elementary schools
- assistant principals of secondary schools
- assistant principals of combined elementary and high schools

There are two problems with this approach for estimating costs. First, a statewide average salary is not representative of the salary expenses incurred by most school divisions. For the salary data JLARC analyzed, the statewide average overestimates the costs because it is heavily influenced by a few high-cost school divisions. Secondly, the statewide average is dependent upon the mix of instructional positions employed instead of the mix required by the standards.

Salary data for FY 1984 illustrates that the statewide average is heavily influenced by a few school divisions, and does not represent the average salary levels prevailing throughout the Commonwealth (Figure 7).

For FY 1984, DOE used $20,457 to estimate SOQ costs, based on the statewide average salary. However, only 7 of 94 county school divisions (7 percent) and only 10 of 41 city and town school divisions (24 percent) had higher average salaries than the statewide average salary. For that same year, the General Assembly established an instructional salary level of $19,604 in the Appropriations Act. Although many regarded this amount to be short of full funding in this area, only 7 of 94 county divisions and only 17 of 41 city and town divisions had average salaries in excess of the amount.

Salary increases provided by local governments have not kept pace with increases in the legislatively recognized salary, which has been consistently less than the statewide average. In FY 1982, 72 divisions (53 percent) were above the legislatively established salary of $15,375. Salary data

Table 5

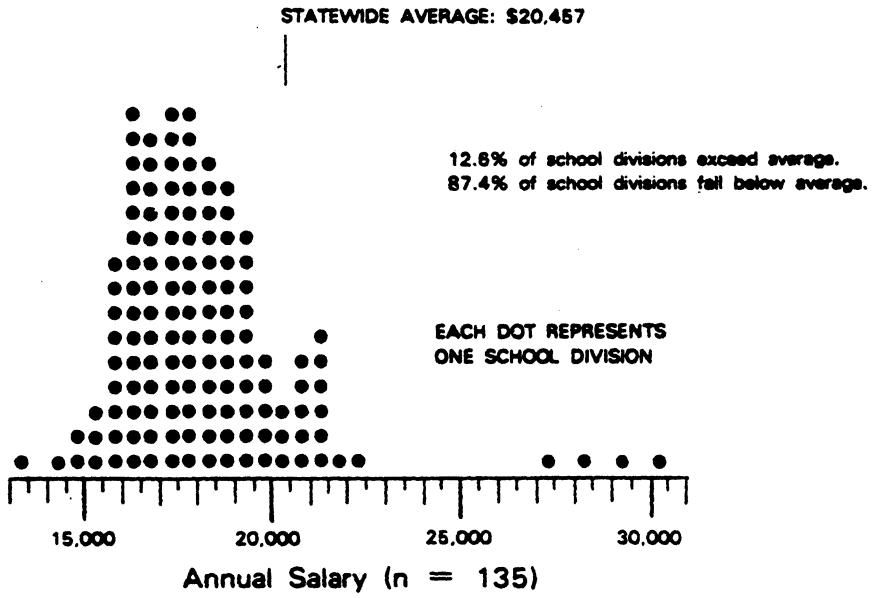
SALARY COST ESTIMATED BY DOE COMPARED
TO THE COST RECOGNIZED BY THE GENERAL ASSEMBLY

Year	Estimated Statewide Average	Legislatively Recognized Salary	Salary as a Percent of the Statewide Average
1980-81	$16,209	$14,104	87.0
1981-82	$17,720	$15,373	86.8
1982-93	$19,292	$17,396	90.2
1983-84	$20,457	$19,604	95.8
1984-85	$22,091*	$21,646	98.0
1985-86	$24,262*	$23,863	98.4

Source: "Data Base for 1986-88 Estimates - April 1, 1985," Department of Education. Asterisks are DOE December revisions.

Figure 7

Distribution of Salaries for All Instructional Personnel



Source: JLARC analysis of Annual School Report data 1983-84.

indicates that by FY 1985, only 23 divisions (17 percent) were above the legislatively established ceiling of $21,646; and that only 26 divisions have budget plans for FY 1986 salaries that would be greater than the legislatively established salary of $23,863.

If a statewide average is applied, the high costs or local aspirations of some school divisions raise the State funding level. Consequently, State funding for all school divisions is based on a salary level that is only paid by a few divisions. The State funds in excess of the school divisions' costs may be used for purposes other than salaries for instructional personnel required by standards.

The second deficiency in the current approach is the use of total staffing across the State to calculate the average instructional salary. The statewide average salary does not account for the mix of positions that are required to implement the standards. As shown in Table 6, the actual mix differs from those required by the quantified standards.

Three categories are under-represented in the statewide average calculation: elementary teachers, secondary teachers and principals of secondary and combined schools. Five categories are over-represented in the statewide average calculation: principals of elementary schools, assistant

Table 6

MIX OF TOTAL STAFF RELATIVE TO THE REQUIRED STAFF MIX
(Positions as a Percent of Total Compensation)

Positions	Total Staff	Required Staff	Salary as Percent of State Average
Principals			
Secondary/Combined	0.9	1.0	1.69
(Elementary)	1.8	1.7	1.54
Assistant Principals			
Secondary/Combined	1.5	0.9	1.46
Elementary	0.5	0.2	1.26
Instructional Supervisors	1.8	0.0	1.60
Visiting Teachers	0.4	0.0	1.19
Teachers			
Secondary	40.5	42.4	1.01
Elementary	52.6	53.8	0.93
	100.0%	100.0%	

Source: JLARC analysis of DOE data.

principals of elementary schools, assistant principals of secondary schools, instructional supervisors and visiting teachers. The higher salary positions (assistant principals, instructional supervisors, and visiting teachers) are over-represented in DOE's calculation of a statewide average. Instructional supervisors, for example, exceed the statewide average salary by 60 percent. Elementary teachers, with a lower salary relative to the statewide average, are under-represented in DOE's calculation of the statewide average. Substituting the mix of instructional positions required by the standards for the total staff employed, with no change in DOE's salary calculations, reduces the statewide average salary per instructor by $313. This translates into a reduction of the cost estimate by $17.80 per pupil, or approximately $17 million statewide.

JLARC Approach

The JLARC approach was to determine those salary levels representative of the prevailing costs for SOQ instructional personnel. Estimates of total cost were based on multiplying the required positions by the prevailing salary level for that position, rather than the use of the statewide average salary for all instructional staff. Since the current funding framework provides allocations by programs rather than by positions, a composite salary was developed based on the proportion of required positions that the program is designated to fund. The implementation of this methodology involved four steps: (1) adjusting data for values that appeared unreasonable, (2) estimating

prevailing salary levels of each of the instructional staff positions, (3) developing composite salaries for program funding, and (4) projecting instructional salary costs for the 1986-88 biennium.

Data Adjustment for Out-of-Range Values. Data collected for the Annual Report of the Superintendent of Public Instruction includes compensation paid for instructional personnel, the number of full-time equivalent instructional positions, and a calculation of an average annual salary -- the compensation for all positions divided by the number of positions. JLARC staff contacted the local school divisions to verify the accuracy of what appeared to be "out-of-range" values. School divisions reporting a less than half-time administrative position were requested to verify the prorated FTE position as well as annualized income. Also, divisions whose total annual compensation for instructional aides appeared to be below the minimum wage or appeared relatively high (above $10,000) were requested to verify the count of aides and compensation.

Estimation of Prevailing Salary Levels. For those positions required by the SOQ, Annual School Report data was arrayed into seven frequency distributions. The distributions correspond to the seven types of positions related to SOQ requirements in Chapter III:

- principals of elementary schools
- principals of secondary and combined schools
- assistant principals of elementary schools
- assistant principals of secondary and combined schools
- elementary teachers
- secondary teachers
- instructional aides

Also, combined schools were included with secondary schools to simplify the analysis. No statistically significant difference in salaries existed for principals and assistant principals in the combined and secondary school levels.

Teachers comprise 96 percent of the personnel required by the SOQ. The distributions of the salaries for elementary and secondary teachers are shown in Figure 8. The more familiar measures of central tendency, the median and mean, are identified, as well as the linear weighted average.

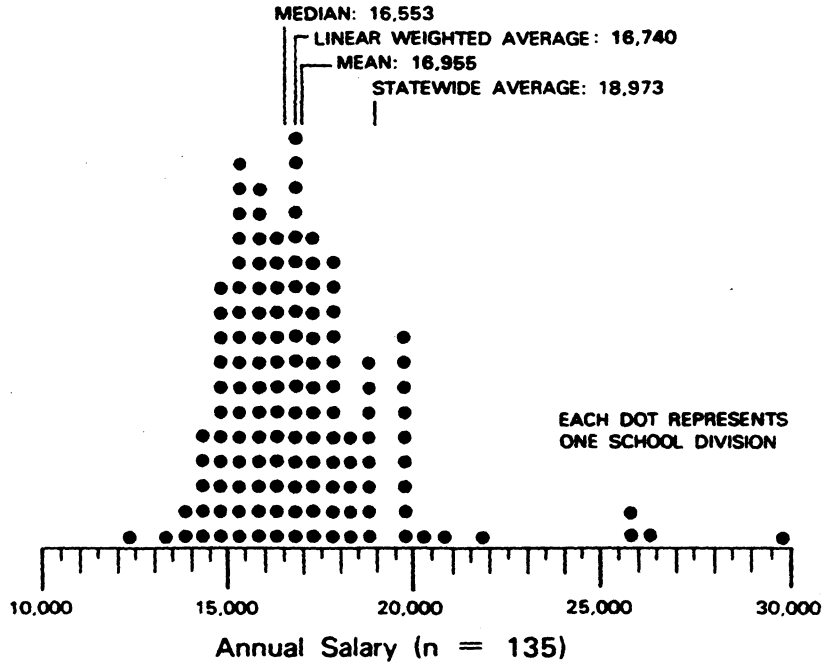
The distribution of salaries for elementary school teachers is fairly typical of the spread in salaries offered by the school divisions for other instructional staff. At the school division level of analysis, the mean salary is $16,955. This level of compensation exceeds the salaries offered by 60 percent of the school divisions. By definition, the median salary of $16,553 exceeds the salaries offered by 50 percent of the school divisions. The linear weighted average of $16,740 exceeds the salary offered by 56 percent of the school divisions. At the statewide level of analysis, however, the mean salary is $18,973. This figure gives greater weight to divisions employing more teachers and results in an amount exceeding the salary offered in 86 percent of the school divisions.

For secondary teachers, the salaries offered in FY 1984 by most school divisions clustered between $15,000 and $22,000 in annual compensation.

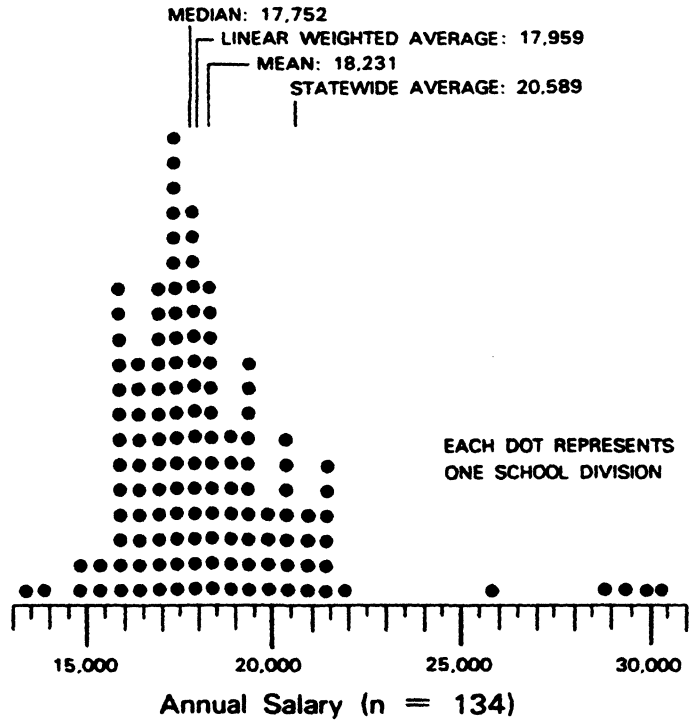
Figure 8

Distribution of Average Salaries:

Elementary School Teachers



Secondary School Teachers



Source: JLARC analysis of Annual School Report data 1983-84.

The location of the measures of central tendency for secondary teachers are similar to their location for elementary teachers. The mean salary of $18,231 exceeds the salary offered by 61 percent of the school divisions. The linear weighted average of $17,959 exceeds the salary offered by 56 percent of the school divisions. The statewide average exceeds the salary offered by 89 percent of the school divisions.

It is apparent from this data that, for teachers, there is a large spread in the salaries offered. The average elementary teacher salary, for example, ranged from $12,466 in Cape Charles to $29,612 in Alexandria. The average secondary teacher salary ranged from $13,109 in Cape Charles to $30,049 in Arlington.

Several factors, including cost of living differences, may account for the variation in salaries across the Commonwealth. One significant factor is the difference in the composition of the teaching staff. School divisions paying in excess of $25,000 for their teachers have higher proportions of teachers with advanced degrees and with more teaching experience. School divisions paying lower salaries tend to have staffs with less advanced degrees and less tenure.

The five highest paying school divisions for secondary teachers, for example, have an average salary which exceeds the midpoint of the salary schedule for a teacher with a Master's degree (Fairfax County at $26,876, Richmond City at $28,876, Falls Church at $29,179, Alexandria at $29,689, and Arlington at $30,049). Three of these localities -- Fairfax County, Alexandria, and Arlington -- had average salaries in FY 1984 exceeding the midpoint of the salary schedule for a teacher with a doctorate.

At the other end of the distribution are localities whose average salary is less than the midpoint on the salary schedule for teachers with Master's degrees (Cape Charles at $13,109, Highland at $13,580, Charles City at $14,542, Cumberland at $15,475, and Prince Edward at $14,833). Three of these localities -- Cape Charles, Highland, and Charles City -- had average salaries in FY 1984 which fell below the midpoint of the salary schedule for a teacher with a Bachelor's degree.

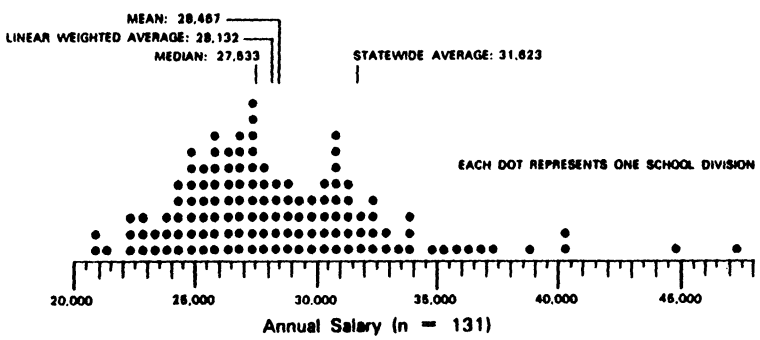
Other instructional staff -- principals and assistant principals -- comprise the remaining 4 percent of the instructional positions required by the SOQ. The distribution of average salaries for these positions is shown in Figure 9.

The location of the statistics for central tendency are consistent for principal positions in both secondary and elementary schools. The linear weighted average for this position at both the elementary and secondary levels exceeds the average salary of 55 percent of the school divisions. The statewide average, on the other hand, exceeds the average salary offered in 82 percent of the school divisions for elementary principals, and 81 percent of the school divisions for secondary principals.

The distributions for elementary and secondary assistant principal positions also have similar properties. The linear weighted average lies near the median. For elementary schools, the linear weighted average exceeds the

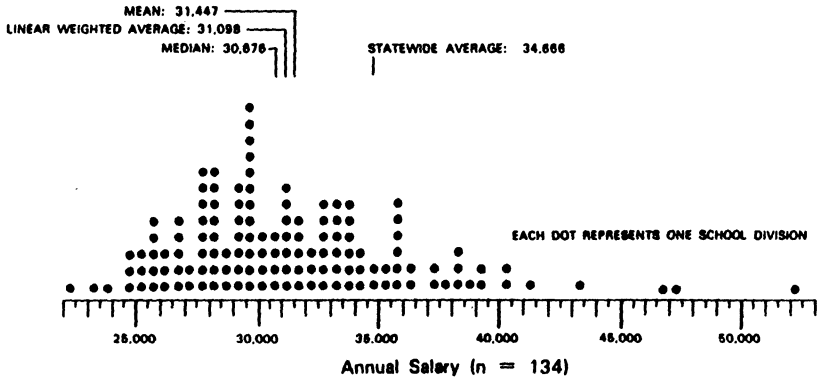
Figure 9

Elementary School Principals: Distribution of Average Salaries



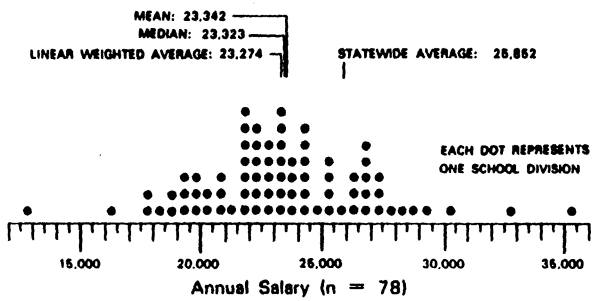
Source: JLARC analysis of Annual School Report data 1983-84.

Principals of Secondary & Combined Schools: Distribution of Average Salaries



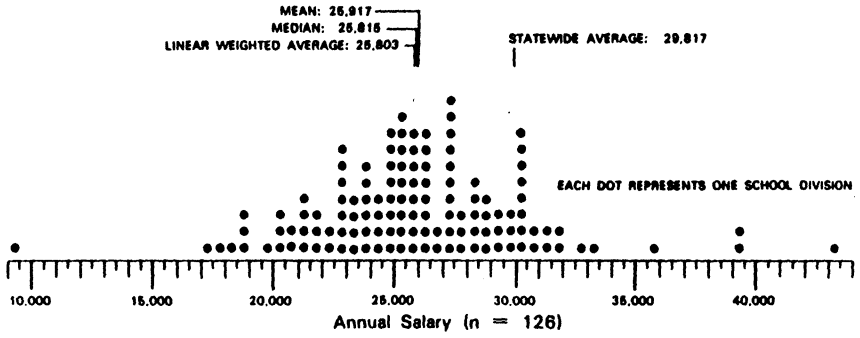
Source: JLARC analysis of Annual School Report data 1983-84.

Elementary School Assistant Principals: Distribution of Average Salaries



Source: JLARC analysis of Annual School Report data 1983-84.

Assistant Principals of Secondary & Combined Schools: Distribution of Average Salaries



Source: JLARC analysis of Annual School Report data 1983-84.

average salary of 47 percent of the school divisions, whereas the statewide average exceeds the salary of 76 percent of the school divisions. For secondary schools, the linear weighted average exceeds the average salary of 50 percent of the school divisions, whereas the statewide average exceeds the salary offered in 83 percent of the school divisions.

A separate analysis was also performed for instructional aide salaries. The weighted average in FY 1984 was $6,209. This amount exceeded the average salary paid by 53 percent of the school divisions. This salary level was used for estimating salary costs for required instructional aides.

Developing Composite Salaries for Program Funding. The most precise way of estimating total instructional salaries would be to multiply the number of required positions by the prevailing salaries for those positions. The State budgeting system does not allocate funds by instructional positions, however; State aid is allocated by program. Given this funding framework, it was necessary to calculate a salary level for the programs with SOQ personnel, such as vocational education, special education, remedial education, and basic aid. To this end, a "composite" salary was computed for each program based on the mix of required positions for that program. The calculated base year salaries in FY 1984 were updated to FY 1986 by applying a rate of 7.957 percent each year, which is the rate localities have passed on in salary increases since 1980. This contrasts with DOE's preliminary data on actual increases in FY 1985 of 7.958 percent and budgeted increases for FY 1986 of 9.8 percent.

For vocational education, instruction is required only in secondary schools. Therefore, the cost estimate for salaries is the number of required instructors multiplied by the prevailing salary level for secondary teachers.

For special and remedial education, instruction is required in elementary and secondary schools. JLARC's estimate of salary costs combines these teacher's salaries in proportion to the number required -- 68 percent elementary teachers and 32 percent secondary teachers.

This approach to calculating the cost for the non-basic aid positions differs from DOE's current estimation of costs. For the special and vocational education add-ons, DOE calculates costs based on an average instructional salary which includes principals and assistant principals. The add-on positions for these programs are teaching positions, so the use of an overall average instructor salary overestimates costs.

For instructional staff funded through basic aid, a composite salary was calculated to reflect the mix of teaching and administrative positions. The proportion that each position comprised of the basic staffing need was multiplied by the corresponding salary level for that position (Table 7).

The composite salary of $17,775 increases to $20,716 for FY 1986 by applying the usual rate of change in recent years. Given a prevailing salary level of $20,716 in the State, the legislatively funded salary of $23,863 exceeds the prevailing cost by 15 percent. In effect, the State is currently picking up 57.6 percent of the prevailing cost of instructional personnel in the school divisions.

Table 7

COMPUTATION OF THE BASIC INSTRUCTIONAL SALARY

Position	Proportion of Total*	Salary Level (FY 84)
Elementary Teachers	55.2%	$16,740
Secondary Teachers	40.2	$17,959
Elementary Principals	2.2	$28,132
Elementary Asst. Principals	.1	$23,274
Secondary Principals	1.5	$31,098
Secondary Asst. Principals	.8	$25,803
Composite		$17,775

*Proportions reflect Basic Positions equal to 51/1,000 pupils in ADM. The difference between the calculated 45.1 basic and the Appropriations Act floor of 51 basic was assumed to be teaching positions. The division of elementary and secondary for the additional 5.9 teachers was based on the ratio for calculated positions.

Source: JLARC analysis.

Projecting Salary Costs for the 1986-88 Biennium. The future costs for instructional personnel depend on the level of salary increase funded by the State, and the ability and willingness of local school divisions to pass on the full salary increase with the additional funds. The State's current goal is to increase Virginia classroom teacher salaries to the average salary of the median state. The General Assembly has provided funds for a 10 percent increase in each year from FY 1983 to FY 1986, in order to boost Virginia's average salary to the salary of the median state.

The JLARC staff estimate of SOQ costs includes the funds necessary to increase the Virginia statewide average for all instructional personnel to the level of the median State in the nation. The calculation involved two steps: (1) estimating the average instructional salary in the median state in FY 1988, and (2) computing the percentage increase required in each year from the FY 1986 salary base to add sufficient funds to meet the average instructional salary in the median state.

Based on the historical rate of increase for the median state of 6.9 percent, the average instructional salary for the median state is estimated to be $28,308 in FY 1988. The average salary for classroom teachers in the median state for FY 1988 is estimated to be $26,897. The difference between the estimated instructional salary of the median State ($28,308), and the expected statewide instructional average for FY 1986 of $23,842, is $4,466 per

instructional position. The addition of $4,466 to the FY 1986 base salary for instructional personnel in Virginia (calculated at $20,716 using the linear weighted average) produces a weighted instructional average salary in FY 1988 of $25,182. The increase required in each year of the biennium to fund the gap between $20,716 and $25,182 is 10.2 percent. With increases of this amount, the JLARC staff cost estimate includes sufficient funds for Virginia to achieve a median rank on average instructional salaries nationally.

V. FRINGE BENEFIT COSTS

In addition to salary costs, significant fringe benefit costs are associated with both instructional and non-instructional (support) personnel. The State requires local school boards to provide retirement, life insurance and federal social security for their professional employees. The school divisions are required to pay social security taxes for all salaried employees and retirement and group life payments for those salaried employees who are employed on a full-time basis. While it is not required, most school divisions also offer some form of health insurance for employees.

JLARC staff estimated the costs for the required benefit programs based on required instructors, prevailing numbers of support personnel, and prevailing salary levels. The JLARC analysis also included health benefits as SOQ costs because they are a prevailing fringe benefit in the Commonwealth. For FY 1987 and FY 1988, the JLARC estimate of SOQ fringe benefit costs totals $780 million, or about 15 percent of the total $5.16 billion SOQ costs estimated.

This chapter addresses fringe benefit issues as they relate to SOQ costs. A discussion of the benefits currently included in determining SOQ costs is followed by JLARC's assessment of a benefit package routinely offered by most school divisions. Finally, cost projections for the 1986-88 biennium are presented.

Fringe Benefit Issues

The first report of the SOQ Task Force derived the costs for the three major benefit programs by multiplying the employer's share of the contributions (a percent of the employee's annual salary) by the annual salaries for "teachers and local school board personnel covered by the above Standards of Quality and Objectives."

The second report of the Task Force altered the computation of benefits for instructional personnel. The salary base was the statewide average for instructional personnel multiplied by the minimum personnel prescribed by the personnel standard in the Appropriations Act. The computation of benefits for support personnel remained unchanged. Both reports of the Task Force were silent as to health benefits. However, to the extent these costs were reported within another category of support, such as fixed charges, health costs were not excluded from the estimate of support costs.

The approach outlined in the second report of the Task Force was used for cost estimates until FY 1976, when State support for fringe benefits began to be reduced through a series of legislative initiatives. By FY 1982, the General Assembly had established a salary ceiling for State funding below the statewide average for the three major programs and restricted State

support for non-instructional employees to a fixed sum. The General Assembly left unaltered the mandate for school divisions to pay the employer share of these benefits for those instructional staff considered SOQ personnel.

DOE estimates fringe benefit costs in three different ways. For instructional personnel, DOE's calculation for the major programs follows that of the original Task Force. For support personnel, DOE no longer computes a cost for the major programs. For "other" fringe benefits, DOE adds most reported expenditures to the support component, which is then folded into the calculation of the per-pupil support cost. As a result, there is an inconsistency in the way costs are defined in the area of (1) fringe benefits for support personnel when compared to instructional personnel and (2) "other" fringe benefits when compared to the three major programs.

VSRS, Group Life, and Social Security for Instructional Personnel. The current DOE approach to calculating State funding for the three major benefit programs is similar to the original Task Force approach: the number of instructional staff is multiplied by the average instructional salary. This salary base is then multiplied by the benefit rate (the employer share) for each program. DOE's estimate deviates from the Task Force approach only with respect to the number of instructional staff eligible for benefits. Whereas the Task Force did not quantify the number eligible, a minimum number of eligible positions has since been defined by the General Assembly as the positions per 1000 pupils in ADM for basic, vocational, and special education.

VSRS, Group Life, and Social Security for Non-Instructional Personnel. DOE does not estimate the fringe benefit cost for support personnel. Funds are budgeted at $21.5 million for each year, consistent with the legislatively established funding cap in FY 1982.

"Other" Fringe Benefits. In addition to VSRS, social security, and group life, most school divisions offer one or more "other" fringe benefit plans. In FY 1984, the school divisions reported expenditures totaling $92,249,025 in "other" benefits (Table 8). Of the itemized expenditures, the major outlays were for health plans, local retirement plans, and unitemized expenses. Of those that did not itemize, there was no pattern by size or region of the State.

DOE does not credit all these costs to SOQ, however. The amount of "other" fringe benefits are prorated by the ratio statewide of SOQ positions required to all instructional staff employed. Of the $92.2 million in reported costs, DOE recognized $73.3 million (79.5 percent), or $77 per pupil for "other" fringe benefits. The costs are included in the support component.

DOE's several approaches understate the costs of fringe benefits prevailing in the Commonwealth. DOE does not compute benefits for instructional aides or preschool teachers, for example. For non-instructional personnel, there is no methodology for estimating cost. With a legislatively imposed funding cap, costs in excess of the cap are no longer computed. Most importantly, the reporting of expenses for "other" fringe benefits in the support component allows any expense that a school division claims to influence SOQ costs.

Table 8

"OTHER" FRINGE BENEFITS

Item	Itemized Amounts	Percent of Total
Hospitalization	$43,341,382	47.0%
Local Retirement/Annuity	25,528,458	27.7
Disability Insurance	1,089,374	1.2
Non-Itemized	18,611,338	20.1
Other	3,678,473	4.0
Total	$92,249,025	100.0%

Source: JLARC analysis of itemized attachments submitted for the Annual Report of School Superintendents, 1983-84.

As shown in the previous table, DOE recognizes benefits that are not at all similiar in school divisions statewide. Health insurance is the largest component of the "other" costs. There is no uniform cost or coverage incurred for this benefit, however. Monthly contributions by schools boards ranged from $25 to $230 in FY 1984 (Table 9). The comprehensiveness of the coverage also varies. Most school divisions (125) made contributions to at least the individual employee coverage. Forty-eight of these school divisions also extended some coverage to other family members. Only ten divisions offered no coverage to their teaching staffs.

In addition to the difference in enrollment, there is also a difference in the types of benefits offered. Some schools divisions offer extra benefits. According to a Virginia Education Association (VEA) Insurance Coverage Survey of November 1984, 14 divisions provided dental plans.

DOE's approach recognizes benefits that are not standard across the State in areas other than health. Only six school divisions have local retirement plans supplementing VSRS. Of the $25.5 million for these plans itemized in FY 1984, $20.2 million was expended by one division. This resulted in an increase in SOQ costs for all school divisions of $17 per pupil.

An assortment of other benefits are offered in a handful of school divisions. Included in these benefits, according to the VEA survey, are provisions for allowing retired persons to continue in certain insurance plans in six divisions, provisions for paying employees consulting fees to retire early -- "early retirement incentive plan" -- in 11 divisions, and full or partial coverage for income protection or disability insurance in 16 divisions. These expenses are not excluded from the department's calculation of SOQ costs, although they are not incurred by all divisions.

Table 9

HEALTH PREMIUM: VARIATION IN COST
AND COVERAGE AMONG SCHOOL BOARDS
FY 1985

Coverage	Divisions	Monthly Contribution
Individual Portion		
Full Premium	41	$40-$89
Partial Premium*	84	$12-$148
Family Portion		
Full Premium	3	$142-$176
Partial Premium*	45	$25-$230
No Teacher Contribution	10	

*Includes divisions that allow employees to select health insurance from a cafeteria plan.

Source: VEA Insurance Coverage Survey, November 1984, with follow-up phone calls to non-respondents.

JLARC Approach

SOQ benefits are designed to include the cost of fringe benefits routinely offered by most school divisions. The estimate of total SOQ costs for FY 1987 and FY 1988 includes the employer share for VSRS, social security, and group life insurance for eligible SOQ positions -- instructional and support. "Other" fringe benefits except health insurance are excluded from SOQ costs. A basic health benefit cost is included for SOQ positions because the benefit is afforded employees in almost all school divisions.

VSRS, Group Life, and Social Security for Instructional Personnel. To compute the cost for instructional personnel, an estimated salary base was calculated by multiplying eligible positions by the prevailing salary levels for those positions. The benefit rate covering 100 percent of the employer share of each benefit was applied to the salary base.

For FY 1987, the benefit rates are 7.15 percent for the social security tax, 0.288 percent for group life coverage, and 11.2 percent for the VSRS contribution. In the 1988 calendar year, the benefit rate for social security is expected to increase to 7.51 percent. The 1987 and 1988 social security rates were averaged to yield a FY 1988 benefit rate of 7.33 percent.

VSRS, Group Life, and Social Security for Non-Instructional Personnel. The methodology developed for estimating non-instructional benefit

costs parallels that of instructional personnel. Fringe benefits were calculated for positions and salary levels resulting from the JLARC linear weighted average as applied to support distributions. Benefit rates were then applied to this salary base. While benefits for some support positions are an option of the school board, in practice school divisions afford all full-time employees the same benefits. The JLARC staff estimate of SOQ costs includes coverage for all support personnel employed on a full-time basis.

The rates for support personnel are those established by actuaries of VSRS. "Professional" support personnel such as transportation supervisors and physicians have the same benefit rate as instructional personnel. "Non-professional" support personnel such as operation and maintenance employees, garage mechanics, and bus drivers, have a lower rate that varies by school division. The benefit rate JLARC used for non-professionals was the statewide average of seven percent. Social security coverage was extended to bus drivers who are part-time personnel.

Other Fringe Benefits. While the individual premium for health insurance is a prevailing benefit, the inclusion of other fringe benefits is not warranted. As mentioned earlier, 125 school divisions (93 percent) paid at least a partial premium for their instructional personnel in FY 1984. In FY 1986, this number increased to 128 school divisions.

In the absence of a prevailing health care cost or a uniform plan of coverage in the school divisions, a minimum cost for a basic health plan was included in the SOQ costs for required SOQ personnel. To define a reasonable contribution to a health plan, information was requested from the largest provider of health coverage for school board personnel in Virginia. Blue Cross/Blue Shield of Virginia has developed a rate specifically for the employees of local school boards enrolled in their "educator program." Enrollment in this program consists of 14,000 teachers, as well as other employees of the school board in the central two-thirds of Virginia. A lower rate exists for the Southwestern part of the State.

The gross expenditures divided by the number enrolled in the educator program is considered the "breakeven rate." The breakeven rate for FY 1986 was $81.58 a month. This rate was multiplied by 12 to produce an annual premium of $978.96. Beyond FY 1986, when the last rate was established, the cost was projected using Chase Econometrics inflation indices for health services (6.2 percent for FY 1987 and 6.9 percent of FY 1988). The annual premium was multiplied by all eligible SOQ positions to produce a total cost for the FY 1986-88 biennium of $163,049,669.

VI. SUPPORT COSTS

School divisions incur substantial operating costs in addition to instructional personnel costs. For example, the divisions offer the following support services: administration; instructional support, such as supplies; attendance and health; operation and maintenance of school plants; pupil transportation; and provision for certain fixed charges. JLARC staff estimate that prevailing support costs for FY 1987 and FY 1988 total $1.65 billion, or about 32 percent of the $5.16 billion estimate of total SOQ costs.

Based on the JLARC analysis of support costs, it appears that the use by DOE of a statewide average overestimates the costs that prevail in school divisions. The use of a statewide average essentially credits all expenditures for support as part of the SOQ. Thus, costs that are not required by State standards, such as those due to inefficiency or local aspiration, are inappropriately included.

This chapter discusses support costs for basic operations (regular day school) and for special education pupils who are not served in regular day school. Issues involved in assessing SOQ support costs are covered, and examples are presented illustrating how the prevailing costs for support were calculated, based on FY 1984 expenditure data. Support costs for special education outside of regular day school are discussed. Finally, the approach used to inflate from FY 1984 costs to the costs for the 1986-88 biennium is presented.

Support Cost Issues

The need for most support expenditures cannot be directly linked to the Standards of Quality. The requirement for these expenditures may be inferred from the fact that the educational programs are to be offered; however, standards that define a minimum necessary for a high quality program in the support area have not been developed.

The 1972-73 Task Force on Financing the SOQ included support costs as part of SOQ costs. The methodology of the task force was to use the actual level of expenditures per pupil statewide to estimate the SOQ costs for eligible support activities. The Department of Education currently uses this same basic approach for estimating SOQ support costs. DOE uses the data on expenditures which it collects for the Annual School Report. The expenditures reported are summed, certain revenues are deducted, and the remaining expenditures are divided by the number of pupils in ADM across the State. As a part of the JLARC analysis, the study team reviewed the DOE method to determine if the use of the statewide average produced a cost estimate that was reasonably reflective of the costs that most school divisions incur.

Prevailing Costs for Basic Operating Support

DOE collects data on support positions and expenditures for its Annual School Report. The most recent year for which data are available is FY 1984. These data are used in the JLARC analysis as well as for the department's cost estimates. The variation in the expenditures reported by school divisions can be used to identify a prevailing support cost level. To examine the issue of prevailing support costs, JLARC staff (1) validated the data to be used, and (2) calculated the costs for all separately identified support items using the mean, median, and a number of other statistical measures.

Data Validation. JLARC found that the support data reported in the Annual School Report are not validated by DOE. A review of the data resulted in the discovery of many problems. For example, the data for school divisions contained support positions reported in personnel categories without corresponding expenditures, or expenditures reported in personnel categories without corresponding support positions. One school division with over $1.6 million in compensation for bus drivers was credited with 0 bus drivers. Another division that reportedly had 86 "other professional administrative personnel" had $0 reported in compensation for those positions.

A review of out-of-range values also indicated additional data problems. For example, one school division reported more than $342,000 in costs for the compensation of 27 psychiatrists, psychologists, or similar personnel, although the division had only 4,216 pupils. When the data was checked, it was found that one school psychologist at a cost of $28,682 should have been reported; the other expenditures in the category were for instructional compensation (elementary and secondary teachers in special education).

To validate the support data, JLARC staff contacted 95 school divisions. Corrections were made to 197 data items. The net impact of the validation for this database did not have a major impact in terms of the costs that are calculated using a statewide average across all expenditure items. However, a review of the database is very important for assessing the variation in costs between school divisions for each of the specific support items. It is this type of review that is necessary to draw conclusions about prevailing costs.

Calculation of Prevailing Costs. Basic operating costs are divided by the Department of Education into six major categories:

- Administration
- Instructional Support
- Attendance and Health
- Operation and Maintenance
- Pupil Transportation
- Fixed Charges

Expenditure data is requested and reported by school divisions at a greater level of detail, however. Thus, each of the major categories can be disaggregated into several separate frequency distributions. In the JLARC analysis, 50 different support cost distributions were identified. These distributions were either: (1) expenditures per pupil (or other control variable), (2) support

positions per pupil (or other control variable), or (3) average salary levels of support personnel.

Of the 50 distributions, eight were selected to test the statistical properties of 12 different estimates of central tendency. These distributions were selected because they reflected a range of the different types that needed to be accommodated. As discussed in Chapter II, the linear weighted average with a weight of five was found to most consistently reflect the prevailing costs (with the best balance between the properties of stability and sensitivity). The median was the most stable, but least sensitive; and the mean was the most sensitive, but the least stable.

For each of the 50 distributions, then, JLARC staff calculated the median, mean, and linear weighted average values. The median generally was the lowest cost estimate, the mean was generally the highest, and the linear weighted average was typically between the two other statistics.

The following pages are a discussion of three examples of the distributions analyzed. The first example is superintendent salaries. Figure 10 illustrates the kind of data corrections which were made in the various support categories. Data reported for the Annual School Report included superintendent salaries of $92,591.62, $85,043.94, $79,450.00, and $77,404.86. When these data were checked, the following situations were found:

(1) The $92,591.62 reflected $55,000 paid for the contract of a superintendent who was fired, plus additional compensation for a new superintendent. The data was changed to reflect that $55,000 was the school division's superintendent salary level; and the other $37,591.62 in expenditures resulting from the need to pay two superintendents was moved to the "other administrative costs" category.

(2) The $85,043.94 reflected a salary of $76,793.94. The remaining $8,250 reflected 30 days of accumulated annual leave paid when the superintendent left. These expenditures should have been reported under "other fixed charges," which is intended to include terminal leave payments.

(3) The reported salary of $79,450 was verified.

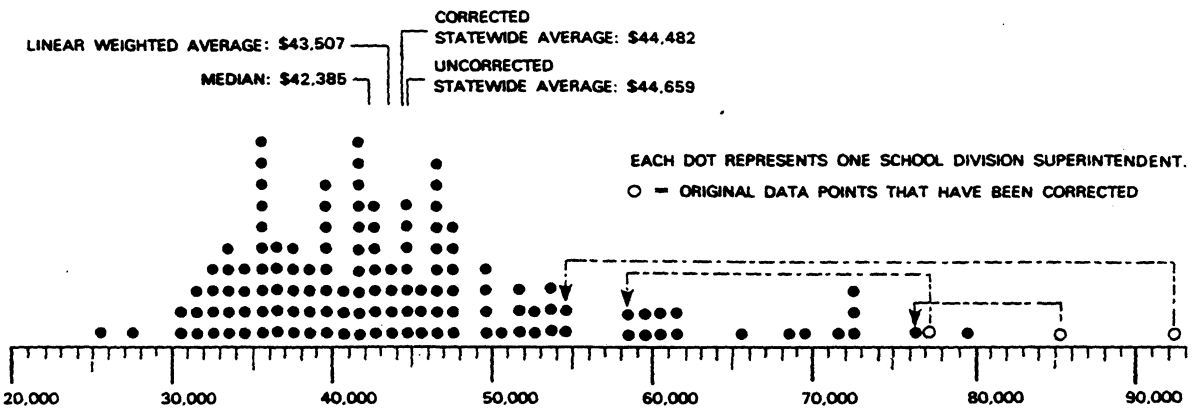
(4) The $77,404.86 reflected a salary of $58,975. The remaining $18,429 was for accumulated annual leave.

Once the data corrections were made, the median superintendent salary was $42,385. The linear weighted average for the salaries was $43,507. The mean calculated at the division level was $44,499.5. The corrected statewide average was $44,482, while the uncorrected statewide average was $44,659.

Figure 11 illustrates a distribution of positions on a per-pupil basis. The particular distribution is "other professional administrative" positions, which includes personnel such as administrative assistants, financial officers, and directors of personnel and research. Again, the linear weighted average at

Figure 10

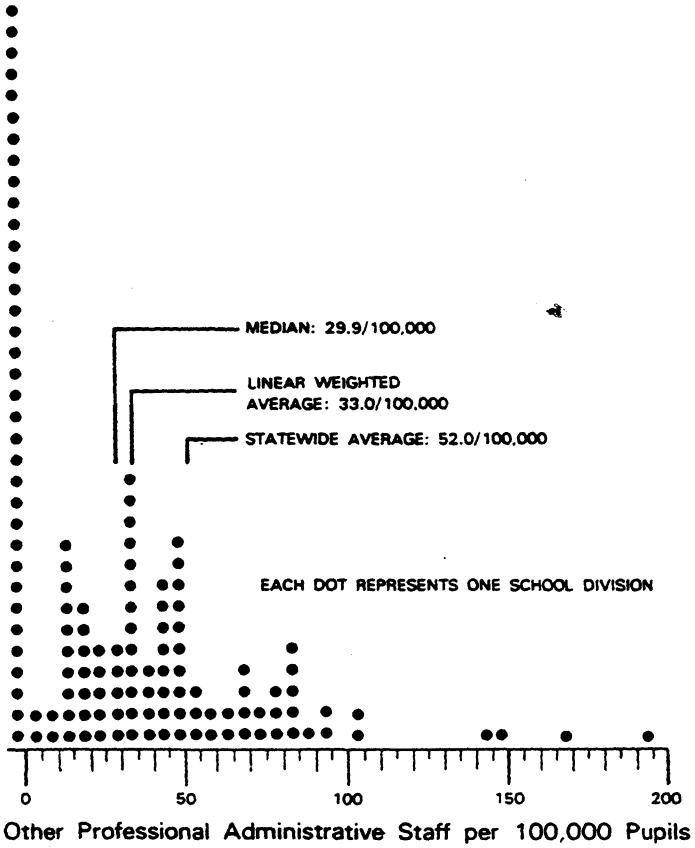
Comparison of Measures of Central Tendency: Distribution of Superintendent Salaries



Source: JLARC staff graphic.

Figure 11

Comparison of Measures of Central Tendency: Other Professional Administrative Staff



Source: JLARC analysis

33.0 positions per 100,000 pupils is greater than the median (29.9) but less than the corrected statewide average (52.0). The linear weighted average is also more reflective of the prevailing number of positions. Thirty-five divisions did not have any of these positions; 78 divisions, or 59 percent of the observations, had fewer positions per pupil than the linear weighted average, while 105 divisions, or 80 percent of the observations, had fewer positions per pupil than the statewide average.

Figure 12 illustrates the third example, which is the number of bus driver positions per 100,000 bus miles traveled. A point illustrated by this distribution is that the statewide average is not always greater than the median or the linear weighted average. In this particular case, only 43 percent of the school divisions provided fewer bus drivers than the statewide average, whereas 55 percent of the school divisions provided fewer drivers than the linear weighted average.

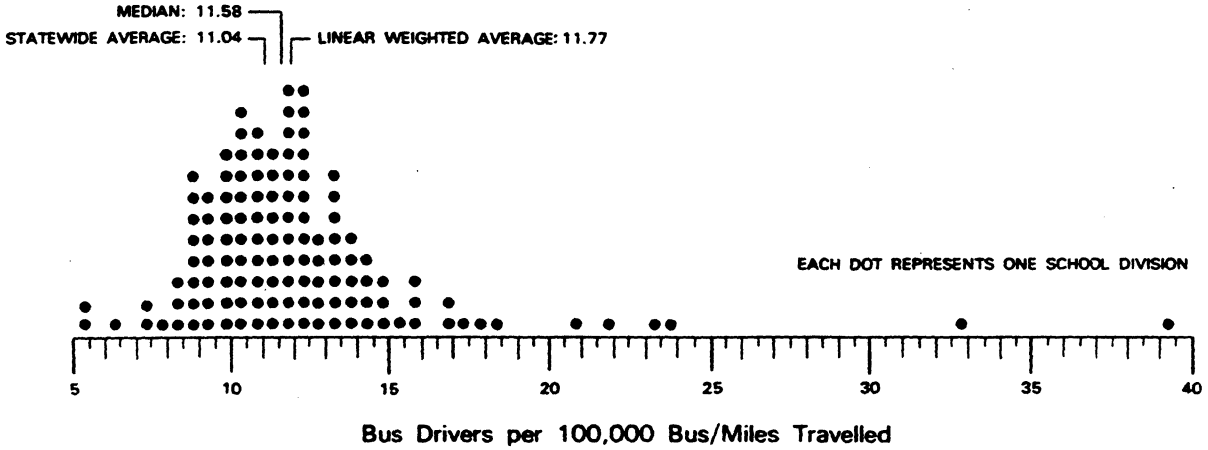
Table 10 shows estimates of FY 1984 support costs using several different methods: (1) the median cost, (2) the linear weighted average cost, (3) the mean cost at the division level, and (4) the statewide average cost. The costs are grouped into the six major support categories, and the items that compose the categories are the basic operating support items as defined by JLARC staff.

The table shows that the costs based on the linear weighted average generally exceed those based on the median, but are significantly less than those based on statewide average. Across the six categories, prevailing costs are 104.8 percent of the median cost, but only 87.3 percent of the statewide average cost.

Differences between the linear weighted average and statewide average costs reflect the variations between school divisions in the number of support personnel, the support salaries, and the levels of expenditure in non-personnel support categories. For example, the school divisions actually employed about 30,260 support personnel in FY 1984. The estimate based on

Figure 12

Comparison of Measures of Central Tendency: Distribution of Bus Drivers



Source: JLARC staff graphic.

Table 10

COMPARISON OF TOTAL SUPPORT COSTS USING DIFFERENT STATISTICS
(FY 1984 Costs in Millions)

Category	Using Median	Using Linear Weighted Average	Using Division-level Mean	Using Statewide Average
Administration	$ 77.08	$ 82.42	$ 88.07	$ 96.02
Instructional Support	141.49	147.43	153.14	168.29
Attendance and Health	16.91	21.74	25.81	29.24
Transportation	109.67	114.24	122.82	123.52
Operation and Maintenance	268.44	276.14	285.14	321.00
Fixed Charges	19.36	21.52	23.78	22.35
Totals	$632.95	$663.49	$698.76	$760.42

Source: JLARC analysis of Annual School Report data.

the linear weighted average recognizes about 28,040 of these positions, or 92.7 percent; this means that one position in every 13.6 is not considered part of a prevailing personnel level, and is not attributed as part of SOQ costs.

Special Education Support Costs

Instruction for handicapped pupils who are not served in regular day school is required by the Standards of Quality. Special education and related services for handicapped children ages two to 21 are required by the regulations implementing Standard number 4, the education of the handicapped. The same regulations also require school divisions to make necessary arrangements with a State facility if it is unable to provide appropriate educational services. School divisions are also required to enter into contractual arrangements with private or regional schools for special education programs when no suitable placements are available in the local school or State facility.

SOQ costs for these services were estimated using actual FY 1984 expenditures. The total cost of these services in FY 1984 was $20,651,443.

Inflation Rates for Support Costs

JLARC cost estimates for FY 1984 were all adjusted for inflation using Chase Econometric rates as disaggregated by object code by the Departments of Taxation, and Planning and Budget. Support cost items were matched with the most closely related object codes. For example, inflation

rates for the "clerical services" object code were multiplied by FY 1984 costs for the various types of support clerical personnel. Estimates of inflation rates were available to calculate costs for FY 1987 and FY 1988.

The application of the rates by object code to the different cost distributions produced the following set of support inflation estimates:

FY 1985: 4.2%
FY 1986: 4.9%
FY 1987: 5.7%
FY 1988: 6.0%

These support inflation estimates are weighted based on the magnitude of the expenditures for the various support items.

VII. STATE SHARE OF SOQ COSTS

The *Constitution* requires that "the General Assembly shall determine the manner in which funds are to be provided for the cost of maintaining an educational program meeting the prescribed standards of quality, and shall provide for the apportionment of the cost of such programs between the Commonwealth and the local units of government comprising such school divisions." A determination of the State's share of SOQ costs is an important element in the overall funding of public education in Virginia.

The State's share of SOQ costs is dependent on legislative judgements. The share to be borne by the State is a policy choice, not a determination which can be based on technical analysis. JLARC staff have developed a computer program that can be used to estimate the State share of SOQ costs using any number of different assumptions about those policy choices. However, in order to produce a single estimate of the State share for this study, JLARC staff used the existing apportionment of costs to the State and local governments established by the General Assembly. An overview of the apportionment of costs is shown in Table 11.

Table 11

STATE AND LOCAL SHARE OF SOQ COSTS

Program	State Share	Local Share
Basic Aid[1]	60.9%	39.1%
Vocational Education Add-On	50.0	50.0
Special Education Add-On	50.0	50.0
Remedial Education Add-On	50.0	50.0
Fringe Benefits		
Instructional Personnel	100.0	0.0
Support Personnel	71.0	29.0
Special Education Support Costs		
State-Operated Facilities	100.0	0.0
Tuition for Placements	60.0	40.0
Preschool Age[2]	60.0	40.0
Total SOQ Program	64.5	35.5

[1]Includes distribution of Dedicated State Sales Tax.
[2]Up to an established maximum.

Source: JLARC analysis.

Based on the JLARC approach, the cost of fully funding the existing Standards of Quality was calculated to be $5,162,803,388 for the 1986-88 biennium (Table 12). Given the current practices for defining State and local shares, the total cost represents a State share of $3,330,931,638 and a local share of $1,831,871,750. When compared to the level of appropriations for FY 1986, the General Assembly will need to increase the general fund appropriation in support of the standards during the next biennium by at least $161,428,898.

Table 12

COST OF THE STANDARDS OF QUALITY

Instructional Personnel*	FY 1987	FY 1988	Biennium Total
Basic Instructional Positions	$1,327,699,434	$1,470,866,323	$2,798,565,756
Basic Aides	0	0	0
Special Education Positions	85,655,982	94,901,623	180,557,605
Special Education Aides	2,738,549	3,034,146	5,772,695
Vocational Education Positions	68,650,435	76,060,511	144,710,945
Gifted/Talented Instructional Positions	25,095,841	27,801,946	52,897,787
Remedial Education Positions	30,231,523	33,494,691	63,726,214
Total for Instructional Personnel	$1,540,071,763	$1,706,159,239	$3,246,231,002
SOQ Support			
Basic Operating Support	$771,940,061	$821,184,822	$1,593,124,884
Health Insurance	78,647,396	84,391,134	163,038,530
Support Fringe Benefits	52,000,378	56,153,944	108,154,323
Special Education Support	25,297,571	26,957,078	52,254,649
Total for Support	$927,885,407	$988,686,979	$1,916,572,386
Total Costs of Standards of Quality	$2,467,957,170	$2,694,846,218	$5,162,803,388

*Total compensation including salary, VSRS, social security, and group life insurance.

Source: JLARC analysis of Department of Education and local school division data.

Defining the State and Local Shares

Since 1972, the General Assembly has established the proportion of costs which will be funded from State funds. In some instances, funding formulas determine the State share. For some other programs, specific levels of support have been established, or funding caps have been imposed.

Basic Aid. The total cost of basic aid is $2,034 per pupil for FY 1987 and $2,212 per pupil for FY 1988. Of these amounts, the State share is $1,227 per pupil in 1987 and $1,335 per pupil in 1988, as a result of apportioning costs through the composite index. The State share for basic aid is $2,489,965,667 for the 1986-1988 biennium. A summary of the distribution of basic aid to each school division is provided in Appendixes C and D.

There are two components to the basic aid per-pupil cost: personnel and support. The per-pupil amount for the instructional personnel was computed by multiplying the required positions per 1,000 pupils in ADM for basic instruction by the basic instructional salary. This amount was divided by adjusted ADM to produce a per-pupil amount of $1,186 in FY 1987 and $1,307 in FY 1988.

The per-pupil amount for support for the 1986-1988 biennium was computed in several steps. First, the costs for support services and fringe benefits for non-instructional personnel (minus the $21.5 million cap) were added to calculate a gross per-pupil amount. As discussed in Chapter V, fringe benefits for support personnel in excess of the cap had not previously been identified as SOQ costs. The JLARC staff estimate of the State share reflects 100 percent of the cost up to the funding cap of $21.5 million, with the costs in excess of this amount included in the support component of basic aid. This represents a modification of the existing apportionment of these costs since the current appropriations for fringe benefits include only the amount of the cap.

Other options for recognizing the real costs of support fringe benefits would change the State's share. Equalizing all benefits would reduce the JLARC estimate of the State share by about $20.8 million over the biennium. For the State to pick up 100 percent of fringe benefit costs would increase the State share by $109.9 million over the biennium.

The net per-pupil amount for support services is derived by deducting State and local revenues that offset basic operating costs. Local direct revenue, State categorical aid for SOQ purposes, and driver's education fund revenues were deducted in estimating the State share of SOQ costs. Local revenue was estimated at $23,409,450 in FY 1987, and $24,840,080 in FY 1988 (Table 13).

The JLARC staff estimate also deducts State categorical aid for basic operating costs from the costs to be met through basic aid. The categorical funds serve to offset the amount that needs to be appropriated for basic aid (Table 14). These deductions amount to $40,526,527 in FY 1987, and $40,665,481 in FY 1988.

Special Education Add-On. The cost per-pupil for the special education add-on was calculated by multiplying the 3.4 positions per 1,000 pupils in ADM by the prevailing salary for special education teachers. The per-pupil cost was multiplied by unadjusted ADM to calculate the total cost. The State share was established at 50 percent of the total cost. In addition to special education classroom teachers, the special education add-on includes handicapped preschoolers and residents of foster homes.

Table 13

ESTIMATES OF LOCAL DIRECT REVENUES

Revenue Source	FY 1987	FY 1988
Tuition-Day School	$ 2,515,141	$ 2,787,365
Special Fees from Pupils	4,038,984	4,494,630
Sale of Textbooks	1,515,053	1,707,987
Sale of Supplies	452,177	448,687
Other Funds	6,619,715	6,751,072
Rebates and Refunds	3,497,206	3,687,771
Sale of Other Equipment	351,277	358,295
Refunds-Gasoline Tax (Operation & Maintenance)	0	0
Refunds-Gasoline Tax (Pupil Transportation)	114,982	128,104
Transportation of Pupils	517,886	566,070
Sale of School Buses	391,211	408,733
Rents	2,729,293	2,944,479
Insurance Adjustments	666,525	556,887
Total Direct Local Revenues	$23,409,450	$24,840,080

Source: JLARC staff analysis of DOE data.

Table 14

STATE CATEGORICAL FUNDS WHICH OFFSET BASIC AID COSTS

Categorical Deductions from Basic Aid Support	FY 1987	FY 1988
Textbooks	$ 0	$ 0
Foster Home-Regular	1,628,820	1,628,820
Pupil Transportation	33,030,415	33,030,415
Voc. Ed. Suprv. Local Administration	3,200,000	3,200,000
Travel for Vocational Education	555,000	555,000
Homebound Instruction for Spec. Ed.	1,362,292	1,501,246
In-Service Training for Spec. Ed. Teachers	375,000	375,000
Voc. Ed. for Special Ed. Pupils	375,000	375,000
Total	$40,526,527	$40,665,481

Source: Department of Education.

Categorical aid is provided to offset the State share of special education add-on funds in two accounts: preschool handicapped, and foster home handicapped. Currently, the State provides funds for preschool age children to reimburse 60 percent of the cost of preschool programs, not to exceed $8,000 per class for home-based instruction and $11,000 per class for center-based. In FY 1986, $4,500,000 was budgeted by DOE. Since most of the cost is for instructors (actual support costs totaled only $355,282 in FY 1986), these funds offset the State share for the required special education instructors. The salary inflation of 10.2 percent was used to project the State share for the 1986-88 biennium.

The State also provides aid for school divisions with handicapped children in foster homes. The amount is based on a formula for the "local cost per pupil day indexed by a factor for the handicapping condition of the child." In FY 1986, $1,990,780 was budgeted for this need. Like preschool, the major expense is for teachers. As a result, these funds can be applied against the State share for the special education add-on. With these deductions the State share for special education for the 1986-1988 biennium is $64,364,371.

Vocational Education Add-On. Currently, the State share is defined as 50 percent of three FTE instructional staff per 1,000 pupils in ADM. The JLARC estimate would redefine the State share as 50 percent of 2.6 FTE instructional staff. This is a State share of $60,984,468 for the 1986-1988 biennium.

Remedial Education. Currently, the State share is defined as 50 percent of a per-pupil dollar amount if school divisions are eligible for funds. For the JLARC estimate, the State share was estimated using 50 percent of 1.2 positions per 1,000 pupils in ADM. The cost to the State is $26,855,669 for the 1986-1988 biennium.

Fringe Benefits for Instructional Personnel. As is current practice, the State share for fringe benefits in the JLARC estimate is defined as 100 percent of the employer share of VSRS, group life insurance, and social security. The biennial cost for these three major fringe benefits is $511,917,473. JLARC also estimated health insurance benefit costs at 100 percent for instructional personnel. These costs have already been included in the support component of basic aid. The State share of health insurance benefits is estimated at approximately $63.9 million.

Conclusions and Recommendations

The result of applying the current funding framework to the JLARC estimate of total SOQ costs is a State share of $3,330,931,638 and a local share of $1,831,871,750 for the 1986-1988 biennium (Table 15).

The estimate of SOQ costs is the minimum necessary to provide for the programs required by the standards. That is, the estimate reflects the cost of providing the "foundation" program only. Most school divisions provide educational programs beyond those required by the SOQ; expenditures for these activities are not included in the calculation of SOQ costs. Thus, the JLARC

Table 15

ALLOCATION OF SOQ COSTS TO STATE AND LOCAL GOVERNMENTS

State Portion	FY 1986 Actual	FY 1987	FY 1988	Biennium Total
Basic Aid (General Fund)	$768,046,350	$824,232,649	$899,433,018	$1,723,665,667
Basic Aid (Dedicated Sales Tax)	329,100,000	367,100,000	399,200,000	766,300,000
Vocational Education Add On	34,087,330	28,953,517	32,030,950	60,984,468
Special Education Add On	45,612,730	30,384,866	33,979,505	64,364,371
Special Education Support	16,851,255	13,964,743	20,241,015	34,205,757
Gifted and Talented SOQ Categorical	4,739,575	*	*	*
Remedial Education Add On	19,089,005	12,750,231	14,105,437	26,855,669
Employee Retirement (General Fund)	113,698,255	130,322,071	128,648,376	258,970,447
Employee Retirement (Literary Fund)	22,000,000	15,000,000	32,100,000	47,100,000
Social Security	86,342,453	92,772,572	105,204,071	197,976,643
Support Fringe Categorical (Capped)	21,559,395	21,559,395	21,559,395	43,118,790
Group Life Insurance	3,505,052	3,736,853	4,133,530	7,870,383
Incentive Payments	12,501,995	0	0	0
Enrollment Loss Payments	2,574,880	0	0	0
No Loss Payments	542,880	0	0	0
Driver's Education Fund (HM&CF)	1,721,000	2,022,000	2,146,000	4,168,000
State Categorical Programs	46,816,215	47,422,307	47,929,136	95,351,444
State SOQ Total	$1,528,788,370	$1,590,221,205	$1,740,710,433	$3,330,931,638

Local Portion	FY 1987	FY 1988	Biennium Total
Required Local Expenditure (Basic)	$764,009,292	$835,200,094	$1,599,209,386
Vocational Education Add On	28,953,517	32,030,950	60,984,468
Special Education Add On	37,280,646	41,243,160	78,523,806
Special Education Support	11,332,828	6,716,064	18,048,892
Remedial Education Add On	12,750,231	14,105,437	26,855,669
Employee Retirement	0	0	0
Social Security	0	0	0
Group Life Insurance	0	0	0
Direct Revenues	23,409,450	24,840,080	48,249,530
Local SOQ Total	$877,735,964	$954,135,786	$1,831,871,750

Total Costs Allocated to State and Local Governments	$2,467,957,170	$2,694,846,218	$5,162,803,388

* 1.0 FTE included in Basic Aid Personnel Component for FY 1987 and FY 1988.

Source: JLARC analysis of Department of Education and local school division data.

staff estimate should not be viewed as a recommendation on how much the General Assembly should appropriate for direct aid to public education.

Based on the JLARC approach, the State would provide 64.5 percent of the funds necessary to implement the Standards of Quality. Traditionally, the State and local shares have been thought of as 50 percent each. The key reason for the State's contributing in excess of 50 percent under the JLARC approach is the level of support which would be provided for instructional fringe benefits and the dedicated State sales tax revenues. The State share of SOQ fringe benefits, for instructional personnel is currently set at 100 percent. Also, dedicated State sales tax revenues have been credited as a State contribution consistent with the Attorney General's opinion that those revenues are "State funds because they are raised pursuant to a State tax, paid into the State treasury, are subject by law to appropriation by the General Assembly and, in that context, may be subjected to such conditions as the General Assembly may prescribe."

JLARC's cost calculation, when applied under the current distribution framework, leads to the following conclusions about full funding of the State share:

(1) $472.0 million in additional State funds from all sources will be required for the 1986-1988 biennium when compared to total funding for the prior biennium.

(2) $273.4 million in additional State funds from all sources will be required in the 1986-1988 biennium when compared to the budget target (FY 1986 funding times two). Of this amount, $161.43 million in additional State general funds will be required for the 1986-1988 biennium.

The $161.43 million substitutes for the $395.9 million in additional funds necessary to achieve full funding estimated by the Department of Education (Table 16).

Table 16

INCREASE IN STATE FUNDS
1986-88 Biennium

	Increase Over Previous Biennium	Increase Over 1986 Level Funding
State General Fund	$327,440,491	$161,428,898
Dedicated State Sales Tax	128,900,000	108,100,000
State Literary Fund	15,100,000	3,100,000
State Highway Fund	576,000	726,000
Total	$472,016,491	$273,354,898

Source: JLARC analysis.

Recommendation (1): In order to fully fund the State's share of the foundation program required by the Standards of Quality, the General Assembly should increase general fund appropriations for SOQ programs by an amount not less than $161,428,898 for the 1986-1988 biennium.

Recommendation (2): The Department of Education should use the methodology described in this report to estimate future SOQ costs. The Department should ensure that the most recent financial and statistical data are used to update the estimates each year. Financial and statistical data of the Annual School Report should be validated by the Department. School divisions should be encouraged to cross-check and verify the financial and statistical data they submit to ensure that they are accurate.

APPENDIXES

APPENDIX A:

TECHNICAL APPENDIX SUMMARY

JLARC policy and sound research practice require a technical explanation of research methodology. The methods used to assess the costs of the Standards of Quality have generally been explained in the text of this report. However, additional technical documentation of the analysis has been prepared. This summary outlines the additional documentation which is available for inspection or for distribution on request.

Instructional Staffing Levels. The required instructional staffing level was determined for each school division by applying staffing standards to appropriate school, grade, or class enrollment data. Enrollment for basic (regular classroom) instruction, special education, vocational education, and remedial instruction in the 1984-85 school year was used. Calculation of gifted and talented instructors was based on actual employment for this program in 1984-85. JLARC staff developed a set of computer programs to apply the quantified standards to the enrollment data. Detailed documentation of the computer programs is available for inspection.

Selection of a Statistic for Prevailing Costs. Fifteen statistics were tested for use in representing the level of expenditures prevailing in most school divisions. The objective of the selection process was to find a statistic which was sensitive to the data from all school divisions, but which was not overly sensitive to the most extreme values. Each statistic was tested on six salary and eight support cost distributions, representing a cross-section of the distributions found in the expenditure data. The appropriateness of each statistic was based on an analysis of the mean square error and absolute error for each distribution. A detailed explanation of this analysis has been prepared and is available on request.

Inflation Assumptions. Individual support cost items for FY 1984 were inflated through FY 1988 using Chase Econometric rates disaggregated by object code. Detailed documentation of the inflation assumptions used for each of the distributions is available for inspection.

Instructional Salary Increases. Sufficient funds were included in the JLARC estimate of SOQ costs to increase the average Virginia classroom teacher salary to the average salary of the median state by 1988. The calculation of this amount was based on a projection of the national median salary in 1988, and an analysis of the historical salary increases in Virginia. This analysis is documented in a separate technical paper available on request.

Calculation of SOQ Costs. The many elements of the analysis were brought together in a LOTUS 1-2-3 computer spreadsheet to calculate total SOQ costs for the 1986-88 biennium. The spreadsheet also computes the State and local shares of the costs, required increases in State funds, the distribution of basic aid funds to each school district, and the required local expenditure. Documentation of the spreadsheet is available for inspection.

APPENDIX B:

INSTRUCTIONAL POSITIONS PER 1000 REQUIRED BY SOQ

	BASIC INSTRUCTORS	SPECIAL ED ADD ON	VOC ED ADD ON	REMEDIAL INSTRUCTORS	GIFTED & TALENTED	KINDERGARTEN AIDES	TOTAL INSTRUCTORS	SPECIAL ED AIDES
ACCOMACK	46.8	3.3	3.5	1.3	1.1	0.2	56.2	0.2
ALBEMARLE	45.0	7.6	2.1	0.3	1.1	0.4	56.5	0.1
AMELIA	44.7	9.4	2.5	1.5	1.1	0.7	59.9	0.0
AMHERST	45.4	6.1	2.1	1.2	1.1	0.4	56.4	0.4
APPOMATTOX	45.3	4.4	3.2	1.4	1.1	0.0	55.4	0.8
ARLINGTON	44.4	10.2	3.0	0.4	1.1	0.1	59.2	0.8
AUGUSTA	45.5	5.3	4.0	1.3	1.1	0.5	57.7	0.3
BATH	45.6	13.2	6.2	1.4	1.1	0.0	67.5	0.0
BEDFORD	44.8	6.3	2.8	0.4	1.1	0.4	55.7	0.4
BLAND	57.3	11.6	4.4	1.3	1.1	0.0	75.7	0.8
BOTETOURT	45.0	5.5	3.6	0.4	1.1	0.0	55.6	0.5
BRUNSWICK	45.4	7.0	3.6	1.4	1.1	0.4	58.9	0.7
BUCHANAN	44.8	4.5	3.0	1.4	1.1	0.2	55.0	0.1
BUCKINGHAM	45.4	7.0	3.9	1.4	1.1	0.2	59.0	0.5
CAMPBELL	45.1	5.9	2.5	1.2	1.1	0.5	56.3	0.2
CAROLINE	44.7	5.8	2.7	1.4	1.1	0.3	55.9	0.5
CARROLL	50.9	6.3	4.2	1.2	1.1	0.1	63.8	0.0
CHARLES CITY	45.5	9.4	2.7	1.3	1.1	0.0	60.1	0.8
CHARLOTTE	45.7	3.7	3.7	1.3	1.1	0.2	55.8	0.0
CHESTERFIELD	44.6	5.3	1.8	0.4	1.1	0.2	53.3	0.2
CLARKE	46.1	5.6	3.6	1.3	1.1	0.0	57.8	0.0
CRAIG	52.7	4.2	4.1	1.4	1.1	0.0	63.4	0.0
CULPEPER	45.3	8.5	3.2	1.4	1.1	0.3	59.8	0.7
CUMBERLAND	43.9	8.1	3.4	1.4	1.1	0.0	57.8	0.0
DICKENSON	45.0	3.8	3.7	1.4	1.1	0.0	55.0	0.5
DINWIDDIE	43.8	8.2	4.0	1.3	1.1	0.4	58.7	0.8
ESSEX	44.8	10.5	3.6	0.4	1.1	0.0	60.5	0.7
FAIRFAX	44.3	7.1	2.4	0.4	1.1	0.3	55.6	0.3
FAUQUIER	44.9	7.0	2.7	0.4	1.1	0.1	56.1	0.4
FLOYD	45.3	9.0	3.8	1.3	1.1	0.3	60.8	0.0
FLUVANNA	45.1	7.7	2.8	1.4	1.1	0.0	58.2	0.5
FRANKLIN	44.7	3.7	2.2	1.3	1.1	0.3	53.4	0.5
FREDERICK	44.0	5.9	2.8	0.4	1.1	0.2	54.3	0.0
GILES	45.1	8.3	3.8	1.3	1.1	0.0	59.6	0.0
GLOUCESTER	44.4	5.1	3.0	0.4	1.1	0.3	54.3	0.2
GOOCHLAND	45.2	8.8	4.8	1.3	1.1	0.3	61.5	1.1
GRAYSON	53.1	5.6	4.2	1.4	1.1	0.7	66.2	0.0
GREENE	43.9	9.1	6.2	1.4	1.1	0.0	61.7	0.0
GREENSVILLE	44.0	6.1	3.6	1.4	1.1	0.0	56.1	1.2
HALIFAX	44.8	5.5	2.3	1.3	1.1	0.4	55.4	0.0
HANOVER	44.0	6.8	2.3	0.4	1.1	0.6	55.1	0.5
HENRICO	44.9	4.7	2.7	0.4	1.1	0.3	54.1	0.4
HENRY	44.4	4.1	3.6	1.3	1.1	0.1	54.6	0.2
HIGHLAND	48.1	25.6	5.6	1.4	1.1	2.2	83.9	0.0
ISLE OF WIGHT	43.7	5.3	5.8	1.4	1.1	0.1	57.5	0.0
KING GEORGE	44.5	5.6	3.6	0.4	1.1	0.0	55.2	0.0
KING QUEEN	47.2	10.5	4.3	1.5	1.1	0.0	64.6	0.0
KING WILLIAM	43.0	9.0	4.5	1.4	1.1	0.4	59.3	0.0
LANCASTER	43.9	2.8	3.5	1.4	1.1	0.0	52.8	0.0
LEE	45.5	5.1	4.9	1.4	1.1	0.5	58.4	0.0
LOUDOUN	45.3	6.3	2.6	0.4	1.1	0.4	56.1	0.6
LOUISA	44.8	6.2	4.7	0.4	1.1	0.4	57.6	0.0

APPENDIX B (Continued)

	BASIC INSTRUCTORS	SPECIAL ED ADD ON	VOC ED ADD ON	REMEDIAL INSTRUCTORS	GIFTED & TALENTED	KINDERGARTEN AIDES	TOTAL INSTRUCTORS	SPECIAL ED AIDES
LUNENBURG	45.4	5.1	3.5	1.4	1.1	0.4	56.9	0.0
MADISON	44.3	5.8	4.2	1.3	1.1	0.8	57.6	0.0
MATHEWS	45.0	11.3	5.1	2.1	1.1	0.4	65.0	0.8
MECKLENBURG	45.2	5.8	4.8	1.2	1.1	0.0	58.1	0.0
MIDDLESEX	43.8	11.2	2.9	0.4	1.1	0.8	60.2	1.7
MONTGOMERY	44.7	6.5	3.7	1.2	1.1	0.2	57.4	0.1
NELSON	47.6	3.3	4.9	1.4	1.1	0.2	58.6	0.0
NEW KENT	44.6	10.2	3.6	1.4	1.1	0.0	60.8	0.6
NORTHAMPTON	45.4	3.4	3.1	1.4	1.1	0.2	54.7	0.0
NORTHUMBERLAND	47.6	6.1	2.8	1.3	1.1	0.3	59.3	0.0
NOTTOWAY	45.4	6.0	2.0	1.4	1.1	0.0	55.9	0.4
ORANGE	45.1	5.3	3.9	1.3	1.1	0.1	56.8	0.9
PAGE	45.3	6.7	3.1	1.5	1.1	0.4	58.1	0.6
PATRICK	44.7	5.3	2.7	1.4	1.1	0.7	55.9	0.3
PITTSYLVANIA	44.2	4.2	3.3	1.4	1.1	0.4	54.6	0.3
POWHATAN	43.1	8.5	2.8	1.3	1.1	0.0	56.8	0.9
PRINCE EDWARD	41.8	5.1	3.6	1.5	1.1	0.0	53.1	0.0
PRINCE GEORGE	44.7	6.8	2.3	0.3	1.1	0.3	55.5	0.4
PRINCE WILLIAM	44.9	6.0	2.5	0.4	1.1	0.1	54.9	0.6
PULASKI	44.7	5.0	3.2	1.1	1.1	0.3	55.4	0.0
RAPPAHANNOCK	44.7	12.4	4.9	1.3	1.1	0.0	64.4	0.0
RICHMOND	46.1	5.4	3.7	1.3	1.1	0.0	57.6	0.0
ROANOKE	45.0	6.4	2.8	0.4	1.1	0.5	56.2	0.4
ROCKBRIDGE	46.6	6.3	3.5	1.2	1.1	0.6	59.3	0.3
ROCKINGHAM	45.2	6.8	4.2	1.3	1.1	0.3	58.8	0.5
RUSSELL	45.6	2.8	3.4	1.4	1.1	0.2	54.5	0.2
SCOTT	45.3	4.8	3.9	1.9	1.1	0.3	57.3	0.2
SHENANDOAH	45.7	7.1	4.5	1.3	1.1	0.2	60.0	0.8
SMYTH	44.8	3.2	4.2	1.4	1.1	0.1	54.7	0.0
SOUTHAMPTON	44.8	9.4	2.8	0.3	1.1	0.6	59.0	0.4
SPOTSYLVANIA	45.0	4.5	2.6	0.4	1.1	0.3	53.9	0.0
STAFFORD	43.6	6.7	3.1	0.6	1.1	0.4	55.5	0.4
SURRY	44.8	4.2	3.2	0.4	1.1	0.0	53.7	0.9
SUSSEX	46.9	3.1	4.7	1.3	1.1	0.3	57.4	0.0
TAZEWELL	45.5	3.6	2.7	1.2	1.1	0.2	54.4	0.3
WARREN	43.7	5.8	2.2	1.3	1.1	0.0	54.2	0.5
WASHINGTON	45.8	4.6	3.4	1.4	1.1	0.2	56.4	0.2
WESTMORELAND	44.7	4.6	2.3	1.4	1.1	0.2	54.4	0.0
WISE	44.1	5.5	4.2	1.4	1.1	0.8	57.2	0.0
WYTHE	44.8	8.1	4.1	1.3	1.1	0.2	59.7	0.2
YORK	45.0	3.5	2.2	0.4	1.1	0.2	52.4	0.2
ALLEGHANY HGLNDS	45.4	6.6	2.5	1.4	1.1	0.3	57.2	0.6

APPENDIX B (Continued)

	BASIC INSTRUCTORS	SPECIAL ED ADD ON	VOC ED ADD ON	REMEDIAL INSTRUCTORS	GIFTED & TALENTED	KINDERGARTEN AIDES	TOTAL INSTRUCTORS	SPECIAL ED AIDES
ALEXANDRIA	44.4	7.9	3.0	1.3	1.1	0.3	58.0	0.9
BRISTOL	45.3	4.6	5.2	1.4	1.1	0.3	58.0	0.0
BUENA VISTA	46.8	5.4	2.2	0.3	1.1	0.4	56.2	0.7
CHARLOTTESVILLE	45.1	9.3	2.0	0.3	1.1	0.6	58.4	1.5
COLONIAL HEIGHTS	45.1	9.0	4.6	0.4	1.1	0.0	60.2	0.7
COVINGTON	47.1	6.5	3.7	1.1	1.1	0.0	59.4	0.0
DANVILLE	44.3	4.0	2.1	1.4	1.1	0.3	53.2	0.3
FALLS CHURCH	45.1	9.0	3.2	1.2	1.1	1.4	61.0	0.0
FREDERICKSBURG	43.1	11.1	2.5	1.4	1.1	0.0	59.2	0.9
GALAX	45.3	5.6	3.6	1.3	1.1	0.4	57.3	0.0
HAMPTON	44.6	6.5	2.5	1.3	1.1	0.3	56.3	0.4
HARRISONBURG	44.8	6.5	2.7	0.3	1.1	0.0	55.5	0.7
HOPEWELL	45.0	5.0	5.1	1.4	1.1	0.2	57.8	0.0
LYNCHBURG	44.5	7.6	2.6	1.2	1.1	0.3	57.4	0.4
MARTINSVILLE	44.9	6.5	3.9	1.3	1.1	0.0	57.8	0.3
NEWPORT NEWS	44.1	5.0	2.7	1.2	1.1	0.1	54.2	0.3
NORFOLK	43.7	8.9	2.6	1.5	1.1	0.5	58.2	0.5
NORTON	45.2	6.8	1.6	1.4	1.1	1.5	57.6	0.0
PETERSBURG	43.2	6.9	2.8	1.3	1.1	0.6	55.9	0.2
PORTSMOUTH	43.4	6.1	3.1	1.4	1.1	0.3	55.4	0.3
RADFORD	46.6	5.6	3.8	0.4	1.1	0.0	57.5	0.0
RICHMOND CITY	43.6	9.1	3.4	1.3	1.1	0.2	58.8	0.8
ROANOKE CITY	44.1	6.9	4.5	1.4	1.1	0.3	58.1	0.7
STAUNTON	45.0	5.8	2.2	0.3	1.1	0.2	54.7	1.0
SUFFOLK	44.8	6.6	3.9	1.3	1.1	0.5	58.1	0.3
VIRGINIA BEACH	43.8	4.5	1.7	0.3	1.1	0.2	51.6	0.3
WAYNESBORO	43.4	2.2	2.6	1.3	1.1	0.2	50.8	0.4
WILLIAMSBURG	43.9	6.8	2.7	1.4	1.1	0.1	56.0	1.0
WINCHESTER	44.8	6.8	3.2	0.3	1.1	0.8	57.1	0.0
SOUTH BOSTON	44.0	6.1	0.0	1.7	1.1	0.0	52.9	0.0
FRANKLIN CITY	43.7	6.2	1.9	1.3	1.1	0.5	54.7	0.0
CHESAPEAKE CITY	44.3	4.3	2.2	1.4	1.1	0.1	53.5	0.2
LEXINGTON	49.6	9.0	0.0	0.3	1.1	2.0	62.0	0.0
SALEM	45.9	5.2	1.8	0.4	1.1	0.8	55.3	0.5
POQUOSON	42.7	5.6	2.2	1.1	1.1	0.2	52.9	0.4
MANASSAS CITY	43.6	8.6	1.9	0.3	1.1	0.1	55.7	1.6
MANASSAS PARK	45.1	11.9	3.7	1.4	1.1	0.0	63.2	2.0

	BASIC INSTRUCTORS	SPECIAL ED ADD ON	VOC ED ADD ON	REMEDIAL INSTRUCTORS	GIFTED & TALENTED	KINDERGARTEN AIDES	TOTAL INSTRUCTORS	SPECIAL ED AIDES
CAPE CHARLES	64.1	0.8	5.6	1.2	1.1	0.0	72.8	0.0
COLONIAL BEACH	49.3	6.7	4.1	1.4	1.1	0.0	62.5	0.0
FRIES	50.2	4.5	9.2	1.1	1.1	0.0	66.0	2.3
WEST POINT	45.1	11.1	2.6	1.3	1.1	0.0	61.2	1.4

APPENDIX C:

STATE BASIC AID AND REQUIRED LOCAL EXPENDITURES FOR FISCAL YEAR 1987

Locality	Composite Index	Unadjusted ADM	Adjusted ADM	Total Cost of Program	Sales Tax Distribution	Local Share	State Share
ACCOMACK	0.4309	4,798	4,736	$9,634,210	$1,820,442	$3,366,953	$4,446,816
ALBEMARLE	0.5890	8,850	8,850	$18,003,117	$2,565,820	$9,092,568	$6,344,729
ALLEGHANY	0.2780	2,742	2,742	$5,577,915	$986,426	$1,276,434	$3,315,055
AMELIA	0.4350	1,540	1,540	$3,132,746	$620,758	$1,092,715	$1,419,273
AMHERST	0.3448	4,625	4,625	$9,408,409	$1,655,160	$2,673,320	$5,079,929
APPOMATTOX	0.3404	2,300	2,300	$4,678,776	$891,060	$1,289,339	$2,498,378
ARLINGTON	0.8000	14,335	14,165	$28,815,159	$6,262,577	$18,042,065	$4,510,516
AUGUSTA	0.4057	9,500	9,500	$19,325,380	$3,236,893	$6,527,099	$9,561,388
BATH	0.8000	990	990	$2,013,908	$325,591	$1,350,654	$337,663
BEDFORD COUNTY	0.4123	6,900	6,900	$14,036,329	$2,691,609	$4,677,428	$6,667,292
BLAND	0.2556	1,170	1,170	$2,380,073	$422,127	$500,451	$1,457,495
BOTETOURT	0.3981	4,325	4,325	$8,798,133	$1,514,451	$2,899,634	$4,384,048
BRUNSWICK	0.3420	2,760	2,760	$5,614,531	$1,151,708	$1,526,286	$2,936,538
BUCHANAN	0.3307	8,153	8,153	$16,585,244	$3,001,988	$4,491,983	$9,091,274
BUCKINGHAM	0.3841	2,150	2,150	$4,373,639	$755,909	$1,389,570	$2,228,160
CAMPBELL	0.3504	8,569	8,569	$17,431,493	$4,058,915	$4,685,751	$8,686,826
CAROLINE	0.3503	3,687	3,687	$7,500,282	$1,327,814	$2,162,215	$4,010,252
CARROLL	0.2879	4,525	4,525	$9,204,984	$1,655,160	$2,173,594	$5,376,229
CHARLES CITY	0.3624	1,152	1,152	$2,343,457	$368,008	$715,903	$1,259,546
CHARLOTTE	0.3175	2,332	2,332	$4,743,872	$931,430	$1,210,450	$2,601,992
CHESTERFIELD	0.4358	38,000	38,000	$77,301,520	$12,080,794	$28,423,192	$36,797,533
CLARKE	0.5866	1,600	1,600	$3,254,801	$624,268	$1,543,071	$1,087,462
CRAIG	0.3961	730	730	$1,485,003	$258,893	$485,662	$740,448
CULPEPER	0.4780	4,320	4,320	$8,787,962	$1,571,788	$3,449,331	$3,766,843
CUMBERLAND	0.3276	1,511	1,511	$3,073,753	$649,134	$794,305	$1,630,314
DICKENSON	0.3658	4,160	4,160	$8,462,482	$1,467,060	$2,558,925	$4,436,497
DINWIDDIE	0.3346	3,598	3,598	$7,319,233	$1,260,238	$2,027,340	$4,031,656
ESSEX	0.5125	1,450	1,450	$2,949,663	$588,287	$1,210,205	$1,151,171
FAIRFAX COUNTY	0.7016	124,495	123,258	$250,737,650	$45,372,090	$144,084,477	$61,281,083
FAUQUIER	0.6466	7,300	7,300	$14,850,029	$2,727,006	$7,838,747	$4,284,276
FLOYD	0.3609	1,941	1,941	$3,948,480	$728,703	$1,162,018	$2,057,760
FLUVANNA	0.4612	2,021	2,021	$4,111,220	$567,224	$1,634,491	$1,909,505
FRANKLIN COUNTY	0.3522	6,254	6,254	$12,722,203	$2,241,691	$3,691,236	$6,789,276
FREDERICK	0.4330	6,993	6,907	$14,050,568	$2,670,254	$4,927,676	$6,452,638
GILES	0.3754	3,063	3,063	$6,230,909	$1,201,439	$1,888,063	$3,141,407
GLOUCESTER	0.4627	4,800	4,800	$9,764,402	$1,591,387	$3,781,654	$4,391,361
GOOCHLAND	0.6066	1,690	1,690	$3,437,883	$723,438	$1,646,583	$1,067,863
GRAYSON	0.3119	2,480	2,480	$5,044,941	$972,092	$1,270,322	$2,802,528
GREENE	0.3737	1,665	1,665	$3,387,027	$671,659	$1,014,733	$1,700,635
GREENSVILLE	0.2804	2,400	2,377	$4,835,413	$793,353	$1,133,394	$2,908,667
HALIFAX	0.2877	5,850	5,850	$11,900,366	$2,112,099	$2,816,084	$6,972,182
HANOVER	0.5070	9,700	9,700	$19,732,230	$3,836,004	$8,059,387	$7,836,839
HENRICO	0.5736	30,300	30,300	$61,637,791	$11,822,779	$28,573,891	$21,241,121
HENRY	0.3399	9,800	9,800	$19,935,655	$3,930,785	$5,440,055	$10,564,815
HIGHLAND	0.6958	395	395	$803,529	$145,097	$458,137	$200,295
ISLE OF WIGHT	0.4725	3,850	3,850	$7,831,864	$1,583,489	$2,952,357	$3,296,018
JAMES CITY	0.5779	4,712	4,655	$9,469,436	$1,584,952	$4,556,443	$3,328,041

(continued)

STATE BASIC AID AND REQUIRED LOCAL EXPENDITURES FOR FISCAL YEAR 1987

Locality	Composite Index	Unadjusted ADM	Adjusted ADM	Total Cost of Program	Sales Tax Distribution	Local Share	State Share
KING GEORGE	0.3833	2,290	2,268	$4,613,680	$733,091	$1,487,430	$2,393,159
KING QUEEN	0.4221	1,000	1,000	$2,034,251	$512,228	$642,446	$879,577
KING WILLIAM	0.4503	1,400	1,400	$2,847,951	$484,730	$1,064,158	$1,299,062
LANCASTER	0.6618	1,625	1,625	$3,305,657	$492,921	$1,861,469	$951,267
LEE	0.2499	5,350	5,350	$10,883,240	$1,981,336	$2,224,586	$6,677,318
LOUDOUN	0.6367	13,147	13,008	$26,461,531	$4,514,391	$13,973,744	$7,973,396
LOUISA	0.8000	3,475	3,475	$7,069,021	$1,374,327	$4,555,755	$1,138,939
LUNENBURG	0.3284	2,250	2,250	$4,577,064	$805,640	$1,238,536	$2,532,888
MADISON	0.4630	1,684	1,684	$3,425,678	$719,635	$1,252,898	$1,453,145
MATHEWS	0.5571	1,210	1,210	$2,461,443	$464,252	$1,112,635	$884,556
MECKLENBURG	0.3519	5,268	5,268	$10,716,432	$1,921,659	$3,094,881	$5,699,892
MIDDLESEX	0.6413	1,165	1,165	$2,369,902	$439,679	$1,237,852	$692,371
MONTGOMERY	0.4028	8,440	8,440	$17,169,074	$3,309,735	$5,582,542	$8,276,797
NELSON	0.4774	2,064	2,064	$4,198,693	$796,279	$1,624,312	$1,778,102
NEW KENT	0.4641	1,760	1,760	$3,580,281	$778,727	$1,300,201	$1,501,353
NORTHAMPTON	0.3402	2,410	2,410	$4,902,544	$985,256	$1,332,661	$2,584,626
NORTHUMBERLAND	0.6538	1,343	1,343	$2,731,998	$522,759	$1,444,401	$764,839
NOTTOWAY	0.3460	2,540	2,540	$5,166,996	$968,582	$1,452,651	$2,745,763
ORANGE	0.4755	3,550	3,550	$7,221,589	$1,239,468	$2,844,499	$3,137,623
PAGE	0.3751	3,377	3,340	$6,794,397	$1,277,205	$2,069,499	$3,447,693
PATRICK	0.3277	2,880	2,880	$5,858,641	$1,126,550	$1,550,706	$3,181,385
PITTSYLVANIA	0.2919	11,350	11,350	$23,088,743	$4,300,549	$5,484,274	$13,303,920
POWHATAN	0.3955	2,175	2,175	$4,424,495	$888,427	$1,398,515	$2,137,553
PRINCE EDWARD	0.4227	2,390	2,390	$4,861,859	$1,110,753	$1,585,592	$2,165,513
PRINCE GEORGE	0.2652	5,065	5,065	$10,303,479	$1,777,147	$2,261,183	$6,265,149
PRINCE WILLIAM	0.4320	38,104	37,656	$76,601,738	$13,131,286	$27,419,235	$36,051,216
PULASKI	0.3228	6,570	6,570	$13,365,026	$2,473,671	$3,515,729	$7,375,626
RAPPAHANNOCK	0.6149	948	948	$1,928,469	$375,029	$955,211	$598,230
RICHMOND COUNTY	0.4649	1,270	1,270	$2,583,498	$443,482	$994,894	$1,145,123
ROANOKE COUNTY	0.4289	13,650	13,650	$27,767,520	$5,015,503	$9,758,340	$12,993,677
ROCKBRIDGE	0.4303	2,607	2,607	$5,303,291	$1,015,680	$1,844,959	$2,442,652
ROCKINGHAM	0.4353	9,050	9,050	$18,409,967	$3,574,478	$6,457,888	$8,377,601
RUSSELL	0.3029	6,055	6,055	$12,317,387	$2,299,906	$3,034,295	$6,983,186
SCOTT	0.2595	4,665	4,665	$9,489,779	$1,674,175	$2,028,149	$5,787,455
SHENANDOAH	0.4724	4,605	4,605	$9,367,724	$1,773,344	$3,587,585	$4,006,795
SMYTH	0.2819	6,088	6,088	$12,384,517	$2,297,565	$2,843,512	$7,243,440
SOUTHAMPTON	0.4712	2,165	2,165	$4,404,152	$1,227,474	$1,496,851	$1,679,828
SPOTSYLVANIA	0.3932	9,200	9,200	$18,715,105	$3,078,047	$6,148,491	$9,488,567
STAFFORD	0.3752	10,348	10,348	$21,050,424	$3,603,147	$6,546,218	$10,901,059
SURRY	0.8000	1,160	1,160	$2,359,731	$396,677	$1,570,443	$392,611
SUSSEX	0.4241	1,767	1,767	$3,594,521	$883,747	$1,149,639	$1,561,135
TAZEWELL	0.3139	9,900	9,900	$20,139,080	$3,718,698	$5,154,358	$11,266,024
WARREN	0.4448	3,790	3,790	$7,709,809	$1,547,507	$2,740,992	$3,421,310
WASHINGTON	0.3315	8,100	8,100	$16,477,429	$3,206,470	$4,399,323	$8,871,636
WESTMORELAND	0.4499	1,908	1,908	$3,881,350	$810,613	$1,381,525	$1,689,212
WISE	0.3066	9,550	9,550	$19,427,092	$3,568,335	$4,862,295	$10,996,462
WYTHE	0.3336	4,650	4,650	$9,459,265	$1,798,794	$2,555,533	$5,104,938
YORK	0.4134	8,800	8,725	$17,748,836	$2,957,523	$6,114,729	$8,676,584

(continued)

STATE BASIC AID AND REQUIRED LOCAL EXPENDITURES FOR FISCAL YEAR 1987

Locality	Composite Index	Unadjusted ADM	Adjusted ADM	Total Cost of Program	Sales Tax Distribution	Local Share	State Share
ALEXANDRIA	0.8000	10,195	10,068	$20,480,834	$4,380,996	$12,879,871	$3,219,968
BEDFORD CITY	0.4853	890	890	$1,810,483	$373,859	$697,194	$739,430
BRISTOL	0.4559	3,015	3,015	$6,133,265	$1,106,658	$2,291,630	$2,734,977
BUENA VISTA	0.2950	1,321	1,321	$2,687,245	$452,843	$659,149	$1,575,253
CHARLOTTESVILLE	0.6660	4,654	4,654	$9,467,402	$1,724,783	$5,156,584	$2,586,035
CHESAPEAKE	0.3908	25,787	25,490	$51,853,046	$9,046,042	$16,728,977	$26,078,027
CLIFTON FORGE	0.3921	759	759	$1,543,996	$275,567	$497,351	$771,078
COLONIAL HEIGHTS	0.4643	2,803	2,803	$5,702,004	$1,072,139	$2,149,646	$2,480,219
COVINGTON	0.4302	1,232	1,218	$2,477,717	$440,264	$876,512	$1,160,941
DANVILLE	0.4009	7,021	7,021	$14,282,473	$3,140,357	$4,466,874	$6,675,242
EMPORIA	0.4642	920	909	$1,849,134	$297,508	$720,265	$831,361
FAIRFAX CITY	0.8000	2,565	2,539	$5,164,962	$1,209,630	$3,164,266	$791,066
FALLS CHURCH	0.8000	1,075	1,075	$2,186,819	$435,584	$1,400,988	$350,247
FRANKLIN CITY	0.3357	2,000	2,000	$4,068,501	$470,395	$1,207,884	$2,390,222
FREDERICKSBURG	0.7088	2,100	2,100	$4,271,926	$947,812	$2,356,132	$967,982
GALAX	0.5087	1,075	1,075	$2,186,819	$337,000	$941,003	$908,816
HAMPTON	0.4226	18,986	18,774	$38,191,019	$7,224,723	$13,086,357	$17,879,939
HARRISONBURG	0.6615	2,805	2,805	$5,706,073	$985,841	$3,122,433	$1,597,798
HOPEWELL	0.3889	4,031	4,031	$8,200,064	$1,568,570	$2,578,988	$4,052,506
LEXINGTON	0.5237	725	725	$1,474,832	$236,368	$648,583	$589,880
LYNCHBURG	0.5065	9,480	9,480	$19,284,695	$3,648,782	$7,919,590	$7,716,323
MANASSAS	0.5997	3,860	3,809	$7,748,460	$1,096,712	$3,989,053	$2,662,695
MANASSAS PARK	0.2932	1,475	1,452	$2,953,732	$544,407	$706,414	$1,702,911
MARTINSVILLE	0.4445	2,952	2,952	$6,005,108	$938,450	$2,252,129	$2,814,528
NEWPORT NEWS	0.4306	26,000	25,700	$52,280,238	$10,603,203	$17,946,131	$23,730,904
NORFOLK	0.4508	35,000	35,000	$71,198,768	$14,371,047	$25,617,937	$31,209,784
NORTON	0.4214	975	975	$1,983,394	$369,764	$679,984	$933,646
PETERSBURG	0.4242	6,777	6,777	$13,786,116	$2,307,219	$4,869,348	$6,609,549
POQUOSON	0.3709	2,315	2,294	$4,666,571	$728,411	$1,460,663	$2,477,496
PORTSMOUTH	0.3571	18,371	18,371	$37,371,216	$7,041,889	$10,830,603	$19,498,724
RADFORD	0.4192	1,570	1,553	$3,159,191	$590,042	$1,076,987	$1,492,162
RICHMOND CITY	0.6098	28,000	28,000	$56,959,015	$14,944,414	$25,620,503	$16,394,097
ROANOKE CITY	0.4920	14,440	14,260	$29,008,412	$7,337,641	$10,662,020	$11,008,752
SALEM	0.5118	3,577	3,577	$7,276,514	$1,321,671	$3,047,689	$2,907,154
SOUTH BOSTON	0.4010	1,296	1,296	$2,636,389	$482,682	$863,636	$1,290,070
STAUNTON	0.4918	2,920	2,920	$5,940,012	$1,077,989	$2,391,143	$2,470,880
SUFFOLK	0.3873	8,700	8,700	$17,697,980	$3,699,975	$5,421,427	$8,576,577
VIRGINIA BEACH	0.4689	61,750	61,011	$124,111,658	$23,261,753	$47,288,521	$53,561,385
WAYNESBORO	0.5124	2,390	2,360	$4,800,831	$845,132	$2,026,900	$1,928,799
WILLIAMSBURG	0.8000	620	612	$1,244,961	$215,890	$823,257	$205,814
WINCHESTER	0.6067	3,001	3,001	$6,104,786	$1,078,282	$3,049,580	$1,976,924
CAPE CHARLES	0.3520	210	210	$427,193	$83,372	$121,025	$222,796
COLONIAL BEACH	0.4376	505	505	$1,027,297	$129,885	$392,707	$504,704
FRIES	0.2016	160	160	$325,480	$42,710	$57,006	$225,764
WEST POINT	0.3877	680	680	$1,383,290	$195,413	$460,540	$727,337
TOTAL	0.4495	965,622	961,210	$1,955,341,940	$367,100,000	$764,009,292	$824,232,649
PERCENTAGE	-			(100%)	18.77%	39.07%	42.15%
LOCAL/STATE SPLIT						48.10%	51.90%

APPENDIX D:

STATE BASIC AID AND REQUIRED LOCAL EXPENDITURES FOR FISCAL YEAR 1988

Locality	Composite Index	Unadjusted ADM	Adjusted ADM	Total Cost of Program	Sales Tax Distribution	Local Share	State Share
ACCOMACK	0.4309	4,717	4,657	$10,299,473	$1,979,625	$3,585,022	$4,734,825
ALBEMARLE	0.5890	8,900	8,900	$19,683,338	$2,790,180	$9,950,070	$6,943,088
ALLEGHANY	0.2780	2,715	2,715	$6,004,524	$1,072,681	$1,371,052	$3,560,791
AMELIA	0.4350	1,560	1,560	$3,450,113	$675,038	$1,207,158	$1,567,918
AMHERST	0.3448	4,550	4,550	$10,062,830	$1,799,891	$2,849,061	$5,413,878
APPOMATTOX	0.3404	2,300	2,300	$5,086,705	$968,976	$1,401,675	$2,716,054
ARLINGTON	0.8000	14,192	14,024	$31,015,633	$6,810,190	$19,364,355	$4,841,089
AUGUSTA	0.4057	9,400	9,400	$20,789,144	$3,519,934	$7,006,118	$10,263,091
BATH	0.8000	1,020	1,020	$2,255,843	$354,061	$1,521,426	$380,356
BEDFORD COUNTY	0.4123	6,950	6,950	$15,370,697	$2,926,969	$5,130,549	$7,313,179
BLAND	0.2556	1,175	1,175	$2,598,643	$459,039	$546,883	$1,592,721
BOTETOURT	0.3981	4,300	4,300	$9,509,928	$1,646,878	$3,130,280	$4,732,770
BRUNSWICK	0.3420	2,745	2,745	$6,070,872	$1,252,416	$1,647,912	$3,170,544
BUCHANAN	0.3307	8,144	8,144	$18,011,360	$3,264,489	$4,876,790	$9,870,081
BUCKINGHAM	0.3841	2,130	2,130	$4,710,732	$822,007	$1,493,659	$2,395,065
CAMPBELL	0.3504	8,386	8,386	$18,546,570	$4,413,835	$4,952,110	$9,180,625
CAROLINE	0.3503	3,705	3,705	$8,194,019	$1,443,921	$2,364,559	$4,385,539
CARROLL	0.2879	4,500	4,500	$9,952,250	$1,799,891	$2,347,064	$5,805,295
CHARLES CITY	0.3624	1,125	1,125	$2,488,062	$400,188	$756,646	$1,331,229
CHARLOTTE	0.3175	2,260	2,260	$4,998,241	$1,012,876	$1,265,353	$2,720,012
CHESTERFIELD	0.4358	39,100	39,100	$86,473,992	$13,137,165	$31,960,189	$41,376,638
CLARKE	0.5866	1,625	1,625	$3,593,868	$678,856	$1,709,946	$1,205,066
CRAIG	0.3961	730	730	$1,614,476	$281,531	$527,980	$804,966
CULPEPER	0.4780	4,330	4,330	$9,576,276	$1,709,228	$3,760,449	$4,106,599
CUMBERLAND	0.3276	1,498	1,498	$3,312,993	$705,896	$854,085	$1,753,012
DICKENSON	0.3658	4,122	4,122	$9,116,261	$1,595,343	$2,751,152	$4,769,766
DINWIDDIE	0.3346	3,468	3,468	$7,669,867	$1,370,436	$2,107,790	$4,191,641
ESSEX	0.5125	1,460	1,460	$3,228,952	$639,728	$1,326,977	$1,262,247
FAIRFAX COUNTY	0.7016	125,666	124,380	$275,080,182	$49,339,523	$158,379,647	$67,361,013
FAUQUIER	0.6466	7,350	7,350	$16,255,341	$2,965,461	$8,593,237	$4,696,644
FLOYD	0.3609	1,924	1,924	$4,255,140	$792,423	$1,249,694	$2,213,022
FLUVANNA	0.4612	2,031	2,031	$4,491,782	$616,824	$1,787,131	$2,087,827
FRANKLIN COUNTY	0.3522	6,272	6,272	$13,871,225	$2,437,710	$4,026,884	$7,406,631
FREDERICK	0.4330	7,049	6,962	$15,397,236	$2,903,747	$5,409,681	$7,083,808
GILES	0.3754	3,015	3,015	$6,668,007	$1,306,495	$2,012,712	$3,348,801
GLOUCESTER	0.4627	5,000	5,000	$11,058,055	$1,730,542	$4,315,840	$5,011,673
GOOCHLAND	0.6066	1,675	1,675	$3,704,449	$786,697	$1,769,908	$1,147,843
GRAYSON	0.3119	2,450	2,450	$5,418,447	$1,057,094	$1,360,306	$3,001,047
GREENE	0.3737	1,675	1,675	$3,704,449	$730,390	$1,111,406	$1,862,653
GREENSVILLE	0.2804	2,370	2,347	$5,190,651	$862,726	$1,213,550	$3,114,375
HALIFAX	0.2877	5,803	5,803	$12,833,979	$2,296,785	$3,031,551	$7,505,643
HANOVER	0.5070	9,625	9,625	$21,286,756	$4,171,432	$8,677,469	$8,437,855
HENRICO	0.5736	30,345	30,345	$67,111,337	$12,856,588	$31,120,524	$23,134,225
HENRY	0.3399	9,700	9,700	$21,452,627	$4,274,501	$5,838,845	$11,339,281
HIGHLAND	0.6958	385	385	$851,470	$157,785	$482,666	$211,019
ISLE OF WIGHT	0.4725	3,850	3,850	$8,514,703	$1,721,953	$3,209,574	$3,583,175
JAMES CITY	0.5779	4,900	4,839	$10,701,986	$1,723,543	$5,188,642	$3,789,801

(continued)

STATE BASIC AID AND REQUIRED LOCAL EXPENDITURES FOR FISCAL YEAR 1988

Locality	Composite Index	Unadjusted ADM	Adjusted ADM	Total Cost of Program	Sales Tax Distribution	Local Share	State Share
KING GEORGE	0.3833	2,300	2,278	$5,038,050	$797,194	$1,625,520	$2,615,336
KING QUEEN	0.4221	1,020	1,020	$2,255,843	$557,018	$717,074	$981,751
KING WILLIAM	0.4503	1,400	1,400	$3,096,255	$527,115	$1,156,884	$1,412,257
LANCASTER	0.6618	1,630	1,630	$3,604,926	$536,023	$2,031,000	$1,037,903
LEE	0.2499	5,300	5,300	$11,721,539	$2,154,588	$2,390,781	$7,176,170
LOUDOUN	0.6367	13,437	13,295	$29,403,369	$4,909,139	$15,595,476	$8,898,754
LOUISA	0.8000	3,500	3,500	$7,740,639	$1,494,501	$4,996,910	$1,249,228
LUNENBURG	0.3284	2,240	2,240	$4,954,009	$876,087	$1,339,190	$2,738,732
MADISON	0.4630	1,650	1,650	$3,649,158	$782,561	$1,327,235	$1,539,363
MATHEWS	0.5571	1,208	1,208	$2,671,626	$504,847	$1,207,113	$959,666
MECKLENBURG	0.3519	5,247	5,247	$11,604,323	$2,089,693	$3,348,198	$6,166,432
MIDDLESEX	0.6413	1,170	1,170	$2,587,585	$478,126	$1,352,796	$756,663
MONTGOMERY	0.4028	8,430	8,430	$18,643,881	$3,599,145	$6,060,020	$8,984,716
NELSON	0.4774	2,016	2,016	$4,458,608	$865,907	$1,715,155	$1,877,545
NEW KENT	0.4641	1,771	1,771	$3,916,763	$846,820	$1,424,761	$1,645,183
NORTHAMPTON	0.3402	2,420	2,420	$5,352,099	$1,071,409	$1,456,291	$2,824,399
NORTHUMBERLAND	0.6538	1,316	1,316	$2,910,480	$568,470	$1,531,206	$810,804
NOTTOWAY	0.3460	2,540	2,540	$5,617,492	$1,053,276	$1,579,219	$2,984,997
ORANGE	0.4755	3,570	3,570	$7,895,451	$1,347,850	$3,113,384	$3,434,217
PAGE	0.3751	3,380	3,339	$7,384,569	$1,388,887	$2,248,980	$3,746,702
PATRICK	0.3277	2,795	2,795	$6,181,453	$1,225,058	$1,624,211	$3,332,184
PITTSYLVANIA	0.2919	11,100	11,100	$24,548,883	$4,676,598	$5,800,720	$14,071,565
POWHATAN	0.3955	2,200	2,200	$4,865,544	$966,113	$1,542,225	$2,357,206
PRINCE EDWARD	0.4227	2,410	2,410	$5,329,983	$1,207,880	$1,742,413	$2,379,690
PRINCE GEORGE	0.2652	5,075	5,075	$11,223,926	$1,932,544	$2,464,075	$6,827,308
PRINCE WILLIAM	0.4320	39,422	38,963	$86,171,001	$14,279,513	$31,057,123	$40,834,365
PULASKI	0.3228	6,440	6,440	$14,242,775	$2,689,974	$3,729,244	$7,823,557
RAPPAHANNOCK	0.6149	922	922	$2,039,105	$407,822	$1,003,076	$628,207
RICHMOND COUNTY	0.4649	1,280	1,280	$2,830,862	$482,261	$1,091,865	$1,256,736
ROANOKE COUNTY	0.4289	13,600	13,600	$30,077,910	$5,454,069	$10,561,166	$14,062,676
ROCKBRIDGE	0.4303	2,502	2,502	$5,533,451	$1,104,493	$1,905,781	$2,523,177
ROCKINGHAM	0.4353	9,100	9,100	$20,125,661	$3,887,038	$7,068,672	$9,169,950
RUSSELL	0.3029	6,005	6,005	$13,280,724	$2,501,014	$3,265,174	$7,514,536
SCOTT	0.2595	4,675	4,675	$10,339,282	$1,820,568	$2,210,606	$6,308,107
SHENANDOAH	0.4724	4,535	4,535	$10,029,656	$1,928,409	$3,827,029	$4,274,218
SMYTH	0.2819	6,021	6,021	$13,316,110	$2,498,469	$3,049,493	$7,768,148
SOUTHAMPTON	0.4712	2,039	2,039	$4,509,475	$1,334,807	$1,495,904	$1,678,764
SPOTSYLVANIA	0.3932	9,400	9,400	$20,789,144	$3,347,198	$6,858,173	$10,583,773
STAFFORD	0.3752	10,503	10,503	$23,228,551	$3,918,213	$7,245,239	$12,065,099
SURRY	0.8000	1,164	1,164	$2,574,315	$431,363	$1,714,362	$428,590
SUSSEX	0.4241	1,698	1,698	$3,755,316	$961,023	$1,185,059	$1,609,233
TAZEWELL	0.3139	9,800	9,800	$21,673,788	$4,043,869	$5,534,032	$12,095,888
WARREN	0.4448	3,800	3,800	$8,404,122	$1,682,824	$2,989,633	$3,731,665
WASHINGTON	0.3315	8,000	8,000	$17,692,888	$3,486,850	$4,709,302	$9,496,737
WESTMORELAND	0.4499	1,853	1,853	$4,098,115	$881,495	$1,447,157	$1,769,463
WISE	0.3066	9,500	9,500	$21,010,305	$3,880,358	$5,252,042	$11,877,905
WYTHE	0.3336	4,600	4,600	$10,173,411	$1,956,085	$2,741,300	$5,476,026
YORK	0.4134	8,900	8,825	$19,517,468	$3,216,135	$6,738,971	$9,562,362

(continued)

STATE BASIC AID AND REQUIRED LOCAL EXPENDITURES FOR FISCAL YEAR 1988

Locality	Composite Index	Unadjusted ADM	Adjusted ADM	Total Cost of Program	Sales Tax Distribution	Local Share	State Share
ALEXANDRIA	0.8000	10,195	10,063	$22,255,442	$4,764,079	$13,993,090	$3,498,273
BEDFORD CITY	0.4853	885	885	$1,957,276	$406,550	$752,567	$798,159
BRISTOL	0.4559	3,020	3,020	$6,679,065	$1,203,426	$2,496,344	$2,979,295
BUENA VISTA	0.2950	1,321	1,321	$2,921,538	$492,441	$716,584	$1,712,514
CHARLOTTESVILLE	0.6660	4,723	4,723	$10,445,439	$1,875,602	$5,707,511	$2,862,326
CHESAPEAKE	0.3908	26,173	25,871	$57,216,589	$9,837,047	$18,515,925	$28,863,617
CLIFTON FORGE	0.3921	751	751	$1,660,920	$299,664	$533,748	$827,507
COLONIAL HEIGHTS	0.4643	2,719	2,719	$6,013,370	$1,165,889	$2,250,686	$2,596,796
COVINGTON	0.4302	1,190	1,176	$2,600,855	$478,762	$912,924	$1,209,168
DANVILLE	0.4009	6,921	6,921	$15,306,560	$3,414,957	$4,767,344	$7,124,259
EMPORIA	0.4642	910	899	$1,988,238	$323,522	$772,761	$891,955
FAIRFAX CITY	0.8000	2,482	2,456	$5,431,717	$1,315,402	$3,293,052	$823,263
FALLS CHURCH	0.8000	1,067	1,067	$2,359,789	$473,672	$1,508,894	$377,223
FRANKLIN CITY	0.3357	2,000	2,000	$4,423,222	$511,528	$1,313,156	$2,598,538
FREDERICKSBURG	0.7088	2,050	2,050	$4,533,803	$1,030,690	$2,483,006	$1,020,106
GALAX	0.5087	1,075	1,075	$2,377,482	$366,468	$1,023,003	$988,011
HAMPTON	0.4226	18,535	18,325	$40,527,772	$7,856,468	$13,806,893	$18,864,411
HARRISONBURG	0.6615	2,825	2,825	$6,247,801	$1,072,045	$3,423,763	$1,751,993
HOPEWELL	0.3889	3,971	3,971	$8,782,307	$1,705,729	$2,752,081	$4,324,497
LEXINGTON	0.5237	720	720	$1,592,360	$257,036	$699,309	$636,015
LYNCHBURG	0.5065	9,480	9,480	$20,966,073	$3,967,839	$8,609,605	$8,388,628
MANASSAS	0.5997	3,950	3,897	$8,618,648	$1,192,610	$4,453,395	$2,972,643
MANASSAS PARK	0.2932	1,500	1,477	$3,266,550	$592,011	$784,175	$1,890,364
MARTINSVILLE	0.4445	2,858	2,858	$6,320,784	$1,020,511	$2,355,972	$2,944,302
NEWPORT NEWS	0.4306	26,300	26,000	$57,501,887	$11,530,370	$19,795,335	$26,176,182
NORFOLK	0.4508	35,000	35,000	$77,406,387	$15,627,681	$27,849,841	$33,928,865
NORTON	0.4214	975	975	$2,156,321	$402,096	$739,230	$1,014,994
PETERSBURG	0.4242	6,721	6,721	$14,864,238	$2,508,967	$5,241,106	$7,114,165
POQUOSON	0.3709	2,352	2,331	$5,155,265	$792,105	$1,618,296	$2,744,864
PORTSMOUTH	0.3571	18,371	18,371	$40,629,507	$7,657,647	$11,774,251	$21,197,609
RADFORD	0.4192	1,530	1,513	$3,346,168	$641,636	$1,133,740	$1,570,792
RICHMOND CITY	0.6098	27,595	27,595	$61,029,407	$16,251,185	$27,305,760	$17,472,462
ROANOKE CITY	0.4920	14,402	14,217	$31,442,474	$7,979,260	$11,543,901	$11,919,313
SALEM	0.5118	3,528	3,528	$7,802,564	$1,437,240	$3,257,773	$3,107,551
SOUTH BOSTON	0.4010	1,280	1,280	$2,830,862	$524,889	$924,695	$1,381,278
STAUNTON	0.4918	3,200	3,200	$7,077,155	$1,172,251	$2,904,032	$3,000,872
SUFFOLK	0.3873	8,700	8,700	$19,241,016	$4,023,509	$5,893,741	$9,323,767
VIRGINIA BEACH	0.4689	63,500	62,705	$138,679,071	$25,295,810	$53,165,411	$60,217,850
WAYNESBORO	0.5124	2,360	2,333	$5,159,689	$919,032	$2,172,912	$2,067,744
WILLIAMSBURG	0.8000	640	632	$1,397,738	$234,768	$930,376	$232,594
WINCHESTER	0.6067	2,989	2,989	$6,610,505	$1,172,569	$3,299,196	$2,138,740
CAPE CHARLES	0.3520	215	215	$475,496	$90,663	$135,461	$249,372
COLONIAL BEACH	0.4376	505	505	$1,116,864	$141,243	$426,932	$548,689
FRIES	0.2016	160	160	$353,858	$46,445	$61,974	$245,438
WEST POINT	0.3877	660	660	$1,459,663	$212,500	$483,525	$763,638
TOTAL	0.4495	969,380	964,832	$2,133,833,113	$399,200,000	$835,200,094	$899,433,018
PERCENTAGE				(100%)	18.71%	39.14%	42.15%
LOCAL/STATE SPLIT						48.15%	51.85%

APPENDIX E:

AGENCY RESPONSES

As part of an extensive data validation process, each State agency involved in a JLARC review and evaluation effort is given the opportunity to comment on an exposure draft of the report.

Appropriate technical corrections resulting from the written comments have been made in this final report. Where appropriate, JLARC staff comments on agency responses have been inserted in the text of the response. Page references in the agency responses relate to the exposure draft and may not correspond to page numbers in the final report.

Included in this appendix are responses from the following:

- Department of Education
- Board of Education

RESPONSE TO THE JLARC STAFF REPORT

ESTIMATING THE COSTS OF THE STANDARDS OF QUALITY DECEMBER 9, 1985

by

S. John Davis
Superintendent of Public Instruction

January 16, 1986

Mr. Chairman,

Members of the Joint Legislative Audit and Review Commission,

Thank you for giving me this opportunity to respond to the report entitled Estimating the Costs of the Standards of Quality prepared by your staff and dated December 9, 1985. This response is not intended to be an in-depth reaction to the JLARC staff report nor is it intended to address revisions to that report which resulted from new data, such as revised sales tax estimates. Furthermore, it is not intended to be responsive to policy decisions included in the proposed budget for 1986-88, presented on January 9, 1986, by Governor Robb.

In order to place this response in proper perspective, it seems appropriate to review briefly the history of the Standards of Quality and related funding issues.

In 1971, more than a decade before an alarmed national commission reported that "a rising tide of mediocrity" was eroding the foundation of American education, the Virginia Board of Education prescribed Standards of Quality for the public schools, subject to revision by the General Assembly. These proposed standards were revised and enacted by the General Assembly for the biennium beginning July 1, 1972. This enactment was a major event in the history of public education in the Commonwealth. This action is believed to be

the first ever undertaken by a state legislature to require, by constitutional mandate, standards of quality for public schools.

In October of 1972, a distinguished task force on financing the Standards of Quality was established by the Honorable Linwood Holton, Governor of Virginia. Members of the task force are listed on Attachment Number 1. The Department of Education staff has used the methodology developed by the original task force in estimating the cost of implementing the Standards of Quality for each biennium. The current approach generally has been accepted as being fair, realistic, understandable, and relatively easy to implement from biennium to biennium.

During the 1978 session of the General Assembly, SJR 42 was passed. This resolution created the Public School Finance Study Commission for the purpose of reviewing the formula for allocating state funds for education. Although a formal report was not given to the General Assembly, there is nothing in the findings and recommendations in the report of the Special Subcommittee to the Public School Finance Study Commission to

suggest anything other than support for the original task force methodology of estimating the costs of the Standards of Quality. Members of the Commission are listed on Attachment Number 2.

The response that I bring to you today was prepared with several objectives in mind. These objectives are as follows:

- To bring to your attention questions concerning the report which are being asked by educators, members of local school boards and governing bodies, and other citizens throughout the State.

- To highlight the need for the General Assembly to make certain policy decisions.

- To highlight the need for developing a total approach for determining "how many" dollars are needed and "to whom" these dollars shall go.

For the sake of continuity, this response will be consistent with the Briefing Outline found on page three of the JLARC staff report dated December 9, 1985, shown as Response Outline on Transparency Number 1.

RESPONSE OUTLINE

SOQ COST COMPONENTS

- INSTRUCTIONAL POSITIONS REQUIRED
- INSTRUCTIONAL SALARY LEVELS
- SUPPORT COSTS
- FRINGE BENEFITS
- INFLATION ASSUMPTIONS

SOQ COST ESTIMATES

SUMMARY AND RECOMMENDATIONS

Virginia Department of Education
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INSTRUCTIONAL POSITIONS REQUIRED

We generally support the JLARC staff report recommendation for funding 59.5 instructional positions per 1,000 students in average daily membership, including .3 special education aide positions. It should be noted that the Board of Education's 1986-88 Financial Proposal recommendation differs in the distribution of the six special and vocational positions. The Board's proposal is based on an analysis of our empirical data, which shows that full-time equivalent (FTE) positions for special and vocational education are equally divided, rather than being split 3.4 for special education and 2.6 for vocational education. In addition, we agree with the need recognized by the JLARC staff report to allocate one instructional position for education of the gifted. However, the Board recommended funding this position in a separate categorical account, instead of including the position in basic aid as proposed in the staff report. In addition, the Board of Education recommended a continuation of the current practice of budgeting remedial education as a separate account without assigning a precise number of instructional staff. See Transparency Number 2.

> *JLARC NOTE:* In order to calculate the cost of the standards for remedial education, JLARC staff used 1.2 positions per 1,000 pupils in ADM. However, the use of the positions in calculating the cost of the program was not intended to imply any particular method for distributing State aid for this program. The 1.2 positions per 1,000 pupils identified for the remedial program should be used to calculate the total amount for the program, but need not be the basis for the distribution of funds.

INSTRUCTIONAL POSITIONS

	1986-88 BOARD OF EDUCATION FINANCIAL PROPOSAL	1986-88 JLARC STAFF REPORT
BASIC	51	52*
SPECIAL EDUCATION ADD-ON	3	3.4
VOCATIONAL EDUCATION ADD-ON	3	2.6
EDUCATION OF THE GIFTED	1	0*
REMEDIAL	0**	1.2
SPECIAL EDUCATION AIDES	0	.3
	58.0	59.5

*1.0 FTE for Gifted is included in Basic Aid

**Funded as a Separate Categorical account

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INSTRUCTIONAL SALARY LEVELS

I understand the constitutional requirement to determine costs based on actual school division data. It was with that understanding that the original task force methodology was developed to require the determination of actual costs from each locality. These costs are then calculated into a statewide average. The use of actual cost data was validated in an opinion of the Attorney General in 1973, and the original task force methodology was supported by the January 1981 report of the Special Subcommittee to the 1978-81 Public School Finance Study Commission.

The need to increase teacher salaries is critical. Governor Robb stated repeatedly that raising classroom teacher salaries in Virginia to the national median was a priority objective of his administration. During the past several years, the General Assembly, the Governor, the Board of Education, and the localities have made great strides in this area. Assuming the funding of the proposed 1986-88 K-12 education budget submitted by Governor Robb, I believe that we can reach and go beyond this critical goal during the biennium. See Transparency Number 3.

HOW VIRGINIA COMPARES TO THE NATION

(Virginia Average Classroom Salaries Versus The National Median)

Year	Virginia Ranking*	Virginia Average	National Median
1981-82 (actual)	34th	$17,009	$18,500
1982-83 (actual)	31st	18,535	19,859
1983-84 (actual)	30th	19,676	20,571
1984-85 (estimate)	28th	21,277	21,997**
1985-86 (estimate)	27th	23,388	23,522**
1986-87 (estimate)	26th	25,727*	25,153**
1987-88 (estimate)	26th	28,300*	26,897**

*Based on estimated increase of 10% each year per salary mandated

**Based on JLARC Staff Methodology

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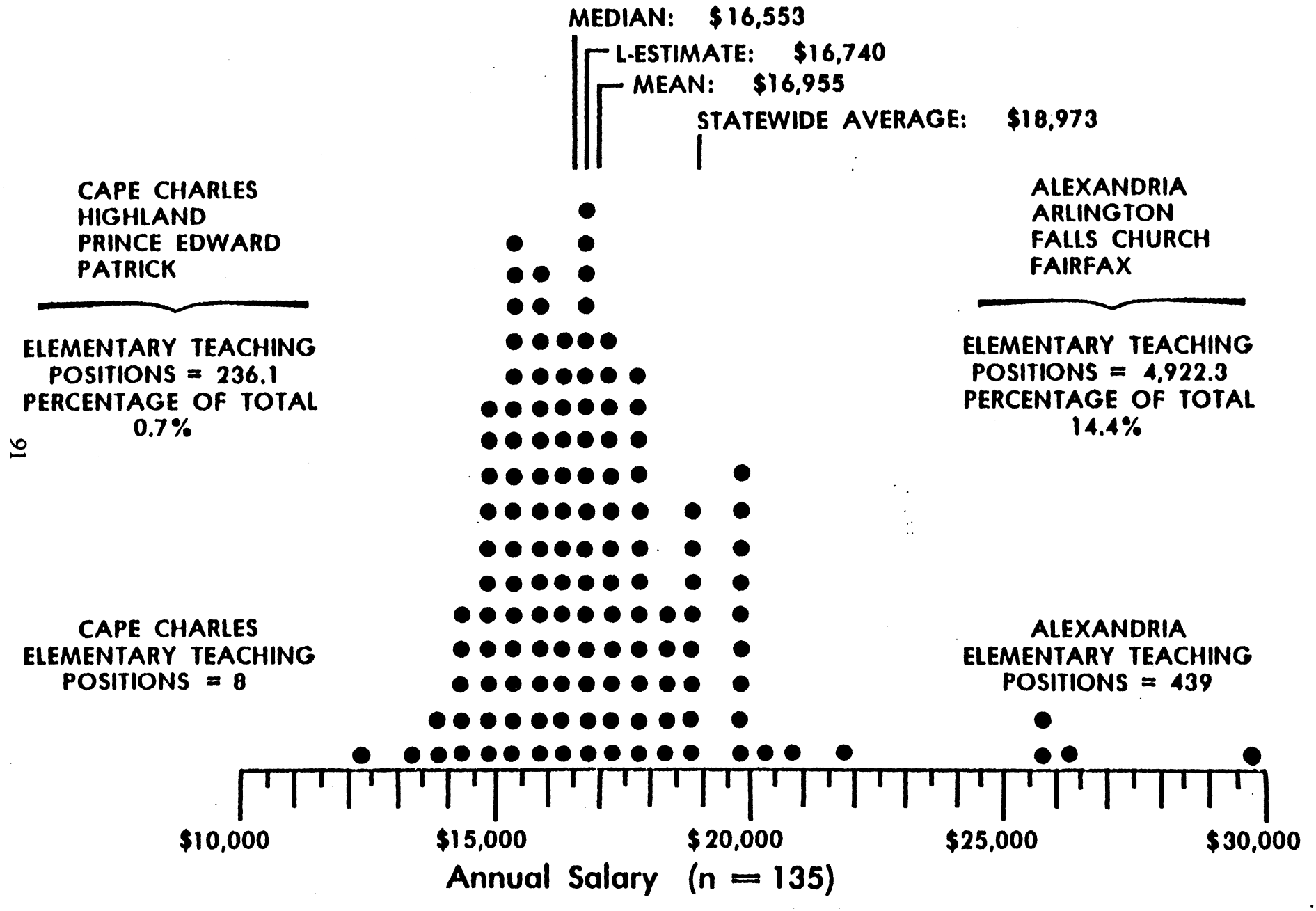
The JLARC staff used a linear estimator technique, with weights from one to five, to estimate average salary levels. While such a technique is recognized as being a reputable statistical methodology, certain questions and concerns are being expressed by those representing the many publics we serve. In my opinion, these questions and concerns must be addressed to ensure the acceptance of changes in methodology for estimating the costs of the Standards of Quality.

For example, questions have been raised as to why school divisions with extreme differences in numbers of teachers receive the same L-Estimator weights. To illustrate, Cape Charles has only eight elementary teachers, while Alexandria has 439 elementary teachers; yet, each receives the same weight.

Furthermore, there apparently are four divisions with 236 elementary teachers which have been assigned weights similar to another four divisions with 4,922 elementary teachers. It appears as though seven-tenths of one percent of the elementary teachers in the State have received weights similar to another 14 percent of the elementary teachers. See Transparency Number 4.

Elementary School Teachers: Distribution of Average Salaries



EACH DOT REPRESENTS ONE SCHOOL DIVISION

Source: JLARC analysis of Annual School Report data, 1992-94

It is true, as the JLARC staff has noted, that 118 of the 135 school divisions in Virginia actually pay instructional staff less than the statewide average instructional salary. It is important to note that the remaining 17 school divisions employ approximately 42 percent of the total statewide instructional staff, serve approximately the same percent of the students in the Commonwealth, and pay at least the statewide average salary. Our projections indicate that these percentages of instructional staff are continuing to rise each year, increasing to 45 percent in 1985-86, with classroom teachers also increasing to 48 percent in 1985-86.

> *JLARC NOTE:* The weighting used by JLARC staff in the linear weighted average for instructional salaries is useful in calculating the prevailing salary cost for the school division. Any weighting scheme which weights according to the number of instructional personnel actually calculates the statewide average salary -- not the prevailing cost which most school divisions pay in order to hire instructional staff.

Another concern is that the December 9 staff report reflects a lack of funding for a teacher salary increase. See Transparency Number 5. The figures reflect a decrease of $31 per pupil in the personnel component from the $1,217 appropriated in 1985-86, to a recommended level of $1,186 in 1986-87. This transparency also reflects the decreases in average instructional salaries due to this decrease in the personnel component. These deficiencies are addressed in the Governor's proposed 1986-88 budget.

> *JLARC NOTE:* The JLARC staff computation of the increase in State general funds necessary for the 1986-1988 biennium includes sufficient funds for a 10.2 percent salary increase for the 59.5 positions used in the cost estimate. The decrease in the instructional personnel component of basic aid is the result of the different technique used to calculate existing salary levels.

Analysis of Personnel Component of Basic Aid

	1985-86 Chapter 619	1986-87 JLARC Staff Report	Difference
Personnel Component	$ 1,217	$ 1,186	$ -31
Average Instructional Salary	$24,262*	$22,829/23,065/22,007**	$-1,433/-1,197/-2,255

*Estimated average salary, based on certifications by Division Superintendents

**L-Estimator salaries of $22,829 for 51 Basic Aid positions
$23,065 for 2.6 Vocational Education positions
$22,007 for 3.4 Special Education positions,
1 Gifted position and 1.2 Remedial positions

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While I completely understand that the General Assembly has the authority to fund instructional salaries through the use of a linear estimator methodology, or any other statistical methodology, I would suggest that we also must continue to determine our ranking through the use of statewide average salaries, which is the method accepted by the other 49 states. The Governor's 1986-88 budget recommendations require that the Superintendent of Public Instruction report to the General Assembly, by December 1 of each year of the biennium, the progress made by each locality in increasing the average teacher salary. This report will include a comparison of statewide average teacher salaries in Virginia with those of the other states.

JLARC NOTE: JLARC staff agree that the statewide average salary should be used to compare Virginia salaries to those in other states.

SUPPORT COSTS

The JLARC staff report included an extensive discussion of the original task force methodology for calculating support costs and the annual school report data on which it is based. I am very pleased that the findings support the Board of Education's position that the support component of Basic Aid has been underfunded in the past. You should be aware that the support level in the JLARC staff report is somewhat lower than that which is recommended in the Board's 1986-88 budget. In addition to this concern, several other issues which I would like to address at this time were raised by the JLARC staff report.

First, the report stated that: "The approach essentially credits all expenditures for support costs as SOQ, although some costs may actually reflect inefficiency, local aspiration, or educational cost clearly outside of the standards." I would raise a question with regard to this conclusion because there are categories of expenditures excluded by the original task force methodology which are outside the cost of the regular day school operation; among these are adult education, school food, capital outlay, and debt service. In addition to these categories, the original task force methodology excludes other expenditures which total over 100 million dollars, such as instructional aide costs and tuition payments for private and regional schools for the handicapped.

Secondly, the report states that the Annual School Report data are not validated and that the JLARC staff corrected 197 entries. I wish to assure you that the Department of Education does validate the Annual School Report data. There are approximately 148,000 data items in this report which could potentially result in a like number of errors. The 197 corrections represent one-tenth of one percent of the total data items.

> *JLARC NOTE:* **The errors noted in the staff report pertain only to the support cost data, which constitute about 12,800 items, rather than the 148,000 items which the department notes. Therefore, the error rate is 1.5 percent, not 0.1 percent. It must also be emphasized that the JLARC validation was only of items clearly out of a reasonable range. There was no systematic validation of the entire data base. It is reasonable to expect that additional errors exist which have not yet been corrected.**

The effectiveness of the Department's validation process--even with the small percentage of errors--is supported through a recosting of the standards, using the original task force methodology. Correction of the errors caused the personnel component to decrease by only 20 cents per pupil and the support component, by 25 cents per pupil. After the Department staff applied its usual procedure of rounding each of these two components of cost to the nearest dollar to derive a total per pupil cost, the errors had absolutely no impact on the ultimate cost derived for the 1986-88 biennium, as recommended by the Board of Education. See Transparency Number 6.

> *JLARC NOTE:* **Correction of the data has little effect on statewide averages. It is, however, critical to a more precise method which looks at the variation of discrete cost items across the school divisions.**

EFFECT OF 197 REPORTING ERRORS

	1983-84 Unadjusted Cost	1983-84 Adjusted Cost per JLARC Staff Report	Difference
Personnel Component	$ 981.94	$ 981.74	$ -.20
Support Component			
Administration	$ 60.31	$ 60.28	$ -.03
Other Instructional Costs	145.40	145.38	-.02
Attendance and Health	24.34	24.13	-.21
Operation and Maintenance	332.40	332.41	+.01
Pupil Transportation	96.24	96.24	-0-
Fixed Charges	113.52	113.52	-0-
	$ 772.21	$ 771.96	$ -.25
Final Costs:			
Personnel Component	$ 982	$ 982	
Support Component	772	772	
	$ 1,754	$ 1,754	

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I am pleased that with sometimes limited and certainly with varying resources among the localities, we have reached this level of accuracy. We hope, however, to continue to improve in this area. For example, during the fall of 1985 we contracted with the Department of Information Technology to conduct a data requirement analysis which will focus on information requirements, communication requirements, and tools needed to improve the information flow between the local school divisions and the Department of Education.

It is necessary to note that the December 9, 1985, staff report incorrectly deducts state highway funds from the support component costs of basic aid, rather than recognizing this item as a funding source for basic aid. This procedure had the effect of improperly reducing the support component cost in excess of two million dollars each year, resulting in an understatement of the estimated cost of the Standards of Quality in each year by $4 per pupil. I am pleased to report to you that, with the concurrence of the JLARC staff, this omission has been corrected in the Governor's proposed 1986-88 budget.

JLARC NOTE: State highway funds were not incorrectly deducted from the support component of basic aid. Rather, in order to identify general fund costs and increases, highway funds were isolated as a separate revenue source and included in the cost estimate. The per-pupil amount for basic aid calculated by JLARC includes only general funds -- it is necessary to add the per-pupil amount for the highway fund.

FRINGE BENEFITS

Our analysis of the fringe benefit costs calculated by the JLARC staff methodology has led to two concerns. First, the estimated cost of instructional fringe benefits is based upon paying every school division at the linear estimated salary, even though estimated average salaries in some of the smaller school divisions are below the linear estimated salary. It should be noted that Appropriations Act language requires that estimated average salaries be used. Based on the information now available, our analysis indicates that the costs reflected in the JLARC staff report are overstated by approximately 4.8 million dollars in the next biennium, based on the proposed 1986-88 budget. Even though I realize that this comment would result in fewer dollars flowing to the localities, in fairness I feel compelled to bring this adjustment to your attention.

> *JLARC NOTE:* The JLARC analysis for fringe benefits was intended to calculate the total cost for fringe benefits, given a certain salary compensation cost. To the extent that actual salary compensation is lower than the cost calculated by JLARC, the fringe benefit cost can also be reduced.

Our second concern is that current practice is for the state each year to "roll-over" the June obligation for instructional fringe benefits into July of the next fiscal year, because of a lack of funding totaling approximately 20 million dollars in the current year. Because this practice was not incorporated into the JLARC staff methodology, the cost of instructional fringe benefits for 1986-88 is overstated by an additional 4.4 million dollars. Again, correcting this error would result in fewer dollars flowing to the localities.

The report excludes "other" fringe benefit costs, with the exception of health insurance, on the assumption that other costs are not prevailing statewide. The staff report pointed out that one school division expended 20.2 million dollars for local retirement costs, which resulted in a statewide increase of $17 per pupil in the support component, and concluded that this cost should not be allowed. In reality, such benefit plans are provided in lieu of increases in salary and therefore are an integral part of total compensation for instructional personnel. Using the original task force methodology, if the $20.2 million dollars had been paid in salaries rather than for other retirement costs, the statewide average instructional salary would have increased by $318. This would have resulted in an increase in the personnel component of $15 statewide. Thus, two dollars per pupil could be considered "local aspiration" in this instance. I believe that this is a policy issue to be decided by the General Assembly because many localities provide increases in fringe benefits in lieu of salary increases.

JLARC NOTE: **Fringe benefit costs which were unique to certain localities were excluded because they are not required by the standards, and do not represent prevailing costs for most school divisions. To assert that benefits given in lieu of salary should be included because the salary cost could have increased if the benefit package had not been chosen is inconsistent with the intent of the General Assembly to increase classroom salaries. Provision of benefits in lieu of salary does not contribute to the goal of increasing salaries to the average salary of the median state.**

The staff report did recognize that health insurance is an integral part of total compensation packages offered to public school employees. The report concluded, however, that this cost should be limited to an "employee-only" plan, with the cost to the State based on the breakeven cost of a major health benefit provider, because paying an additional amount for a family plan was not "prevailing" in the localities. While I agree that the additional cost of a family plan in many cases is covered by the employee, in many other cases employers pick up some of the additional cost. As a matter of fact, the plan in use for all State of Virginia employees covers an additional cost for family coverage beyond the "employee-only" rate, at a total cost to the State of approximately $1,543 per employee in 1985-86. Questions have been raised regarding the restriction of costs to $1,040 in 1986-87 and $1,111 to 1987-88. In the final analysis, recognition of costs associated with family health plan insurance should be decided by the General Assembly.

JLARC NOTE: There is no requirement in the standards that local school divisions provide health insurance for employees. However, the JLARC analysis indicated that health insurance is an important benefit provided by 125 of 139 school divisions. Therefore, JLARC staff included the cost for a minimum plan in the calculation of costs. A health plan that included some portion of costs for the employee's family was not used because only 48 divisions provide for family coverage.

INFLATION ASSUMPTIONS

I am pleased to note that the JLARC staff report and the revised Board of Education budget both used the most recent Chase Econometrics inflation factors to estimate support costs for the 1986-88 biennium.

SOQ COST ESTIMATES

The methodology used by the JLARC staff in estimating the cost of the State's share of the Standards of Quality results in an estimate that is less than the current estimate of the Board of Education. The personnel component of basic aid, the fringe benefit accounts, and the various add-on accounts all have been reduced as a result of the reduction in average salaries. The support component of basic aid also has been reduced as a result of the methodology used by the JLARC staff. The Board of Education's revised estimate for the State's share of the Standards of Quality is 395.9 million dollars, as compared to 192.2 million dollars in the staff report.

Because there has been considerable comment recently regarding the revision of the Department's estimates for funding the State share of the Standards of Quality, please allow me to explain our procedures. The Board of Education approved its 1986-88 financial proposal on August 1, 1985, and recommended to Governor Robb an increase of 518 million dollars to fund fully the State share of the cost of the Standards of Quality.

As it does each year in preparing for the upcoming session of the General Assembly, in December, the Department of Education twice revised its cost estimates, based on the most up-to-date revenue and other data estimates available, such as sales tax, ADM, and state and national average salaries. This was done to enable the General Assembly to have the

most accurate cost data available upon which to base critical funding decisions.

The first revision to the Board's proposal occurred in early December of last year and was based upon revised data in five areas: (1) an adjusted 1983 school age census for distributing sales tax revenue; (2) revised Chase Econometric inflation factors for the support component of Basic Aid; (3) revised average salaries in 1986-88, based upon actual average salaries for 1984-85 and a superintendent's certification of increases in these salaries for 1985-86; (4) revised estimates of increases in national salaries; and (5) new estimates of 1986-88 ADM received from the localities, based on actual September 30, 1985, membership. These revisions resulted in a decrease from our original estimate of 518 million dollars to 419.3 million dollars.

The second revision, in late December, was the result of revised sales tax revenue projections from the Governor's Budget Office and the Department of Taxation. This increase in estimated sales tax revenue, which is an integral part of the basic aid formula, reduced the additional General Fund dollars needed from 419.3 million dollars to 395.9 million dollars. It is this amount which is the Board's current estimate. It is my understanding that the JLARC staff also will revise its 192.2 million dollar estimate downward, for the same reason.

SUMMARY AND RECOMMENDATIONS

During the past several years, there has been an incredible amount of public concern at the national, state, and local levels about the quality of education in our public schools. Virginia has been making great strides in providing equitable and high quality educational programs to students throughout this Commonwealth. This is evidenced in part by the major gains in the test scores of Virginia students, particularly as they compare to scores of students in many other states.

There is no question that the constitutionally mandated Standards of Quality for our public schools has been the driving force behind the many successes in public education in this state. With the support of the Governor, the General Assembly, and the Board of Education, these many successes will continue through the 1986-88 biennium.

Recognizing that the General Assembly, in its 1986 session, must make some very difficult decisions, I have considered a number of factors in offering my best judgment as to the actions that should now be taken. Among these factors are:

1. The vital importance of funding the State's share of the cost of the Standards of Quality.

2. The complexity of the funding issue.

3. The change in established methodology represented by the JLARC staff report.

4. The insufficient amount of time for public understanding of the funding issues and for reaction to these issues.

Based on the number and complexity of questions raised in this response, as well as those from local school divisions and from many statewide interest groups, I am submitting the following recommendations:

1. Within the constraints of available revenue, the General Assembly should fully fund State's share of the Standards of Quality for 1986-88.

2. The General Assembly should establish a task force on funding the Standards of Quality similar to the 1972 and 1978 task forces. The task force, working with the staffs of the Department of Education, JLARC, and the Department of Planning and Budget, should make recommendations to the appropriate bodies, prior to the 1988-90 biennium, regarding a restatement of the Standards of Quality in more

quantifiable measures. In addition, the task force should ensure that the several components of the funding formula, including (1) the methodology to determine how the Standards of Quality costs are to be computed; (2) an equitable distribution of State funds to the localities; and, (3) an equitable division of the costs of the Standards of Quality between the state and the localities result in an approach that is fair, realistic, understandable, and relatively easy to implement from biennium to biennium.

The following information will be made available to the Task Force:

- The reports of the 1972 Task Force on Financing the Standards of Quality for Virginia Public Schools.

- The 1981 Special Subcommittee Report to the Public School Finance Study Commission.

- The 1985 JLARC staff report on Estimating the Costs of the Standards of Quality.

- The forthcoming JLARC staff report on distribution of funds.

- The forthcoming Department of Education report recommending standards to be applied in the costing of the support component of the Standards of Quality.

Thank you again for this opportunity to respond to the JLARC staff report.

I urge your consideration of these recommendations.

1972
TASK FORCE ON FINANCING THE STANDARDS OF QUALITY

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1978-81
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*The Honorable Adelard L. Brault
*Preston C. Caruthers
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The Honorable Earl V. Dickinson
The Honorable Calvin W. Fowler
The Honorable Ray L. Garland
*The Honorable Robinson B. James
*Mrs. Virginia Ritchie
The Honorable Edward E. Willey

*Special Subcommittee Members

RESOLUTION EXPRESSING THE SENSE OF THE BOARD OF EDUCATION REGARDING THE STUDY OF FULL FUNDING OF THE STANDARDS OF QUALITY

WHEREAS, the single greatest expenditure from the state General Fund is for public education; and

WHEREAS, the members of the Board are satisfied that Governor Robb's proposed budget as endorsed by Governor Baliles goes far toward meeting needs of public education and the children of Virginia and provides a transition period during which time additional study could be completed that would address the question of how school divisions in the Commonwealth would be affected by use of new methodology both in the short- and long-term; and

WHEREAS, the staff of the Joint Legislative Audit and Review Commission has recommended a new methodology for estimating the costs of the Standards of Quality; and

WHEREAS, this new methodology differs significantly from the methodology which was recommended by the original Task Force on Financing the Standards of Quality in 1972 and which was reaffirmed by the special subcommittee of the 1978 Task Force; and

WHEREAS, the new methodology does not appear to take into account certain problems facing the various school divisions in the Commonwealth, such as density, sparsity, municipal overburden, and cost of living; and

WHEREAS, the members of the Board recognize that the decision as to which methodology to use is a complex one, noting that other methods might well have been used such as giving higher weights to divisions with the greater populations, highest grade point averages, or greater remedial needs; and

WHEREAS, the data which the members of the Board have been able to gather indicate that certain divisions will gain and other divisions will lose under this new methodology; and

WHEREAS, it is not known at this time what the Joint Legislative Audit and Review Commission staff will recommend for the distribution formula; thus it is impossible to determine long-term impact of the new methodology, if adopted, on the local school divisions; and

WHEREAS, long-range planning and evaluation require data that are consistent with data that have been and will continue to be used for the purpose of comparing teacher salaries in Virginia with those of the other forty-nine states;

NOW, THEREFORE, BE IT RESOLVED, that prior to the adoption of any change in methodology used in estimating the cost of the Standards of Quality, a blue ribbon commission, similar to those appointed in 1972 and 1978, be created to study this topic together with the proper allocation of costs between the state and localities, the funding formula, and the impact on schools and children to be educated and report to the Governor, the General Assembly, the Secretary of Education, and the Board of Education its recommendation on methodology and funding formulas;

BE IT FURTHER RESOLVED, that this resolution be sent to the members of the Joint Legislative Audit and Review Commission and, because of the great public interest in this topic, copies be sent to the Governor, each member of the General Assembly, and the Secretary of Education.

Adopted this 17th day of January, 1986

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