GETTING DOWN TO FACTS II

Technical Report

What Does It Cost to Educate California's Students? A Professional Judgement Approach Report Appendices

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About: The *Getting Down to Facts* project seeks to create a common evidence base for understanding the current state of California school systems and lay the foundation for substantive conversations about what education policies should be sustained and what might be improved to ensure increased opportunity and success for all students in California in the decades ahead. *Getting Down to Facts II* follows approximately a decade after the first Getting Down to Facts effort in 2007. This technical report is one of 36 in the set of *Getting Down to Facts II* studies that cover four main areas related to state education policy: student success, governance, personnel, and funding.

Stanford University

PACE Policy Analysis for California Education

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Report Appendices

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List of Appendices

Appendix A. Professional Judgment Panel General Instructions

Getting Down to Facts II
California Adequacy Study

Professional Judgment Panel
General Instructions
Document A

Please read this introduction in its entirety before beginning work on Tasks 1-9

Introduction

You have been selected to serve on one of two professional judgment panels (PJPs) that will contribute to the reexamination of the California school funding formula. You have been nominated and selected to serve on one of these PJPs because of your unique knowledge, skills, and perspective as a California educator. Each PJP will be asked to carry out a set of tasks over the course of this two-and-a-half-day meeting.

The purpose of this document is to provide a general overview of the purpose of PJP meetings, the nature of the activities, the assumptions to be made in your work, and the resources to which you will have access to accomplish the tasks.

Statement of Purpose

The ultimate purpose of this work is to help us estimate the cost of providing an *adequate* education for all public school students in California. There are four components required to achieve this objective:

1. **Define adequacy.** First, we are providing the PJPs with a *Goals Statement* (Exhibit A.1) that defines what is meant by the term "adequate education." The *Goals Statement* incorporates four state accountability measures described in the Every Student Succeeds Act (ESSA) and access to California Content Standards.

2. **Design programs.** Second, we are asking each PJP to work independently to design educational programs at the elementary, middle, and high school levels that, in the professional judgment of the panel members, will provide an adequate opportunity for students in schools with varying demographics to have access to the learning opportunities specified in the *Goals Statement* (see Exhibit A.1) and to achieve the desired results.

3. **Specify resources.** Third, each PJP will be asked to specify the resources and services necessary to efficiently deliver "*adequate"* educational programs in public elementary, middle, and high schools in California.

4. **Estimate costs.** Fourth, the AIR research team will use the information provided by each PJP to estimate the cost to deliver "adequate" educational programs in each and every public school and district in the state.

The charge of the PJP's is to complete components 2 and 3, above. Please note that we are **not** asking PJPs to create a "one size fits all" model to be implemented in all California public schools. Rather, we are asking panels to design instructional programs and specify the resources that they believe will deliver the desired results as ***efficiently as possible*** (i.e., at the lowest possible cost to taxpayers). These program designs and resource specifications simply provide us with a basis from which to estimate the costs of achieving the goals and to show how these estimates might be used to modify the existing school funding formula. By developing cost estimates for an adequate education from the work of two independent panels, we can measure how sensitive the cost estimates of the panels are to alternative specifications of the personnel and non-personnel resources required to deliver an adequate education.

Definition of Educational Adequacy

The purpose of the Goals Statement (see Exhibit A.1) is to guide the deliberations of the PJPs. This Goals Statement is based on the accountability plan that the California State Department of Education submitted under the Every Student Succeeds Act (ESSA), which was signed into federal law in 2015 and reauthorized the Elementary and Secondary Education Act (ESEA). The Goals Statement also incorporates the California Content Standards adopted by the California State Board of Education's vision, mission, and goals.

The Accountability System

California's accountability system is a reflection of the belief that all local education agencies and schools should improve. It is focused on student group performance and emphasizes equity. The system has both state and local indicators.

The State indicators have the following priority areas: student achievement, student engagement, and school climate. The Local indicators focus on basic services and conditions at schools, implementation of state academic standards, parent engagement, school climate, and access to a broad course of study.

Regarding the access to a broad course of study, each local education agency measures its performance based on a college/career indicator to measure whether high school graduates are prepared for postsecondary education. Table 1 shows the priority area of the Local Control Funding Formula with its corresponding state or local indicator.

Table 1. Local Control Funding Formula Priority Area and State and Local Indicators

Local Control Funding Formula Priority Area	State Indicators	Local Indicators
Basic Services and Conditions at schools (Priority 1)	N/A	Access to textbook, adequate facilities, and appropriately assigned teachers
Implementation of State Academic Standards (Priority 2)	N/A	Annual report on progress in implementing the standards for all content areas
Parent Engagement (Priority 3)	N/A	Annual report on progress toward: (1) seeking input from parents/guardians in decision making; and (2) promoting parental participation in programs
Student Achievement (Priority 4)	Academic Indicator	N/A
Student Achievement (Priority 4)	English Learner Progress Indicator	N/A
Student Engagement (Priority 5)	Graduation Rate Indicator	N/A
Student Engagement (Priority 5)	Chronic Absenteeism Indicator (not available until Fall 2018)	N/A
School Climate (Priority 6)	Suspension Rate Indicator	Administer a Local Climate Survey every other year
Access to a Broad Course of Study (Priority 7)	N/A	College/Career Indicator (Status Only) for the initial release
Outcomes in a Broad Course of Study (Priority 8)	N/A	College/Career Indicator (Status Only) for the initial release

N/A: Not Applicable
Source: Available at https://www.cde.ca.gov/ta/ac/cm/

Exhibit A.1: Goals Statement

Goals Statement

California Department of Education Vision, Mission and Goals

The State Board of Education (SBE) has set the following vision for all California students:

> All California students of the 21st century will attain the highest level of academic knowledge, applied learning and performance skills to ensure fulfilling personal lives and careers and contribute to civic and economic progress in our diverse and changing democratic society.

Under this framework, SBE has also defined its mission as:

> Create strong, effective schools that provide a wholesome learning environment through incentives that cause a high standard of student accomplishment as measured by a valid, reliable accountability system.

The overarching goals of the SBE are focused on two areas: Standards and Achievement. SBE goal is to adopt and support rigorous academic content and performance standards in the four core subjects for kindergarten and grades 1 through 12. In regards to achievement, SBE goal is to ensure that all students are performing at grade level or higher, particularly in reading and math, at the end of each school year, recognizing that a small number of exceptional needs students must be expected, challenged, and assisted to achieve at an individually determined and appropriately high level. Advocate for mandatory intervention for every child not at grade level. Do everything possible to ensure that "the job is done right in the first place".

In regards to assessment, SBE has developed policies that assure that all students receive the same nationally normed and standards-based assessments, grades 2 through 11, again recognizing that a small number of exceptional needs students must be separately and individually assessed using appropriate alternative means to determine achievement and progress

The California Accountability Model

A key part of the accountability system in California is based on the combination of current performance (Status) and improvement over time (Change). Status is measured based on the school or student group's current year of data for each indicator. Change is measured as the difference in results from the current year to the prior year. There are five levels of both Status and Change. The combination of the five Status levels and the five Change levels results in 25 performance levels displayed in a five-by-five colored matrix as illustrated below in Table 2 (and Appendix 1).

Goals Statement (Continued)

(1) Student Outcomes

Regardless of student body, all California schools will meet the criteria to be rated at least GREEN, as described at https://www.cde.ca.gov/ta/ac/cm/fivebyfivecolortables.asp#AcademicTable, on all four state accountability indicators:

- Suspension rate
- English Learner Progress
- Graduation Rate
- Academic indicator (English language arts/literacy assessment or mathematics)

Table 2. California Accountability Matrix

Levels		Change				
		Declined Significantly	Declined	Maintained	Increased	Increased Significantly
Status	Very High	Yellow	Green	Blue	Blue	Blue
	High	Orange	Yellow	Green	Green	Blue
	Medium	Orange	Orange	Yellow	Green	Green
	Low	Red	Orange	Orange	Yellow	Yellow
	Very Low	Red	Red	Red	Orange	Yellow

(2) Access to California Content Standards

All students should have access to instructional programs and services that are consistent with the California content standards in all subject areas, listed below, as adopted by the State Board of Education and described at https://www.cde.ca.gov/be/st/ss/.

- English Language Arts
- Mathematics
- English Language Development
- Career Technical Education
- Computer Science
- Health Education
- History-Social Science
- Model School Library
- Physical Education
- Science
- Visual and Performing Arts
- World Language

PJP activities

We are asking each professional judgment panel to carry out the following two activities:

1. **Design an instructional program.** Each panel will be responsible for designing a coherent instructional program at the elementary, middle, and high school levels that meets the framework of the indicators will allow all students in California to reach the state's goals laid out in the *Goals Statement*:

    a) The program should be consistent with the underlying ***Task Assumptions*** of the system (see Document B).

    b) The program should allow schools to meet the goals laid out in the *Goals Statement*, including providing access to the California content standards.

Instructional program designs will be entered as narrative into a Word document called the *Program Design Document.*

2. **Specify resources to deliver the program.** With your program design in mind, we are asking each panel to delineate the specific resources and services necessary to deliver that program in a series of hypothetical elementary, middle, and high schools representative of the varying needs and sizes found in California public schools that provide <u>all</u> students the opportunity to achieve target performance levels.

When designing programs and specifying resources, we ask each panel to specify the ***most efficient*** combinations of various resources necessary to implement the ***best practices*** you believe necessary to ***achieve the desired results****.* Ideally, the program design and corresponding resource specifications generated by your professional judgement should be supported by research evidence and reasonable (i.e., could be realistically implemented by competent staff provided sufficient funding were available).

Program Design

The program design should be one that you would reasonably expect to be adopted and funded by a school board comprised of knowledgeable, well-intentioned lay persons and designed to meet the needs of the local communities. In each of the major tasks we ask you to carry out, the initial activity is to describe the nature of the instructional program that you believe is needed at the elementary, middle, and high school levels to allow schools to meet the state's instructional goals. As instructional programs can be defined in a myriad of ways, the following list (Exhibit A.2) is intended to provide you with some ideas of the types of components you may consider as you design your program.

Exhibit A.2: Examples of Program Design Elements for Consideration

- Core Instructional Program (e.g., regular classrooms, resource teachers, and subject matter specialists)
- Pre-Kindergarten and Transitional Kindergarten Program
- English Learner Program
- Special Education Program
- Instructional and Pupil Support Services
- Professional Development Services
- Athletics Program (for High Schools)
- Extended Time (After-School and/or Summer) Programs
- Materials, Supplies, and Technology (Non-Personnel)
- Other Strategies for Delivering Services

Best Practices in Designing Programs and Specifying Resources

Use your professional judgment

With the exception of the constraints imposed by these instructions, you are free to configure your programs in any way that you feel confident will achieve the desired results. The programs should be based on your best professional judgment and any high-quality research.[1] Your program design should be practical and have a reasonable chance of being implemented successfully by competent educators.

Use resources efficiently

As you proceed through the assigned tasks and activities, we ask you to specify the best combinations of various resources that you believe are necessary to achieve the desired results at minimum cost. You need to be mindful that the resources you allocate will be financed by tax revenues collected primarily from the citizens of California. To this end, we want to ensure that resources in the most efficient way possible to reach the specified goals.

Work from design to specification

It is important to design your program first. From our experience working with other educators on similar projects, the most effective groups first decide the nature of the program they would provide, describe the comprehensive program through a narrative program design, and then proceed with staffing the program and allocating resources accordingly. For example,

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[1] We have already provided you through email with a copy of our expert briefs (***Essential Elements for Successful Schools***) written by a nationally recognized group of scholars and practitioners. These papers were intended to provide a balanced overview of current research evidence and the practitioner perspective on implementation. Hardcopies of these expert briefs will also be included in the 'Advanced Reading' section of the PJP binders.

desired class size should be determined in the program design document prior to specifying quantities of teaching staff first.

Implementation Issues

The panels should recognize that the cost estimates derived from this analysis may represent target levels of future investment in public education. The program designs, resource specifications, and the cost estimates will be extensively reviewed and discussed at subsequent meetings of the Project Stakeholder Panel.

Further, any recommendations for changes in the levels or distribution of school funding that may come out of this project generally cannot be implemented instantaneously. Significant amounts of planning on the part of the state and local educational decision makers may be necessary to efficiently and effectively manage any new resources that might be necessary to achieve the long term goals. For this reason, it is not uncommon to phase in such changes over a three- to five-year time horizon in order to permit districts sufficient time to adjust patterns of decision making and resource allocation.

Moreover, these goals are not static and may change over time requiring periodic reassessment and reanalysis of the work being undertaken by the PJPs. The program designs may have implications for changes in higher education with demands for additional teachers or other school personnel, and it may entail new investments in capital resources to support programmatic changes.

IMPORTANT: Note that the goal is **NOT** that the specific components of these models become mandates for local practice. However insightful are the instructional designs created by the California PJPs, or persuasive the case for their effectiveness, the design and specification of adequate educational programs is not yet an exact science. Harnessing creativity and commitment, and taking advantage of the experience of local educators, necessitates providing them with discretion to determine exactly how funds should be used. Each district will be able to make their own resource use decisions given funds distributed through the Local Control Funding Formula (LCFF). However, we rely on your collective professional judgment to determine adequate resources needed for this system.

Organization of Panel Activities

Each PJP will be asked to appoint a chair to take charge of the panel deliberations. In addition, we have assigned two AIR team members, a facilitator and a data entry assistant, to assist each PJP in completing its tasks. The panel facilitator will be available to answer any questions and to help structure the meeting. The data entry assistant provides an interface between the panel and the computer files described in the next section.

Electronic Files Available to Each Panel

Each panel will be provided with a laptop computer to carry out its work. There are two computer files necessary to complete all tasks. These two files are briefly described below.

- **PROGRAM DESIGN DOCUMENT**. This first file is a Microsoft Word document and will be used to enter the narrative description of your program design for the elementary, middle, and high school prototypes. While this document is structured to record specific information and answers, it has a flexible design to permit you to enter any information deemed appropriate in your panel deliberations. In addition to the narrative description of your program design, you may include any notes, reminders, concerns, and questions that arise during your deliberations.

- **COST MODEL**. This second file is a Microsoft Excel file containing structured worksheets that will be used to quantify the resources believed necessary to deliver the designed programs and provide corresponding real-time cost calculations. While we have made every effort to make the worksheets self-explanatory, a panel facilitator will always be present to enter information and answer any questions that might arise.

The data entry assistant, a member of the AIR team, will be at the disposal of the panel to record the program design narrative under the direction of the panel and to enter the resource specifications into the COST MODEL based on instructions from the panel.

In addition, each panel member will be provided with a hardcopy of the PROGRAM DESIGN DOCUMENT in the binders provided to each PJP member.

Appendix 1: Performance Goals

Background

In 2013, the Local Control Funding Formula (LCFF) was signed into law, along with a new accountability system based on two principles: (1) provide resources more equitably to students with learning and socio-economic barriers, and (2) provide greater flexibility for educators to serve and respond to their students' needs.

In December 2015, the Every Student Succeeds Act (ESSA) was signed into federal law, which reauthorized the Elementary and Secondary Education Act (ESEA) and replaced the No Child Left Behind Act of 2001. One of the requirements under this law is for states to have a new multiple measures accountability system in effect by the 2017–18.

The State Board of Education (SBE) established a seven-year timeline for schools and student groups to reach the goal that all students groups and schools meet academically rigorous content standards and performance standards in all ELA, Math, Graduation and English Learner Progress and are maintained from the previous years by 2024-25.

Performance Goals

The State Board of Education has identified that a Status level of High or better and a Change level of Maintained or better as the long-term goal for all schools and student groups (denoted by the cells in the dashed line in the example ELA matrix in Table 3, below):

- ELA School Level Academic Indicator:
    - Status is 10 points above to less than 45 points above Distance to Met.
    - Change is Declined less than 1 point or increased by less than 7 points.
- Math School Level Academic Indicator:
    - Status is 5 points below to less than 35 points above Distance to Met.
    - The goal for Change is Declined less than 1 point or increased less than 5 points.
- School Graduation Rate Indicator:
    - Status is a graduation rate of at least 90 percent to less than 95 percent.
    - Change is Declined or Increased by less than 1 percent.
    - Note: The baseline data for graduation rate is based on the 2014–15 four-year cohort rate for Status, compared to the weighted average of the four-year cohort rates for 2011–12, 2012–13, and 2013–14.
- English Language Learner Progress Indicator
    - Status is 75 percent to less than 85 percent of students increasing at least one performance level on the English language proficiency exam or being reclassified from the prior to the current year.
    - Change is Declined or Increased by less than 1.5 percent.

Table 3. ELA – Academic Indicator Change in Average Distance from Level 3

Levels		Table 3. ELA – Academic Indicator Change in Average Distance From Level 3				
		Declined Significantly by more than 15 points	**Declined** by 1 to 15 points	**Maintained** Declined by less than 1 point or increased by less than 7 points	**Increased** by 7 to less than 20 points	**Increased Significantly** by 20 points or more
ELA – Academic Indicator Status Average Distance from Level 3	**Very High** 45 or more points above	Yellow	Green	Blue	Blue	Blue
	High 10 above to less than 45 points above	Orange	Yellow	Green	Green	Blue
	Medium 5 below to less than 10 points above	7 (0.1%) Orange	81 (1.1%) Orange	173 (2.4%) Yellow	310 (4.3%) Green	148 (2.1%) Green
	Low More than 5 below to 70 points below	73 (1%) Red	690 (9.6%) Orange	959 (13.4%) Yellow	1,495 (20.9%) Yellow	561 (7.8%) Yellow
	Very Low More than 70 points below	44 (0.6%) Red	193 (2.7%) Red	144 (2%) Red	130 (1.8%) Orange	21 (0.3%) Yellow

Appendix B. Professional Judgment Panel. Task Instructions

Getting Down to Fact II

California Adequacy Study

Professional Judgment Panel

Task Instructions

Document B

Resources and Services

On the following page, Exhibit B-1 lists the school-level resources included in the COST MODEL worksheets. You will be asked to specify the quantities of these resources necessary to deliver the instructional programs you design. Please use the PROGRAM DESIGN document to describe how specific resources will be recorded within the elements listed in Exhibit B-1.

Exhibit B.1: School-Level Resources

Length of the School Day and Year

Proportions of Teachers at Steps 1-4, 5-8 and Step 9 or greater

Core Instructional Program Personnel (teachers and educational assistants)

- Self-contained classroom teachers by grade level
- Middle and high school classroom teachers by subject area (core subjects, career education, and athletic program)
- Resource teachers & subject matter specialists (e.g., academic coaches, art, music, PE, English language arts, math, science, and gifted)

Transitional Kindergarten (TK) & Pre-school Programs

- Full or half day enrollment
- BA-level teachers (TK model)
- AA-level teachers

English Learner Specialists (professional staff and educational assistants)

- Bilingual resource teachers
- English language development resource teachers

Special Education Program Personnel (professional staff and assistants)

- Special day class teachers
- Related services caseload teachers
- Speech/language pathologists

Instructional and Pupil Support Services (professional staff and assistants)

- Guidance Counselors
- School Psychologists
- Social Workers
- School Nurses
- Librarians/ Media Specialists
- Technical Consultants
- Academic Coaches
- Other Student Support Services

Non-Personnel Expenditures (includes supplies & materials, specialized equipment, contracted services)

Professional Development Expenditures

Student Athletic Programs

- Administrative personnel
- Coaches
- Transportation for athletics
- Other related non-personnel expenditures

Extended Time (day and year) Programs (professional staff & educational assistants)

- Administrative personnel
- Teachers

Administrative and Support Staff

- Principal and vice principals
- Other professional staff
- Clerical and office staff

Maintenance and Operations

- Maintenance & operations personnel
- Security personnel

Task 1: The Base Model

(To be completed by **full** panel)

> **Important note:** The product of this task (the *Base Model*) provides a foundation for all remaining tasks to be completed in the three days of panel deliberations. We estimate that this task will require approximately a full day of deliberations; this work should make the remaining tasks easier to accomplish.

Task Overview

With the *Goals Statement* (Exhibit A.1) in mind, we ask that each panel undertake two specific activities: develop a narrative description of the instructional programs (i.e., the program design) and specify resources necessary to deliver that program. Most remaining tasks (specifically tasks 2 through 7) are organized in a similar fashion around these two activities.

Each task is organized around a specific set of student demographics and a Demographics Worksheet will be provided at the panel meetings. This worksheet will detail the low and high levels of student characteristics (the average below the 25th percentile and the average above the 75th percentiles, respectively) used to define the prototype schools for which the panels will be designing instructional programs and specifying resources. These student characteristics include the percent of students eligible for free or reduced price lunch, the percent of English learners, and the percent of students eligible for special education services.

Activity 1: Instructional program design

Using the guiding questions found in the PROGRAM DESIGN document, we ask that each panel develop elementary, middle, and high school instructional programs aimed at achieving the desired educational goals specified in Exhibit A.1. The purpose of this task is to identify the programs and resources panelists consider necessary for the *typical, average-needs* California school to achieve these goals. In other words, we want the panels to think about what processes and inputs will produce the desired levels of access to content standards and student performance.

Activity 2: Resource specification

Using the Excel spreadsheets found in the COST MODEL document, we ask panelists to specify the quantity of resources they consider necessary to deliver their desired instructional programs. Using these numbers and typical costs for educational services, we will determine the amount of funding necessary to implement these programs.

The combination of **program design** and **resource specifications** you develop under this task will subsequently be referred to as the *Base Model.*

The 'Typical, Average-Needs' California School

While we realize that all schools and students are unique, we are asking panelists to design instructional programs for schools attended by the typical average-needs public school student in California. Using extant data, the AIR research team determined the average below the 25th percentiles for the poverty, English learners (EL), special education (SE) and enrollments. These figures are unique to each schooling level (i.e., elementary, middle, and high school).

The table below (Exhibit B.2) shows the enrollment and student characteristics of the typical average-need school in California at each grade level[2]. The Task Demographics Worksheet shows similar information for each task and should be used as reference when designing instructional programs for their respective student populations.

Exhibit B.2: Sample School and Student Characteristics for the Typical Average Needs California Elementary, Middle, and High Schools

School and Student Characteristics	Average Need Elementary School (Grades K-5)	Average Need Middle School (Grades 6-8)	Average Need High School (Grades 9-12)
School Size			
Enrollment	522	609	1,471
Poverty			
Percent free and reduced lunch	64%	68%	58%
English Learners (ELs)			
Percent of total enrollment	28%	21%	10%
Special Education Students (SE)			
Percent of total enrollment	12%	11%	9%

Activity 1: Instructional program design

Using the PROGRAM DESIGN document to report on your deliberations and decisions, please describe the instructional and support programs that you believe are necessary for students served in the typical California schools to achieve the desired outcomes outlined in the *Goals Statement* (Exhibit A.1). For guidance and instructional components to consider, please refer to *Program Design Elements to Consider* (Exhibit A.2 in Document A) and use the guiding questions found in the PROGRAM DESIGN document. Please **be as specific as possible given**

[2] The demographics used to define each schooling-level specific task represent averages across those schools that were in the second and third quartiles (between the 25th and 75th percentiles) of the respective within-schooling level statewide distribution

the time available. From your description, other professional educators should be able to understand the nature of the programs and how they relate to the desired outcomes.

Base elementary, middle, and high school instructional programs. We have provided space in the PROGRAM DESIGN document for descriptions of elementary (including Pre-K, TK and grades K-5), middle (grades 6-8), and high (grades 9-12) school programs. Please describe all of the basic instructional services necessary to meet the needs of all students served in the school, including students living in poverty, English learners, and special education (both severe and moderate disabilities). Please describe the allocation, organization, and utilization of personnel and non-personnel resources and services in the following programmatic areas:

- Core Instructional Program (e.g., regular classrooms, resource teachers, and subject matter specialists)
- Pre-Kindergarten and Transitional Kindergarten Program
- English Learner Program
- Special Education Program
- Instructional and Pupil Support Services
- Professional Development Services
- Athletics Program (for High Schools)
- Extended Time (After-School and/or Summer) Programs
- Materials, Supplies, and Technology (Non-Personnel)
- Other Strategies for Delivering Services

Please also consider any additional support personnel and services you might require to ensure the success of the instructional programs.

Special education services. Your panel should think through its philosophy and rationale for serving special education students at the school- and regional-level. Special education personnel available at the school-level include general special education teachers, related services caseload teachers and speech/language pathologists.

In a subsequent task (Task 8), a special education subpanel will specifically address the regional- and district-level components of special education programs. These regional level components include the nature of the instructional and related services offered to three categories of special education (SE) students:

- those not served in the neighborhood schools,
- those requiring related ancillary services not already captured in the instructional programs that your panel might specify in the *Base Model* task, and
- those aged 3-5 requiring preschool special education programs.

For the current task, your panel should establish the general program orientation, the division of responsibility between the school and region for serving SE students, the extent to which special education services are integrated into the regular classroom, the use of response

to intervention (RTI) and multi-tiered systems of support (MTSS), and the deployment of SE resources necessary to deliver that instructional program to SE students at the school level.

Activity 2: Resource specification

For this activity, your panel should use the worksheets in the Excel COST MODEL file to enter the quantities of resources necessary to deliver the instructional program described in your PROGRAM DESIGN document. The COST MODEL includes information on typical salaries and benefits for full-time school personnel staff so that once you have entered the appropriate full-time equivalent (FTE) quantities, you will be able to see the cost implications of your decisions. The combination of program design and resource specifications you develop under this task will subsequently be referred to as the *Base Model.*

Navigating the COST MODEL

A facilitator and a data entry assistant will be available to help navigate and input resources into the COST MODEL worksheets.

Schooling Level Specific Worksheets. In addition, there are separate input worksheets for the three school levels: one each for elementary (ELEM), middle (MIDDLE), and high (HIGH) schools. Each of these worksheets contains the basic set of resources used to support school operations at each grade level. The top section of each worksheet reproduces the enrollment and student demographic characteristics for typical California schools pertinent for each task. The second section of the worksheet provides panels with a structure for translating the desired instructional program into specific resources. Specifically, it asks panels to specify the:

- Length of the school day and year
- Fulltime equivalent (FTE) quantities for various types of teaching and professional personnel
- Percentages of students to receive preschool or early childhood programs
- FTE quantities of other non-teaching personnel and specialists
- Allocations of non-personnel resources
- Amounts of time and other resources that should be devoted to professional development
- Percentage of students and hours of educator time required for delivering extended day or extended year programs.

Data may only be entered in the white cells within each worksheet. Colored cells provide relevant information, calculations of relevant statistics, and cost estimates for your program. If the panel decides not to allocate funds or assign certain personnel, please indicate this choice with a ‘0’.

In instances where an employee works in a school less than full time, please allocate only the fraction of full time (FTE) necessary to deliver the educational program. For example, a teacher who teaches half time would count as 0.5 FTE.

Default values. You will also notice that we have provided default values for Task 1 for many of the resource quantities, class sizes, and per pupil expenditures. These default values represent actual class size and resource data for schools with the corresponding demographics.

Task 2: Programs for High Poverty Schools

(To be completed by **full** panel)

Task Overview

In Task 1, we asked your panel to develop the *Base Model.* In Task 2, we are asking you to describe how you would change your *Base Model* (i.e., your program design and resource specifications in Task 1) in response to an increase in the percentage of students receiving free or reduced price lunch, holding all other student characteristics constant. Specifically, we are asking you to revise your program design and resource specifications for schools serving higher percentages of students in poverty.

Program Modifications

The next step for your panel is to consider whether the increase in the student poverty levels in Task 2 would require you to make modifications in your program design and/or the resource specifications developed for the *Base Model* in Task 1.

A change from low to high levels of poverty

Would an increase in student poverty from the level in the *Base Model* (Task 1) to the **high poverty** level (in Task 2) affect the base instructional program designed to achieve the outcome goals?

Please proceed to complete *Activities 1 and 2* below using the guidelines and instructions in the appropriate PROGRAM DESIGN document and COST MODEL file for these tasks. You can reference the SCHOOL RESOURCE PROFILES AND DEMOGRAPHICS to see the demographic profiles that define each of the tasks.

Activity 1: Instructional program design

Using the PROGRAM DESIGN document, please follow the guiding questions addressing modifications in the *Base Model* resulting from the specified change in student characteristics. It is not necessary for the panels to update the entire series of programmatic components that they originally did for the *Base Model*. Instead, panels should focus ONLY on identifying those changes that must be made to the *Base Model* design in response to the increase in student need presented in Task 2 (High Poverty Schools).

Activity 2: Resource specification

You may open the portions of the elementary, middle, and high school worksheets in the COST MODEL file corresponding to Task 2 and specify any changes in the resource specifications necessary to deliver this modified instructional program. The values previously determined for the *Base Model* will be the default starting values automatically entered into each of these two worksheets.

Task 3: Programs for Low Poverty and EL Schools

(To be completed by subgroups within in the panel)

Task Overview

In Task 1, we asked your panel to create the *Base Model.* In Task 3, we are asking you to describe how you would change your *Base Model* (i.e., your program design and resource specifications in Task 1) in response to a difference in the percentage of students receiving free and reduced price lunch and the percentage of English language learners, holding all other student characteristics constant. Specifically, we are asking you to revise your program design and resource specifications for schools serving lower percentages of students receiving free and reduced price lunch and percentages of EL students.

Program Modifications

The next step for your panel is to consider whether the decreases in the student poverty and EL levels in Task 3 would require you to make modifications in your program design and/or the resource specifications developed for the *Base Model* in Task 1.

A change from average to low levels of poverty and English Language learners.

Would a decrease in percent of students in poverty and ELs from the **average poverty and EL** level in the *Base Model* (Task 1) to the **low poverty and EL** level (in Task 3) affect the instructional program designed to achieve the outcome goals?

Please proceed to complete *Activities 1 and 2* below using the guidelines and instructions in the appropriate PROGRAM DESIGN document and COST MODEL file for these tasks.

Activity 1: Instructional program design

Using the PROGRAM DESIGN document, please follow the guiding questions addressing modifications in the *Base Model* resulting from the specified change in student characteristics. It is not necessary for the panels to complete the entire series of tasks that they originally did for the *Base Model*; instead, panels should focus ONLY on changes in the *Low Poverty and English Learner Model*.

Activity 2: Resource specification

You may open the portions of the elementary, middle, and high school worksheets corresponding to Task 3 and specify any changes in the resource specifications necessary to deliver this modified instructional program. The values previously determined for the *Base Model* will be the default starting values automatically entered into each of these two worksheets.

Task 4: Programs for High Poverty and EL Schools

(To be completed by subgroups within in the panel)

Task Overview

In Task 2, we asked your panel to modify the *Base Model* in response to a difference in the percentage of students receiving free and reduced price lunch, holding all other student characteristics constant. In Task 4, we are asking you to describe how you would change your *high poverty model* specified in Task 2 according to an increase in the percent of English language learners. Specifically, we are asking you to revise your program design and resource specifications for schools serving higher percentages of EL students.

Program Modifications

The next step for your panel is to consider whether the changes in the student EL levels in Task 4 would require you to make modifications in your program design and/or the resource specifications developed for the *High Poverty* in Task 2.

A change from average to high levels of English Language learners.

Would a change in percent of ELs from the **high poverty, average EL** level in the *High Poverty Model* (Task 2) to the **high poverty, high EL** level (in Task 4) affect the instructional program designed to achieve the outcome goals?

Please proceed to complete *Activities 1 and 2* below using the guidelines and instructions in the appropriate PROGRAM DESIGN document and COST MODEL file for these tasks.

Activity 1: Instructional program design

Using the PROGRAM DESIGN document, please follow the guiding questions addressing modifications in the *High Poverty Model* resulting from the specified change in student characteristics. It is not necessary for the panels to complete the entire series of tasks that they originally did for the *High Poverty Model*; instead, panels should focus ONLY on changes in the *High Poverty and High EL Model*.

Activity 2: Resource specification

You may open the portions of the elementary, middle, and high school worksheets corresponding to Task 4 and specify any changes in the resource specifications necessary to deliver this modified instructional program. The values previously determined for the *High Poverty Model* will be the default starting values automatically entered into each of these two worksheets.

Task 5: Programs for Low Percent SE Schools

(To be completed by subgroups within in the panel)

Task Overview

In Task 1, we asked your panel to develop the *Base Model*. In Task 5, we are asking you to describe how you would change your *Base Model* (i.e., your program design and resource specifications in Task 1) in response to a difference in the percentage of students receiving special education services, holding all other student characteristics constant. Specifically, we are asking you to revise your program design and resource specifications for schools serving lower percentages of special education students.

Program Modifications

The next step for your panel is to consider whether the changes in the number of students receiving special education services would require you to make modifications in your program design and/or the resource specifications developed for the *Base Model* in Task 1.

A change from average to low special education levels

Would a change in the numbers of students receiving special education services from the level in the *Base Model* (Task 1) to the **low SE** level (in Task 5) affect the base instructional program designed to achieve the outcome goals?

Please proceed to complete *Activities 1 and 2* below using the guidelines and instructions in the appropriate PROGRAM DESIGN document and COST MODEL file for these tasks.

Activity 1: Instructional program design

Using the PROGRAM DESIGN document, please follow the guiding questions addressing modifications in the *Base Model* resulting from the specified change in student characteristics. It is not necessary for the panels to complete the entire series of tasks that they originally did for the *Base Model*; instead, panels should focus ONLY on changes in the *Low Percent of SE Schools Model*.

Activity 2: Resource specification

You may open the portions of the elementary, middle, and high school worksheets corresponding to Task 5 and specify any changes in the resource specifications necessary to deliver this modified instructional program. The values previously determined for the *Base Model* will be the default starting values automatically entered into each of these two worksheets.

Task 6: Programs for High SE Schools

(To be completed by subgroups within in the panel)

Task Overview

In Task 1, we asked your panel to develop the *Base Model*. In Task 6A, we are asking you to describe how you would change your *Base Model* (i.e., your program design and resource specifications in Task 1) in response to a difference in the percentage of students receiving special education services, holding all other student characteristics constant. Specifically, we are asking you to revise your program design and resource specifications for schools serving higher percentages of special education students.

Program Modifications

The next step for your panel is to consider whether the changes in the number of students receiving special education services would require you to make modifications in your program design and/or the resource specifications developed for the *Base Model* in Task 1.

A change from low to high special education levels

Would a change in the numbers of students receiving special education services from the level in the *Base Model* (Task 1) to the **high SE** level (in Task 6) affect the base instructional program designed to achieve the outcome goals?

Please proceed to complete *Activities 1 and 2* below using the guidelines and instructions in the appropriate PROGRAM DESIGN document and COST MODEL file for these tasks.

Activity 1: Instructional program design

Using the PROGRAM DESIGN document, please follow the guiding questions addressing modifications in the *Base Model* resulting from the specified change in student characteristics. It is not necessary for the panels to complete the entire series of tasks that they originally did for the *Base Model*; instead, panels should focus ONLY on changes in the *High SE Schools Model*.

Activity 2: Resource specification

You may open the portions of the elementary, middle, and high school worksheets corresponding to Task 6 and specify any changes in the resource specifications necessary to deliver this modified instructional program. The values previously determined for the *Base Model* will be the default starting values automatically entered into each of these two worksheets.

Task 7: District and Regional-Level Special Education Programs and Resources

(To be completed by subgroups within in the panel)

In Task 7, we are asking special education sub-panels to determine and describe district-level special education programs and resources. These district-level components include instructional and related services offered to three categories of special education (SE) students:

- those not served in the neighborhood schools;
- those who are served in the regular neighborhood schools but require related services not included in the school-level instructional program worksheets;
- those of ages 3-4 who require preschool special education services.

This task asks the panels to specify pupil-staff ratios and per pupil expenditures for various instructional and related service professionals and assistants who may provide services in regular or special education schools. These services are provided by professional staff that may operate out of the district office and provide part time services in the regular, neighborhood schools within the districts. Neighborhood schools can be designated as housing specialized programs for students with disabilities who have need for intensive instructional services. In addition, these related services may serve specific needs of students who are dispersed throughout the district or region and this would necessitate part time services by professional staff operating out of the district office or the Special Education Local Plan Areas around the state.

The goal of this task is to obtain your input on the program design most appropriate for the district category represented by your panel and the pupil-staff ratios that may reflect the differential circumstances faced by the types of districts you represent.

Keep in mind that the services you specify at this level under Task 7 are for three categories of special education students:

- those not served in the neighborhood schools;
- those who are served in the regular neighborhood schools but require related services not included in the school-level instructional program worksheets;
- those of ages 3-4, who require preschool special education services.

The instructional and related services for which you will be able to specify pupil-staffing ratios include the following:

Related Services

- Administrator for special education
- Interpreter
- Medical/nursing services
- Speech-language pathologist
- Modified or specially designed physical education
- Special education audiology
- Special education mobility instructor
- Special education occupational therapist
- Special education physical therapist
- Special education program specialist
- Special education vision therapist
- Special education work study coordinator

Please proceed to complete *Activities 1 and 2* below using the guidelines and instructions in the appropriate PROGRAM DESIGN document and COST MODEL file for these tasks.

Activity 1: Instructional Program Design

Using the PROGRAM DESIGN document, please follow the guiding questions for describing how these district level services are likely to be provided in the typical California school district in the category represented on your panel. It will ask you how severely involved students with disabilities are commonly served in your districts and the extent to which the Special Education Local Plan Areas support these programs and services.

Activity 2: Resource Specification

You may open the District Special Education portions of the COST MODEL worksheets corresponding to Task 7 and record the resource specifications necessary to deliver these services in the category of districts represented by your panel.

Task 8: Programs for Small Schools

(To be completed by **full** panel)

Task Overview

In Task 1, we asked your panel to develop the *Base Model.* In Task 8, we are asking you to describe how you would change your *Base Model* (i.e., your program design and resource specifications in Task 1) in response to a difference in school size (enrollment), holding all other student characteristics constant. Specifically, we are asking you to revise your program design and resource specifications for schools serving fewer students.

Program Modifications

The next step for your panel is to consider whether the changes in student enrollment in Task 8 would require you to make modifications in your program design and/or the resource specifications developed for the *Base Model* in Task 1.

A change from an average school size to a small school size in student enrollment.

Would a change in student enrollment from the level in the *Base Model* (Task 1) to a **low enrollment** (in Task 8) affect the base instructional program designed to achieve the outcome goals?

Please proceed to complete *Activities 1 and 2* below using the guidelines and instructions in the appropriate PROGRAM DESIGN document and COST MODEL file for these tasks.

Activity 1: Instructional program design

Using the PROGRAM DESIGN document, please follow the guiding questions addressing modifications in the *Base Model* resulting from the specified change in student characteristics. It is not necessary for the panels to complete the entire series of tasks that they originally did for the *Base Model*; instead, panels should focus ONLY on changes in the *Small Schools Model*.

Activity 2: Resource specification

You may open the portions of the elementary, middle, and high school worksheets corresponding to Task 8 and specify any changes in the resource specifications necessary to deliver this modified instructional program. The values previously determined for the *Base Model* will be the default starting values automatically entered into each of these two worksheets.

Task 9: Programmatic Priorities Task

(To be completed by full panel)

Task Overview

In Task 1, we asked your panel to develop the *Base Model*. In Task 9, we are asking panels to describe how they would change the *Base Model* in response to a decrease in available funds. Specifically, we are asking you to revise your program design and resource specifications if the amount of previously determined per-pupil expenditures were cut by approximately 10 percent.

Program Modifications

The next step for your panel to consider is how the *Base Model* program design and resource specifications would change if there was a cut of approximately 10 percent to the previously determined per-pupil expenditures.

Please proceed to complete *Activities 1 and 2* below using the guidelines and instructions in the appropriate PROGRAM DESIGN document and COST MODEL file for these tasks.

Activity 1: Instructional program design

Using the PROGRAM DESIGN document, please follow the guiding questions addressing modifications in the *Base Model* resulting from the specified change in student characteristics. It is not necessary for the panels to complete the entire series of tasks that they originally did for the *Base Model*; instead, panels should focus ONLY on changes implied *by a reduction of 10 percent of the per-pupil expenditure specified previously*. For this programmatic priorities exercise, you may also indicate what impact you might expect to student outcomes in this scenario.

Activity 2: Resource specification

You may open the portions of the elementary, middle, and high school worksheets corresponding to Task 9 and specify any changes in the resource specifications necessary to deliver this modified instructional program. The values previously determined for the *Base Model* will be the default starting values automatically entered into each of these two worksheets. Based on the per-pupil costs of the *Base Model,* we will calculate the TARGET BUDGET we are asking you to use, and it will appear in the COST MODEL worksheets corresponding to this task.

Task Assumptions

The following assumptions should guide your deliberations throughout all tasks. This list is by no means exhaustive and we encourage panels to document any additional assumptions or questions in the program design document.

1. **Student demographics and need.** Assume that the student population in each school reflects the demographic and need characteristics provided in the TASK DEMOGRAPHIC WORKSHEET and the COST MODEL worksheets for each Task.

2. **Personnel qualifications.** Assume that all personnel are state-certified in the subject areas that they are teaching, and that salaries are adequate to attract and retain certified faculty and staff. You will be asked to provide your judgment on the appropriate mixture of salary schedule step 1-4, 5-8 and 9 teachers in your school prototypes.

3. **School facilities.** Facilities are in place, and funding for facilities improvements are not part of these tasks. If, however, the program you are designing would require any major changes in the current general state of facilities in a district, please note what those changes would be in the program design document.

4. **Maintenance and operations.** Ongoing facilities maintenance and operations are considered a district expense, and we will make appropriate estimates from separate analyses to add these to the school costs estimated from your program specifications. However, we may ask you to specify basic custodial or maintenance as well as security services that may be necessary.

5. **Instructional supplies, equipment (including educational technology), and textbooks.** Assume that the program you are designing is for an existing school that has the basic amount of supplies, equipment, and textbooks that is typical of California schools. We will provide you with an estimate of the annual per pupil spending on these non-personnel resources in your worksheets and ask you to suggest **changes or additions to current levels of expenditure for instructional supplies, materials, and textbooks** you believe to be appropriate. However, if you do so, you must describe how these changes will contribute to the specified outcomes.

6. **Student activity expenditures.** Assume that the school you are designing has access to resources sufficient to devote expenditures to student activities that are typical of California schools. Here again, we will provide you with rough estimates of this amount in your worksheets and ask you to suggest **changes or additions to current expenditures on student activities.** Again, if you do so, you must describe how these changes will contribute to the specified outcomes.

7. **Special education services.** Assume the statewide average distribution of disability and severity across the district unless otherwise instructed (a table detailing the statewide average distribution of students ages 5-22 by disability and the percent of students who are eligible for special education preschool programs will be provided later in the instruction set). Based on your professional judgment of what types of special education students should be served in regular classrooms and what types of services should be provided at neighborhood schools, you will be asked to design appropriate special education instructional programs at each school level (i.e., elementary, middle, high). Special education sub-panels will be asked to take what the general panels provide as input to be used in specifying a full set of programs designed to provide schooling to special education students not served in neighborhood schools (i.e., those served at or by district/regional facilities and/or staff).

8. **Central district administration.** There is no need for the panels to address central district administration expenditures, as these costs will be estimated separately. We will be consulting with the school business managers on the PJPs to help evaluate our methodology for estimating these costs.

9. **Home-to-school transportation services.** There is also no need for the panels to address home-to-school transportation services. Home-to-school transportation cost estimates are beyond the scope of the present study. If, however, the program you are designing would require any major changes in the current level of transportation services typically offered in California school districts, please note what those changes would be in the program design document.

10. **School organization structures.** Multi-grade, multi-level classes, block schedules and other non-traditional organization structures are permissible. Moreover, you may design programs that include multi-school campuses such as small learning communities or schools within schools.

Appendix C. School Resource Profiles

School Resource Profiles

The following pages show average resources (personnel and non-personnel) used by typical schools and districts in California.

The first table shows typical staff profiles of elementary, middle, and high schools having the same characteristics of the hypothetical "average" school in the first panel exercise. The numbers of full time equivalents (FTEs) shown in this table are the predicted number of FTEs by position type based on a regression model controlling for school size and the percentages of free and reduced price lunch students, English language learners, and special education students. The underlying data used to estimate the models are for 2015-16 and come from staffing files maintained by the California Department of Education (CDE).[3,4]

[3] Specifically, we made use of the staff assignment file for certificated staff and the classified staff by race/ethnicity and gender file (see https://www.cde.ca.gov/ds/sd/df/).

[4] The demographics used to define each schooling-level specific task represent averages across those schools that were in the second and third quartiles (between the 25th and 75th percentiles) of the respective within-schooling level statewide distribution

Table C-1. Typical staff profiles of elementary, middle, and high schools

		Elementary School	Middle School	High School
School Characteristics				
Enrollment (students)		522	609	1,471
Free and reduced price lunch (percent)		64%	68%	58%
English language learner (percent)		28%	21%	10%
Special education (percent)		12%	11%	9%
School Staff (FTE)				
Type	Position			
Certificated	Counselor	0.1	1.0	3.4
Certificated	Nurse	0.1	0.1	0.1
Certificated	Other Admin	0.1	0.1	0.5
Certificated	Other student support services	0.3	0.4	0.5
Certificated	Principal	1.0	1.0	1.0
Certificated	Psychologist	0.1	0.2	0.2
Certificated	Special Ed. Specialist	0.4	0.2	0.3
Certificated	Teacher	24.4	28.6	65.0
Certificated	Vice principal or assoc. / asst. administrator	0.2	1.0	2.3
Classified	Office/Clerical Staff	2.5	3.4	8.8
Classified	Paraprofessionals	6.7	5.6	11.5
Classified	Other Classified Staff	5.1	6.8	16.1

The second table shows average school-level operational nonpersonnel spending per pupil. These calculations are based on district-level Standardized Account Code Structure fiscal files (SACS) made publicly available by CDE. In order to isolate school-level expenditures, general administration expenses were excluded. In addition, all capital spending was excluded as they are not considered part of operational expenditure.

Table C-2. Average school-level operational nonpersonnel spending per pupil

Nonpersonnel Categorys	Per Pupil Spending
Books and Curriculum	$110.04
Instructional Supplies and Equipment	$269.17
Instructional Support Supplies and Equipment	$24.94
School Administration Supplies and Equipment	$13.59
Pupil Support Supplies and Equipment	$10.42
Professional Development Supplies and Equipment	$0.74
Ancillary Support Supplies and Equipment	$7.92
Community Services Supplies and Equipment	$1.67
Instructional Contracted Services	$252.63
Instructional Support Contracted Services	$58.36
School Administration Contracted Services	$18.63
Pupil Support Contracted Services	$53.95
Professional Development Contracted Services	$5.58
Ancillary Support Contracted Services	$21.78
Community Services Contracted Services	$4.09
Communications	$9.89
Rentals, Leases, and Repairs	$24.19
Travel and Dues	$37.60

[5] Categories of nonpersonnel spending were created using combinations of SACS function and object codes.

Appendix D. Suggested Reading for Professional Judgment Panelists

GETTING DOWN TO FACTS II

Essential Elements for Successful Schools:

Expert Briefs on the Essential Factors that Need to be Present in Successful Schools Serving At-Risk Students, English Learners, Students with Disabilities, and Rural Schools

December 2017

Table of Contents

Essential Elements for Successful Schools: Expert Briefs on the Essential Factors that Need to be Present in Successful Schools Serving At-Risk Students, English Learners, and Students with Disabilities, and Rural Schools

The Expert Panel

As background for the members of the professional judgment panels, AIR commissioned the papers in this booklet from a panel of five education experts. The members of this *Expert Panel* include nationally recognized scholars in the field of education and a recognized, former practitioner. Each of these experts was asked to prepare a research paper with brief descriptions of elements that need to be present in *successful* schools serving diverse student populations. Each of the papers in this booklet explores how variations in student need might impact the need for additional resources, programs, and services. In addition, each paper includes analysis of the existing evidence-based research regarding the most efficient (least cost ways) of achieving the educational goals and objectives through improving the allocation and utilization of school resources.

Ultimately, none of the information presented in these papers is intended to be prescriptive in telling schools and districts how to spend their money. It is simply to provide background information on existing research evidence that will help the PJPs in their deliberations to consider some realistic parameters describing effective resource allocation patterns.

This expert panel includes the following individuals:

- **Professor Henry Levin** of Columbia University has prepared a paper about successful programs for economically disadvantaged and at-risk students.

- **Professor Margaret McLaughlin** of the University of Maryland presents her paper focusing on the factors that contribute to successful programs for students with disabilities.

- **Professor Kenji Hakuta** of Stanford University presents information on the design elements necessary to appropriately serve students who have been identified as English learners.

- **Dr. Jerry Johnson** of the Rural Education Trust provides his perspectives on how resources are best organized in remote, rural communities.

- **Dr. Anthony Cavanna**, a former superintendent of schools with a distinguished career as an educator, presents his practitioner perspective on what elements need to be present for successful schools and districts.

Improving Education for At-Risk Students

Professor Henry M. Levin
Teachers College, Columbia University

Executive Summary

In the complex world of school effectiveness, educational reform requires that we set out what is known about resource allocation policies and student achievement. The following is a summary.

Guiding principles

- In choosing educational strategies, take into account effectiveness, costs, and implementation.
- Effectiveness is the likely impact of the strategy on student achievement and other outcomes.
- Cost is the value of resources that must be used to apply the strategy.
- Implementation is the probable success in getting the strategy in place to operate effectively.

General resource strategies

Teachers. Higher salaries and good benefits and working conditions will attract a larger talent pool and reduce turnover. Combine these with improvements in recruitment, selection, professional development, and evaluation to capitalize on an increased talent pool.

- Seek teachers drawn from more selective undergraduate institutions.
- Seek teachers with an academic major in a subject area.
- Seek teachers with at least five years of experience.
- Seek teachers with strong performance on verbal and content area tests.

Professional development

- Develop coaching models with observation of teachers and feedback.
- Tailor professional development to teacher and curriculum needs.
- Perform careful assessment of teacher performance before granting tenure.

Class size

- Reduce class size, especially for at-risk students (no larger than 20 in early grades).
- Differentiate class size by subject and student need—not across the board.

Leadership

- Attract teachers with high salaries, benefits, and large scope for decision-making.
- Offer strong professional development and evaluation of performance.
- Provide bonus incentives for achievement of specific goals.

Support personnel

- Define and assign personnel roles carefully for each compelling need.
- Provide professional development and assessment.

Curriculum

- Emphasize depth rather than breadth.
- Hold intensive workshops to bring all students to high levels.
- Provide enrichment opportunities such as Advanced Placement classes.

Co-curricular and extracurricular activities

- Provide attractive support for engagement and academic programs.
- Emphasize quality and choose carefully with competition for resources in mind.

Additional learning time

- Consider longer school days and school years, after-school programs, and summer school.
- Need meaningful content and engagement and strong personnel to be effective.

Technology

- Use technology as an instructional tool where it has the power to improve instruction.
- Provide adequate capacity for access to Internet and utilities such as writing.

Student diversity

- Seek ways to increase racial and socioeconomic student diversity.
- Emphasize quality and incentives to go to diverse school, not compulsion.

Comprehensive school reform

- Consider model of overall school reform only if there is the will and capacity to fully implement it over the long run.

Preschools

- Offer quality preschool programs to prepare children for success in early childhood.

High schools

- Emphasize highly supportive high schools with frequent student monitoring and assessment and high academic standards, as well as tutoring, workshops, and other opportunities to close learning gaps.

Purpose of This Brief

Consideration of adequacy in educational finance must be based upon what the funding buys and its effectiveness. For reasons that will be described later, there is no guarantee that funds spent in a specific way will assure particular educational results, but spending the funding in certain ways is more likely to be successful than spending it in other ways. Over time a reasonable consensus seems to have emerged on the effectiveness of devoting resources to certain spending strategies. The purpose of this report is to provide an overview of what we know benefits educationally at-risk students. "Educationally at-risk" students are viewed as pupils who are at high risk of educational failure in conventional schools because they lack the resources in their homes, families, and communities that are associated with school success. Such students are found in disproportionately high numbers among immigrant and minority families as well as families in poverty and with low parental education. They are also overrepresented among families whose first language is other than standard English and those headed by a single parent. However, these categories of identification are only indicators of populations that include large portions of educationally at-risk students. They should not be used as definitions of at-risk populations because many students who come from these circumstances are successful. Our goal should be to increase substantially the number of successes. A good overall source on this topic is the book by Natriello, Pallas, and McDill (1990).

Three criteria

In considering particular resource strategies, there are three criteria that need to be considered. The first and most obvious is that of the **effectiveness** of the strategy in raising student achievement and other valued school outcomes. In most cases the documented evidence is limited to test scores and graduation rates, so other measures of school effectiveness have not been considered directly, even though they should be given consideration in school resource decisions. More recently there has been attention to healthy social and emotional development—a goal that has important implications for educational and adult competence.

One concern in reviewing the evidence is not to be seduced by the word "significant effects," since this is just a statistical term which means that any measured advantage was not likely to be found by chance. It does not mean that the advantage is significant in the sense of being a large effect, and the most microscopic effects can be found to be statistically significant if the statistical sample of analysis is large enough. Thus, one must also judge from the results whether the apparent effect size or advantage of a resource intervention is of sufficient magnitude to consider it important.

The second criterion is that of the **cost** of the resource strategy. Costs are sometimes ignored or forgotten as decision-makers revel in findings of effectiveness and forget that the costs may be excessive for what appears to be an effective strategy. Although this paper will not estimate the costs of each strategy, decision-makers should focus on both effectiveness and costs (Levin, McEwan, Belfield, Bowden, & Shand, 2017). In some cases, strategies that have lower apparent effectiveness in terms of achievement gains have much higher gains relative to each dollar of expenditure.

For example, a study in the 1970s found that 7 minutes a day of computer-assisted instruction of the drill-and-practice type had as large an effect on mathematics achievement as 25 minutes a day of teacher focus on drill-and-practice. But at that time, the computer-assisted instruction would have been about 25 percent of total per-pupil costs, requiring dramatic reductions in other programs, while the additional teacher time would have been only about 6 percent of per-student expenditure, requiring a much smaller reallocation or additional financing. Studies of adult tutoring show very large gains in achievement, but very small gains relative to cost because of the very high cost of paid personnel time when allocated to individual students (Levin, Glass, & Meister, 1987). Thus, many tutoring programs use cross-age tutoring among students or use volunteers such as college students. While the achievement outcomes are somewhat less than with trained, adult tutors, the cost-effectiveness is considerably higher.

The third criterion is that of **implementation**. The educational process is not a mechanical one in which one simply feeds in inputs and predictable outputs ensue. Rather, the success of any resource strategy depends heavily on the implementation of that strategy in terms of the leadership, effort, and fidelity of the application. Even the educational improvement produced by such mechanical changes as reductions in class size, something that can be legislated, is conditioned substantially by whether teachers do something different with smaller classes to take advantage of the change. Researchers have found that many strategies that have been found to improve school outcomes in pilot settings fail to do so when they are expanded to other sites because the implementation needs (e.g., leadership, effort, teacher professional development) are not honored (Vernez, Karam, Mariano, & DeMartini, 2006). Moreover, context is important. In some contexts the necessary accompanying resources to make an intervention effective will be available and in others they will not. Available facilities, leadership, and teacher talents can make a difference in whether a particular curriculum approach will have a positive impact. Thus, implementation efforts must consider these aspects as well as the features of the specific intervention. In what follows, I will provide persistent reminders that how one implements resource use is as important as the resource strategy itself in accounting for educational results.

"Informed" opinions on what works

It would be marvelous if we had a repository of reliable information on all of those resource strategies that might be shown to work for at-risk students. If we had randomized trials of all or many of them, we might proceed in that direction. Unfortunately, even the major

efforts in recent years have found relatively few reliable evaluations, even through the substantial efforts of the What Works Clearinghouse. Any attempt to identify which strategies seem to be effective must rely heavily on interpretation of a largely incomplete evidence base. Nevertheless, there are individual and multiple evaluations of some interventions and considerable experience with others. I will attempt to combine my reading of the literature and assessment of specific evaluations with my experience in working with a large number of schools serving at-risk students in my previous role as the Founder and Director of the Accelerated Schools Project, a national school reform established in 1986 and covering more than 1,000 schools in 41 states (Finnan & Levin, 2006). Thus, what follows is a blend of statistical findings with direct experience and judgments that might be characterized as "informed" opinions.

Funding and Student Outcomes

One of the most important debates about educational funding is the question of whether school funding can be used to address the needs of at-risk students. Skepticism was expressed by the famous Coleman Report (Coleman et al., 1966) that looked statistically at the relations between academic achievement and school resources and found only modest relations. This was followed by many economic studies using available data with mixed results. Different researchers interpreted the results as supporting or not supporting additional educational investment as a solution (e.g., see Hanushek, 1989; Hedges, Laine, & Greenwald, 1994).

One of the major problems was that the data and statistical methods used in these studies were inadequate to meet the challenge of measuring school resources adequately, and separating the effects of family, community, and school investments, which overlap substantially. That is, more advantaged families tend to live in communities with more educational advantages and send their children to better-endowed schools, all combining to produce greater student achievement and educational attainment. The research frameworks that were used were inadequate to separate out the unique effects of funding from the other overlapping influences.

But recent studies using more sophisticated methods and data and enlisting causal methods of analysis have uncovered powerful impacts of funding on educational attainment and adult income. For example, Jackson, Rucker, & Persico (2015) studied the effects of additional funding for children in districts with low expenditures in response to state school funding challenges. They found that children from low-income families that had benefitted from the increases in educational spending for 12 years experienced greater educational attainment, higher adult incomes, and reductions in poverty. There was a 20 percentage point reduction in poverty relative to students from low-income families who did not benefit from higher funding. A 10 percent funding advantage resulted in a 13 percent increase in income among children from the lowest income families and a two-thirds reduction in adult inequalities between children from poor and non-poor families. A 10 percent increase in school spending

was associated with about a 4 percent increase in base teacher salaries and an almost 6 percent reduction in student–teacher ratios.

Measuring School Effects

Clearly, the assessment of improvement in the education of at-risk students depends upon what is measured as school effectiveness. The two most common measures are those of standardized test scores and educational attainment (such as high school graduation and postsecondary participation). The No Child Left Behind (NCLB) program that dominated federal funding for at-risk students from 2001 to 2016 was particularly focused on test scores as measures of accountability. NCLB was replaced by the Every Child Succeeds Act (ESSA) in December 2015, which allows states more flexibility in selecting school outcomes in meeting the requirements to receive federal funding for the education of at-risk populations.

These changes come at an opportune time, because educational research and policy are shifting to encompass a broader range of outcomes of education. More specifically, the role of social and emotional development of children has risen in importance. These outcomes are necessary not only for becoming proficient learners, but also for productive personal, social, family, and work success.

To meet the economic, political, social, and personal demands for competency, much more is required of students and adults than just cognitive proficiencies as measured by test scores. Individuals must develop interpersonal skills that enable them to relate to others productively in many different social situations. They must also develop the intrapersonal skills that include good judgment and strategies for meeting their own needs in effective ways. (Levin, 2012). These requirements are not only important for learning, but recent research provides strong evidence that they may be more important for worker productivity than test results (Heckman & Kaust, 2012).

One of the challenges is deciding which of the many potential social and emotional needs should be the focus of schools, given limited instructional time and many existing demands on teachers. Gehlbach (2017) suggests that schools should choose a few key priorities in these domains rather than trying to cover too many dimensions. He asserts that research reinforces the importance of placing a prime focus on social connectedness (appropriate behavior in relating to others), motivation, and self-regulation (monitoring and control of one's own emotions and activities). At this time, many researchers and educators are engaged in studies and applications of social and emotional learning, so new initiatives in this direction will be informed by results (Durlak, Domitrovich, Weissberg, & Gullotta, 2015).

General Resource Strategies

General resource strategies are those that can be used at any level of schooling.

Teachers

There is wide recognition that the quality of the teacher in the classroom is the most important single influence on the quality of education. Higher teacher salaries are capable of drawing a larger pool of talent into teaching. For any given level of talent, the salaries, benefits, and working conditions must be adequate to attract promising teachers away from other occupations which can enlist their talents. Many of the best potential teacher candidates and classroom teachers are lost to other occupations where the rewards are considerably greater. In one of the best statistical studies, it was found that an increase in teacher salaries of about 10 percent was associated with a rise in high school graduation of about 6 percentage points a decade later (Loeb & Page, 2000). Other studies have shown less teacher turnover with higher salaries (Murnane & Olson, 1990).

Higher teacher salaries (or benefits and better working conditions) should not be viewed as a magic elixir. Fully capitalizing on higher teacher salaries may require very large changes in teacher recruitment, selection, professional development, and evaluation. Many school districts have traditional arrangements in which they set minimal hiring requirements and simply rely primarily on recommendations of placement officials at local colleges and universities. To take advantage of a larger pool of talent, school systems must gather more detailed information on academic qualifications, teaching performance (through sample lessons and feedback from teaching internships), and candidate knowledge of their teaching fields (e.g., high scores on Praxis II), and must use interviews with panels of knowledgeable teachers and administrators. Increased talent must also be cultivated by continuous professional development of high quality that is pertinent to teacher duties and that makes "coaches" available to observe their teaching and assist them. With a larger pool of talent, only the best teachers should be retained. This suggests a superior system of teacher evaluation that amasses data on teacher performance and growth during the probationary period and heavy dependence on evaluative data for awarding tenure.

Good teaching can be observed directly in classrooms as well as inferred from student performance and from such assessment devices as value-added performance of students—a measure of improvement in student achievement (Harris, 2011). But, it can also be partially informed from the general research on characteristics of effective teachers. That research suggests that student academic progress is linked to teacher performance on ability and achievement tests, quality of the teacher's undergraduate institution, an academic major in the subject taught (with the strongest evidence for mathematics), and at least some teaching experience (Wayne & Youngs, 2003). With respect to the latter finding, studies show that student achievement grows as teachers acquire their first 5 years of experience, but the provision of meaningful professional development opportunities for experienced teachers may increase their effectiveness beyond what is found in these studies. Sadly, much professional development seems to have little impact, so it must be chosen and designed carefully to meet instructional needs in an effective way.

There is virtually no evidence that a master's degree (or higher) is tied to student achievement. However, this should not be interpreted as suggesting that more teacher

education **cannot** be effective. It is generally acknowledged that more education can be an important part of teacher professional development if it is of high quality and linked closely to the instructional demands placed upon teachers. However, additional salary increments should not be randomly given for the accumulation of additional courses of dubious relevance or value, as is automatically done in most school districts.

It is not only the overall level of teachers' salaries that should be considered, but also the structure of the salary scales themselves. As mentioned, instead of providing salary increments automatically, such additional compensation should be linked to approved further study that is demonstrably related to student needs. Salary increments might also be given for undertaking additional responsibilities, such as specific school projects, or to talented teachers who can provide instructional assistance to other teachers (e.g., much as is expected of teachers who have been promoted to Tier III of the current licensure system in New Mexico). Salary increments also need to be considered for attracting teachers to schools and teaching areas that have experienced persistent shortages of qualified teachers and to attract the highest quality teachers to the schools with greatest need. Single, lockstep salary schedules do not have the flexibility to attract teachers to meet these challenges.

Class size reduction

Class size reduction is one of most common paths for improving instruction. Based upon a range of studies, most notably the Tennessee class size experiment, it appears that class size reduction does have a positive effect on student achievement. In Tennessee, the average effect on achievement of reducing class size from about 24 to 15 in kindergarten through grade 3 was equivalent to about 8 percentiles for all groups, but it was about twice as high for low-socioeconomic-status and minority populations as for the non-poor and white students. Students who experienced the smaller class sizes for four years also had far higher graduation rates. For every 100 low-socioeconomic students, those with 4 years of smaller classes graduated 18 additional students from high school relative to similar students who had not experienced smaller classes (Finn, Gerber, & Boyd-Zacarias, 2005).

In general there is consensus among experts that there are two considerations that must be weighed with the class size "solution." The first is that reductions in class size are costly. They require increases in teachers and classrooms that, even when facilities are properly amortized, require substantial cost increases relative to their increased effectiveness or "cost-effectiveness" (Levin, Glass, & Meister, 1987). The second is that class size reductions seem to be particularly effective strategies for improving the education of at-risk students, but are less crucial for students with stronger family resources. For example, Catholic schools with good achievement results commonly have class sizes in excess of most public schools, but with student enrollments that have fewer at-risk students. The resource solution is to use class size reduction selectively for those groups of students that will benefit most.

Leadership

There is wide agreement that the quality of school leadership is central to school performance. Unfortunately, there is little solid quantitative evidence tying leadership characteristics to student achievement. The major evaluation problem is that school leaders are removed from the classroom, so their actions and decisions are mediated through their influence on teacher selection and effectiveness, which cannot be easily traced back to the leadership behavior. What we do know is that many features that make for great leaders in other types of service institutions are likely to be important in public schools, as well as some unique characteristics that are education-specific. These include academic background and accomplishments, interpersonal skills, communication effectiveness, understanding learning, ability to recognize good teaching, ability to engage school staff and students, problem solving, data analysis (e.g., on school performance), ability to allocate resources effectively, and so on. But many of these features are generic to good leaders everywhere, requiring that schools must compete with other institutions for talent. This means that salaries, benefits, and working conditions will make a difference in size and quality of the talent pool that will be attracted into school leadership positions, just as in teaching. But equally important is the careful recruitment, selection, development, and evaluation of talent in choosing and maintaining leadership. Beyond salaries and the efforts at recruitment, selection, development, and evaluation, it is also important to consider incentive pay, or bonuses, for principals and other school leaders for achieving particular goals that contribute to school success, such as attendance, teacher collaboration, a stable teaching force, and student achievement.

Support personnel

Schools require support personnel to reinforce and assist the core functions of teaching and learning. However, the precise number of such personnel and their roles clearly depend upon the characteristics of the students. Provision of school psychologists is necessary to evaluate children for special education, as well as to provide short-term assistance to some children and referrals to other agencies for children with more serious difficulties. This is also true for routine health and dental screening, as well as meeting emergency health needs. Such personnel are often provided by the school district on a scheduled or as-needed basis. This is also true with counselors, where the school level and student needs are the main criteria for assignment. Perhaps the most problematic category is that of classroom aides. The Tennessee class size study also included assigning a full-time aide to each of the larger classes, but found virtually no difference in student achievement between classrooms with or without aides. My guess is that where aides have sufficient education, training, and supervision to assist the classroom teacher, by tutoring and working with small groups of students with special needs (e.g., reading or math groups) or assisting parents, there can be an impact on achievement. But where the aide is charged primarily with “housekeeping” chores, there will be no such impact. This suggests careful hiring and staff development, as well as teacher education on productive employment of classroom aides.

Wraparound Services

Students who are educationally at risk often have needs that go beyond a conventional classroom or school. These needs, if unmet, may represent obstacles to learning. Such issues may include inadequate nutrition, health issues, family dysfunction, and inappropriate housing arrangements. Addressing them may require tutoring, health services, meals, counseling and psychological services, and other responses that school staff can't fully provide. A school with "wraparound" services is sometimes called a community school, because it enlists assistance from community organizations and volunteers. The school provides a systematic assessment of the needs of all children and seeks services for them by public entities or philanthropic organizations that match their needs.

Community schools with "wraparound" services seek health, nutritional, tutoring, and counseling services from the entire community as well as those available at schools. Dental care, corrective lenses, adequate meals, and attention to and assistance on family issues are all necessary to enable children to focus on learning. When there is a systematic and comprehensive approach to providing needed services, drawing on all available resources, many learning obstacles are overcome, yielding better educational outcomes (Walsh et al., 2014).

Curriculum

The area of curriculum is controversial. Thirty years ago the main goal was to provide as large a number of curriculum and program offerings as possible to accommodate the interests and needs of every child. This was often thought of as a rich curriculum. But, since the last decade of the 20th century, opinion has gone in the opposite direction, with an emphasis on concentrating resources on a set of core offerings. The reasons for this are twofold. First, the larger curriculum offering promoted more tracking and diluted versions of courses for at-risk students. The move to more heterogeneous classes, where all students are expected to learn at a higher level, has taken precedence in the last two decades, suggesting that fewer different courses or sections are required (Burris, Heubert, & Levin, 2006; Oakes, 2005). Second, the broadness of the "rich" curriculum and the different versions of core courses that emerged placed more emphasis on the breadth of program offerings than on the quality of instruction. It is highly recognized today that the quality of instruction is the dominant variable contributing to learning, and a focus on fewer courses of high content and excellent instruction requires a more manageable curriculum. For example, the International Baccalaureate (IB), an international quality movement headquartered in Switzerland, focuses on the academic requirements of a rather compact curriculum with an emphasis on high standards and quality of curriculum for all students. This movement has been expanding in the U.S.

Another effort in this direction is that of the Advanced Placement (AP) program, where students are encouraged to take courses that may lead to college credit if their examination score (administered by the College Board) is high enough. Recent research has found that AP classes have a particularly positive effect on college success of at-risk students. Several states

provide incentives for AP courses by paying schools financial bonuses for such courses, as well as by covering the examination costs that must be paid by students.

Co-curricular and extracurricular activities

There is little consensus on how much attention should be focused on activities outside of the classroom. In general, the view is that many of these activities are important to develop talents and interests that are not a focus in regular classrooms, and that they have a special role in the development of interpersonal skills. Certainly athletic teams serve these purposes, as well as building community and school solidarity, along with school bands, orchestras, and theater groups. For some students, these are the prime attraction for engagement in their school, and they contribute to attendance and academic achievement. Clearly, they serve an important function, but there is little or no research on their contribution to student achievement. There is also reason to believe that they are more important for at-risk students whose families are less able to afford the private lessons and participation that these opportunities provide. A hint of impact on academic performance can be derived from the research of James Catterall which shows that students who are similar in other respects show higher achievement in schools with good arts programs (Catterall, Deasy, et al., 2002).

Time in learning

In recent years there has been considerable discussion and implementation of more time in learning through longer school years and school days, as well as supplemental summer school and after-school programs. Logically, more time in school would appear to be related to greater achievement, but the results have been disappointing. For example, a cost-effectiveness study that would add an hour a day to elementary schools, devoted equally to math and reading, found that such an intervention showed the lowest cost-effectiveness ratio (i.e., effectiveness per dollar expended) of the four interventions being compared (peer tutoring, computer-assisted instruction, class size reduction, and longer school days) (Levin, Glass, & Meister, 1987). Important research has found that at-risk students lose much of their achievement gains over the summer, and that finding has initiated quests for longer school years (Alexander, Entwisle, & Olson, 2001). However, the record for improving achievement through summer programs is weak, as it is for after-school sessions (Cooper, Chatton, Valentine, & Muhlenbruck, 2000; Scott, Little, Hamann, & Jurs, 2002).

What seems clear is that what is done with the time is at least as important as the amount of time that is added. Longer school days and school years, or summer schools and after-school programs, need to be tailored to the needs of the students and devoted to the highest quality experiences that will motivate pupils to use the time to advance (Birmingham, Pechman, Russell, & Mielke, 2005). As they currently exist, these programs are more likely to be "add-ons" that are not well thought through or planned and that do not draw upon the highest quality of instruction. This is another area where implementation is at least as important as the provision of resources.

Technology

The area of educational technology and its use is so broad that generalization is impossible in gauging its impact on the achievement of at-risk students. However, it is clear that schools need computers and wide access to the Internet for everything from word processing to carrying out research. That is, the use of information technologies broadens the prospects for learning. Such provisions can also be particularly important in small schools and in rural areas, where they may provide access to distance learning opportunities that are not available locally. However, as in other areas of application, the specific ways in which technology is used will determine its influence on student achievement, and it is clear that in many schools not much thought has been given to how educational technologies can be used to maximum advantage as a tool for learning (Wenglinsky, 1998). The provision of educational technologies must be accompanied by professional development and applications to learning in general, and to particular parts of the curriculum.

Of particular importance is the increased use of online teaching and learning approaches, which are claimed to have superior results to classroom or face-to-face teaching. However, there are few systematic and rigorous studies comparing these. Of greater recent currency is the "flipped classroom" where face-to-face teaching is complemented by online sessions that reinforce and support classroom instruction. This combination seems more promising in improving educational outcomes, but it is also lacking sufficient rigorous study.

Student diversity

What is emerging in the literature is the importance of mixing at-risk students with those who are not at risk. It appears that when at-risk students are in schools with a majority of students who are more advantaged, student achievement is substantially higher. Precisely why this occurs is not clear. It may be that such schools attract better teachers, or that there are higher expectations for all students, or that the curriculum is stronger for all students. A different interpretation is that high educational aspirations and expectations of student peers inform the climate of the school and raise expectations and academic performance of all students. A recent paper, based upon a sophisticated econometric study of the rich data set in Texas, found that by reducing racial segregation and inequality in teacher experience, the black–white achievement gap between grades 3 and 8 could be reduced (Hanushek & Rivkin, 2007).

The financing implications might be to provide incentives to schools to provide high-quality magnet schools with transportation or other incentives to create excellent schools that will be accessible and attractive to students from many different backgrounds. Of course, this is a controversial political issue because the general public associates the quality of education largely with the demographic composition of students in the school. Thus, increasing diversity of student bodies must be done carefully, with an emphasis on the quality of the educational process, educational outcomes, and attractiveness of the educational program as the highest priorities rather than just mixing students.

Comprehensive school reform

The last two decades have witnessed attempts at comprehensive school reform—the transformation of the entire school and its program along the lines of a cohesive educational philosophy and set of goals. This approach is differentiated from the more piecemeal attempt at educational reform, which changes one or two features at a time, such as class size, curriculum, technology, professional development, instructional materials, and other disparate dimensions. Comprehensive school reform focuses on making simultaneous changes in all features of the school to provide cohesion in meeting set goals. Despite the compelling logic of this approach, it is highly unpredictable, because the capacity of schools and school leadership to make the necessary changes is much more variable than initially expected. In the cases with high levels of implementation, schools with at-risk students have been transformed into highly productive institutions. In other cases, the schools simply go through the motions and little or nothing changes. In most schools adopting comprehensive school reform, implementation is only partially successful, and the gains are limited. While evaluations of most of the major comprehensive school reforms show some academic gains, they have tended to be modest and, for some models, costly (Borman, Hewes, Overman, & Brown, 2003).

A different approach to gaining comprehensive school reform is to convert a school to a charter school or to contract the operation of schools to a private educational management organization or EMO. Charter schools are public schools that are permitted considerable autonomy in their operations with public funding, have their own boards of directors, and receive waivers of most state and local laws and policies. Their advocates suggest that their autonomy from the larger legal and bureaucratic restrictions, and their ability to compete for students with conventional public schools, will raise student achievement, especially for at-risk students. Thus far there is little evidence that this prediction is supported, as public schools with comparable students have performed as well or even better (Bifulco & Bulkley, 2015). A large national study has found mixed results as well (CREDO, 2013).

The same conclusion is found for EMOs, despite their claim that their business practices will provide greater efficiency in operations. Here, too, the evaluations of performance have not provided supportive evidence of the claims. Better results are found for charter schools sponsored by charter management organizations (CMOs), although comparisons of all forms of charter schools with public schools show mixed results.

Preschools

One financial investment that seems to be promising for overall educational success is that of a quality preschool experience for at-risk students. Since such students lack the resources in their homes to prepare them for school success, a year or more of preschool experience has been shown to improve school readiness and improve their social and academic skills. What is particularly remarkable is the longevity of effects of preschool. When at-risk students who have attended preschool are compared in late adolescence or in adulthood with those who have not participated in preschool, the differences in favor of preschool participation are found to persist, in the form of greater educational attainment and better

economic outcomes in terms of employment and earnings and less likelihood of being a public charge to the criminal justice system or public assistance. Two independently evaluated programs, Perry Preschool and the Chicago Child Parent-Center program, showed high school graduation rates of 19 percentage points and 11 percentage points higher than for similar children who had not been enrolled (Levin, Belfield, Muennig, & Rouse, 2007). They were also found to return as much as $3.50 in public benefits for each dollar of public cost. However, these programs are considered to be of high quality, and others such as Head Start have shown mixed success (Currie, 2001). The key is to assure that quality services are provided and that quality control is maintained (Barnett, 2011).

High Schools

Although the general resource strategies set out above also apply to high schools, it is important to single out recent attempts to improve high schools which are somewhat unique to that level of schooling. This is sometimes called the "small schools movement," but it is clear that small size is only an enabling reform that makes it somewhat easier to implement a common set of features. These features include (1) small school size, (2) high levels of personalization, (3) high academic expectations for all students, (4) regular monitoring of progress, (5) strong counseling, (6) parental engagement, (7) extended-time school sessions, and (8) competent and appropriate personnel for this type of school, including leadership personnel. There is wide agreement that these features should be implemented as a complete package rather than be implemented individually (Quint, 2006). Evidence on their effectiveness is found in the evaluation of First Things First by Quint et al. (2005), where the combined strategy considerably improved both test scores and graduation rates relative to comparison schools with similar students.

Postscript

To a large degree the conclusions in this paper are based upon the best evaluative evidence. However, there may be other strategies that are equally effective or even more so that have not been properly evaluated and do not show up in the evaluation literature. Therefore, in the formulation of effective resource studies for improving the education of at-risk populations, one must always be open to new and promising strategies which seem to be compelling and have at least some evidence of success. Finally, it is important once again to emphasize that the quality of implementation is the missing variable in discussions of adequacy financing. Quality must be constantly stressed, and must become a focus of new educational finance, through the consideration of how such financing provides incentives and accountability to be effective.

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Levin has held Fulbright Professorships in Barcelona and Mexico and is on the Guest Faculty at Beijing University. He has been a fellow of the Center for Advanced Study in the Behavioral Sciences and the Russell Sage Foundation. In 1992 the New York Times named him, in its special issue on educational reform, as one of "nine national leaders in education innovation". Levin has been the Editor of the *Review of Educational Research* and the President of the American Evaluation Association and a winner of its Gunnar Myrdal Award. He is also a recipient of the 2004 Outstanding Service Award of the American Educational Finance Association.

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English Language Learners With Reference To California Public Schools

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Expert Brief

Introduction

English learners are students from language minority backgrounds whose proficiency in the English language is nascent or still developing. English learners require appropriate services that (1) support their English language development, and (2) ensure continuous and full access to instruction in the academic content areas throughout their period of English language development. Furthermore, English learners have diverse needs, depending on key factors such as their proficiency and literacy in their native language, their entering level of English proficiency, and their length of time in the system. In addition, their family history and status may require special attention to targeted services that address inclusion into a safe school community, particularly during times of heightened fear of deportation of undocumented residents. Educators in classrooms, schools, and local district systems must work together to ensure that each English learner is provided appropriate services.

In this brief, I will describe the policy context and provide an account of the educational needs of English learners, focused on the contents of the *California English Learner Roadmap*, a recently adopted state policy. The Roadmap speaks directly to the educational needs of English learners and weaves together the multiple laws and policies that are leading toward a continuous improvement and system capacity-building model that fully integrates the needs of English learners.

Policy Levers/Contexts

Civil rights law, in particular Title VI of the Civil Rights Act, has been the key lever protecting equal and appropriate educational access for English learners. The most commonly adopted federal standard for determining an appropriate program for English learners that is in compliance with federal civil rights law (as unanimously decided in the 1974 U.S. Supreme Court ruling *Lau v. Nichols*) is based on a Fifth Circuit Court ruling, *Castañeda v. Pickard* (1981). The ruling helped establish the following "standards" to determine whether an approach taken to remedy the needs of English learners is appropriate:

(1) Is the program based on sound educational theory?

(2) Is the program effectively implemented?

(3) Has the program produced results to overcome language handicaps?

An adequate program, moreover, should be able to take poor outcomes and use them as an opportunity for continuous improvement, by improving program implementation or modifying the theory. These imply that all of the components used in addressing the framework—curriculum, teacher preparation, professional development, assessment and accountability frameworks, and leadership and community engagement—need to specifically support English learners.

In the arena of federal legislation, since 1968, Congress has made federal assistance funds available to support states and districts with EL students through Title VII of the *Elementary and Secondary Education Act* (ESEA; also known as the Bilingual Education Act), currently Title III of the *Every Student Succeeds Act* (ESSA). English learners have been the focus of ESEA not just within Title III, but also in the main part of the law in Title I programs, in which the bulk of the local and state accountability (and funding and attention) reside. The most recent change in ESSA requires accountability for the EL subgroup for state academic assessments. Additionally, it includes progress toward English language proficiency as a required element of Title I accountability for English learners. The federal law therefore clearly states the expectation that English language proficiency development is as important as academic proficiency for English learners. Furthermore, the law requires an alignment of the state's English language proficiency standards with the state's academic standards—something that California has fully embraced through its development of new English language development (ELD) standards that incorporate the disciplinary practice expectations of the *Common Core State Standards* and the *Next Generation Science Standards*.

California state laws and policies have moved significantly toward the development of local improvement and accountability, with the adoption of the Local Control Funding Formula and Local Control Accountability Plan (LCFF/LCAP) that provides significant additional resources for English learners. The California Education for a Global Economy (Ed.G.E.) Initiative (passed as Proposition 58), leading the state to reverse old anti-bilingual policies that were put into place after Proposition 227. Most recently, the State Board of Education adopted the California EL Roadmap to supplant the old policy. The EL Roadmap based its principles and strategies around a just-released major consensus study from the National Academies of Sciences, Engineering and Medicine (NASEM),[6] and will be described below as the best working model of research-based best practice for English learners.

The NASEM Report

The recent 2017 consensus study report from the NASEM offers important conclusions and recommendations for promoting the educational success of English learners. Many of the findings reinforce and expand on prior research syntheses, including earlier work from the

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[6] National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures.* Washington, DC: The National Academies Press. doi: 10.17226/24677

California Department of Education[7] and national research syntheses (CREDE), and therefore should not be surprising to those familiar with the research. However, the conclusions of the NASEM report carry the authority of the National Academies and its careful and well-vetted approach to publishing consensus studies.

The California EL Roadmap policy guidance[8] notes in particular the following findings from the NASEM report:

- English language development is a process that takes 5 to 7 years for those entering with emerging English, and therefore programming needs to take a long-term view, with benefits taking place from coherent and aligned instruction across that time period.

- English language development should take place as an integrated process simultaneous with academic content learning in addition to designated ELD and the development of bilingualism/biliteracy.

- Bilingualism provides benefits from the capacity to communicate in more than one language and may enhance cognitive skills, as well as improve academic outcomes.

- Establishing proper and consistent procedures and criteria for identifying, monitoring, and exiting English learners using appropriate assessment procedures—while developing professional capacity to use assessment results—constitutes a key lever for effective system improvement.

- The diversity of the EL population (e.g., newcomers, long-term English learners, students with interrupted formal education, students with disabilities, gifted and talented students, and student who have recently exited the EL category) necessitates pedagogy and educational support services that are differentiated and responsive.

- Brain development research reinforces the importance of the period from birth through early childhood in the areas of cognitive, social, and language development. There is great need for coherent, aligned support for dual language learners across the preschool and primary grade systems to begin developing their bilingual and biliterate capacities.

The EL Roadmap policy guidance also spotlights the need to attend to the following instructional factors:

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[7] California Department of Education. (1984). Schooling and Language Minority Students: A Theoretical Framework; California Department of Education. (1986). Beyond Language: Social and Cultural Factors in Schooling Language Minority Students; and California Department of Education. (2010). Improving Education for English Learners: Research-Based Approaches.

[8] California EL Roadmap. Retrieved from the California Department of Education website: https://www.cde.ca.gov/sp/el/rm/

- Explicit literacy instruction, especially in the early grades
- Peer-assisted and small-group learning opportunities
- Providing academic language support during content area instruction, balanced with structured explicit opportunities for oral and written language skills development
- Appropriate assessment in various forms (e.g., formative, benchmark, summative) to understand and support student learning
- Processes related to social emotional development and identity formation

Finally, the NASEM report (pp. 7–20) also notes the importance of leadership and systems, and makes the following observations about effective local systems (the following bulleted points quote directly from the NASEM report, *emphasis added*):

- *Administrative leadership at the district and school levels takes responsibility* for initiating and sustaining instructional programs and practices that support the full academic development of all students, including ELs.

- ELs are recognized as capable of learning whatever society expects all children to learn in school rather than as incapable of handling the school's curriculum until they master English. This is a fundamental epistemological difference between schools that educate ELs successfully and those that do not.

- *Socioemotional support* is provided for both teachers and students through the creation of learning communities. In the successful districts and schools described, administrators recognized that educating students with complex and diverse needs could be very challenging for teachers, emotionally and physically. They, like their students, required collegial support from fellow teachers and administrators to accomplish all they were expected to do.

- *Teachers are encouraged to work collaboratively* and support one another to improve instruction. … Cross-disciplinary endeavors in planning and integrating instruction [are] critical in supporting language and literacy development across the curriculum.

- *Language-rich classroom and school environments* are promoted in which communication and self-expression are encouraged. Teachers are linguistically, culturally, and pedagogically prepared to meet the academic and sociocultural needs of ELs. Instruction is adapted based on frequent analysis of student performance in formative and summative assessments. School and community partnerships are encouraged to augment and enrich classroom-based learning.

The California EL Roadmap Principles and Elements

Drawing upon the NASEM recommendations, a committee of researchers, practitioners, advocates, and policymakers appointed by the California Department of Education deliberated and synthesized four key principles and elements that compose the California EL Roadmap:[9]

Principle #1: ASSETS-ORIENTED AND NEEDS-RESPONSIVE SCHOOLS

Preschools and schools are responsive to different EL strengths, needs, and identities, and support the socioemotional health and development of English learners. Programs value and build upon the cultural and linguistic assets students bring to their education in safe and affirming school climates. Educators value and build strong family, community, and school partnerships.

A. The languages and cultures ELs bring to their education are **assets** for their own learning, and are important contributions to our learning communities. These assets are valued and built upon in culturally responsive curriculum and instruction and in programs that support, wherever possible, the development of proficiency in multiple languages.

B. Recognizing that **there is no single EL profile** and no one-size approach that works for all, programs, curriculum, and instruction must be responsive to different EL student characteristics and experiences. Students entering school at the beginning levels of English proficiency have different needs and capacities than do students entering at intermediate or advanced levels, as do students entering in kindergarten or in later grades, and the needs of long-term English learners are vastly different from recently arrived students (who in turn vary in their amount of prior formal education). Districts vary considerably in the distribution of these profiles, so there is no single program type or instructional approach that works across the board.

C. **School climates** and campuses are affirming, inclusive, and safe.

D. Schools value and build strong family and school partnerships.

E. Schools and districts develop a collaborative framework for identifying **ELs with disabilities** that supports culturally and linguistically inclusive practices, supports valid assessment practices and training, and develops appropriate IEPs with expertise specific to ELs;

[9] This section draws verbatim from the EL Roadmap policy guidance document, in draft form from the final meeting of the EL Roadmap committee. The final guidance document will be published in December 2017.

and develops a plan that addresses academic goals that take into account student language development, as called for in state and national policy recommendations.[10,11]

Principle #2: INTELLECTUAL QUALITY OF INSTRUCTION AND MEANINGFUL ACCESS

English learners engage in intellectually rich, developmentally appropriate learning experiences that foster high levels of English proficiency. These experiences integrate language development, literacy, and content learning as well as provide access for comprehension and participation through native language instruction and scaffolding. English learners have meaningful access to a full standards-based and relevant curriculum and the opportunity to develop proficiency in English and other languages.

A. Language development occurs in and through content and is **integrated** across the curriculum, including integrated ELD and designated content-based ELD (per ELA/ELD Framework).

B. Students are provided a rigorous, intellectually rich, standards-based curriculum with instructional **scaffolding** for comprehension, participation, and mastery.

C. Teaching and learning emphasize engagement, interaction, discourse, inquiry, and critical thinking—with the same **high expectations** for ELs as for all students.

D. ELs are provided **access to the full curriculum** along with the provision of EL supports and services.

E**.** Students' **home language** is (where possible) understood as a means to access curriculum content and as a foundation for developing English, and is developed to high levels of literacy and proficiency along with English.

F. Rigorous **instructional materials** support high levels of intellectual engagement, explicit scaffolding to enable meaningful participation by English learners at different levels of English language proficiency, and integrated language development and content learning, and also provide opportunities for bilingual/biliterate engagement appropriate to the program model.

G. English learners are provided choices of **research-based language support/development programs** (including options for developing skills in multiple languages)

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10 California Department of Education. (2009). *Inventory of Services and Supports (ISS) for Students with Disabilities.* Special Education Division. Retrieved from the California Department of Education website: https://www.cde.ca.gov/sp/se/sr/issforswd.asp

11 Park, S., Martinez, M. & Chou, F. (in press). A Guide for States Creating Policies on the Identification of and Service Provision for English Learners with Disabilities. Washington, DC: Council of Chief State Schools Officers.

and are enrolled in programs designed to overcome the language barrier and provide access to the curriculum.

Principle #3: SYSTEM CONDITIONS THAT SUPPORT EFFECTIVENESS

Each level of the school system (state, county, district, school, preschool) has leaders and educators who are knowledgeable of and responsive to the strengths and needs of English learners and their communities, and utilize valid assessment and other data systems that inform instruction and continuous improvement; resources and tiered support are provided to ensure strong programs and build the capacity of teachers and staff to build on the strengths of, and meet the needs of, English learners.

A. **Leadership** establishes clear goals and commitments to English learners' access, growth toward English proficiency, academic achievement, and participation, and maintains a focus across the system, beyond compliance through the Master Plan and ELAC/DELAC regulations,[12] on progress toward these goals and continuous improvement.

B. The school system invests **adequate resources** to support the conditions required to address EL needs.

C. A system of culturally and linguistically valid and reliable **assessments** supports instruction, continuous improvement, and accountability for attainment of English proficiency, biliteracy, and academic achievement.

D. **Capacity building** occurs at all levels of the system, including leadership development to understand and address the needs of ELs, **professional development** and collaboration time for teachers, and robust efforts to address the teaching shortage and build a **pipeline** (recruitment and development) of educators skilled in addressing the needs of ELs, including bilingual teachers.

Principle #4: ALIGNMENT AND ARTICULATION WITHIN AND ACROSS SYSTEMS

English learners experience a coherent, articulated, and aligned set of practices and pathways across grade levels and educational segments, beginning with a strong foundation in early childhood and continuing through to reclassification, graduation, and higher education. These pathways foster the skills, language(s), literacy, and knowledge students need for college and career readiness and participation in a global, diverse, multilingual, 21st century world.

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[12] School and District English Learner Advisory Committees (ELAC/DELAC). (November 6, 2016). Dear Colleague Letter from Tom Torlakson and Michael Kirst. Retrieved from the California Department of Education website: https://www.cde.ca.gov/nr/el/le/yr16ltr1107.asp

A. EL approaches and programs are designed for continuity, **alignment, and articulation** across grade and systems segments, beginning with a **strong foundation in early childhood** (preschool) and continuing through to reclassification, graduation, and higher education.

B. Schools plan schedules and resources to **provide extra time** in school (as needed) and build partnerships with afterschool and other entities to provide additional support for ELs, to accommodate the extra challenge facing ELs of learning English and accessing/mastering all academic content.

C. EL approaches and programs are designed to be **coherent** across schools within districts, across initiatives, and across the state.

Necessary Components for Local Implementation of the EL Roadmap

For the effective implementation of programs for English learners envisioned in the EL Roadmap, the following components need to be available:

1. Systemwide planning activities that engage parents and the community to clarify expectations that English learners are the responsibility of *all* educators, and not just the responsibility of bilingual teachers, English language development specialists, and the ELD/bilingual program.

2. Professional development programs that provide all teachers with instructional approaches and strategies that support language development throughout the school day to provide equitable opportunities for English learners to participate meaningfully in content instruction.

3. Targeted ELD programs, particularly in schools with newcomer students and students entering at beginning levels of ELD who are most in need of designated ELD time, and in schools with significant long-term EL students whose needs are in social and emotional learning and many of whom are dually identified as students with disability.

4. Curriculum materials across the content areas that provide specific supports to enable students at varying levels of ELD to engage with the content, and accompanying professional development for teachers enacting the curriculum.

5. Assessment tools and approaches that support formative assessment practices for teachers, and interim/benchmark indicators of progress for administrators that enable continuous monitoring of student language development that supports content learning.

6. Professional learning culture and professional time for teachers and school leaders to examine student learning, especially around language use and discourse practices by students around the content area (e.g., collaborative conversations, argumentation with claims and evidence, etc.).

7. Recruitment and retention of bilingual teachers to staff program models where non-English languages are supported.

8. Special considerations to support challenging, non-normative cases, such as English learners with disabilities and newcomers, refugees, and unaccompanied minor students who have had significant interruption in their formal education.

An effective system for English learners will need to pay attention to these components and place them in a framework of continuous improvement. The framework of continuous improvement and capacity development of the system is consistent with the state's approach to accountability, as well as with the Castañeda standards undergirding federal law.

California Special Education

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Introduction

Children and youth with disabilities are provided specific rights and protections under the 2004 Individuals with Disabilities Education Improvement Act (IDEA), Section 504 of the Rehabilitation Act, and the Americans with Disabilities Act (ADA). In addition, the 2015 amendments to Title I of the Elementary and Secondary Education Act (Every Student Succeeds Act. [ESSA]) contain explicit requirements for how students with disabilities are to be treated under that act. IDEA has two major programs: Part C provides funding for programs for infants up to 36 months and Part B, Section 611, covers children from ages 3–21, while Part B, Section 619, specifically focuses on children ages 3–5. This expert brief focuses primarily on Part B, Section 611, and on children with disabilities who are in Grades K–12.

The purpose of IDEA is to:

> Ensure that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for further education, employment, and independent living, to ensure that the rights of children with disabilities and parents of such children are protected, to assist states, localities, educational service agencies, and Federal agencies to provide for the education of all children with disabilities. (IDEA, 20 U.S.C. § 1400(d))

The central protections and entitlements of IDEA include *Zero Reject,* which guarantees that any student with a disability who meets the eligibility requirements is entitled to a publicly funded education—regardless of the severity or nature of the disability; *Nondiscriminatory Identification and Evaluation,* which is intended to ensure that only those children who meet the determination of "disability" are identified as eligible for services; *Free and Appropriate Public Education* (FAPE), which includes extensive procedural protections, including parent participation and consent and also substantive requirements, to ensure that each child receives, at no cost their parent or guardian, "specially designed instruction to meet the unique needs of (that) child with a disability" (IDEA, 20 U.S.C. § 1404(a)(17)); *Least Restrictive Environment,* which requires children with disabilities to be educated with their peers without disabilities to the maximum extent appropriate; and *Procedural Safeguards,* which are the essential civil rights protections that defend the interests of the child (Yell, Shriner & Katsiyannis, 2006).

States and local school districts have faced the challenge of implementing these requirements that are both complex and exist at the periphery of the K–12 education mission. Despite this, according to data from the National Center for Education Statistics (in 2014, Part B), IDEA funds accounted for a fifth of all federal monies distributed to states and were second

only to Title I. Over the decades since passage of the federal Education of All Handicapped Children Act (PL 94-142), several persistent issues have propelled many of the federal policy changes as well as state and local implementation strategies. These issues also are the major special education cost drivers.

Which Children Are Eligible to Receive Special Education?

The first issue that has existed for as long as there have been special classes or special education relates to which children are eligible to receive those services. The "Child Find" requirement in IDEA is intended to make sure that a child who is suspected of having a disability is evaluated for eligibility to receive special education, but at the same time to protect against inappropriate or inaccurate identification of disability. The numbers of children served under IDEA and the characteristics or level of need of those children is a major factor in what special education "costs." Concerns about the resource implications associated with large numbers of children being identified as needing "special education" go back over a century itself (see Hendricks & MacMillan, 1989; Goldstein, Arkell, & Ashcroft, 1975).

Eligibility for services under IDEA is a two-part decision: First, the child must be determined to have a disability that fits within one of the "discrete" categories; second, that disability must be determined to have an adverse impact on the child's ability to benefit from education. For some disability categories, the first decision is easy; however, for other categories, this has historically been a problem. Imperfect or unmeasurable criteria associated with specific "disability" categories, such as "Specific Learning Disabilities," were part of the issue. So too were the use of tests and procedures, such as IQ testing, that were invalid for use with children who may have had other characteristics, such as insufficient English language proficiency, to determine a "disability." California in particular has extensive experience with issues related to eligibility determination, particularly Nondiscriminatory Identification and Evaluation. As a result of key court decisions as well as continued concern about disproportionate numbers of students of color in special education, schools are required to use multiple methods to evaluate a child and ensure that all tests and the procedure do not discriminate on the basis of race, culture, or native language. The extensive IDEA regulations that govern eligibility determination are known as protection in evaluation procedures, and specify all conditions and timelines for completing an initial evaluation as well as reevaluation to determine presence of a disability.

The fact that the IDEA statute and regulations are so prescriptive regarding eligibility determination clearly illustrates the soft boundary between what is considered "general" education and "special education." The push and pull of making sure a child has the opportunity to be evaluated and not "overidentifying" or identifying "the wrong" child exists because of a lack of capacity within general education to provide the necessary supports and instruction to struggling learners. The evaluation requirements apply to all 13 categories; however, the determination of a Specific Learning Disability (SLD) has been one of the most prominent given the numbers of school-age children in this category of disability. In addition, the longstanding problem of "disproportionality" in terms of the number of children of color

(i.e., African American and Hispanic) in special education has resulted in changes to both IDEA and the regulations.

Specific learning disability

The 2004 IDEA reauthorization permits local school districts to use a child's response to evidence-based instruction (response to intervention or RTI) as part of the criteria for determining SLD. This was intended to address the problem of "wait to fail" that was an outcome of the "discrepancy" model in the prior definition, and to make IQ and other tests with limited or no instructional relevance obsolete. In addition, the provision recognized that many children who were being referred for evaluation did not have a disability but rather required more intensive and evidence-based instruction in general education. Nationally, SLD remains the most prevalent disability category (39% of all children ages 6–21 with individualized education programs [IEPs] were identified as having this disability in 2014) (U.S. Department of Education [ED], Annual Report to Congress, 2016). However, nationally, the prevalence decreased about 9% between 2008 and 2014. Also, states vary in terms of increases or decreases over time. For example, California reported a 5% decrease in prevalence between 2006–07 and 2015–16. However, beginning in 2012–13, the number of students identified as having SLD has been inching up. Also, there has been a 31% increase in numbers of children identified as having "Other Health Impairment" (OHI) between 2008 and 2014. The OHI category can include students with attention deficit and hyperactivity disorder (ADHD). Do these changes reflect "real" changes in prevalence? Probably not. Rather, they further support the porosity between general and special education, and the role that "special education" plays as a default strategy for dealing with children's learning and behavior problems.

Disproportionality

The 1997 IDEA reauthorization was the first time that states were required to collect and analyze data to "determine if significant disproportionality based on race is occurring in the state or schools"; to revise "policies, procedures, and practices used in the identification and placement"; and to report annually on the number of districts identified as having significant disproportionality (34 CFR 300.647(a)). In 2004, the IDEA reauthorization expanded the requirement to include determination of "significant disproportionality," using one of three formulas, and to report on districts as well as policies and procedures that were found to be contributing to the disproportionality and corrections made. In addition, a provision was added that **permitted** local districts to use up to 15% of their Part B funds to provide services to "students in kindergarten through grade 12 (with a particular emphasis on students in kindergarten through grade three) who are not currently identified as needing special education or related services, but who need additional academic and behavioral support to succeed in a general education environment" (20 U.S.C. 1413(f)(2); 34 CFR 300.226(b)). The funds could be used to provide professional development, educational and behavioral evaluations, services and "scientifically based literacy instruction." Local districts that were determined to have significant disproportionality in identification and/or in the educational environments in which children with disabilities were being educated were **required** to allocate

15% of their Part B funds "to provide comprehensive coordinated early intervening services to serve children in the LEA [local education agency], particularly, but not exclusively, children in those groups that were significantly over identified … with respect to the identification of children as children with disabilities, or the placement in particular educational settings of these children (34 CFR 300.646(a), under 34 CFR 300.646(a) of this section." States report on the policies and procedures that have been changed to address the disproportionality and on the number of children served by Comprehensive Coordinated Early Intervening Services (CEIS).

New IDEA regulations finalized in 2016 established a standard approach that states must use in determining whether significant disproportionality based on race or ethnicity is occurring in the state and in its districts (using a risk ratio) (34 CFR 300.647(b)). In 2013, the Government Accountability Office (GAO) issued a report finding that, because states were using a variety of methodologies for examining their districts, few states take action to address significant disproportionality. In fact, as the GAO found, only 2 to 3% of all districts nationwide are identified as having "significant disproportionality," and some states' methodologies for identifying districts for disproportionality were constructed in such a way that the GAO found districts would likely never be identified. A 2016 report issued by the Office of Special Education and Rehabilitation Services (OSERS) used Office for Civil Rights data to calculate the "risk ratios" for 13 racial/ethnic categories for identification, environment, and discipline for all districts within each state. The data are reported in terms of numbers of districts with enrollments of 10 or more students with a risk ratio for each category x identification, environment, or discipline that was two "median absolute deviations" above the national median over 3 years. According to this report, California was identified as having 638 (61%) of its districts that met the threshold for one of the three areas. The 2016 IDEA regulations clarify that states must address "significant disproportionality" in the incidence, duration, and type of disciplinary actions, including suspensions and expulsions of students with disabilities (as well as identification and educational placement). Finally, the regulations provide more flexibility in how districts may use Part B funds to intervene and prevent disproportionality (34 CFR 300.647(b)).

A recent analysis conducted by Morgan, Farkas, Hillemeier, and Maczuga (2016) used the Early Childhood Longitudinal Study-Kindergarten (ECLS-K) 1998 cohort data to examine disproportionate representation of children of color identified as having IEPs. The results indicate that socioeconomic status was a larger factor than a child's race or ethnicity. These findings have been supported by other studies (see Coutinho & Oswald, 1998; Education Elementary Longitudinal Study (SEELS); Malmgrem, McLaughlin, & Nolet, 2005) that have shown the interaction between race and poverty in the identification of children as having certain disabilities. Morgan et al. note that their findings should challenge the conventional thinking about disproportionality that have been based on *aggregate* disability rates with no adjustment for family income. They pose the question that the concern over disproportionate "over"-representation may in fact mean that some children who may legitimately have a disability are not being identified or provided services.

Free and Appropriate Public Education

The core entitlement of IDEA is to ensure that each child who is determined to meet the eligibility requirement receives, at no cost to their parent or guardian, "specially designed instruction to meet the unique needs of (that) child with a disability" (34 CFR 300.39). This is termed Free and Appropriate Public Education, or FAPE. What constitutes an appropriate education can be very ambiguous because the intent of the statute expects appropriate instruction to be tailored to each child's needs and strengths. The IEP is the legal expression of what a team, including parents or guardians, has determined to be appropriate for a child. The majority of disputes between parents and schools center on interpretations of "appropriate." A child's level of need can and should influence interpretations of "appropriate"; however, my experience suggests that other factors, including availability of resources, have an equal role in determining what goes into an IEP.

Legal interpretations of "appropriate"

Until May 2017, the prevailing legal interpretation of "FAPE" was the 1982 Rowley decision, which established that a state met the requirement to provide FAPE by providing "personalized instruction with sufficient support services to permit the child to benefit educationally from that instruction…the instruction must meet the State's educational standards, must approximate the grade levels used in the State's regular education and must comport with the child's IEP" (Board of Educ. v. Rowley, 458 U.S. 176 (1982). In addition, the IEP must be formulated in accordance with the requirements of the law and "should be reasonably calculated to enable the child to achieve passing marks and advance from grade to grade."

Despite the implied intent of creating ambitious educational goals and educational outcomes, it is probably reasonable to say that most of the efforts surrounding IEP development have focused on procedural compliance, not "educational benefit." Furthermore, the level or degree of benefit a child is receiving from the IEP is at the crux of most disputes and the tension between standards-based IEPs and the concept of "adequacy" and "appropriate." The Endrew F. decision concerned what amount of benefit satisfies the "appropriate" standard. The question presented to the Supreme Court was whether the "educational benefit" provided by a school district must be "merely more than *de minimis*" or "*meaningful*" to satisfy the requirements for FAPE.

Writing for the majority (8-0), Chief Justice Roberts said, a "child's "educational program must be appropriately ambitious in light of his circumstances" and that "every child should have the chance to meet challenging objectives."

"When all is said and done, a student offered an educational program providing 'merely more than de minimis' progress from year to year can hardly be said to have been offered an education at all," Roberts wrote. "For children with disabilities, receiving instruction that aims so low would be tantamount to 'sitting idly . . . awaiting the time when they were old enough to 'drop out (Chief Justice John G. Roberts Jr., 2017).' "

The key change, according to Yell and Bateman (2017), will be to the IEP goals that will need to be crafted to meet the test of "*appropriately ambitious in light of [the student's] circumstances."* Yell and Bateman summarized the implications of Endrew F. as a clarification of the Rowley decision. The Endrew F. decision maintains the two-part test for determining "appropriate": (1) Did the district comply with the procedures for developing the IEP? and (2) Is the IEP reasonably calculated to enable a child to make appropriate progress in light of a student's circumstance? The decision settled the issue with respect to "educational benefit" in that it must be more than "*de minimus*." Yell and Bateman state that this higher standard will have implications for states that were in a federal circuit court that had no standard or a *"de minimus*" standard, which includes California.

FAPE and the Elementary and Secondary Education Act (ESEA)

Educators need no reminder of how the past two decades of federal K–12 education policies, as defined through ESEA, have altered the education of students with disabilities in U.S. schools. The focus on universal standards, assessments, and accountability in ESEA has impacted how IEPs are developed as well as how and where special education services and supports are provided.

The initial changes were made to IDEA in 1997 and began the alignment of the standards-based reforms that had been incorporated into ESEA. Among the changes were the requirement that students with disabilities access the general education curriculum, participate in state and local mandated assessments with necessary accommodations, and have results of those assessments publicly reported. The 2000 ESEA reauthorization (No Child Left Behind Act [NCLB]) resulted in significant changes to special education. A key provision in NCLB was the requirement that schools be held accountable for the performance of all of their students, as well as for the performance of specific subgroups, including students who receive special education services. The idea that schools would have public accountability for the aggregate achievement of students with IEPs on state standards was unprecedented, and created tensions and divisions within the field over how the concept of "appropriate" could be achieved through universal standards. One strategy was the creation of "standards-based IEPs."

Standards-based IEPs

Since that time, the IEP provisions have been expanded to include more reference and alignment to state standards and student outcomes based on those standards. Among the very important provisions in the 2004 IDEA is the requirement that the content of the child's IEP specify how "the child (will be) involved in and progress in the general education curriculum" [§614(b)(2)(A)(ii)], "how the child's disability affects the child's involvement and progress in the general education curriculum" [§614 (d)(1)(A)(i)(I)(aa)], and a statement of the program modifications or supports for school personnel that will be provided for the child "to be involved in and make progress in the general education curriculum..." [§614 (d)(1)(A)(i)(IV)(bb)]. In a November 2015 *Dear Colleague Letter*, ED provided additional guidance stating that "the same curriculum as for nondisabled children" to be the curriculum that is based on a state's academic content standards for the grade in which a child is enrolled. This

interpretation, which we think is the most appropriate reading of the applicable regulatory language, will help to ensure that an IEP for a child with a disability, regardless of the nature or severity of the disability, is designed to give the child access to the general education curriculum based on a state's academic content standards for the grade in which the child is enrolled, and includes instruction and supports that will prepare the child for success in college and career. (https://www2.ed.gov/policy/speced/guid/idea/memosdcltrs/guidance-on-fape-11-17-2015.pdf).

ESSA

According to Council of Chief State School Officers, some ESSA requirements for states that are or may be "new" include:

- Universal design for learning (UDL). All assessments must be developed, to the extent practicable, using principles of UDL (Section 1111(b)(2)(B)(xiii) of ESEA, as amended by ESSA).

- Alternate achievement standards must (1) be aligned with the challenging state academic content standards); (2) promote access to the general education curriculum, consistent with IDEA; (3) reflect professional judgment as to the highest possible standards achievable by the affected student; (4) be designated in the IEP developed for each such student as the academic achievement standards that will be used for the student; and (5) be aligned to ensure that a student who meets the alternate academic achievement standards is on track to pursue postsecondary education or employment (Section 1111(b)(1)(E) of ESEA, as amended by ESSA).

- Goals and measures of interim progress. States must establish ambitious long-term goals with measures of interim progress for all students and separately for each subgroup, including students with disabilities. Long-term goals, including measurements of interim progress toward meeting such goals, must be established for, at a minimum, improved:

    - Academic achievement (as measured by proficiency on the annual assessments)
    - High school graduation rates. The term set for such goals is the same multiyear length of time for all students and for each subgroup of students.
    - For subgroups who are behind on the measures of academic achievement and high school graduation rates, the state must take into account the improvement necessary on such measures to make significant progress in closing statewide proficiency and graduation rate gaps. The proposed regulations under ESSA would (1) clarify that student proficiency goals and measures must be based on grade-level proficiency, and that a state must use the same definition of grade-level proficiency for all students; and (2) specify that "taking into account" the improvement necessary for lower performing students to make significant progress means setting interim measures that require greater rates of improvement for those subgroups.

- Allow states to include in their adjusted cohort graduation rate students awarded *a state- defined alternate diploma*. Students with the most significant cognitive disabilities in the cohort, assessed using the alternate assessment aligned to alternate academic achievement standards, and awarded a state-defined alternate diploma, can be counted in a state's adjusted cohort graduation rate, if the state-defined alternate diploma is (a) standards-based, (b) aligned with the state requirements for the regular high school diploma, and (c) obtained within the time period for which the state ensures the availability of FAPE.

Least Restrictive Environment (LRE)

The law requires that the IEP first consider what is "appropriate" for an individual child and then requires that states and districts have in place procedures assuring that, "to the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled, and that special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily." The states report LRE based on the proportion of the school day that children with disabilities are educated in general education classrooms, then the percentage of children educated in special classes, special schools, and other separate placements. More than half of all children with IEPs are receiving special education in general education classrooms 80% or more of a school day.[13]

This is the preferred setting, and the IEP team must begin its consideration of placement starting with the general education age-appropriate classroom. Decisions to move away from the general education classroom "occurs only when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily."

Four circuit court decisions have defined the following considerations for determining LRE for a given child:

- The educational benefits available to the disabled student in a traditional classroom, supplemented with appropriate aids and services, in comparison with the educational benefits to the disabled student from a special education classroom.

- The nonacademic benefits to the disabled student from interacting with nondisabled students.

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[13] Available at https://nces.ed.gov/programs/digest/d15/tables/dt15_204.60.asp?current=yes

- The degree of disruption of the education of other students, resulting in the inability to meet the unique needs of the disabled student.

- School districts **may not** make placements based solely on factors such as the following:

    - Category of disability;
    - Severity of disability;
    - Configuration of delivery system;
    - Availability of educational or related services;
    - Availability of space; or
    - Administrative convenience.

Despite the best efforts to define and maintain the maximum degree of inclusion in general education, decisions about location of services are most often dictated by availability of resources and administrative structures, including how special education is defined and situated within a school or school system. For instance, by far, most of the children who are receiving special education in general education classrooms for most of the school day are classified as SLD or OHI. Children with more significant intellectual and other developmental disabilities still receive the majority of their education in separate classes, schools, or other specialized settings. Students identified as having behavior and emotional problems also are far less likely to be educated in general education classrooms, and African American males are far more likely to be in special classes and schools (and also to be identified as having a behavioral/emotional disability).

Separate settings cost more (Chambers, Shkolnik & Perez, 2003), and districts attempt to decrease special education costs by reducing the numbers of children placed in special schools, including nonpublic schools. In my experience, LRE is related to district-level demographics and conditions. Schools that have large concentrations of poor children, although not necessarily identifying more children for special education, tend to (1) have more children with IEPs whose needs are greater, and (2) have weaker general education programs due to such things as less experienced teachers, larger classes, and higher caseloads for support personnel, such as speech and language specialists, behavioral specialists, psychologists, and social workers.

Small and/or rural districts struggle to provide more specialized services that are typically required for low-incidence students (e.g., occupational therapy, behavior analysis) because there are fewer of the students and also fewer available specialists.

Although issues related to disproportionality, inclusion, and “appropriate” are longstanding and have resulted in new or greater regulation, there are some issues specific to special education that are emerging and deserve recognition due to the possible relationship to costs. The first of these is the expansion of the use of multi-tiered systems of support (MTSS).

Multi-Tiered Systems of Support

Special education research and policy has focused on two major goals over the past decades: (1) ***prevention*** of academic and behavioral problems that result in identification for special education, and (2) ***attenuating the effects*** of child-specific developmental/cognitive conditions to reduce the level of service need. Research is clear that special education is most effective in prevention and attenuating when intervention occurs early, is tailored to specific child characteristics, and is intensive enough to achieve results. Sound general education is necessary but insufficient, and the notion of tiered intervention reflects the understanding that the line between "general" and "special" education is ambiguous and that preventing and moderating the effects of learning problems begins in general education.

The concept of tiered intervention, which is the model for "response to intervention," or RTI, and positive behavioral interventions and supports (PBIS), is included within a broader umbrella term of MTSS. Tiered intervention is not a new concept in special education, but became part of the vocabulary in public education as a result of the 2004 reauthorization of IDEA that specified RTI as an alternative approach to identifying students with SLD. It also was listed as one of the interventions that schools deemed in need of improvement under NCLB should consider. RTI focused on the identification of individual students with disabilities due to learning or behavior problems, and PBIS focused on reducing disciplinary events due to behavior or emotional problems. MTSS is defined as a way to change a school so that it can support any child with learning or behavior problems through systematically delivering a range of interventions based on child need, and consistently monitoring children's progress to make sure they are moving forward. Fuchs and Deshler (2007) note that MTSS is a new way to think about both identification and early intervention assistance for all struggling or "academic unresponsive children" (p. 131). MTSS can "prevent" or make irrelevant the need to "classify" a child in order to receive specialized or more intensive interventions.

The basic MTSS model consists of three tiers: Tier 1 is strong, scientifically based core instruction; Tier 2 is targeted intervention; and Tier 3 is comprised of intensive interventions. The real challenge in MTSS is that it requires that teachers, administrators, district personnel, and student support specialists change the way that they have traditionally worked as isolated or separate, and instead learn how to come together to create a more collaborative and cohesive culture. California is one of a number of states that have endorsed MTSS, but implementation requires a strong district commitment. How many of California's districts are implementing this model is not known, although Los Angeles Unified School District has been identified as one of the adopters.

Comprehensive coordinated early intervening services

As noted earlier, the 2004 IDEA reauthorization established CCEIS, which permitted local districts to use up to 15% of their Part B funds to provide services to "students in kindergarten through grade 12 (with a particular emphasis on students in kindergarten through grade three) who are not currently identified as needing special education or related services, but who need additional academic and behavioral support to succeed in a general education environment."

The intent was that the funds be used to support greater collaboration between general and special education, and could be used, in combination with Title I funds, to support tiered intervention models.

The new regulations finalized in 2016 that established a standard approach that states must use in determining whether significant disproportionality based on race or ethnicity is occurring in the state and in its districts also provided more flexibility in the use of Part B funds to intervene and prevent disproportionality. Specifically, the changes clarify how the Part B funds can be used voluntarily versus the use of funds in districts found to have significant disproportionality. Table 1 provides a comparison between CCEIS and CEIS.

Table 1. Comparison of Mandatory Comprehensive Coordinated Early Intervening Services and Voluntary Coordinated Early Intervening Services

Element	Coordinated Early Intervening Services	Comprehensive Coordinated Early Intervening Services
Abbreviation	CEIS	CCEIS
Regulation	34 CFR §300.226	34 CFR §300.646
Type	Voluntary – LEAs can choose to use a portion of their IDEA Part B funds for services to a defined group of at risk students.	Mandatory – LEAs identified as having significant disproportionality in identification, placement, and/or disciplinary removals must use IDEA Part B funds for CCEIS.
Grade level/ ages served	Kindergarten through grade 12	Age 3 through grade 12
Groups served	Only children who are not currently identified as needing special education or related services.	Children who are not currently identified as needing special education or related services, but who need additional academic and behavioral support to succeed in a general education environment. Children currently identified as needing special education or related services (funds can be used primarily, but not exclusively, for this group).
Funds	Up to 15 percent of IDEA Part B funds (611 and 619)	Exactly 15 percent of Part B funds (611 and 619)
Permitted activities	Professional development for teachers and other school staff to enable such personnel to deliver scientifically based academic and behavioral interventions, including scientifically based literacy instruction and, where appropriate, instruction on the use of adaptive and instructional software. Educational and behavioral evaluations, services, and supports, including scientifically based literacy instruction.	Professional development and educational and behavioral evaluations, services, and supports. The activities must address factors and policy, practice, or procedure contributing to significant disproportionality.
Reporting requirements	An LEA is required to report to the state and the state is required to report to the U.S. Department of Education the following: the number of children served under this section who received early intervening services; and the number of children served under this section who received early intervening services and subsequently received special education and related services under Part B of IDEA during the preceding 2-year period.	An LEA is required to publicly report on the revision of policies, practices, and procedures. Additional reporting requirements to be determined by OSEP at a future date.

Source: Idea Data Center, https://ideadata.org/sites/default/files/media/documents/2017-09/idc_ceis_chart.pdf

Evidence-Based Interventions

As part of the states' ESSA plans are how the states will identify their "lowest performing" (5%) public schools that receive Title I funding, including public high schools that fail to graduate one third or more of their students and other categories to be determined by the state. In those identified schools, the district must develop "a comprehensive support and improvement plan that is informed by the indicators and long-term goals of the state's accountability system, includes evidence-based interventions, is responsive to a school-level needs assessment, and identifies resource inequities that will be addressed.

ESSA defines "evidence-based" as an activity, strategy, or intervention that demonstrates a statistically significant effect on improving student outcomes (or other relevant outcomes) based on strong, moderate, or promising evidence from at least one well-designed and well-implemented experimental or quasi-experimental study, or a rationale based on high-quality research findings or a positive evaluation that suggests the intervention is likely to improve outcomes.[14] States have flexibility in allowing schools and districts to determine which evidence-based interventions are most likely to work in which contexts and with which students.

According to expectations set forth in IDEA, an individual child's IEP should reflect the use of evidence-based practices or interventions that are responsive to the child's IEP goals. In defining such practices, a 2005 article in *Exceptional Children* (Odom et al., 2005) specified the methodologies and expectations for interventions considered to be evidence based. Recently, a committee of special education researchers under the direction of James McClesky compiled a review of "high-leverage" practices in special education. The 2017 *High-Leverage Practices in Special Education* provides the categories of practices and specific interventions within each category that have a sufficient evidentiary base to be considered evidence based.[15]

State Compliance and Accountability under IDEA

The original accountability model for making sure that states were providing sufficient oversight and resources to ensure that districts were meeting the requirements of the act relied on demonstrations of procedural compliance with the law. These included demonstrating that children were being identified as having a disability and provided services under IDEA (e.g., reports on child counts, timelines for evaluations). The number of indicators of compliance that states were required to report grew over time and were increasingly burdensome to states; also, advocates did not see a link between the indicators and FAPE.

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[14] See ESSA (2016), available at https://www2.ed.gov/policy/elsec/leg/essa/guidanceuseseinvestment.pdf.

[15] Available at http://ceedar.education.ufl.edu/wp-content/uploads/2017/07/CEC-HLP-Web.pdf.

2004 IDEA amendments and the 2006 regulations refocused the monitoring of state compliance that the law requires of ED's Office of Special Education Programs (OSEP). The regulations required that states develop State Performance Plans (SPPs) that were used to evaluate states' implementation of IDEA. The SPPs for Part B include baseline data for 20 indicators, such as graduation rate, dropout rate, participation in and performance on assessments, meeting evaluation timelines, and ensuring that complaints and hearings are resolved within required timelines.[16]

States also were required to establish measurable improvement goals and "rigorous" improvement targets and activities for each of the indicators (Yell, 2006, p. 468). States were required to report annually on the extent to which their local districts met or exceeded the targets through annual performance reports, or APRs, which were reviewed by ED. However, a determination of a state's compliance with IDEA did not include consideration of progress made on student performance or educational outcomes.

The 2004 IDEA also set out the designations of "Meets Requirements" (MR), "Needs Assistance-1 Year (NA-1), "Needs Assistance-2 Years" (NA-2), and "Needs Intervention," which denotes three or more consecutive years of not meeting requirements. The 2004 amendments laid out specific enforcement requirements for ED based on the number of years a state is found to "Need Assistance." Between 2004 and 2013, most states were designated as "MR" for any given year, although states moved between MR, NA-1, and NA-2 with no consistent pattern, either by region, state size, or other characteristic (https://ed.gov/fund/data/report/idea/partbspap/index.html#nm).

In 2014, OSEP initiated a new compliance model referred to as "Results Driven Accountability" (RDA) (https://www2.ed.gov/about/offices/list/osers/osep/rda/index.html). Under this model, state designations are calculated using a scoring system for "compliance" and student results (e.g., student achievement, performance on the National Assessment of Educational Progress [NAEP], graduation rate). On each indicator (two of the 20 indicators were eliminated), a state is scored as "0," "1," or "2" based on established criteria, and states receive a compliance and results score, which are then transformed into one of the designations. ED uses the determination to differentiate the monitoring and support it provides to all states, but in particular low-performing states.

According to the extensive documentation, OSEP uses "the totality of available information about a state, including a variety of public data sources, information from specific monitoring, and "Special Conditions" on a state's Part B grant award," to score a state. (*How the Department Made Determinations under Section 616(d) of the Individuals with Disabilities Education Act in 2015: Part B*, U.S. Department of Education:

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[16] See U.S. Department of Education (2010) available at https://education.gov/fund/data/report/idea/partbspap/prevideaetermfs/2010ideafactsheet-determinations6-1-10.pdf.

https://www2.ed.gov/fund/data/report/idea/partbspap/2015/2015-part-b-how-determinations-made.pdf).

A key element of the new RDA is the requirement that each state develop a comprehensive multiyear State Systemic Improvement Plan focused on improving results for students with disabilities.

The 2016 OSEP determinations indicate that California has been in the category of "Needs Assistance" for 2 or more consecutive years (https://www2.ed.gov/fund/data/report/idea/ideafactsheet-determinations-2016.pdf).

Based on the scoring system, a state may receive a total of 24 points for "results" and 20 points for the "compliance" indicators. California received 13 of the 24 points (54%) and 20 out of 20 points (100%) for compliance. The performance of students with IEPs on the state reading and math assessments, NAEP, and the overall graduation rate were all below the state-determined targets (https://osep.grads360.org/services/PDCService.svc/GetPDCDocumentFile?fileId=20104).

Summary

The rights and protections for students with disabilities are stated in the Individuals with Disabilities Education Improvement Act (IDEA), Section 504 of the Rehabilitation Act, and the Americans with Disabilities Act (ADA). The requirements of how students with disabilities are to be treated are stated in the 2015 amendments to Title I of the Elementary and Secondary Education Act (Every Student Succeeds Act. [ESSA]). States and local school districts have faced the challenge of implementing these complex requirements in spite of demands of the overall general education system. Despite these complexities, according to 2014 data from the National Center for Education Statistics Part B IDEA funds accounted for one-fifth of all federal monies distributed to states and is the second largest federal program (the first being Title I).

In 2014, OSEP initiated the RDA, a new compliance model, where each state is required to develop a comprehensive multiyear State Systemic Improvement Plan focused on improving results for students with disabilities. Moreover, state designations are calculated using a scoring system for "compliance" and student results that requires that each state develop a comprehensive multiyear State Systemic Improvement Plan focused on improving results for students with disabilities. According to the OSEP, California needs to improve upon its efforts in providing special education services given that the performance of students with IEPs on the state reading and math assessments, NAEP, and the overall graduation rate were all below the state-determined targets.

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California Rural Research

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Executive Summary

The same challenges that characterize California's schools generally are also present in the state's rural schools, and result in similar patterns in the distribution of achievement. These challenges tend to manifest differently in rural areas, however—in part because the level of some challenges is sometimes greater in rural schools than it is in non-rural schools, and in part because characteristics unique to rural settings present challenges to delivering programs and services.

The research brief highlights challenges, calls attention to research suggesting policy considerations with the potential to enhance or impede efforts to improve public education in the state, and offers recommendations for consideration by the professional judgment panels.

1. Characteristics of rural schools in California. Just under 200,000 students attend school in rural school districts in California (about 3% of the total state enrollment). California's rural schools

    - Have high rates (in comparison with other states) of minority students, students who are economically disadvantaged, students who are English learners (ELs), and students in mobile/transient households
    - Face difficulties in recruiting and retaining high-quality teachers
    - Face difficulties in providing specialized services to small schools and districts in remote, isolated settings
    - Face fiscal challenges associated with declining enrollments and pupil transportation

2. Review of best practices literature. Results from the literature review are grouped in the report under five primary categories:

    - Place-based education is associated with academic and social benefits for students, and with enhanced leadership, services, and capacity-building opportunities that are crucial to sustaining and revitalizing rural communities.
    - Multiage classrooms are associated with increased efficiency in the distribution of human and fiscal resources, and social and academic benefits for students.
    - Staff development that relies on local resources and distance technology can be cost-effective and can improve educational outcomes.
    - Effective use of distance technology can diminish isolation and expand course offerings and other learning opportunities for students, staff, and community.
    - Multi-use school facilities in rural areas can expand and enhance educational, civic, and even physical fitness opportunities for community members by making their resources available to the community members.

- Smaller organizational size in schools and districts is associated with positive academic social and outcomes, particularly among economically disadvantaged students; broader grade span configurations are also associated with positive academic outcomes.

3. Manufacturing economies of scale. To operate efficiently while retaining the benefits of smaller size, rural school districts must find ways to *manufacture* economies of scale. The report offers several suggestions:

    - Shared administrative staffing patterns allow fewer administrators to provide educational leadership for a greater number of students.
    - Multi-grade instructional staffing patterns allow teachers to provide instruction for more students.
    - Shared specialized functions can allow all students access to qualified specialists in an efficient manner.
    - Shared programs can allow students access to richer curricular, co-curricular, and extracurricular offerings.
    - Distance learning makes specialized curricula, innovative programs, and cooperative/collaborative projects viable for any school, no matter its size or location.
    - Multi-use educational facilities allow small and/or remote communities to offer programs and opportunities not otherwise available in a dedicated facility.

4. Recommendations. The following recommendations are offered for consideration by the professional judgment panels:

    - Create and implement new and better policy and strategies for (1) recruiting and retaining quality teachers, and (2) building capacity in existing faculty.
    - The smaller size of rural schools and districts should be recognized as an educational asset, and should be deliberately supported and sustained through responsive fiscal and administrative policies.
    - Create and implement new and better policy and strategies for diminishing the negative effects—fiscal and otherwise—associated with declining enrollments.
    - Assist schools in developing their capacity to implement place-based learning strategies, and support their efforts through responsive administrative and assessment policies.
    - Ensure that all schools have an adequate technology infrastructure to take advantage of the opportunities offered by distance learning.
    - Emphasize and support the use of school facilities for non-academic social service and community functions, through appropriate administrative and fiscal policies.

Expert Brief

Introduction

In and of itself, rurality[17] is not a barrier to educational achievement. Most studies find no significant difference between rural achievement levels and achievement levels for schools in other locales when appropriate statistical controls are imposed (Fan & Chen, 1999; Howley & Gunn, 2003). The *when appropriate statistical controls are imposed* part of that last statement is very important. It means that achievement in rural schools varies, and that the variations are closely related to student and community characteristics like poverty, disability, and limited English language skills—characteristics that are typically used to describe "achievement gaps." In other words, the same challenges that characterize schools generally are present in rural places, and result in similar patterns in the distribution of achievement. These challenges tend to manifest differently in rural settings, however. Here's how and why.

First, rural areas often face higher concentrations of traditional barriers to educational achievement than do their non-rural counterparts. Second, characteristics unique to rural schools present challenges to delivering the kinds of programs and services typically deployed to address barriers and promote improvements in educational achievement. And third, policy contexts often fail to recognize the challenges and opportunities inherent in rural schools, adopting one-size-fits-all approaches that limit opportunities and compound challenges.

California's rural schools can meet the challenges they face and promote excellence and equity in educational achievement. Their uniquely rural characteristics will necessitate the use of some different strategies and resources to do so, however. This report is intended to highlight the challenges, call attention to policy considerations with the potential to enhance or impede efforts to improve public education in the state, and offer recommendations for consideration by the professional judgment panels.

School characteristics and discussion of challenges and difficulties

School characteristics in rural California. Just under 200,000 students attend school in California's 351 rural school districts—about 3% of the state's public school enrollment.[18] Table 1 provides data on California's public school districts, with rural and non-rural comparisons.

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[17] A caveat: there is no universally accepted definition of what constitutes a rural place. In general, most approaches to defining rural treat it as a residual category (i.e., any place that is outside one of the more clearly defined areas—e.g., urban, suburban—is rural). The data presented in this report were obtained from the U.S. Department of Education. See http://nces.ed.gov/ccd/Rural_Locales.asp for detailed information, including maps that allow users to identify those school districts designated as rural in each state).

[18] Over 350,000 students attend California's 1,239 rural *schools* (5.8% of the student population), some of which are located in non-rural districts. We use the district level unit of analysis rather than the school level unit of analysis because state funding operates at the district level.

Table 1. Comparison of selected school characteristics

	Rural CA	Non-rural CA
Percent students eligible for free and reduced-price meals	55%	58%
Percent EL students	21%	22%
Percent IEP students	10%	11%

Note: An IEP is an Individualized Education Program.
Data source: *20014–15 Common Core Data*, National Center for Education Statistics

Some observations:

- While a majority of students in both rural and non-rural school districts are economically disadvantaged, the rate is slightly higher in non-rural school districts (of note: national studies show that among those eligible, rural households are less likely than their non-rural counterparts to participate in subsidized meal programs [Carson, 2015]).
- More than one in five rural students qualify for EL services (approximately the same rate as in non-rural schools).
- Nearly one in 10 rural students qualify for special education services (slightly less than the rate in non-rural schools; the state as a whole has the fourth-lowest percentage of IEP students in the nation).

In comparison with other states, California's rural student population has the fourth highest percentage of rural minority students, third highest percentage of rural EL students, 11th highest rate of rural economically disadvantaged students, and 11th highest rate of rural students in mobile/transient households (Showalter, Klein, Johnson, & Hartman, 2017).

In terms of outcomes, rural educational achievement (NAEP performance among rural students) and college readiness measures (graduation rates for all rural students, rural minority students, and rural economically disadvantaged students) in California are substantially behind other states (Showalter et al., 2017). Differences on NAEP performance between rural and non-rural California students are non-significant for the most part.

Difficulties in recruiting and retaining high-quality teachers. High-quality teaching is essential to raising student achievement and closing achievement gaps (Goe & Stickler, 2008). Rural schools in California are attempting to meet tremendous educational needs with teaching staffs that are often inexperienced, under-qualified (or even non-qualified), and lacking adequate professional development (Aragon, 2016; Jimerson, 2004). Moreover, recruiting and retaining high-quality teachers for rural schools is difficult, primarily

due to causes over which schools and school districts have little if any control: research suggests that geographic, social, cultural, and professional isolation are the major reasons teachers choose not to work in rural areas (Aragon, 2016). Along with challenges in terms of recruiting and retaining high-quality teachers, in remote rural areas it is more difficult for current staff to build capacity and/or obtain additional credentials/expertise (e.g., EL certification) through traditional approaches like in-service professional development workshops and graduate coursework (Howley & Howley, 2005).

Difficulties in providing services in rural areas. Effective strategies for meeting the varied challenges faced by California's schools and providing an adequate education for all students are discussed in the other REP reports addressing specific challenges (e.g., EL student services), and this report defers to the recommendations of those experts regarding specific approaches. The challenges are not unique to either rural or non-rural schools. There are, however, some characteristics of rural schools that make providing services more difficult.

Two key characteristics of rural schooling are important here: their smaller organizational scale and their often remote, isolated locations. Rural school districts are considerably smaller (median enrollment in CA is 226, versus 3,812 for non-rural school districts). Many rural schools are located in remote areas as well, with limited access to specialized services and facilities, higher education institutions, etc. The smaller organizational scale of rural schooling makes it more difficult to provide specialized course offerings and specialized services through traditional delivery methods. For example, in a grade 7–12 school of 171 students, a total of four students might request to take physics. In such a case, it would be impractical for the school to hire a physics teacher to teach four students. Similar issues arise when a smaller school enrolls, say four EL students. Additionally, student service functions that are typically handled by district-level staff, like screening for specialized services, also present challenges to smaller districts (e.g., it is unlikely that a district with an enrollment of 434 could afford to hire its own school psychologist). And remote settings make it more difficult and more costly to obtain such services from private agencies (Levin et al., 2011). Because of these characteristics, alternative delivery methods and different types and levels of resources are needed to realize the potential of strategies and interventions.

Fiscal challenges associated with rural settings. In addition to difficulties in providing services using traditional approaches, some other challenges unique to rural areas are specifically fiscal in nature. One such challenge is declining enrollment. From 2004–05 to 2014–15, more than 37% of California's 340 rural school districts lost enrollment, with 16% of districts declining by more than 20% of their total student enrollment. Enrollment loss creates financial hardships for school districts in terms of lost revenue and general instability with regard to availability and allocation of resources. Another fiscal challenge comes from additional costs associated with transporting students in sparsely populated areas, often with less than ideal travel conditions (i.e., transportation in sparsely populated areas is inherently more costly because of efficiency issues associated with fewer students and more miles, and because of additional maintenance costs stemming from travel over poorly maintained roads). Finally, as noted in the previous section, the smaller scale of operations and remote setting of rural schools creates fiscal challenges in that standard inputs cost more to deliver.

Review of best practices literature

Place-based education. The following definition of place-based education (PBE) was developed by the Rural School and Community Trust: "Place-based education is learning that is rooted in what is local—the unique history, environment, culture, economy, literature, and art of a particular place. The community provides the context for learning, student work focuses on community needs and interests, and community members serve as resources and partners in every aspect of teaching and learning. Together we have discovered that this local focus has the power to engage students academically, pairing real-world relevance

with intellectual rigor, while promoting genuine citizenship and preparing people to respect and live well in any community they choose."

Research suggests that place-based education programs are associated with positive academic and social outcomes among students, most particularly among students not otherwise engaged—e.g., at-risk students, EL students (Fontaine, 2000; Lieberman & Hoody, 1998; Howley, Showalter, Howley, Howley, Klein, & Johnson, 2011; National Environmental Education and Training Foundation, 2000; Schneider & Atkin, 2000; State Education and Environment Roundtable, 2000). Moreover, the benefits of PBE extend equally if not more strongly to the local community (Gruenewald & Smith, 2008), providing leadership, services, and capacity-building that are crucial to sustaining and revitalizing rural communities.

Multiage classrooms. Multiage grouping is often discussed as an approach to achieving greater efficiency in the distribution of resources in very small schools and districts (e.g., in a school with six 2nd graders and eight 3rd graders, staffing a combined 2nd/3rd grade class with one teacher saves money). It is important to note that multiage grouping is also widely presented as a pedagogical strategy irrespective of school size or efficiency, however. As one example, the Kentucky Education Reform Act (KERA, 1990), a sweeping set of educational policies developed in response to a court mandate to create an entirely new (and improved) system of public education, mandated multiage grouping at the primary level for all schools in the state. Research on multiage classrooms is generally positive, with most studies finding social and/or cognitive benefits (Butler, 1998; Carter, 2005; Kolstad & McFadden, 1998). While some studies find no significant differences between multiage and traditional graded settings (e.g., Veenman, 1995), there was little evidence of negative outcomes associated with multiage grouping identified through the literature review conducted for this report.

Staff development. The challenges associated with providing high-quality professional development in rural places parallel the challenges of rural schools in general—specifically, remote, isolated locations that make travel difficult, and small numbers that make related expenses (travel, honoraria, etc.) more expensive on a per teacher basis. The challenges necessitate the need to think beyond the traditional format of expert-led teacher workshops. The good news (for the purposes of this discussion, anyway) is that traditional approaches are perhaps not the most effective anyway:

> The essential characteristic of effective professional development is that it involves continuous teacher and administrator learning in the context of collaborative problem solving. Thus it occurs in planned, structured ways and in ways that are incidental and informal. When professional development is seen as a program or series of formal scheduled events or is otherwise disconnected from authentic problem solving, it is unlikely to have much influence on teacher or student learning. (Hawley & Valli, 2000)

The essential characteristic described by Hawley and Valli (2000) is not a commodity that is purchased from a vendor or delivered by university faculty or private consultants. In fact, it's a characteristic that can be cultivated locally and can draw on local resources supplemented by limited and strategic use of outside sources. It is rooted in identifying and addressing the needs of a specific school and/or faculty member operating in a specific context for teaching and learning (Howley & Howley, 2005). Some strategies for realizing the potential of this approach to professional development include creating professional learning communities (Barton & Stepanek, 2012) and emphasizing the use of distance technology (Dzwonek, 2005; Hobbs, 2004; Salazar, Aguierre-Munoz, Fox, & Nuamez-Lucas, 2010).

Technology and facilities. As noted above, distance technology can be an important tool in the design and delivery of effective professional development. As noted elsewhere, distance technology can serve an equally important role in providing students in small and remote schools the opportunity to participate in specialized course offerings that may not be feasible to offer on-site. Hobbs (2004) suggests two primary benefits that distance learning offers for rural and small schools:

- **Academic.** Distance learning technology offers the opportunity for an enhanced curriculum and advanced classes, including low-enrollment, high-cost classes like physics, anatomy, chemistry, music theory, and calculus.

- **Economic.** Using distance learning, the economic feasibility of offering a class is no longer constrained by the calculation of instructional cost per pupil. In addition, there is generally no incremental cost associated with distance learning opportunities—the cost to educate one student is the same as the cost to educate 20; the cost to offer a distance learning class every hour of the day can be the same as offering a class for only one hour.

Hobbs also suggests five ancillary benefits:

1. Professional learning: professional development and continuing education opportunities can be delivered via distance technology.

2. Clinical experiences: distance learning technologies can facilitate clinical experiences for pre-service teachers and mentoring relationships between new and experienced teachers, as well as help provide ongoing contact between new teachers and higher education faculty.

3. Virtual field trips: distance learning can be used to provide students with virtual field trips that can supplement and enrich curricula.

4. Collaborative projects: distance learning can be used to facilitate collaborative projects among students and teachers across the state, the nation, and the world—collaborations that fit nicely into place-based approaches to teaching and learning, Hobbs notes.

5. Ancillary services: specialized and ancillary student services like speech therapy, psychological testing, counseling, individualized assessments, and gifted education can be delivered and/or augmented through two-way I-TV (interactive television) technologies.

With regard to rural facilities, best practices recognize that schools are often the center of the community, and take steps to ensure that relationships between the two are mutually beneficial. Rural schools can expand and enhance educational, civic, and even physical fitness opportunities for community members by making their resources available to the community members (e.g., using a computer lab for evening adult education courses, using school facilities for local governance meetings, allowing community members to access athletic fields and equipment). The literature on sharing facilities suggests that the positive outcomes go well beyond the practical benefits derived from access to facilities—this kind of sharing can promote community involvement and support for public schools, and can promote higher levels of civic engagement on the part of students and others (Lawrence, 2004; Williams, 2010). Facilities policies with regard to renovation and new construction should take into account the inherent potential for school and community collaboration. Both renovation and new construction design decisions should be informed by an awareness of the school's role as community center, and policies regarding new construction should avoid restrictions (e.g., minimum acreage

size) that necessitate building new schools on sites that are not accessible to the community and conducive to community use (e.g., located within a recognizable local community, not in open territory).

School and district size, grade span configurations. Research on the effects of school and district size is remarkably consistent, and strongly suggests that smaller size is an educational virtue for nearly all student populations, and a necessity for impoverished ones.

Research indicates that smaller schools and districts are generally associated with positive academic results. Some studies show that student achievement is higher in smaller schools and districts (Bickel & Howley, 2000; Howley & Bickel, 1999; Johnson, 2003, 2004; Johnson, Howley, & Howley, 2002). Other studies reveal a limited influence of smaller size on overall achievement, but a more robust influence on the distribution of achievement among various student groups—in effect, narrowing achievement gaps (Friedkin & Necochea, 1988; Huang & Howley, 1993; Johnson, 2007; La Sage & Renmin, 2000; Lee & Smith, 2001). Smaller school size has also been identified as contributing to lower dropout rates (Pittman & Haughwout, 1987; Fetler, 1989), higher rates of participation in co-curricular activities (Morgan & Alwin, 1980), and higher rates of postsecondary enrollment (Funk & Bailey, 1999).

Smaller schools have also been linked to a variety of attributes related to positive school climate. Research has found that students attending smaller schools are less likely to be the victims of crime (U.S. Department of Education, 1999), and more likely to attend school regularly and become involved in school activities (Black, 2002; Lindsay, 1982). Moreover, studies have suggested that the higher rates of student participation in small schools are positively associated with lower dropout rates, higher achievement levels, enhanced self-esteem, and diminished disciplinary problems (Holloway, 2000), and with reductions in racial and social isolation (Clotfelter, 2001).

A related finding from the literature concerns the association between grade span configurations and desirable student outcomes. Research on this topic generally reports improved student outcomes for all and/or increased equity in the distribution of achievement among student sub-groups in schools with broader grade spans—e.g., a K–8 or K–12 school versus a K–3 or K–5 school (Bickel et al, 2001; Johnson, Godwyll, & Shope, 2016).

Research regarding the efficient and effective use of existing funds: manufacturing economies of scale

In a number of states, policymakers and others have argued that small rural schools are inefficient to operate because they have higher per pupil costs than larger schools and districts. *Economies of scale* is a key concept here. It's an economics term describing a dynamic wherein the average cost of production declines as a firm's output increases. Applied to schools, it means that the *per pupil* cost of providing educational and related services can be expected to decline as the organizational scale (i.e., school and district enrollment size) increases. Appropriate application of this concept of scale economies, however, must take school quality (e.g., student achievement, if you will) into account as part of the way one measures output. The appropriate output or measure of scale should be the number of pupils, adjusted for their levels of achievement.

Research cited in the previous section suggests that students benefit academically and socially from smaller size, and that making schools and districts larger would likely produce negative effects for students. Moreover, a growing number of researchers have begun to question the application of the economies-of-scale

argument to schooling by demonstrating that smaller schools and districts are not necessarily more costly to operate (e.g., Funk & Bailey, 1999; Howley et al., 2011; Steifel, Berne, Iatarola, & Frucher, 2000) or to build (e.g., Lawrence et al., 2002, 2005; Howley, 2005), and that consolidation often does not result in promised cost savings and actually increases some costs (Howley et al., 2011; Reeves, 2004).

The arguments and the research will no doubt continue. In the meantime, rural and small schools will need to seek ways to increase efficiency and effectiveness in their use of existing resources. The challenge is to find ways to artificially *manufacture* economies of scale (in economic terms, spreading their fixed costs over a larger number of units; in practical terms relevant to this discussion, extending the reach of educational staff and other resources to serve greater numbers of students). Following are some suggested strategies (Johnson et al., 2012; Malhoit, 2005):

- **Shared administrative staffing patterns.** The small size of some rural school districts can mean that the costs of traditional administrative staffing practices (e.g., one principal per school) are impractical. In these instances, districts can assign one principal to provide administrative support for more than one school. In all instances, however, a designated instructional leader (e.g., a lead teacher) should be physically located at each school site. Other creative administrative staffing patterns include a single superintendent providing administrative leadership to more than one school district, joint appointments as superintendent and principal, and the use of teacher leaders for curricular and instructional support.

- **Multi-grade instructional staffing patterns.** Traditional approaches to instructional staffing (e.g., separate classrooms for each individual grade) may also be impractical in some small rural school districts. In such cases, split-level grades and multi-grade classrooms can be an effective approach to working with smaller enrollments. As noted earlier in the best practices section, this is a practice that has positive financial and pedagogical outcomes—i.e., multiage grouping is generally found to be an effective instructional practice, without regard to financial concerns. At the very least, there is virtually no research suggesting that the practice is likely to do harm.

- **Shared specialized functions.** Geographic isolation and other factors can make it difficult for districts to recruit and retain qualified specialists (e.g., school psychologists, speech therapists, teachers for the hearing impaired), and the small size of some districts makes it impractical to hire such specialists at all. Districts faced with this challenge can partner with other districts to share the services of one individual who provides specialized services.

- **Shared programs**. The ability of schools and districts to offer a wide range of curricular programs can be made more difficult by their smaller enrollments and staff numbers. Programs like early childhood education can be offered effectively through inter-district partnership agreements. In a similar vein, districts can collaborate to provide co-curricular programs like vocal and instrumental music by sharing staff and sharing or jointly purchasing materials (e.g., musical instruments, uniforms).

- **Distance learning**. As discussed earlier in the best practices section, distance learning technologies make specialized curricula, innovative programs, and cooperative/collaborative projects viable. They can be used to pool both student and faculty resources among clusters of small schools, and they also offer enhanced learning opportunities for students and professional development and enrichment opportunities for staff.

- Facilities. Capital construction and renovation projects should emphasize multiple uses, so that school facilities serve community purposes as well. Construction and renovation plans should also give consideration to creating schools with broader grade spans (e.g., K–8 instead of K–4)—a strategy with demonstrated benefits in terms of educational outcomes and fiscal efficiency (Bickel et al., 2001; Johnson et al., 2016).

Recommendations for consideration by the professional judgment panels

Staffing. Rural schools in California are staffed by teachers with less training and less experience. Recruiting and retaining teachers in rural communities is difficult. If all students are to benefit from high-quality instruction, the state must find ways to assist rural schools and districts in (1) recruiting and retaining teachers and (2) building and enhancing capacity in their existing staff. Incentive programs to attract and keep teachers—including differential pay, bonuses, housing assistance/allowances, and student loan forgiveness—should be considered. Moreover, teacher quality is not something that must be imported into a school or district through hiring; it can be developed and enhanced among current faculty through effective professional development. High-quality professional development to improve the instructional capabilities of current staff must receive adequate fiscal and policy support to realize its potential. Scholarships, internships, and other incentives to encourage and support future teachers (a "grow-your-own" approach) are also recommended, as are fiscal and policy support for alternative certification programs.

Organizational scale. Fiscal pressures may tempt policymakers to push for larger schools and districts as a way to cut costs and broaden program availability and curricular offerings. A consistent research literature and the experiences of other states would suggest that this not a wise course of action. Smaller size is a principal asset of rural schooling, and an effective educational policy context must actively work to preserve that asset. Particularly important, fiscal policy should recognize the higher costs of operating smaller schools and should provide additional resources as necessary. Put simply and directly, it generally costs more per pupil to provide the same level of quality in a smaller educational setting; funding mechanisms must ensure they receive it if those schools are to operate on a level playing field with other schools.

Declining enrollment. Many rural communities are losing population. This diminishes the local property tax base while draining the community of the young talent it needs to survive and prosper. The loss of population—and with it, local amenities—makes it more difficult to recruit and retain quality teachers. Fiscal policy must be responsive to the challenges posed by declining enrollments. The current state funding formula incorporates an adjustment for small size. Neither the formula nor the adjustment was analyzed for the purposes of this report, and so no conclusions are drawn with regard to its adequacy or effectiveness. There are multiple approaches (adjustments, categorical funding, etc.) to doing this. The key is to ensure that small schools receive adequate resources, and whatever specific approach is used should be evaluated on their ability to do so**.**

Jimerson (2006) offers seven recommendations for state fiscal policy relative to declining enrollment:

1. State funding formulas should include provisions that cushion the impact of declining enrollment, like the use of a rolling average or hold-harmless provision.
2. Every state should supplement state aid for small districts and/or schools based on enrollment and/or sparsity.

3. Supplemental aid for low enrollment should be determined and allocated on a school level.
4. Criteria for small school aid should be broad enough to cover all small, poor schools that cost more to operate because of low student enrollment.
5. Supplemental aid should be substantial enough to adequately cover additional costs associated with low student enrollment.
6. Supplemental aid should vary along a continuum of school sizes, with the smallest schools receiving the most additional aid, rather than setting artificial size categories.
7. States should avoid spending and levy caps, or eliminate them if they exist, so that local communities can fill gaps created by low enrollment if they so choose.

Place-based learning. No other pedagogical strategy has the demonstrated potential of place-based learning to benefit students socially and academically and to help sustain and revitalize communities (rural and non-rural as well). Fiscal, policy, and professional development support for implementing place-based learning approaches in California is strongly recommended.

Technology. As described throughout this report, distance learning technology can be used to overcome numerous barriers, and can do so in ways that make maximum use of existing resources. Adequate financial support for developing and maintaining an adequate technological infrastructure is essential if small rural schools are to provide their students with rich educational opportunities in a cost-effective manner.

Facilities. Rural communities often lack dedicated facilities for providing much-needed services (e.g., adult education, onsite delivery of postsecondary courses, public Internet access). Public school facilities can play a vital community role in supplying non-school agencies and community groups with the space and technology they need to provide these and other services, and can act as an important conduit for delivering services to students and their families, helping to ensure that non-educational barriers do not get in the way of educational achievement (Williams, 2010). Adequate financial and policy support for multi-use facilities and school-based programs are strongly recommended as a way to both directly support (by enhancing immediate opportunities) and indirectly support (by enhancing quality of life in ways that will aid in efforts like teacher recruitment and retention) rural schools and the communities they serve.

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Effective School Leadership Supports Schools in Educating All Students

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Executive Summary

The purpose of this paper is to assist educators, policymakers, and other school community members in California in exploring some of the key components of successful schools serving diverse student populations. Although the strategies provided are based on research and the experiences of veteran administrators, school board members, and teachers, it is important that each strategy is evaluated against the local school and school district context prior to implementation, and that ongoing evaluation is used to gauge its effectiveness. Described below are the key, identified themes of school success.

Leadership for district and school success

Effective leadership is essential at the district and school levels to promote school success and student achievement. Characteristics of effective leaders include (1) a recognition that shared accountability requires shared resources; (2) a reliance on data-driven decision making to guide student instruction; (3) a dynamic ability to engage all stakeholders in the education process; (4) an ability to establish and sustain a professional learning community (PLC) that is sensitive to district, school, teacher, and student needs; (5) skills and experience to deal with the often volatile political and financial environments; (6) a realization that race and poverty have a profound impact on the school experience for many students; (7) an understanding that student mastery and competence are more indicative of student ability than accountability measures; and (8) a persistent focus on the instructional core and what is happening in every classroom in the district.

Change versus progress

Changing school structures, adding programs, or allocating additional resources does not automatically result in improved student achievement. Instead, change must be well articulated, focused, part of a theory of action, and sustained over time to have positive effects on student outcomes.

Support from a student-focused school district

Having a clearly defined roadmap for change is critical. In developing it, one must be aware of the local context and able to prioritize needs addressing student, as well as adult, learning. In addition, a clearly articulated vision and mission that is inclusive of all students will enable everyone to work toward shared goals. It is only together that the mission and vision can be realized. Last, high teacher and student expectations are vital for student success. Professional development promotes teacher quality, while clear and rigorous standards, use of multiple assessments, strength-based teaching strategies, and accelerated learning opportunities are among some of the effective strategies to raise student standards.

Policy and resources

Although providing ample resources to districts and schools is vital, the need to appropriately allocate these resources also is paramount. Formulas that are sensitive to individual student need, rather than simple per-student allocation, enable all students to have their needs met. Student data should drive this process, while policy should solidify it. It also is important to note that money alone cannot raise student achievement. Instead, appropriate allocation, along with a comprehensive plan that addresses school leadership, teacher professional development, and student learning, are required.

School, community, climate, and connectedness

The success of individual students and school communities is positively affected when students feel connected to and valued within their schools. A safe and orderly school environment creates the foundation for student engagement in learning activities. Related to providing engaging instruction—particularly at the intermediate and secondary levels—is the need for a personalized learning environment wherein each student's individual progress is noted and encouraged, and related to competencies and mastery rather than scores on accountability assessments. In addition, emphasizing prevention can mitigate some of the costly intervention strategies needed when students' needs are left unmet over a long period. Effective schools build capacity, develop relationships concerning effective learning, and monitor progress toward meeting standards. Research on best practices indicates that the most successful school reform strategies are those that emerge through a process involving the entire school community, where various stakeholders come together to design a strategy that meets the unique situational needs of the district. Moreover, the success or failure of any whole-systemic reform strategy depends on the strength of its implementation; that is, whether it creates tangible and long-lasting improvements throughout the school, the school system, or both.

History has taught us that reform happens at the school level, but district supports must be in place to provide and steer resources, professional development, and support and encouragement (a top-down/bottom-up approach). Policymakers, state education agencies, and district administrators need to set criteria, provide support, and allow schools to meet expectations in self-determined ways because educators closest to students know what students need. At the same time, districts need to be ready to intervene in failing schools when necessary.

The most important lesson learned from many school improvement efforts is that raising student achievement is challenging work that takes extensive time and energy. It also requires that we assess our strengths and weakness, admit what we do not know, design focused learning experiences for both students and educators, and focus resources on activities that improve student learning. This requires that school leaders, district administrators, and policymakers develop a sustainable theory of action and make difficult decisions about how to assess needs and respond accordingly, as well as ensuring that adequate resources are available to implement the necessary strategies.

Expert Brief

During my tenure as superintendent of urban and suburban school districts, I was keenly aware that one of my major responsibilities, both legally and morally, was to recommend to the board of education that resources be allocated adequately, equitably, and effectively to support the education of all students in my care. I soon discovered that this was a daunting task, given the reality of the politics surrounding the education process and the inevitable competition for available resources.

Prior to my tenure in that district, most, if not all, decisions about the allocation of resources were based on the needs, opinions, and desires of a small number of adults who had influence over the board of education, politicians, and political processes at the state, local, district, and school levels. Thus, it became my task, that school year, to work to change the thinking of stakeholders to focus on the needs of children in their classrooms.

My practice had been to develop a collaborative process with the board of education, community members, school administrators and staff, parents, and state, regional, and local community and business leaders to develop and implement a *theory of action* for school improvement that focused on the needs and welfare of each student. The *theory of action* included a central question pertaining to the current or anticipated revenues/resources: How does that decision support the instructional core in the classroom and meet our goal of success for all students? Many difficult and controversial decisions were made, which required the reallocation of resources that were being used ineffectively or unproductively. All decisions were key determiners of how teachers and programs supported the unique needs of each student.

Two things consistently occurred each time after the articulated reprioritization of the *theory of action*. First, resources appropriately targeted students' needs through the establishment of priorities and structures that supported improved teacher practice. Some programs and positions were eliminated or resources reallocated to establish sound instructional practices based on the realities of student needs. Second, students made significant achievement gains in literacy and mathematics, and this progress continued for years following the effort to more effectively channel available resources and make needed adjustments, while seeking additional needed resources.

During my years as superintendent of schools in these districts, I learned that administrators have an enormous responsibility to not only manage resources effectively, but also to ensure that resources are allocated to provide adequate student support and, most importantly, to improve teacher practice. In addition, my experience taught me that although my primary focus was to focus on student learning and welfare, my role was becoming increasing complex and ambiguous given the changing nature of national, state, and local policies regarding funding and accountability. Dealing with the complexity of creating more effective schools and school districts taught me that I needed to develop the skills and understanding to be an effective school leader. I needed to consistently remind the school community members of our mission and purpose, focus our resources on achieving those goals, and call on expertise in the community to support those efforts.

It is important to keep in mind that race and poverty have a profound impact on the school experience for many of our students. Inequities and inequalities are magnified by conditions outside of the school, such as poverty, health, neighborhood, safety, and parental support. It is every leader's challenge and responsibility to provide the leadership to ensure that ***every student*** *in every classroom is engaged in learning opportunities and instruction that will allow him or her to* ***meet or exceed high standards***, ***graduate***, *and* ***be college or workforce ready***.

Background

It is the goal of this paper to assist educators, policymakers, and other school community members in California in exploring some of the key components of successful schools serving diverse student populations. Supported by research on school reform, the components discussed herein—if implemented effectively—are likely to move schools toward the objectives set forth by the California Legislature and State Board of Education. Many educators have seen student performance gains and a narrowing in the achievement gap following implementation of some combination of the components of successful schools considered in this paper.

First, a discussion of instructional leadership explores how dynamic instructional leaders are less concerned with day-to-day management matters and more focused on what is going on in classrooms. Current research and evidence from successful schools and school districts suggest that effective school and district leadership is fundamental to student success because strong leaders ensure that teachers and other staff receive meaningful and relevant professional development, cultivate PLCs, use data rather than instinct to make decisions, and ultimately work to guarantee that every student receives high-quality instruction.

Today, school principals and other leaders face mounting accountability demands in a climate of urgency; therefore, some may end up simply replacing structures and strategies with others, instead of planning carefully to accomplish goals and ensure actual progress. Following a section on the importance of effecting sustainable results instead of quick-fix solutions, this paper recommends research-based strategies for district-level support of school improvement strategies. When districts articulate and implement a *theory of action* to guide school reform, everyone is able to understand and commit to his or her role in the process. The alignment of state, district, and school priorities and strategies is more likely to raise student achievement than a disjointed, piecemeal approach. Furthermore, it has been shown that schools can provide better opportunities for student and adult learning when their efforts are supported by district administrators and school policymakers.

Successful schools and districts routinely collect and analyze student data to make important decisions about policies, resource allocation, and financial sustainability. In addition, they make teacher professional development and training a priority, along with the recruitment and training of potential individuals to join the certified teaching force. In California, as in other states, there exists a tremendous need to recruit and train both teachers and instructional assistants to meet the needs of students who attend California schools to offset a shortage of certified teachers. Also, the needs and benefits are clear in research about the benefits of preschool for all students, especially those from low-income families and homes where English is not the first language. Last, this paper recommends some best practices for ensuring a safe and positive learning environment in schools, wherein students are engaged with the material and invested in their own education. Successful schools have student supports focused on prevention rather than intervention for all students, including those placed at risk, as well as partnerships with parents, businesses, and the larger community.

Leadership for district and school success

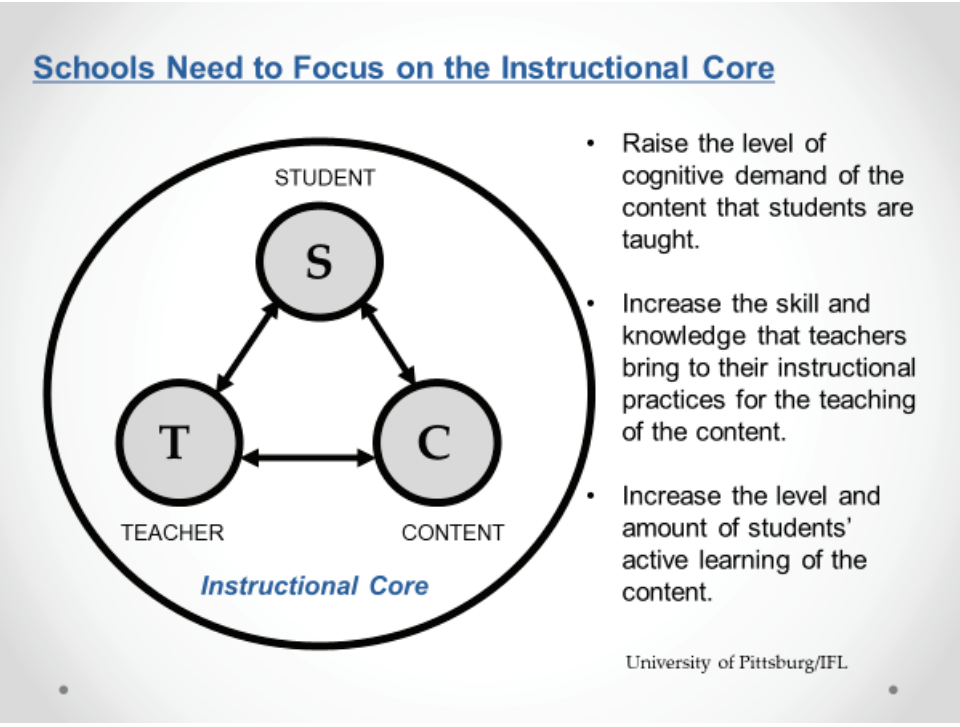
It starts with mindset—erasing deficit thinking. As leaders, we constantly hear these excuses for underperformance: “The students cannot perform because...,” “The community will not agree to it...,” or “Teachers cannot implement this initiative....” Many of the rationales for these statements stem from interpreted notions of socioeconomic status, “geographical context and perceptions of a certain neighborhood or community, or other perceived disadvantage affecting students, educators, or the community at large” (Sanfelippo & Sinanis, 2016). It is incumbent upon school leaders then to eradicate this type of deficit thinking

or “soft bigotry of low expectations” by developing strength-based relationships. Leaders can do this by looking for and emphasizing the strengths of students and teachers, indicating and modeling those strengths, encouraging educators to learn something difficult, giving students and teachers access to diverse learning opportunities, and celebrating the strengths at their schools (Sanfelippo & Sinanis, 2016). By emphasizing these elements, all education stakeholders (students, teachers, administrators, board members, and parents) will feel empowered and motivated to grow professionally, thus building capacity of the school and district.

Clear school mission and goals. Research on the characteristics of effective schools and testimony from veteran educators across the nation make evident the importance of school leadership as the catalyst for school success and the engine that drives student achievement gains (Marzano, Waters, & McNulty, 2005). Research and anecdotal evidence indicate that school reform aimed at raising student achievement to meet state standards will produce better and more lasting results if a principal sets a clear mission and develops goals, establishes the urgency of implementing this mission, supports and develops staff, and builds a solid organization (Leithwood, Seashore, Anderson, & Wahlstrom, 2004; Blythe & Gardner, 1990). Often, effective principals provide opportunities for teacher leaders to emerge by distributing responsibility for student learning and sharing a commitment to the mission of raising student achievement.

If schools and school districts are to achieve the quality of teaching and learning that students need for future success, and if school leaders are to meet their goals, then school leaders must focus on the instructional core of what is happening in schools (see Figure 1). Schools have to raise the level of cognitive demand of the content, increase the skills and knowledge that teachers bring to their practice, and increase the amount and level of students’ active learning. This is the major challenge that faces our schools and their leadership in the effort to increase student achievement and meet the needs of each student.

Figure 1. Focus on the Instructional Core



Following a coherent *theory of action* at the district level, successful schools have a school vision and mission that are articulated and widely displayed in the school. Everyone in the school community has an obligation to invest in where the school is going and how it is getting there. The school vision must be inclusive and committed to all students, including special education students and English language learners (ELLs).

Successful schools have a mission that includes engaging instruction and high expectations for all students. These schools offer many opportunities for shared or distributed leadership, including identifying and nurturing teacher leaders. In many cases, these schools use an instructional area, such as literacy or a cross-disciplinary theme, to focus teaching and professional development activities on student achievement in those identified subject areas or themes. In many of these schools, where a focused curriculum is matched to the state standards and where themes are tools to improve instruction, the infusion of additional resources is not always required, but resources may need to be reallocated.

The Leadership Effect

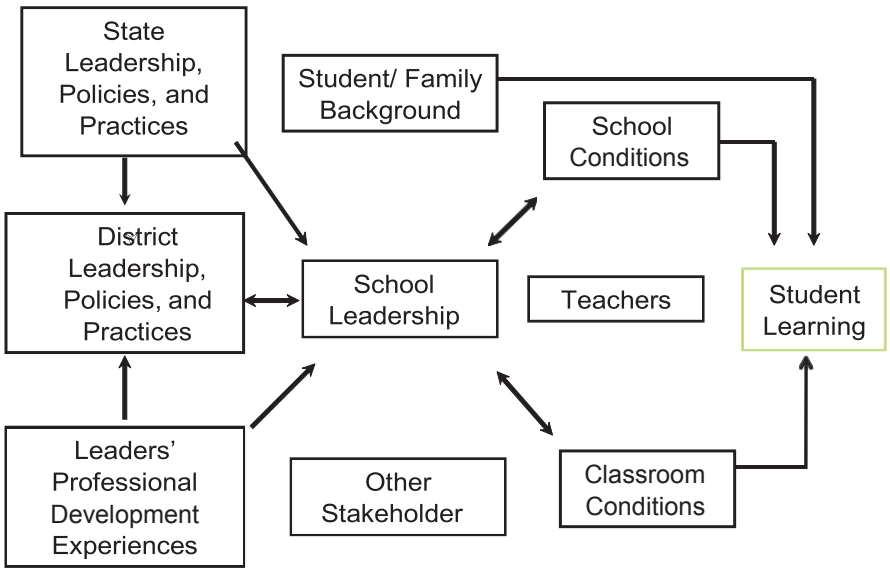
In 2010, the Wallace Foundation published *Investigating the Links to Improved Student Achievement: A Study of Collective Leadership*. Leadership is widely believed to be a force for school effectiveness. This study justified this belief through a 6-year research study that examined the multiple levels at which leadership can be exercised in education—from the classroom to the state house. The study identified factors that have been shown to have an impact on student achievement (see Figure 2). The research recognized and focused on many identified behaviors that are thought to be elements of being an effective leader, and pointed to the conditions that encourage or discourage these productive actions, such as the following:

- Principal-teacher relationships focus on student learning and the instructional core.
- District leaders' interactions with principals encompass a theory of action and a focus on instruction.
- Principals are most effective when they see themselves as working collaboratively towards clear, common goals with district personnel, other principals, and teachers.
- District support for shared leadership at the school level enhances the sense of efficacy among principals.
- When principals and teachers share leadership, teachers' working relationships with one another are stronger and student achievement is higher.
- District support for shared leadership fosters the development of professional communities.
- When teachers feel attached to a professional community, they are more likely to use instructional practices that are linked to improved student learning.
- Higher performing schools generally ask for more input and engagement from a wider variety of stakeholders, and provide more opportunities for influence by teacher teams, parents, and students.
- Principals and district leaders continue to exercise more influence than others in all schools; they do not lose influence as others gain it.

- Expectations and accountability measures were identified as a major focus for leadership activity.
- In districts where levels of student learning are high, for example, district leaders are more likely to emphasize goals and initiatives that reach beyond minimum state expectations for student performance, while they continue to use state policy as a platform from which to challenge others to reach higher ground.
- In schools that are doing well, teachers and principals pay attention to multiple measures of student success.
- State initiatives and policies matter.

Finally, we found that, overall, state initiatives matter. States, for all the variability in their approaches to policy making, are firmly focused on standards and accountability. Most make use of state mandates, and pay more limited attention to support and professional development for leaders. The translation of legislative and gubernatorial initiatives into support for schools falls to the state agencies, which are struggling to realize a significant change in their roles, shaped by the standards and accountability movement (Louis, Leithwood, & Anderson, 2011).

Figure 2. Leadership Influences on Student Learning



Source: Louis, Leithwood, & Anderson, 2011

As the Wallace Foundation's Learning from Leadership project reminds us:

School leadership, from formal and informal sources, helps to shape school conditions (including, for example, goals, culture, and structures) and classroom conditions (including the content of instruction, the size of classrooms, and the pedagogy used by teachers). Many factors within and outside schools and classrooms help to shape teachers' sense of professional community. School and classroom

conditions, teachers' professional communities, and student/family background conditions are directly responsible for the learning of students.

School district leadership

American Institutes for Research (Dailey et al., 2005) conducted a review of the research on school district reform and reinforced a number of earlier findings while emphasizing the need for a systematic *theory of action* to guide the course of those involved in the change process. The *theory of action* that a school district follows must align with the beliefs and values of the individuals who are involved in the school improvement process to be successful and, more importantly, sustained. Another lesson learned from the past is that genuine change in schools requires time and a sincere commitment of the people involved in the process, coupled with the sense of urgency that the reforms need to be accomplished now.

Accountability

Again, meeting the demands of multiple accountability systems requires strong leadership at the school and district levels. Principals and other administrators and supervisors are not always prepared to be effective instructional leaders in today's age of high-stakes testing and increasingly diverse student populations (Bouchard, Cervone, Hayden, Riggins-Newby, & Zarlengo, 2002). Their educational background and training may not have taught them to analyze and synthesize the complicated issues with which they are presented, and they may not be experts in literacy or other subject areas that they supervise. However, changes in the past decade to professional preparation programs for principals "suggest that there is a movement away from managerial, authoritarian, top down leadership styles" and a "transition towards collegial and empowering forms of leadership [that] has been catalyzed by a reconceptualization of the principal's role" (Behar-Horenstein, 1995, p. 18). This philosophical shift is present in the leadership styles of many successful superintendents of schools and principals who promote distributed leadership and shared decision making as improvement strategies (Spillane, Halverson, & Diamond, 2001; Burney, 2004). Furthermore, many educators who have seen student achievement improve dramatically in their districts will confirm that reaching out for help is a courageous first step toward bringing about genuine, noticeable change. Crucial to improving instruction and achievement within a school is admitting what one knows and what one needs to learn, and then launching reform efforts out of this needs assessment (Togneri & Anderson, 2003).

Change versus Progress

Learning From History

Over the years, schools and school districts have become very good at changing through the adoption of various reform models and school improvement exercises because that is the expectation that some policymakers, private funding entities, and others have placed on them (Cuban, 1990). However, the lesson that we as educators have learned from many years of school reform efforts is that merely changing school structures, adding programs, or allocating additional resources does not automatically result in improved student achievement—change efforts must be well articulated, focused, and sustained over time if genuine progress is to result (Hall & Hord, 1987; Togneri & Anderson, 2003). It takes a great deal of hard work, a dedication to professional learning, and a commitment to success, with an overarching focus on what happens in each individual classroom between teacher and student.

The implementation of school reform strategies has shown us that the quality of the interaction between a teacher and a student has a significant impact on student achievement and other positive student outcomes (Hamre & Pianta, 2005; Sanders, Wright, & Horn, 1997; Bryk & Schneider, 2002). In fact, research suggests that the quality of children's early relationships with their teachers during the first several years of school is vital in shaping children's academic success over time (Silver, Measelle, Armstrong, & Essex, 2005). To attract, retain, and nurture high-quality teachers, school and district leadership must be strong and complementary to teachers' efforts. Therefore, school districts need to build research-backed systems with resources and attention focused on high-quality classroom instructional practices that lead to enhanced student achievement. These systems and practices can provide the mechanisms necessary to meet the demands of the federal *Every Student Succeeds Act (ESSA)* legislation, the *Individuals with Disabilities Education (IDEA)* Act, other federal regulations, and the accompanying state-mandated accountability systems.

Data-driven decision making

In addition to effectively deploying resources, staff in successful schools establish and contribute to a professional culture that focuses on and supports student learning through data-driven decision making (Togneri & Anderson, 2003; Fiske, Reed, & Sautter 1991). Data are not limited to summative standardized assessment results (Blythe & Gardner, 1990); rather, they encompass findings from formative assessments, student portfolios, guided school walk-throughs conducted by the principal, staff and parent surveys, response to intervention, and so on. These data are routinely collected and analyzed to ensure that priorities and resources are appropriately aligned with students' needs. Effective school leadership is inextricably linked to thoughtful allocation of resources and collective support for, and participation in, PLCs that base their priorities and instructional decisions on demonstrated areas of need.

Successful school districts and schools devote funds to train teachers and administrators about using data to inform decisions about teaching, materials, and professional development. What gets measured gets addressed—measurement of the conditions for education in schools, whether as part of a performance management strategy or not, will tend to increase the attention that educators pay to the significance of these factors (Achieve, Inc., 2002; Rothman, Slattery, Vranek, & Resnick, 2002). Professional development should provide teachers and administrators with strategies for using and analyzing data effectively. Data include student achievement indicators from summative and formative assessments, as well as other indicators of progress and success (Fiske et al., 1991; Blythe & Gardner, 1990). Instruction and student supports must be responsive to the unique needs of student populations, including ELLs, students in special education, and students from low socioeconomic backgrounds. In addition, systems are developed to collect and analyze data from the state assessments and any benchmarking assessments that are used to inform the teaching process.

Often overlooked, value-added analyses of student progress can inform instruction by measuring individual student achievement gains to ensure growth opportunities for all students while predicting students' future academic success. Value-added formulas focus resources on those students who might require additional resources, such as ELLs and special education students. Whereas current measures look at the performance of a group of students at an isolated point in time, "value added analysis focuses on the achievement gains of individual students over time" (Drury & Doran, 2003, p. 1). Furthermore, the implementation of value-added analyses helps align a school's professional development efforts to the areas

of greatest need by allowing district and school leaders to use data to make informed decisions about curriculum, instruction, and other student supports. In addition, educators can make data-driven decisions about how to allocate district and school resources to the areas of greatest need to have the maximum impact on student learning. Districts and schools should consider devoting resources to a value-added analysis of student data because this approach will assist educators in ensuring continual progress over time (Drury & Doran, 2003; Raudenbush & Bryk, 2002).

Themes for school improvement

Schools must focus resources and instructional support from the district and, in some cases, state education agencies to be successful in raising student achievement. Stemming from its *theory of action*, a district should consider what policies and strategies would best meet student needs and decide whether to select a particular instructional strategy and implement it across the district, or to allow schools the flexibility to choose their own direction based on a set of criteria. In either case, research has demonstrated that clearly articulated and coordinated school district activities, policies, and procedures are central to the sustained success of sustained schools within a given district.

District resources should allocate funding to develop, articulate, and sustain the chosen *theory of action* over time. Preliminary research indicates that the particular *theory of action* chosen is not as important for long-term success as is the simple act of implementing a *theory of action*. Every school and district must know where it is going and how it is getting there to make progress in today's era of standards-based education and accountability.

Support from a Student-Focused School District

Targeted district support

Although strong leadership is pivotal, school principals alone cannot be held accountable for poor performance within their schools, particularly if they have not been trained and encouraged to build the knowledge, skills, and understanding necessary to improve their abilities as instructional leaders. Raising student achievement must be a coordinated, district-supported effort wherein accountability for student performance is distributed among all district office and school personnel. Furthermore, principals can benefit from leadership development opportunities, such as job-embedded mentoring and peer-to-peer networking activities. Figure 3 illustrates the processes that underline effective instructional leadership at the school and district levels.

In a study done by Reardon (2011), principals rated their own practice of learning-centered leadership behavior (the amalgamation of transformative and instructional leadership that stresses "rigorous curriculum" and "performance accountability"). As a result, "[s]alient, systemic responses to the implications drawn from the principals' self-assessment of their learning-centered leadership provides the context in which the assessment of the principal's leadership drives his or her professional development" (p. 81). Like principals who target "next steps" for teachers, and like teachers who target instruction for their students, district-level support must target, individualize, and personalize its professional learning with (and for) their building leaders, based upon self-assessment and exogenous data. Accordingly, as shown from the study, student outcomes will increase.

Figure 3. Instructional Leadership Functions

High expectations and effective teaching, learning, and professional development

Missions are accomplished and visions are realized when leadership, instruction, and professional development are aligned with schoolwide goals because instructional leadership and practice are the two most important factors in schools (Marzano et al., 2005). Both have an impact on that crucial moment between a teacher and a student when learning takes place, which can be the determining factor for a child in meeting or exceeding standards (Bryk & Schneider, 2002).

Effective teaching encompasses integrated systems of high standards, which are essential for student success. Numerous studies have demonstrated this link (e.g., Venezia, Kirst, & Antonio, 2003; Venezia, Callan, Finney, Kirst, & Usdan, 2005) and have continued to validate and expand the initial work in this area by Rosenthal and Jacobson (1968). The National High School Alliance (2006) provides the following practical guidance in implementing integrated systems of high standards:

- Establish clear and rigorous standards aligned with curricula and entrance requirements for postsecondary education and careers
- Develop and use multiple assessments, including performance-based measures (e.g., portfolios, public exhibitions, capstone projects), that align with standards
- Plan intended outcomes and assessment strategies before initiating a learning activity or project
- Build students' capacity to critique their own work and learning process
- Provide accelerated learning opportunities to help all students meet or exceed standards
- Eliminate academic tracking.

Most of these strategies do not require purchasing materials or adopting a new reform model. Instead, these suggestions require that teachers believe in their students' potential and provide thoughtful opportunities for students to learn and demonstrate their understanding.

A culture of learning is characterized by students, teachers, and school leaders all being held to high standards, and it requires prioritizing student learning over all other matters. High expectations, a curriculum aligned with assessments, acceleration rather than remediation, quality classroom instruction, and job-embedded professional development are hallmarks of successful schools.

Furthermore, much has been written about the development of PLCs and critical friends groups. When teachers are able to develop their skills and knowledge about effective pedagogy and practice in a nonthreatening atmosphere, they build their capacity to focus on and address the needs of all students in their classroom. Sufficient resources should be allocated so that teachers have time to meet and discuss student learning, give and receive workshops and professional development opportunities that build their knowledge base, and receive support from either critical colleagues or coaches. Last, in successful schools and districts, teacher leaders are identified and developed to help guide the culture of learning. Resources can be allocated or redirected to support these capacity-building activities.

Policy and Resources

Effective policy has a key role in student success

"An important reason that school finance systems generally have done a poor job in financing an adequate education is that, in most cases, the formulas that allocate state funds to local school districts fail to recognize that the amount of money needed to provide students with an adequate education is not the same in each school district" (Reschovsky & Imazeki, 2000, p. 2). Some experts (i.e., Ouchi & Segal, 2003) maintain that a Weighted Student Formula, based on the needs of individual students, would be a more effective and fair way of allocating resources to districts and schools. Others believe that decision making about school resources and programs should be made at the district level, where the district can identify programs and target and match available resources to those goals.

Whichever formula or method is used to distribute resources, it should increase the school's capacity for raising student achievement and maintaining that progress.

Money does matter

In addition to providing fiscal and moral support for instructional leadership capacity building, schools and districts need to examine current resource allocations to make decisions about what is necessary to get the school moving toward success for all students.

Ouchi and Segal (2003) stress the importance of providing a thorough education for each individual child through a Weighted Student Formula that can potentially provide the most needy schools and students with the targeted resources that they require for success.[19] Although this individualized, student-centered method has had promising results in some districts, another approach that was successfully used in New York City's Community School 2 (NYC's CSD 2) and elsewhere was a routine assessment of funding impact followed

[19] The Weighted Student Formula is an approach used within some districts to allocate resources to schools based on the composition of student needs attending each school. Resources or dollar allocations are attached to each student based on the student's need characteristics (e.g., family poverty, English language learner status, or disability), and these resources follow the student to whatever school he or she attends.

by efficient reallocation of resources to where they were needed. This approach significantly elevated reading scores in NYC's CSD 2 over a relatively short time (Resnick, Alvarado, & Elmore, 1996).

Both approaches do not require additional funds; rather, they require the courage and resolve to make bold decisions based on the needs of students, not the opinions of adults who may seek to maintain the status quo.

Although funding and resource allocation are important, we all know that simply throwing money at the issue of increasing achievement levels for all students is not the solution. Bringing a school's mission and vision to fulfillment requires examining the tenets of successful schools and districts, and using those best practices to create a model in the context of a local school or school district that fits those unique needs. Some schools and districts not only have examined the possible reallocation of state and local funds, but also have taken the opportunity to change the way they use Title I and IDEA money to better meet the needs of eligible and potentially eligible students. The answer may be adding more resources or simply redirecting those resources along with using some leadership and management practices that have proven to make a difference in raising student achievement and closing the achievement gap.

Effective deployment of resources

Effective school principals recognize that shared accountability requires shared resources. To truly hold everyone accountable for student success, district and school administrators, teachers, and support staff must have the resources necessary to fulfill their roles. In many successful schools, resources are allocated on the basis of the particular needs of individual students. All instructional personnel—including special education, ELL, and general education teachers—must have the materials and support required to teach effectively and meet students' needs. Also, strong leaders hold schools and responsibility centers accountable through various processes such as budget projections and program evaluations.

As an example, Elfers and Stritkus (2014) studied the "ways in which school and district leaders create systems of support for classroom teachers who work with linguistically diverse students" (p. 305). The study lucidly illustrates the collaborative effort between school and district leaders in mobilizing resources to support ELLs Leaders tapped into both human and financial capital resources: principals hired and utilized bilingual teachers to aid in curriculum modifications, leaders tapped into the community to help fund ELL coaches, and district administrators allocated monies for bilingual teachers to provide professional development to general education teachers to support ELLs' achievement in their respective classes.

Local context

It also is important to be cognizant of the school and district context when planning improvement strategies. What works in one school or district may not work in another. For example, many rural schools and districts are experiencing declining enrollments, thus presenting unique challenges that are different from the challenges faced by urban schools and districts (Jimerson, 2004). When enrollments are in chronic decline, rural schools experience great financial hardship because of the loss of per-pupil state revenue. For that reason and others, rural educators have different professional learning needs and delivery systems compared

with those of urban and suburban educators (Tobin, 2006). Therefore, professional development and other supports for rural educators must be responsive to their situational context.

Prevention, not intervention

Safe and positive school climates are fostered by responsive school structures, including prevention and intervention programs for students, particularly at-risk students and students with disabilities. Heckman (2000) conducted a cost-benefit analysis to determine which types of investment (e.g., job training programs, tax reform, higher education subsidies, and early intervention programs) had the most benefit and savings to society. Based on his analysis, he concluded that "the returns to human capital investments are greatest for the young for two reasons: (1) younger persons have a longer horizon over which to recoup the fruits of their investments, and (2) skill begets skill" (p. 3). Heckman demonstrated that a focus on prevention, or early intervention, programs garners greater benefit than do later implemented intervention programs. These findings have been validated in numerous other studies, especially in the areas of early education (Barnett, 1993), preschool (Schweinhart, 2004), mental health (Keenan & Wakschlag, 2000), juvenile justice (Welsh, 2001), alcohol and drug abuse (Wisconsin Clearinghouse for Prevention Resources, 2002), and special education. Therefore, an emphasis should be placed on implementing high-quality prevention programs, although this should not preclude implementing targeted intervention programs.

Policy related to rural school may be different

Policy considerations in rural districts are likely to be different from those in urban or suburban districts (Jimerson, 2004). For example, many states are partaking in the national trend of ramping up course requirements for high school graduation to meet state and national standards, but rural schools often do not have the human or material resources to provide all of the required courses, such as foreign languages or technology classes that require specific equipment and materials, which may not be purchased in school districts with perennially shrinking budgets.

Close communication and collaboration among all stakeholders (especially local school boards and state legislators) can result in a successful consolidation or sharing of services of school districts, which may help alleviate the challenges of debt and declining enrollments. However, a recent study of rural schools in Iowa concluded that creating bigger schools with more classes is not likely to raise student achievement (Johnson, 2006). Given that many challenges faced by rural districts result from recent changes in demographics, as well as from state and federal policies, no definite answer exists for addressing those challenges.

There has been a growing emphasis in discussions of school reform on the importance of a sustained and consistent effort at improvement (McAdams, 2006). This focus directly relates to the significance of the development of a *theory of action* to guide a vision for school improvement over time, regardless of changes in school and district administrators and policymakers. School board members need to work with administrators in developing a district *theory of action* that will have an impact on student achievement across the district. Typically, districts set criteria for schools to meet and then choose to manage that work from district offices in a prescriptive way, or they allow schools to meet those criteria by making decisions at the school level. Some districts adopt a hybrid of the two approaches. One strategy is driven by the district and the other assumes that decisions are better made by those educators who are closer to the students and who know the unique needs of the students.

School and the Community

School community, climate, and connectedness

When students feel connected and valued in their schools and community, they succeed. Successful schools recognize that a safe and orderly school environment is necessary for the establishment of a learning culture. They also attend to the varying and specific needs of the elementary, intermediate, and high school levels, which can vary widely depending on the intellectual, social, and psychological maturity of the age group. In addition, successful schools recognize the need for articulation and communication within and across grades, school levels (i.e., eighth-grade teachers should meet with ninth-grade teachers at the high school), and departments, including special education, ELLs, and Title I. They acknowledge that mechanisms for ensuring smooth school transitions ought to be in place and sufficient resources should be allocated for articulation events for teachers, ancillary staff, parents, and students.

A safe and orderly school environment creates the foundation for student engagement in learning activities. The most competent teachers are those who unite challenging content and effective pedagogy to create a dynamic, engaging learning experience for their students. "In general, students need work that develops their sense of competency, allows them to develop connections with others, gives them some degree of autonomy, and provides opportunities for originality and self-expression" (Brewster & Fager, 2000). Innovations for strengthening student engagement and ultimately raising achievement require the support of school and district administrators because strong teachers need supportive leadership to be successful. Effective and targeted professional development for teachers and school leaders gives educators a better understanding of the strategies that motivate students to learn.

Related to providing engaging instruction—particularly at the intermediate and secondary levels—is the need for a personalized learning environment wherein each student's individual progress is noted and encouraged. Much of the mania surrounding the concept of small school learning communities is rooted in an urgency among educators and communities to locate a solution to the problems of low-performing, impersonal high schools. The recent nationwide interest in small schools has largely been fueled by the recognition that if students receive more personalized attention in small classes, they will feel more connected to their schools, engage more with the material, and ultimately perform better (Deutsch, 2003). Resources should be allocated or redirected to provide a safe, nurturing, and age-appropriate learning environment for students, regardless of school or program size. Clearly, sufficient resources need to be allocated to schools to ensure that students have the out-of-classroom supports that they need to be successful. These resources include, but are not limited to, guidance counselors, psychologists, and social workers.

Enhancing students' connection to school, strengthening their commitment to achieve, and developing their social, emotional, and civic competencies improve academic performance and personal growth (Marks, 2000). Furthermore, students with high career aspirations—which can be nurtured through career development programs—are more likely to be engaged in school (Kenny et al., 2006). Many students experience individual-level barriers to learning (such as social, economic, or health challenges), and the provision of high-quality instruction alone will not improve these children's performance. We know that students who attend safe and nurturing schools are more likely to be academically engaged and less likely to

exhibit problem behaviors, such as drug use or violence. Students are less likely to drop out of safe schools (Rothstein, 2004).

Professional learning communities

In fostering data-driven decision making, a PLC builds the instructional leadership capacity of teachers and administrators. Dynamic school leadership is the most fundamental component of school success because it has a direct impact on the quality of the curriculum, instruction, learning environment, achievement, parent and community engagement, and professional development. Effective school leaders work to focus daily teaching practice and discussion solely on student learning and attainment of state standards. Positive change develops organically out of strong leadership and shared responsibility for student success that focuses on the instructional core; therefore, resources should be allocated for instructional leadership development and support at the district and school levels, such as one-to-one mentoring, teacher leader teams, and peer-to-peer networking activities.

Clearly, establishing PLCs and developing the capacity to effectively collect, analyze, and use data are neither simple nor quick solutions for troubled schools. Fullan and Hargreaves (2012) state, "[t]he current PLC movement should be reconsidered and reconfigured in terms of how well it can become grounded not in implementing outsiders' agendas but in promoting professional capital and all of its three components—decisional, human, and social." Thus, PLCs should focus on the growth of all stakeholders within the school to not only assess data and school performance, but also to bring genuine issues and inquiries to the forefront (Heiftez and Linksy [2017] dub this concept as traditional problems versus adaptive challenges). Careful planning and implementation of these elements require a great deal of patience in the face of urgency, and progress can easily stagnate—or worse, be reversed—in schools and districts with high administrator turnover and other frequent changes.

Enduring learning

Success develops in districts where the leadership is committed to creating and sustaining an atmosphere that supports student and adult learning. The characteristics of many of these districts follow:

- A rigorous and aligned curriculum for all students focused on the instructional core— see Figure 1 (Elmore, 2009)
- An emphasis on literacy and the integration of literacy in all other content areas, particularly for ELLs (Stahl & McKenna, 2006)
- Structures and supports for creating and nurturing safe, supportive, and successful schools (Osher, Dwyer, & Jackson, 2003)
- Professional development with a focus on instructional leadership and literacy (Wixson & Yochum, 2004)
- District support for the establishment of PLCs at the district and school levels (Hord, 1997)
- Student data that are frequently and systematically collected, analyzed, and used to drive decision making (Learning Point Associates, 2004)
- Internal accountability that accompanies external accountability, meaning that responsibility for student learning and meeting benchmarks is distributed among all educators (Burney, 2004).

In successful districts, schools make a collective commitment to improvement because external factors, such as standards and assessments, may not be enough to create the powerful atmosphere that is needed to move schools forward to meet the demands of a state accountability system. The education of our

youth is best addressed in the context of the learning environment that supports the adults who lead the efforts of school reform and accountability.

Parent, community, and business partnerships

The engagement of parents, business leaders, and other community members can contribute to a positive school climate, as well as provide material and human resources that may be lacking. Research indicates that the degree and nature of parent involvement influence students' academic success, including at the middle and high school levels when parent involvement often tapers off (Catsambis, 2002). When families are more involved in their children's education, children earn better grades, attend school more regularly, complete more homework, demonstrate more positive attitudes and behaviors, graduate from high school at higher rates, and are more likely to enroll in higher education than students with less involved families. These benefits of family involvement apply across all income and demographic groups, and from preschool through high school.

Schools and districts may formulate plans for involving parents after determining the challenges to parent engagement in their particular settings. In communities where parents work multiple jobs, providing resources for helping children with homework at home may be valuable for those parents who cannot attend scheduled events. Similarly, "parent involvement programs for rural communities work best when they respond to particular features of the communities they serve" (Maynard & Howley, 1997, p. 1). The programs often provide opportunities for parents to model life management strategies for their children and draw connections between school and the workplace.

In addition to well-planned and implemented parent engagement programs, community and business partnerships can be especially fruitful in rural areas (Warden, 1986). Because rural schools cannot always offer students a variety of course options or a range of extracurricular activities, partnerships with local business and community organizations are an excellent opportunity for students to explore new challenges and engage in project-based learning.

Conclusion

Effective schools build capacity, develop relationships related to effective learning, and monitor progress toward meeting standards. Research on best practices indicates that the most successful school reform strategies are those that emerge through a process involving the entire school community, where various stakeholders come together to design a strategy that meets the unique situational needs of the district. Moreover, the success or failure of any whole-system reform strategy depends on the strength of its implementation; that is, whether it creates tangible and long-lasting improvements throughout the school, the school system, or both. The past decades have taught us that reform happens at the school level, but district supports must be in place to provide and steer resources, professional development, and support and encouragement (a top-down/bottom-up approach). Policymakers, state education agencies, and district administrators need to set criteria, provide support, and allow schools to meet expectations in self-determined ways because educators closest to students know what students need. At the same time, districts need to be ready to intervene in failing schools when necessary.

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Puzzling It Out: The Current State of Scientific Knowledge on Pre-Kindergarten Effects A Consensus Statement

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Available at: https://www.brookings.edu/wp-content/uploads/2017/04/duke_prekstudy_final_4-4-17_hires.pdf

Appendix E: Professional Judgment Panelist Information

Northern Panelist Biographies

Tina Brar

Tina Brar has been an educator in Selma, California for twenty-two years. She has been a third grade teacher, district literacy coach, and BTSA lead for Selma. She has her Master's degree in Reading and a Reading Specialist credential. In her fourteen years as a literacy coach, Tina has had the opportunity to work with teachers at the K-6 level and for six years at the 7-12 level.

Tina's current work includes supporting teachers with understanding Common Core literacy instruction, effective lesson design, and implementing engaging instructional strategies to support the literacy growth of all their students. She is currently pursuing an Ed.D. in Educational Leadership from Fresno State University.

Chris Funk

Chris Funk, a native of San Jose, received his MA in Social Science from San Jose State University in 1991. His career in education started in the classroom as a teacher with the East Side Union High School District at Yerba Buena High School. Eighteen of his 22 years in education were with the San Jose Unified District where Chris served for five years as the Principal of Lincoln High School.

During Chris' tenure, Lincoln High School earned a 21st Century School of Distinction, Lighthouse Award, California Distinguished School Award, a six-year WASC accreditation and improved its API score by 30 points to close the achievement gap between Hispanic and white students by 106 points, a 40% decrease in the gap.

Chris was promoted to Director of Human Resources in 2006 and successfully negotiated successor contracts with all six bargaining units. After one year, Chris was promoted to Assistant Superintendent, Division of Instruction, where during his tenure, the Board of Education passed Equity Policy 2010, which was the backbone to the new strategic plan the Board passed in May 2012. Chris worked at Lincoln High School when SJUSD was the first district in California to usher in the University of California, A-G default graduation requirements in year 1998.

Chris resides in San Jose with his wife Leslie, a chemistry teacher at Leland High School and their two sons, a freshman and senior at Lincoln High School.

Diane Glasser

This is Diane's seventeenth-year teaching in Menlo Park School District and her fifth-year teaching Math Acceleration. Prior to teaching full time at Hillview Middle School, she was an Inclusion Specialist in the district. Prior to working in Menlo Park, she was a teacher at a middle school in the Berryessa Union School District in San Jose.

Diane attended the University of the Pacific in Stockton, where she received her teaching credential, her B.A., two special education credentials and a Master of Arts degree in Special Education.

When she is not teaching, Diane enjoys spending time with her family and friends, traveling, going for walks, watching Netflix and sampling local cuisine.

Matt Hewitson

Matthew Hewitson, principal of Lincoln High in San Jose Unified School District, was honored the 2016 Principal of the Year in December 2016 by the San Jose Silicon Valley Chamber of Commerce. He was awarded for development of community-school partnerships, increasing college-eligibility rates, driving educational innovation for achievement, and empowering students to lead social change.

Matt has been principal for nearly four years and previous to that was the Assisted Principal for the school.

Lupe Jaime

In her role as Director of Early Care and Education at Fresno County Office of Education, Lupe Jaime oversees several early learning programs and initiatives, including the Child Care and Development Local Planning Council (LPC); the Early Stars Quality Rating and Improvement System; the Race to the Top – Early Challenge Grant; the California State Preschool Program Block Grant; the Teen Parent Support Program; and Early Care and Education Workforce Support programs, such as PIECES and the California Transitional Kindergarten Stipend Program.

Prior to her current position, Ms. Jaime was the Deputy Director of Central Valley Children's Services Network. In this role, she managed the Resource & Referral, Subsidized Childcare, and numerous First 5 Fresno County contracts. In addition, she served as an Infant & Toddler Specialist Trainer for WestEd, and a Child Development adjunct instructor at Willow International College.

She is actively involved in her community and currently serves as a member of the Fresno County Child Care & Development LPC, co-chair of the California State University, and the Fresno Central Valley Bilingual Dual Language Consortium. She is a Board Member for the California Childcare Resources and the California Child Development Administrators Association.

Ms. Jaime holds a Bachelor's degree in Liberal Studies and a Professional Clear Multiple-Subject Teaching Credential. In addition, she earned a Master's degree in Cross Cultural Education and a Child Development Director's Permit. Recently, she earned a post graduate certificate in Infant Family Mental Health from the University of Massachusetts, Boston.

Most importantly, Lupe is the proud mother of a 19-year-old daughter, Alexus, who currently is attending University of California, Merced.

Nicole Knight

Nicole Knight is the Executive Director of the English Language Learner and Multilingual Achievement Office at Oakland Unified School District. She is honored to have served Oakland students for the last 19 years as a teacher, teacher leader and instructional leader at the site and district-level.

A National Board Certified Teacher in English as a New Language, Nicole has expertise in language and literacy development of English Language Learners, curriculum development, language program design, and professional development for teachers and principals. She is also the mother of two bicultural, bilingual, and biliterate children, both students at a dual language school in Oakland.

Cheryl Marelich

Cheryl Marelich has been a teacher in Menlo Park City School District for many years. She has been teaching at Hillview Middle School for a couple of years, in the Acceleration reading program and RtI program, supporting English Language Learner students. Prior to that, she taught at Oak Knoll Elementary.

Cheryl was born in Redwood City, and still continues to live there with her husband and two children. Her daughter is in college and her son is just finishing high school. She is an avid gardener and loves being outdoors walking her dogs.

James Parrish III

James Parrish III has dedicated the last 25 years working in the Jefferson Elementary School District. He has been the principal of Benjamin Franklin Intermediate School in Daly City for the past 16 years.

James considers himself a leader who has an adaptive leadership style. He believes in fostering a climate of trust, where innovation and structured, calculated risks are used as a tool of empowerment, inspiration and transformation. James is a leader who sets a high standard of ethics by modeling in collaborative settings effective strategies to engage in high discourse addressing complex and challenging issues that are presented in education and schools today. He is a life-long learner and embraces feedback openly to build environments of trust and respect. With this approach James has found people are motivated to do their best work individually and work as a team collectively. Success is a team effort and does not depend exclusively on one person as we are all in this work together.

James earned his Bachelor of Science degree in Psychology from UC Davis and obtained his California Multiple Subject Teaching Credential at Sacramento State University. In addition, he holds a Masters of Science in School Counseling and Marriage Family Therapy and Masters of Arts-Administrative Education from San Francisco State University.

Octavio Rodriguez

Octavio Rodríguez teaches ninth-grade science at Sequoia High School in the Sequoia Union High School District (SUHSD), Redwood City. He received a Bachelor's in Aquatic Biology from the University of California, Santa Barbara in 1990 and a Master's in Education and a Life Science teaching credential in 1994 from Stanford University. His work to bring engaging, authentic, and appropriately rigorous science education to all students earned him the SUHSD Teacher of the Year Award in 1998. He is especially passionate to teach English Language Learners and students with below grade level academic skill.

From 2001-2009, Rodriguez worked for the Gene Connection program in San Mateo County. In addition to teacher training and biotechnology lab tech support, he also mentored teachers in their

classrooms during their first two years of implementing labs and the accompanying computer and web-based resources. Rodriguez is experienced working with pre-service science teachers, including serving as a mentor teacher; teaching the Science Curriculum and Instruction course at San Francisco State University (2006-7 academic year); leading the science section for the Language Policy and Practice course at Stanford University (2009-12); and teaching the Science Methods and other related courses while serving as the Teacher-in-Residence at San Jose State University (2012-14). He has been serving as a member of the California Teacher Advisory Council (CalTAC) since 2015. CalTAC is under the California Council of Science and Technology (CCST), a nonpartisan, nonprofit advisory organization for the California State Legislature.

Jason Willis

As the Director of Strategy & Performance in the Comprehensive School Assistance Program (CSAP) at WestEd, Jason Willis oversees and guides CSAP's performance and accountability practice that includes supporting state, regional, and local education agencies to align their policies, strategies, and accountability practices to achieve more equitable education outcomes for students.

The performance and accountability practice provides this support through capacity building, facilitation of professional learning networks, policy implementation strategies, and analysis of financial data including the effective use of resources. Currently, California is a primary focus to support implementation of the Local Control Funding Formula (LCFF) law.

Previously, Willis was the Assistant Superintendent of Community Engagement & Accountability for the San Jose Unified School District where he managed the implementation of a five-year strategic plan. Prior to San Jose, Willis was the Chief Financial Officer at Stockton Unified School District and Budget Director at Oakland Unified School District. Willis has advised states, national education organizations, and commissions on the formation of funding and accountability systems including New Jersey, Maryland, Louisiana, the Data Quality Campaign, the National Governor's Association, the California Community Colleges Chancellor's Office and the National Equity and Excellence Commission.

Willis currently sits on the Technical Working Group advising the first national study on the impact of weighted student funding systems. Willis received a master's degree in education policy and finance from Teachers College, Columbia University and a bachelor's degree from The Catholic University of America in Washington, DC. Willis is also a graduate of The Broad Residency in Urban Education.

Southern Panelist Biographies

Kim Dammann

Kim Dammann currently serves as Managing Director of Special Education for KIPP LA Public Schools. KIPP LA is a charter network in Los Angeles with 14 schools that serves 6,600 students. She joined KIPP LA in 2011 and she has overseen the growth of the region’s special education programs and services. Prior to KIPP, Kim was a Resource Specialist Program Coordinator for Total Education Solutions, where she managed the special education compliance and services for over 30 charter schools in the Los Angeles region.

Kim began her teaching career at Five Acres, a school and residential treatment facility for abused and neglected children. In her ten years teaching at Five Acres, she taught kindergarten, second, sixth, seventh and eighth grades. Her last six years were spent in the role of Lead Teacher, overseeing the school’s Junior High Program.

Amy Enomoto-Perez

Dr. Amy Enomoto-Perez has served as a leader in education for the past forty-four years. Her vision has been to promote student equity and provide a world class education for all students and especially the socioeconomically challenged and linguistically diverse student population. She has served as MERGE JPA board member and president for numerous years, and has served as the Los Angeles County Superintendent representative to the state's Fiscal Crisis Management Team and Executive Board for 12 years.

After graduating from UCLA, she worked as a middle school ESL instructional aide and then as a USC Teacher Corps intern at Compton middle and elementary schools. As a TESOL certificate holder, she joined Santa Ana Unified as a teacher specialist in language arts at the K- 5 level. She has also taught ESL and TOEFL classes with adults through the high school and community college districts. She went on to serve as a teacher specialist, assistant superintendent, and superintendent in the Rosemead School District, where she has served over 36 years.

Her proudest work in the Rosemead School District is her passage of 3 GO bonds to modernize all of the school facilities and classrooms for the 21st Century and to partner with the business community including Panda Restaurant Group and Franklin Covey to invest in the schools. The district's elementary schools have been recognized as National Leader in Me Schools for their results in student achievement and student leadership. Amy was recently honored as a nominee for the LACOE Superintendent of the Year. She was also recognized for her achievements as superintendent by Foothill Technology and ACSA Region XV.

Jennifer Freeman

Jennifer Freeman currently serves as the District EL Coordinator at Green Dot Public Schools where she manages the instructional programs and supports for English Learners at 11 school sites. She began this role in 2014 as the founding EL Coordinator and has helped grow the program through coaching teachers, administrators, curriculum specialists and other stakeholders.

Prior to this role, Jennifer taught ELD and Science for 10 years at both the middle school and high school level in LAUSD and Chicago Public Schools. She began her teaching career as a Biology teacher in Ghana, West Africa, where she served for two years as a Peace Corps Volunteer. Jennifer currently resides in Santa Monica with her husband and two daughters.

Erin Oxhorn-Gilpin

Erin Oxhorn-Gilpin is in her 12th year of teaching and is currently teaching a first and second grade combination class at Northlake Hills Elementary School in the Castaic Union School District. Erin has facilitated and provided district level professional development, served as a lead teacher for multiple grades, developed curriculum that has been used district-wide and mentored new teachers. She strives to create a sense of community for her students by developing relationships and creating a sense of family within her classroom.

Erin knows that the profession of teaching is a gift and never takes for granted that parents entrust her to do what is best for their child(ren). They are empowered to believe in themselves as she guides them in

understanding that we all have challenges that we have simply not conquered...YET! Erin was named a 2018 California Teacher of the Year.

Whit Hayslip

Whit Hayslip has worked in the field of early childhood education for over forty years. He is currently serving as a consultant to the David and Lucile Packard Foundation Starting Smart and Strong Initiative with a particular focus on support for young Dual Language Learners and their families. In 2010, Whit retired from his position as Assistant Superintendent, Early Childhood Education for the Los Angeles Unified School District where he was responsible for programs serving over 35,000 children between birth and five years of age.

During his long career he has worked as a District Director of Early Childhood Special Education, as well as a teacher of infants and toddlers, preschoolers and kindergarten-age children. Whit played a key role in the development of California's Transitional Kindergarten program and continues to provide technical assistance to programs throughout the state. He has also been a member of numerous local, state and federal advisory boards related to Early Childhood Education including the Federal Advisory Committee on Head Start Research and Evaluation. Whit is especially interested in the development and support of inclusive early childhood programs and has delivered numerous keynote addresses and workshops on this topic at conferences throughout the world.

Rebecca Mieliwocki

Rebecca Mieliwocki is the 2012 National Teacher of the Year. Selected from 54 state and territorial teachers of the year, Rebecca was awarded the crystal apple for excellence in teaching at the White House by President Barack Obama. She spent a year on leave from the classroom to travel the United States and the globe representing all 3.2 million U.S. public school teachers spreading a message of hope, enthusiasm, and admiration for the wonderful work happening in American classrooms every day. Rebecca had the opportunity to study the education systems, speak, and guest teach at schools in China, Japan, Russia, The Netherlands, Australia, and American Samoa. She still continues to travel, write, speak, and advocate on behalf of America's teachers.

Rebecca has 20+ years of teaching experience in the middle school English classroom, but she is now a teacher on special assignment for the Burbank Unified School District specializing in new teacher induction and secondary level professional development for the district's 650 teachers. She is an EdWeek contributor producing regular blogs on topics in teacher leadership and has published articles, advice columns, and Q&A's for a variety of education publications across the country including Scholastic Magazine, CNN Schools of Thought Blog, Real Simple Magazine, Kappan, and Newsweek. Rebecca has appeared on CBS This Morning, CNN, PBS Television, & The Ellen Show and is co-authoring a guidebook for teacher leaders to be published by ASCD in late 2018.

Alysia Odipo

Alysia has extensive experience as an educator, professional development trainer, and instructional leader. She has served students as a teacher, instructional literacy coach, middle school assistant principal, elementary school principal, director of elementary education for the Bellflower Unified School District, and assistant superintendent of instructional services in Laguna Beach Unified School District. She has led administrators and teachers through key instructional shifts. Alysia's dissertation was on school finance and effective best practices. She works with instructional teams to inform instruction with data to close opportunity gaps for students and develop comprehensive systems of support for students.

Alysia is married and has two daughters. Their family coordinates a not for profit that supports a village in Kenya. She serves as adjunct professor at the University of California, Irvine.

Ryan Ruelas

Ryan Ruelas is a history/social science teacher at Anaheim High School. In the 2015-2016 school year, Ryan was selected to serve on State Superintendent Tom Torlakson's Accountability and Continuous Improvement Task Force, a position he still holds, and in 2016 was selected to represent the National Education Association on the U.S. Department of Education's Negotiated Rulemaking Committee for the Every Student Succeeds Act (ESSA). In 2014, Ruelas helped to establish the BROS program at Cypress, South and Sycamore high schools. BROS is a student-run organization that blends elements of a fraternity, a community organization and a social club to shatter negative stereotypes of young Latino males by helping them excel in school, apply to college and serve their hometown of Anaheim. Ruelas, who serves as teacher advisor to BROS, started the group six years ago. The chapter at Anaheim High has more than 200 members. Ruelas was recently elected to the Anaheim Elementary School District board. He was a semi-finalist for Orange Country Teacher of the Year in 2012, and in 2014, he was awarded the "Apple of Gold: Excellence in Teaching" by the Hispanic Education Endowment Fund (HEEF).

Susan Sherwood

Susan Sherwood has been Superintendent/Principal in Three Rivers Unified School District for the past 21 years. She started her career in education as a preschool teacher 40 years ago, where she felt committed to the importance of a positive, early beginning for our children. While operating a preschool, she went to school to complete her Bachelor's degree, teaching credential, and Master's degree while raising a 2 year old and twin boys and living in the mountains, 1 1/2 hours from the closest university.

This year, she also served as an eighth grade teacher given the district's budget constraints. She has done many things in her career in terms of curriculum and instruction but, most importantly, has always been an advocate for children.

Jennifer Tedford

Dr. Jenifer Tedford has 22 years of experience serving a broad span of students K-12 primarily in the Beverly Hills Unified School District and a brief period in Santa Monica-Malibu Unified School District. She began her career as an English teacher for 13 years and also served as department chairperson. She has worked in administration since 2008, serving as an assistant principal, principal, and chief academic officer. She has considerable expertise in the areas of instruction and curriculum and oversaw the launch of STEM programming K-12 as well as 1:1 technology instruction for the Beverly Hills USD.

Dr. Tedford earned her Doctorate Degree in Educational Leadership from University of Southern California. Her Master's Degree is in Teaching English from Loyola Marymount University, alongside her undergraduate work in English while overseas. During her tenure as an academic program administrator, academic achievement in Beverly Hills Unified increased and significant school recognitions were earned, including California Gold Ribbon School recognitions and Schools to Watch designations in 2015. She has presented at numerous professional conferences, including the 2017 Lead 3.0 Symposium and 2015 California Department of Education STEM Conference, serves as adjunct faculty for Pepperdine University, and serves on the Good Entertainment Foundation Board.

Crechena Wise

A dynamic strategic planner with a passion for student learning, Dr. Crechena Wise is an educational innovator, who has been a catalyst for change in schools. As a graduate of the Rossier School of Education from the University of Southern California with a Doctor of Education, she completed her dissertation study focusing on high performing schools in socio-economically depressed areas. Dr. Wise serves as Vice President of the ACSA Secondary Schools Committee and is the ACSA Region 14 representative. Dr. Wise is currently, the principal of Gahr High School in the ABC Unified School District in which she has been employed over ten years.

Dr. Wise is an extraordinary leader who is undaunted in her mission to provide educational access to all students. Her leadership style exemplifies her goals of authentically engaging student learners and engaging teachers as professional facilitators of learning. With many years of experience teaching a variety of learning abilities, she brings a wealth of knowledge to the school settings she has led.

As an educational innovator, Dr. Wise led Tetzlaff Middle School to become the first magnet school in Los Angeles County to offer Pre-Advanced Placement curriculum to all students. To fund the endeavor, she wrote a grant application to the Federal Magnet Schools of America which granted 1.8 million dollars to the endeavors of changing curriculum and facilities to the school site. During this tenure, Tetzlaff was awarded the California Distinguished School, National Schools to Watch from the California League of Schools, California Board Association awards, and became the only California College Board- Spring Board National Demonstration School. Student performance on the California API scored moved from 2007-2008 score of 789 to 2012-13 score of 858.

Dr. Wise, was newly appointed to Gahr High School in 2016. Since her time the school has received nearly one million dollars in CTE grants which she has dedicated to ensuring that all students have access to pathways to explore career options. She has increased AP course offerings for students and created a transitional language program with her feeding middle school. The focus of the site is to ensure all students, whether they choose college or career, have opportunities to pursue their passions which hopefully lead to life success. Currently, Gahr High School has a 100% graduation rate and she attributes student performance to

proper procedures to manage the school site, quality professional development for teachers, engaging curriculum and instructions for students, and positive a school climate and culture. With an eye for talent, she seeks out the most talented teachers to provide the best for students and learning.

Dr. Wise is truly a school innovator who works to reform schools to ensure all students have access to all educational opportunities that will ensure they prepared for life after high school.

Appendix F: Program Design Documents

PROGRAM DESIGN DOCUMENT – Northern Panel

As mentioned in the general instructions, "the purpose of these tasks is for your team to describe educational programs that, in the judgment of its members, will provide an adequate opportunity for the specified student populations to meet the Desired Education Goals." While the ultimate goal of these deliberations is to arrive at a cost corresponding to an amount necessary for an 'adequate' education in California, we feel it is equally important to understand the design elements from which the numbers are generated.

This PROGRAM DESIGN document is intended for recording panel deliberations on instructional programs designed for schools with varying demographic compositions. This document has three main purposes:

1. To serve as a guide to help panels think about the different resources necessary for delivery of these programs. These resources will be further specified in the Cost Model.

2. To provide the AIR research team and policy makers insight into what resources are considered most effective and necessary to meet the desired educational goals.

3. To build as much transparency as possible into this process. This is particularly important when thinking about how these results will be presented and used by various stakeholders.

This document is organized around the tasks and activities found in the general and the specific task instruction set in the "Instructions" tab in your binder. Please note that all boxes provided in this document are designed to expand as you enter information, and there are projection screens so that all panel members can view the information as it is being entered into the document. AIR has assigned a data entry specialist to assist the panels in entering the narrative developed by the panel into the PROGRAM DESIGN document.

There are no specific restrictions on what information should be included in this document. Please enter as much information as necessary to capture the essential elements and issues that arise during your panel deliberations. Hard copies of the PROGRAM DESIGN document will also be provided so that each panel member can take his/her own notes. Final versions of these documents will be distributed to the panels at the end of the three days or subsequently after that via email. If you have any questions or concerns at any point during these exercises, please consult the facilitator assigned to your panel.

We recognize that this is a daunting task and one that could conceivably require substantially more time than the two-and-a-half days we have provided for this work. However, it is important to keep in mind that the purpose of this exercise is not to prescribe how all California schools should necessarily implement their instructional programs nor exactly how they should allocate their budgets among various resources and services. We are **NOT** asking you to create a "one size fits all" model. *We are asking for what you consider to be a reasonable model of services and programs that might legitimately achieve the desired results at the lowest possible cost. This model will be used to help guide the modification of the existing school funding formula to be used to provide access to resources in schools and districts across the entire state.*

General Instructions

Task 1 has three separate activities and is the most extensive of all the tasks. As mentioned, this task will likely require a fairly substantial portion of your overall time, and the work you do for this task should help to make the remaining tasks easier to accomplish.

Tasks 2-6 each have three distinct activities (one for each school level) that focus on the changes in instructional program design with respect to varying EL, and SE levels and budget cuts. For these remaining tasks, panels should not work to recreate the entire instructional program. Instead, panels should focus primarily on any changes in the program design resulting from the changes in student demographics.

Using the guiding questions below, each panel should develop elementary, middle and high school instructional programs aimed at achieving the desired educational goals. These questions are subsumed into six different themes. However, we recognize that these themes are not necessarily distinct and may overlap with one another. Panels should address these questions and themes in any order that they see fit. **We do not expect that panels will necessarily address each and every question listed below, but rather will use these as a guide to think about instructional programs.**

Below is a table with the themes and questions that you might consider during this phase of your deliberations. These are not necessarily exhaustive, but are rather suggestive of some of the kinds of things you should consider prior to working with the COST MODEL Excel worksheets. We strongly encourage the panels to provide information on the **rationale** behind their decisions and program designs.

Imagine you are no longer at your current school and district, but are charged with creating an instructional design for a new school along with the colleagues joining you in this exercise. This program should be designed to meet the expectations of the Goals Statement.

<table>
<tr><td colspan="2">General Philosophy and Characteristics
- What is the overarching instructional design for this school?
- What will the instructional day and week look like for the typical student and teacher?
- Given the structure of the instructional day, what personnel will be necessary?
- What is the desired distribution of salary schedule step 1-4, 5-8 and 9 or more teachers? Will their roles differ?
- What are the target class sizes and teacher caseloads?
- What are the rationales and expectations behind each of these general philosophies and characteristics?</td></tr>
<tr><td>Special Populations
- How will the special education (SE) program be structured?
- To what extent will SE students be included in regular schools and classrooms?
- How will the EL program be structured?
- How will native languages and cultures be retained and promoted?
- What are the rationales and expectations behind each of these decisions surrounding special populations?</td><td>Supplemental Programs
- Which students should receive early childhood education and preschool services? How will these students be selected?
- Which students will be targeted in the extended day and year programs? What will be the focus and structure?
- Which personnel and non-personnel resources will be necessary to deliver these supplemental programs?
- What are the rationales and expectations behind each of these decisions surrounding supplemental programs?</td></tr>
<tr><td>Professional Development (PD)
- What types of PD will teachers receive? What will be the focus, frequency, structure and duration?
- To what extent will more ‘informal’ (i.e. – coaching, collaborative planning time, etc.) PD opportunities be employed?
- Who will attend and deliver these opportunities?
- What are the rationales and expectations behind each of these decisions surrounding supplemental programs?</td><td>Non-personnel Expenditures
- What types of instructional materials and supplies will be used for classroom instruction?
- What types of instructional materials and supplies will be available for special needs populations?
- What technology will be available to students and teachers?
- What are the rationales and expectations behind each of these decisions surrounding non-personnel expenditures?</td></tr>
<tr><td colspan="2">Support Personnel
- In terms of additional personnel, what instructional support and pupil services will students receive?
- What roles will these additional personnel hold?
- What are the rationale and expectations behind each of these decisions surrounding support personnel?</td></tr>
</table>

General Programmatic Issues that Cut Across Grade Levels

- MS and HS- comprehensive school with core academic program and electives
- Should include after school supports for academic achievement and athletics/other activities- complementary to learning that's happening in the classroom (reinforces)
- Alternative access/differentiation
- Builds climate and community in schools and across schools (e.g., PBIS, Link Crew, etc.)
- Articulation is critical
- Consider PBL, hands on learning, links to industry, electives/following student interests, and other strategies to increase student engagement at all schooling levels (Training is critical: New Tech Network, Buck Institute)
  - "You can't be what you can't see" – develop passion early/ expose kids to options and new interests (e.g., Career pathways – Linked Learning, Career inventory)
  - Include arts (performance)
- Focus on science and needs to support the state's future economy
- Focus on college and career readiness– 5 C's (Communication, Cultures, Connections, Comparisons, and Communities) – define and measure them – create unique opportunity; Senior portfolio, Senior Defense
- Ensure access to advanced courses- AP, etc.
- Links to industry also critical to ensure relevance of learning (applied learning and performance skills- CDE goals)
- Builds professional learning community among teachers, peer to peer learning (including classroom walk-throughs with different lenses) – collaborative learning is more effective than other types of PD
  - Use teacher expertise
- Systematic PD around specific student supports (part of renewing credentials?)
- Sufficient focus on content, too (and how to teach it)
  - We assume teacher prep programs are at their current quality/structure.
- Coaching or other follow up support after training
  - E.g., Teachers train other teachers
- Coordinate PD activities well
  - Don't try to do too many things at once
- Beginning teacher support
- Longer-term plan for Els, defining specific strategies
- Include access to early childhood education as a core part of elementary
- Family engagement is critical – should be a component of all programs, particularly with early childhood education
- Inclusion of special education students and other students (e.g., ELs)- EL and special ed fully included, with access to specific targeted supports
- Appropriate and equitable access to technology
- Supports for both academic and socio-emotional learning/counseling
  - Socio-emotional focus for parents, teachers, staff, and students

- Quality of teachers is critical—so we need effective, purposeful, useful, meaningful systems for personnel evaluation and feedback/growth
  - Well integrated with PD/ cycle that is purposeful
  - Sufficient systems for feedback conversations
- Sufficient systems for formative and summative assessments, with data analysis/review
- Focus should be on student growth
- Students with a common home language other than English should have access to instruction in core subjects in their native language
- Acknowledge diversity of needs for all students, and especially within group of ELs and special education students
- UDL is important
- Skill development is important in addition to just content

Note: panel points out that longer term outcomes are important, and it's important to acknowledge some students with more serious disabilities may not achieve at the current level required by the accountability system (realistic expectations)

Elementary School Program

Task 1: The Base Model Instructional Program Design

Please enter description and rationale below **(**the box will automatically expand to fit your narrative).

Length of the School Year & Day

- 180 instructional days
- 190 contract days: Added 10 days for staff development which are critical
- PLC/planning time available to teachers—professionalism and balance
- More planning time is needed with Common Core requirements
- To cover this, we'll have VAPA, STEAM, foreign language, PE teachers

Core Instructional Program

- Want exposure early, programs like Odyssey of the Mind – for student engagement
- K/1 primary teachers, departmentalized 2-6 – allows for teachers to focus. Time for vertical and horizontal planning time (departmentalized instruction has made a big difference in Sacramento City, also allows students to have multiple teachers and more easily adjust to middle school). They stressed that planning time is still important even if a district chooses not to departmentalize.
- Articulation across grades important and will also be facilitated with vertical planning time (all staff need to participate in PLC training. In addition, PLC leaders need to be trained in facilitation and adult learning)
- 5.5 hours per day includes 50-minute break for teachers covered by STEAM, VAPA, etc.
- PD will focus on helping teachers use time more efficiently
- We want resources to allow schools to set up programs to teach languages in an integrated way- e.g., dual immersion or at least exposure early. This may require another teacher—but it will depend on language skills of existing staff and community resources like universities (may require contracted services).
- Integrated with core reading/writing/math as much as possible.
- Class size- lower class sizes my help community, but may not impact achievement
- Given desire for inclusion and honoring diversity of needs/differentiation
- K-3: 22, grade 4-6: 28 but have + 2 additional FTEs to support differentiation (float as needed)
- Ok to have somewhat larger classes in elementary school if we invest in Pre-K and focus on social-emotional early
- We need more research on class size impacts given the large resource/cost implications
- Aides in TK and K to support social-emotional learning and gradual independence

Transitional Kindergarten & Pre-school Programs

- 100% of four-year olds will have OPPORTUNITY to attend TK- full-day but teacher would do home visits in afternoon some days (part-day some days)
- Provide universal access but give slots to low-income students first

- We expect (on the high end) a 75% participation rate – this is what we based cost on
- Important to avoid TK/K combo so TK can be focused on needs of younger students
- Be clear this is cost for 4-year olds to grade 12 – comparison should be to current K-12 spending PLUS whatever public dollars are already going to Title 5, Head Start, AP, and CalWORKS
- Connect with younger siblings through home visitation, allow current mixed delivery system for 0-3 (though we recommend an overhaul)

English Learner Specialists

- 1 ELD coach – in a bilingual program this person might play a slightly different role
- PD and planning structures will support teachers on integrated and designated ELD
- ELD specialist will also support intake, testing, re-classification

Special Education Program

- Full inclusion but with additional support – 2.5 teachers, 3 aides
- 0.5 SLP for this school's number for low severity, another 0.5 for high severity
- 1 half-time special ed coordinator (under admin)
- Higher severity- one self-contained classroom SDC = 0.5 FTE
- 1 special day class teacher- we assume all 18 high severity aren't in this (some will be autistic kids included in mainstream classes with aides) – SDC should be no more than 10 students (we think 2 FTEs would be too many)
- 4 aides to support autistic students

Change (during follow-up review with the Special Education Specialist):

- Changed high severity general special education caseload from 18 to 9 to ensure high severity students are supported. Maintained similar caseload for Elementary task 6.
- The Cap caseload for speech therapist is 55:1. We therefore assigned 0.5 FTE for high severity students and 0.5 FTE for low severity students (no change).

Instructional & Pupil Support Services

- 1 librarian (this person will help teachers with technology)
- Every school should have access to a nurse—0.5 FTE assumes shared nurse/ on call. Admin is trained to administer meds when needed and take care of skinned knees but not broken bones.
- 1 social worker or family navigator- to address behavior, anti-bullying programs, family referrals etc.
- Share psychologist with 3 other schools (0.25 FTE)

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- We zeroed out instructional contracted services because we don't' know that this is, moved $ to instructional supplies and equipment to cover technology and outdoor ed/field trips

Professional Development (PD) Expenditures

- Invest in teachers as professionals and drivers of learning—included sufficient time to make sure all teachers are competent in literacy, made similar assumptions to middle/high school

Extended Day Instruction & Other Programs Outside of Regular School Hours

- Offer to students who are struggling
- Additional opportunities for enrichment—STEM, VAPA, foreign languages
- Definitely serve all ELs

Extended Year or Summer Programs

- Focus program on academically struggling students including all ELs, focus on K-3 because reading by third grade is critical. Then prioritize 4th and 5th graders who need remediation.
- Goal is to prevent summer learning loss AND offer enrichment/extending learning from school year
- Students shouldn't have to attend summer programs every year—so we assume overall participation rate of 30% (based on state test results—about 25-30% are in lowest category)
- Offer lunch
- Allows teachers to try new strategies for school year
- 2 coaches—2 weeks of ELA coach and 2 weeks of math
- Open up classrooms for teachers to observe – teacher stipends up to $400 up to 18 teachers
- Also provide resources for summer activities for families (e.g., tech, books) –added to materials budget in nonpersonnel

Change (during follow-up review with the Special Education Specialist):

- The extended year program aims to keep student up for next school year, not an enrichment program: 4 hours/day (teachers 5 hours/day), 5 days a week, for 5 weeks
- For the extended year program, keep the pupil teacher ratio 18:1 for general ed students; 7:1 for special education students and 3 EAs for 4 hours/day
- Transportation for high special need students, which can be costly, is not included
- Not all students need the additional resources, but a needy student can be very costly
- What we provided in elementary school high special education should be adequate

Athletics:

- $2000 stipends for 3 coaches – could be athletic or other clubs (e.g., robotics)

School Administration

- 2 Aps – extra person to support evaluation of staff and oversee instruction (something like Guidance Instructional Specialist)
- 1 principal
- 2.5 clerical staff covers TK too

Maintenance & Operations

- 2 custodians
- We assume night cleaning will be covered by district overhead

Task 2: A Change from Average Poverty to a High Poverty

Length of the School Year and Day

- Teacher distribution – more Tier 5-8 teachers since they are experienced but flexible

Transitional Kindergarten

- 90% participation rate in TK

Instructional & Pupil Support Services

- Double social workers so they can actually provide support
- PBIS/ restorative practices – 0.5 aide to help social workers
- 1 full time nurse
- Add aides—floating aide per grade level G 1-3
- Added additional reading specialist
- More support earlier in children's lives
- Added family engagement coordinator position (other student support)

Non-Personnel Expenditures

- We zeroed out instructional contracted services because we don't' know that this is, moved $ to instructional supplies and equipment to cover technology and field trips/outdoor ed

Professional Development (PD) Expenditures

- Increased professional development $$

Extended Day Instruction & other Programs

- Still with after school tutoring/ enrichment 1 hour provided by certificated teacher
- 100% of kids participate – teacher stipends

Extended Year or Summer Programs

- Offered summer school for 50% of kids – before start of year

Task 3: A Change from High Poverty to a High Poverty, High EL Model

Changes based on the High Poverty Model:

Personnel:

- Research suggests extended learning time for ELs – need time for ELD and content, ELs need more time to work with materials. Don't want to cut enrichment, PBL, discussion.
- 8:30-4 school day
- Class sizes under 20- added FTE in K
- Dropped class sizes in grades 4 and 5
- Added floating aides for grades 4 and 5
- We want to minimize pull-outs – use specialists to support in core classes
- Added math specialist (to all models) because of low SBAC scores and need to build these fundamental skills for NGSS and career demands
- Added 0.5 science specialist + 0.5 EA for lab support—science skills are critical, added to base model, high poverty, high EL

- In this school, all teachers are language teachers, content teachers will teach ELD
- 1 ELD support for K-3 and 1 for 4-5, can also support newcomers/intake/re-classification
- ELPAC testing – will be handled by ELD and bilingual teachers, GIS admin, and teacher stipends… teacher stipends covered by ELD EA in budget
- Add 2 bilingual teachers to support dual immersion, flexibility to provide home language support part of the day (one K-3, one 4-5) – one can be newcomer teacher – this school will likely have ~ 20 newcomers in upper grades
- Increased 0.5 to 1 FTE restorative justice coordinator (EA) – to account for cultural mixing and student support overall
- Also added 0.5 EA in other support services to cover these purchased services from district and/or teacher stipends
- Increase community service nonpersonnel for family engagement/child care/etc.
- Reduce after school – enrichment – go back to base model, because we increased length of day
- No changes to summer school – 50% participation

Nonpersonnel:

- EL population increased 36 percentage points, increased books and curriculum by 25%
- Add dedicated PD for EAs on ELD/assessment. PD for unconscious bias as well as culturally responsive classrooms

Task 4: A Change from the Base Model to a High SE Model

General Strategies

43 more special education students, 11 more high-severity students:

- Increase in school psychologists (responsible for the assessments): one additional FTE
- Increase in staffing in special education
- Increase in nurses and social workers
- Increase assistant of technology
- Introduce extended year and day programs for special education students

Special Education Program

- More FTE teachers for low severity and high severity students
- Maximum caseload for speech pathologist is 56
- Add 0.5 FTE to speech pathologists for both low severity/high severity students
- Raise the general special education resource teacher to 2 FTEs
- 18 students including who need one-on-one need, assign 8 FTE EAs (2 resident and 6 floating)

Instructional & Pupil Support Services

- Needs are higher due to more assessments
- Special education cost is district-based, not school-based
- One FTE school psychologist on site
- 0.5 FTE increase for social workers and nurses

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Assistive technology for one-on-one aid for students- added $600 for each high need student to instructional supplies and equipment

Extended Year or Summer Programs

- Special education program should include all high-severity students
- In general education (30% general education+11% low severity) there needs to be teachers taking care of low-severity students, who are not going to the special education program
- The current situation is that there are strict eligibility criteria for special education students going to summer school; However, every student with IEP should have the opportunity to go to summer school (the optimal situation!)
- Caseload 18:1 general education 15:1 special education
- 3 EAs one for each class for general education program; 3 EAs for every class for special education program
- 4 hours/day, 4 days/week, 4 weeks (for both general education and special education summer schools)
- 1 administrator (4 hours class and 2 hours preparation) and same clerical (for both general education and special education summer schools)
- Karen adjusted N196 to 7; 1 administrator (4 hours class and 1-hour preparation) and 1 coach (2 hours class)

  Transfer this special education program to the base model (proportionally)

- Change (during the follow-up review with the Special Education Specialist): carry the program design and caseload from the base model.

Task 5: A Change from the Base Model to a Smaller School

Core Instructional Program

- Class sizes are slightly larger for K-3, lower 4-6 based on how numbers fall—we felt hiring another teacher in K, for example, and having a class size of 17 was too expensive
- Important to allow for flexibility for districts/schools in choosing to create smaller classes that are combination grades, if that's what works best for those kids
- Reduce coaches to half time- still have math and ELA and 0.25 science coach (Keep 3 coaches – don't want to reduce opportunity/options for these kids just because they are in a small school)
- Halved all resource teachers
- 62.5% participation rate in TK (halfway between 50% and 75%)—small rural schools may have much lower participation rates because of transportation but suburban small schools might have high rates
- Halved teachers to similar class sizes to base (slightly higher) but only 1 aide rather than 2 for efficiency (floating aide)

English Learner Specialists, Special Education Program, and Instructional & Pupil Support Services

- Reduced special ed staff proportionately
- Half-time ELD teacher (down from full-time)
- Half time social worker (down from full time)
- 0.5 nurse
- Half time librarian (down from full time)

Non-Personnel Expenditures

- Reduced non-personnel proportionately, with a little extra given to community services supplies/materials (family engagement in rural areas will be key)
- Increased contracted PD services to get to same per FTE cost as base

School Administration and Maintenance & Operations

- Only need 1 custodian (down from 2)
- Clerical down from 2.5 to 1.5
- APs down from 2 to 1
- Don't need special ed coordinator – Special Education Local Plan Area (SELPA) or the special day class (SDC) teacher can help play this role (0.5 "other professional administrative staff" in base model → 0)

Task 6: Determine Programmatic Priorities: A reduction of 10 percent from the Base Model Budget

How would a budget decrease of approximately 10% affect your instructional elementary school program? What would you prioritize? **Please also indicate what impact you might expect to student outcomes in this scenario.**

Length of the School Year & Day

Panelist 2: Reduced planning/training days: from 10 to 8 for teachers, from 25 to 20 for principal, and 10 for clerical and other administrative staff.

Core Instructional Program

Panelist 1: Reduced 3rd and 4th grade teacher FTE by 0.5 each. Need more research that class reduction produces outcomes commensurate with expense. Also eliminated science educational assistant and reduced kinder EA's from 4 to 1.

Panelist 2: Reduced academic coach from 2 to 1, and eliminated the science specialist and science educational assistant. Reduced reading specialists from 2 to 1. Reduced kinder FTE assistants from 4 to 2.

Panelist 3: Reduced academic coach and ELA and reading specialist from 2 to 1.

Panelist 4: Increased the class size for grades 1-3 from 20/21 to about 26 students per class. Our program design document shows target class sizes but immediately notes a lack of research to support across the board lower class sizes, in particular for a population that does not have an expressed, high need. Further, bigger investments in expanded TK and K remain intact suggesting that more rapid socio-emotional development for the students would prepare them for having few additional students in the class. Also, reduced the academic coaches from 2.0 FTE to 1.0 FTE assuming that school moves from 2 weeks to 1 week of coaching. Principal can prioritize coaching to those struggling teachers and leverage PD and non-personnel dollars for other teacher development opportunities.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

Panelist 4: Cut instructional supplies and equipment from $331K to $150K per year. Original assumption was over half is for technology equipment which would not be refreshed on an annual basis. The cut brings allocation more in line with a 3-year refresh program. No impact to student outcomes.

Professional Development (PD) Expenditures

Panelist 1: Reduced PD contracted services and conference travel by about 80%. Core instructional section includes 2.0 FTE Instructional Coaches who can provide ongoing PD in lieu of sending all teachers to a weekend conference every year.

Panelist 2: PD professional services reduced to $1000/FTE

Panelist 3: Reduced travel and dues by 50%. PL can be provided by local providers.

Panelist 4: Reduced travel and dues by 50%. Teachers find efficiency in travel and/or attend more regional convenings. No impact to student outcomes.

Substitutes
Panelist 2: Reduced from 2 to 1 assistant principals.

School Administration
Panelist 1: Reduced 1 assistant principal and 0 .5 professional admin staff.

Panelist 2: Reduced sub costs from 11 to 8 per FTE.

Panelist 3: Since vice principal has been added, the other 0.5 administrative staff position can be eliminated or reduced to a 0.25 position.

Middle School Program

Task 1: The Base Model Instructional Program Design

Length of the School Year & Day

- 180 instructional days per year
- 190 teacher contract days per year
- 45-minute period

Core Instructional Program

- 7 periods per day: Math, science, ELA, Social studies, PE, elective, and a second elective or intervention
- Teachers will have 2 planning periods per teacher per day (one common planning, one personal planning)
- 100 percent of students take full year of core subjects. An additional 40 percent will be enrolled in a language or literacy intervention class (includes ELD, reading intervention, academic literacy, etc.)
- Students with special educational needs will be in mainstream classes with fewer students and more highly qualified experienced teachers – and also receive additional supports.
- To support more engaged, project/skills-based learning and support inquiry, writing and other critical skills- need smaller class sizes – on average cap size to 27, however there will be variation around this number such that support/intervention classes are smaller (PTR=15:1) and general classes will be larger (PTR=27:1).
- Panel acknowledges that reducing class size, even a bit, will exacerbate the teacher shortage (perhaps requiring higher salaries) and may require additional facilities.
- CTE course (including student leadership classes) and FTEs includes many options for students
- Health ed is included in science
- Dance is counted in PE
- Rolling career-tech classes (different topic quarterly)
- Class sizes for music/drama – larger beginner courses, smaller more advanced courses
- Art needs to be smaller.
- More exposure to arts at the middle school level
- Based on the assumption will get at least one-year elective. Some may need additional support instead of electives one year.
- Foreign language- lower ratios because one teacher cannot likely teach multiple languages
- CTE classes will vary locally but will include a trimester of computer science– developing this thinking early (at the middle school age) is important
- Social studies/history important at teaching students to create arguments
- Ed Assistants in extra math and ELA support classes
- EA ratio for science and social studies 0.25 * FTE of teachers
- Tier II- smaller classes; Tier III- needs ELA specialist
- Project/skills-based learning/performance opportunities – within content classes (even more than high school)

- Give students structured choice to increase student motivation/engagement
- Offer structured opportunities for support/tutoring, ensure time for communication between support staff/teacher and core content teachers so support is matched to where student is struggling
- Structure for communication between schooling levels
- RTI – provide opportunities for intensive instruction for kids who need it
- Panel notes concern that funding formula does not fully fund students who arrive after census day.
- Add one FTE activities director in the athletic section
- 1 coach for math, 1 for ELA – helps differentiate learning with teachers – ok for these to be regular teachers on special assignment – but they work more days
- Didn't include department head in academic coaches.

English Learner Specialists

- 0.2 FTE Bilingual resource teacher to provide additional support such as home language literacy or support in subject-specific area (one period per day). Students with interrupted formal education (SIFE).
- FTE English Language Development Specialist. Perform all EL case management duties, teaching with differentiated instruction, compliance duties, provide coaching/PD to general teaching staff.
- Assume 20% of 22% ELs are newcomers. Need some breathing room on FTE teachers to allow for transitions out of newcomer programs.

Special Education Program

- High Severity Students – Two SDC programs to serve highly diverse group of students (each class with certificated PTR of 8:1 and classified PTR 8:3). Para educators included to support inclusion of students outside of the SDC classrooms.
- 1 FTE certificated learning specialist designated to work with more intensive low severity students (those approaching 50 percent of the day in the more restrictive environment and therefore have less access to the general education curriculum).
- Low Severity Students – 3 FTE resource specialists (certificated teachers, one per grade level) each working with 1 FTE Para educator. Perform all IEP case management duties, teaching with differentiated instruction. Students assumed to be mainstreamed/collaborative (resource specialist or Para educator providing support to IEP students in regular class).

Instructional & Pupil Support Services

- 3 counselors, 1 per grade (to serve in academic and social-emotional capacities)
- 1 school psychologist
- Social worker- home visits, clinical mental health, socio-emotional counseling – need 2, needs of middle school kids are high these days

- 2 social workers to provide crisis management services, family engagement/consultation, and clinical support; Social workers are needed for at-risk students (assume 20% of poverty students).
- 0.5 FTE classified staff to provide restorative justice services
- 0.5 FTE classified staff to serve as family liaison (in the other support category)
- The panel discussed the necessity of providing mastery services
- The panel commented that the definition of "technical consultant" is unclear, thus was unable to distribute resources for it
- 1 full time nurse- 600 kids are a lot! Allergies, follow up, epi pens
- 1 librarian
- District needs to provide sufficient tech support/folded into role of teachers – stipends
- Cheryl's school has a ratio of 1: 162 students in EL/RTI/Sped support—feels this caseload needs to be lower.
- Add 1 FTE to train teachers and 1 EA to address IT needs in technical consultants (not yet included in the base model)

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Per pupil spending is not enough. Increase 50% on each item.
- Instructional contracted services: account for centralized services, still needed. Only needs to be increased by 20% for the base model.

Professional Development (PD) Expenditures

- Conference allowance of $2,000 per teacher.
- $50,000 to contract PD services including combination of partner PD organizations (e.g., IB, expeditionary learning/project based framework, etc.), specialized engagements for department/PLCs, and whole school events.
- $200 per teacher and instructional assistant for materials and supplies.
- For IAs, we can use internal resources for PD, but we should provide PD supplies for IAs.

Student Athletic Programs

- Support four sports teams for boys and girls: Volleyball, Track, Soccer, and Basketball. Staffed with 8 coaches and athletics director who will have a stipend of $1,200 each and $4,500, respectively. Assuming 5 away games for each team with transportation cost at $700 per game. Contracted Services: 1) Physician to cover physical examinations for students ($1,600); 2) referees ($200 per game); 3) Uniforms $20 for each student
- The panelists decided to add 1 FTE director into the athletic courses section instead of the stipend.
- Stipend ($1,200) for the coaches is too low; raise it to $2,000

Extended Day Instruction & Other Programs Outside of Regular School Hours

- After school program offering academic support, enrichment activities, physical activities, nutrition.
- 3.5 hours/day, 5 days/week
- 20% student are provided with extended day programs. 180 days offered.
- The contracted service is paid as stipends, not FTEs. Could be count at IAs.
- $150 per student for supplies, $50 per student for clothes.

Extended Year or Summer Programs

- Provide it to 1/3 of students of the general education program, for 25 days, 4 hours/day
- Need at least 2 office staff (clerical) for the summer programs.
- Add 40 hours of preparation in advance to set up the program
- Every class has a teacher and an EA.
- Supplies $20 per student
- For special education students: offer it to all high-severity students, and provide 2 teachers and 6 EAs (the same as special ed classes). Teacher hours should be longer than student hours.
- Supplies $25 per special education student

Change (after follow-up review with the Special Education Specialist):

- Add admin and clerical staff for special education program (following the Elementary base model program design)
- For the Extended Year program, keep the pupil teacher ratio for general ed/special ed programs across tasks and schooling levels: pupil teacher ratio 18:1 for general ed students; 7:1 for special education students and 3 EAs for 4 hours/day (6:1 special education EAs to student ratio)

School Administration

- Attendants and clerks needed
- The number of administrators needs to match the FTE (core courses teachers).

Maintenance & Operations

- Custodians needed as well as1 security staff needed

Task 2: A Change from Average Poverty to a High Poverty

General Strategies

- Small group instructions, more nurse, more aids, more extended (after-school) programs, more social workers and family liaison, more reading specialists, more professional development for teachers (increasing quality than quantity)
- RAT for middle school students may be too high
- The range of needs of students is wider.
- Don't have research showing effective evidence, therefore we need to increase professional development.
- More specialists; More electives; more outside-of-class support
- The message from research studies is "depth over breath"
- Lower the student teacher ratio, increase in-depth blend-in learning programs (extended days), provide high quality materials, more funding for technology for students in variety of needs

- Wrap-around services and behavioral support; strongest intervention in the first year of middle school to help students that are traumatized
- The core instruction should be where the most of the resource is going
  Focus on Tier III students and provide them with good resources. Fund each tier appropriately- core funding vs. extra funding

Core Instructional Program

- Increase the composition of teachers from step 5-8 (the middle Tier) to 45%
- Need to protect electives, even in high poverty schools, to prepare students for college
- Bring down the class size to an average of 20 (to incorporate extremely small-sized classes) on core courses and computer education/the career and technical courses.
- Panelists agree that computer education should be included the graduation requirements (mandatory elective)
- Add 22% additional staffing
- Add an additional coach that trains the teachers

Instructional & Pupil Support Services

- High-poverty populations lead to potential unidentified incidences
- Add additional social workers and assistants
- Add additional 0.5 FTE nurse
- Add additional EA for librarian to free up the librarian, who provides literacy and resources to the high-need students
- Add additional 0.5 EA for family liaison
- Nutrition problem needs to be addressed, use 0.5 EA in the social workers category to serve as a nutrition specialist

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Keep the 50% increase in every category
- Additional funding for instructional supplies and books & curriculum (use the funding from the instructional contracted services)
- Add 22% ($50,000) for technology support for additional teachers and high-poverty student body
- Instructional contracted services: account for centralized services, still needed. Increased by 20% along with other categories.

Professional Development (PD) Expenditures

- Increase PD by 22% to account for the increase in teachers

Extended Day Instruction & Other Programs Outside of Regular School Hours

- Increase the target population (student participation) to 50%
- Additional teachers to support the increase of students

Extended Year or Summer Programs

- Increase the target population (student participation) to 50%
- Additional teachers to support the increase of students
- Special education program remains the same

School Administration

- Add one assistant principal to address the additional needs of students, and more evaluations and more classroom observations

Maintenance & Operations

- Securities are important for neighborhood issues in high-poverty areas, add one additional security staff

Task 3: A Change from High Poverty to a High Poverty, High EL Model

Changes based on the High Poverty Model:

Personnel:

- More ELD, more bilingual teachers– similar to elementary changes
- Translation services
- Newcomer teachers
- Λονγ Τερμ Ενγλισηη Λεαρνερσ (LTEL) courses – in middle and high
- More literacy support for core teachers/more intervention time
- No additional changes to social workers/pupil support
- Increase math specialists
- No class size changes

Nonpersonnel:

- 25% increase in curricular materials- bilingual dictionaries, etc.
- PD- increases similar to elementary, tied to number of teachers – slight increase over poverty – to build in check points with staff

Task 4: A Change from the Base Model to a High SE Model

- The panel agreed that the changes in Middle Schools would be similar as the changes in Elementary Schools.
- According to the instructions of the Special Education Specialist of the Panel, the PJP team transferred the Elementary Task 6 Model proportionally (based on special ed student numbers) to Middle School Task 6 Model, and kept the comparative richer program design from either the original base model or transferred task 6 model.
- For middle school special Ed program, the transferred numbers look good. We need to maintain the same caseload for teachers across different tasks for all schooling levels. However, we need to increase EAs for middle and high schools to support a larger student body:
  Increase 0.5 FTE social worker based on the results of proportionally increase.
  For both middle school base model and middle school task 6, add 0.5 FTE special ed coordinator for inclusion/behavior specialist (other student support services)

Task 5: A Change from the Base Model to a Smaller School

Core Instructional Program

- Class size should stay the same; we shouldn't increase class size because of the lower enrollment
- It may not be realistic to hire 0.3 FTE drama teacher or music teacher; thus, you can't proportionally reduce FTEs for some teachers. Same with the 1.9 FTEs and 2.7 FTEs. However, it is okay to keep the decimals if we are targeting specific class sizes.
- Instead, the panel combined the % of drama/theater, and music classes (60%) in the top row, and provided 1.0 FTE for those teacher roles.
- The panel had a debate on how much EAs the school should have. Our high school principal Matt insisted that we should not have so many EAs.
- Jesse restated the goal statement of the panel, and panel questions how effective are EAs in bringing positive student outcomes. Although more support for EAs could possibly increase their efficiency.
- The panel decided to change the FTE teachers to 1.2 without adding any EAs.
- The panel has a question about the locale of smaller schools. If most of them locate in rural areas, those small schools may need more resources to support "sufficient education".
- We need to make sure that every student has the opportunity to take elective courses. Therefore, the panel decides to keep the FTEs for electives.
- Keep resource teachers and specialists.

English Learner Specialists

- EL staff can work at different schools (schools can share staff members), therefore schools can have decimal FTEs.
- We should keep the bilingual resource teacher as 0.2 FTE. Keep 0.4 FTE.
- The panel questions about the feasibility of having 0.1 FTE.

Special Education Program

- Which is more important? Teachers or EAs?
- Keep the 2.6 EAs for shadowing special need students.
- Change the 0.9 general special ed. FTE to 1.0 to account for the 0.1 speech/language pathologist.

Instructional & Pupil Support Services

- Change the 0.4 FTEs of professional staff to 0.5 to make it more practical (e.g. comes in school 2 days a week and visit homes half day/week).
- Reduce the guidance counselors to 1.0 FTE.
- The decimal FTEs, especially EAs, can be grouped and become full-time staffs who have separate roles. EAs can perform administrative duties or support students and therefore assist professional staff (e.g. Prep for lab sessions).

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Decreased the non-personnel cost proportionally the same as the panel did for the elementary school.
- For school administration supplies and equipment, it's not clear what the costs are.
- Proportionally decreased the Instructional Contracted Service, which definition is not clear, and decided to use it as a cushion for other items.

Professional Development (PD) Expenditures

- keep the per-person spending in PD
- $50,000 contracted services used to bring training sessions in school is large expenditure. Need to bring down since it's not reasonable for small schools. Bring it down to $25,000.
- Travels and dues are too high. $2,000 per person is reasonable, but should not provide conferences opportunities to every staff every year (e.g., one department receives training in one year). Decided to provide travels and dues to 25% of all staff
- Finally decided that every FTE teacher receive 1 training every 4 years.

Student Athletic Programs

- Need less director of athletic program: decrease 50%

Extended Day Instruction & Other Programs Outside of Regular School Hours

- Decrease proportionally, keep the formulas.
- For rural schools, there are higher cost of transportation compared to suburban/urban schools.

Extended Year or Summer Programs

- Keep the formulas, keep the percent of target population to be served.
- One teacher and 2 EAs to support 7 special ed students.

School Administration

- Only need 1 assistant principal, and 2 clerical staff.

Maintenance & Operations

- Only need 2 custodial staff, and 1 security personnel.

Task 6: Determine Programmatic Priorities: A reduction of 10 percent from the Base Model Budget

How would a budget decrease of approximately 10% affect your instructional middle school program? What would you prioritize? **Please also indicate what impact you might expect to student outcomes in this scenario.**

Length of the School Year & Day

Panelist 2: Reduced training/planning time: from 10 to 8 for teachers, assistants, and support staff; from 35 5o 25 for principal.

Panelist 4: Increased teacher load from 5 to 5.5 which means they keep the one common planning period per day and receive approximately 2 periods of individual planning time per week. As a result, dropped extracurricular FTE by a total of 4. Even with this reduction, teachers continue to retain sufficient planning time throughout the week and retains important common planning time.

Core Instructional Program

Panelist 1: Eliminated EA's in mainstream classes. No evidence correlating EA's to student outcomes. Trimmed classroom FTE across subject to allow class size near 30.

Panelist 2: Reduced the number of ELA and math teachers to 4.7, the same as the other content teachers. This will mean less capacity for support classes and higher class-size.

Instructional & Pupil Support Services

Panelist 2: Eliminated technical consultant

Panelist 4: Zeroed out EA and reduced professional staff for technical consultants to spread time across two media specialists versus one. Also reduced guidance counselors from 3 to 2 recognizing that the school psychologist can shift some responsibilities to pick-up from guidance counselors. Also, reduced EA under social worker as well.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

Panelist 1: Eliminated instructional contracted services.

Panelist 4: Reduced various non-personnel costs by program or service to bring in line with current spending. If necessary, school can make the decision to reallocate non-labor resources.

Professional Development (PD) Expenditures

Panelist 1: Eliminated contracted services and PD travel budgets. Research shows that directed coaching producing better outcomes that one-off conferences or trainings.

Panelist 2: Reduced PD

Panelist 4: Reduced various PD costs by program or service to bring in line with current spending. If necessary, school can make the decision to reallocate non-labor resources. Self-directed PD has shown to be less effective than directed, meaningful coaching.

Substitutes
Panelist 2: Average day absent from 11 to 8

High School Program

Task 1: The Base Model Instructional Program Design

Length of the School Year & Day

- Same days of instruction as the middle school.
- The school demographics changed (less EL students), therefore the needs of students also changed.
- There needs to be 8 periods of class every day for some of the students, and 5 periods of class for some students. Senior students have less classes. Therefore 6.25 periods of class on average should account for the variations. School should offer 8 periods of class every day.
- We assume higher steps equal higher teacher quality.
- The optimal distribution of teachers (of different steps) needs to reflect a mix of experience and mindset.
- High schools need to have more experienced teachers than middle schools do.

Core Instructional Program

- Change the provision of PE to 50% since high school students don't need 4 full years of PE classes.
- Change the provision of science classes and foreign language classes, which can be built into elective classes, to 75% to meet the 3 years A-G science class requirements.
- Change the provision of art, dance, drama, and music classes to 25% to meet the 1-year elective class requirement in A-G.
- Higher ratio of Career Technical Education (CTE) classes than middle school. 75% guarantees 3 years of CTE classes and other electives.
- Health education is not included in the science classes, and is needed for half year of classes, increase to 12.5%.
- Keep small class sizes (n=27)
- PE class size should be much smaller than it is in reality. Incorporate the team sports % into PE class %.
- EAs are less effective in high schools. But still needed to provide support.
- Keep 140% provision for English Reading class to provide flexibility for students in need.
- Add 25% of science, history/social sciences, and foreign languages classes to account for the provision of IB and AP courses. Adjust FTEs accordingly.
- Academic directors include 7 department heads. Add 3 academy coordinators. Should add one additional FTE department head instead of stipend because the role requires not only $ but also time commitment.
- High school requires more flexibility.
- Need one activities director and one athletic director, 2 FTEs in the athletic program section

English Learner Specialists

- Although the EL% dropped by half, the service is still needed for EL students.

Special Education Program

- Special education percent remains similar.

Instructional & Pupil Support Services

- School psychologists are part of the special education services?
- 2 academic counselors for each grade (to help as-risk student's graduate) + 2 college pathways and career counselors with different specialization. 10 counselors in total.
- Other services should remain the same.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Remain the 1.5 times increase
- Instructional contracted services: account for centralized services, still needed. Only needs to be increased by 20%.

Professional Development (PD) Expenditures

- 4 times of PD contracted services
- We need to skip the "scarcity mindset"
- PD is the reason that holds the California education back, therefore we need to focus on getting more funds on PD

Student Athletic Programs

- Add 2 FTEs for the athletic coach and activities director in the athletic courses section in R90
- Stipend needs to be higher
- Varsity and JV for 10 different sports, 40 teams in total, more than one coach per team
- Stipend = $2,500 for each coach
- Bus trip fee = $1,000 for each game away
- Average cost for uniforms, used Matt's school for reference ($17,000 for 700 students participating in sports).
- Stipend ($2,500) for the coaches is too low; raise it to $3,000

Extended Day Instruction & Other Programs Outside of Regular School Hours

- No afterschool programs
- Only need to provide safety net to some students
- 2 hours/day teacher time including planning time for after school programs that incorporating possibilities for Saturday programs
- Ideal teacher to students ratio 1:25
- Clubs- rehearsals and performance, $150 for non-personnel supplies for each student
- 6 clubs 2 days/week for 25% of the students, remain the same
- Proportional increase for stipend

Extended Year or Summer Programs

- We really want to engage students to come to summer schools for credit recovery. Aim for 1/3 of the student body. The program is going to be longer. 4 hours/day for 6 weeks. (one cycle equals 60 hours for 5 credits, for 2 cycles). Class size remains at 25.
- Teachers work 5 hours/day including preparation time.
- Add 2 security staff, keep the 2-clerical staff
- We don't account for the fee for construction/maintenance during the summer time.
- We need 6 EAs that work 4 house/day for EL students.
- Assume that the high-severity students (n=33) are not included in the general summer schools. Therefore provide 2 classes for those students. 2 FTEs (5 hours/day) and 3 EAs (4 hours/day) per each class.

Change (after follow-up review with the Special Education Specialist):

- Add admin and clerical staff for special education program (following the Elementary base model program design)
- For the Extended Year program, keep the pupil teacher ratio for general ed/special ed programs across tasks and schooling levels: pupil teacher ratio 18:1 for general ed students; 7:1 for special education students and 3 EAs for 4 hours/day (6:1 special education EAs to student ratio)

School Administration

- 1 principal, 5 VPs including 1 instructional VP and 4 grade-specific VPs.
- Matt strongly advocated for 2 additional administrators for behavioral and school securities.
- Budget professionals are not necessary; the principal should be responsible.
- Nicole advocates for 1 one operations director (business, marketing, etc.).
- 8 classified staff for clerical and office staff registrar, secretary, 2 attendants, general office clerical, student bank clerk, textbook clerk. 1 secretary for the principal, 0.5 secretary for each VP.

Maintenance & Operations

- 10 full-time custodians (2-3 shifts every day, they need to take care of every event and summer schools, etc.)
- full-time securities that also work during the summer

Task 2: A Change from Average Poverty to a High Poverty

General Strategies

- Mirroring the changes in middle school to high school

Core Instructional Program

- Decrease the class size for the Health Education classes to address the nutrition issues of the high-poverty students
- Keep the 22% increase in teachers and staff
- Gifted resource teachers should already be included in the academic coaches duties

Instructional & Pupil Support Services

- Add 0.5 FTE nutrition specialists to address the nutrition needs
- Add 0.3 FTE school nurse
- Add 1 FTE to train teachers and 1 EA to address IT needs in technical consultants
- Increase the family liaison for the high as-risk students

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Instructional contracted services: account for centralized services, still needed. Only needs to be increased by 20% because of the increase of the teachers.

Extended Day Instruction & Other Programs Outside of Regular School Hours

- Keep the realistic 20% target student rate
- Provide more teachers to run well-structured after school program
- Can use library as the drop-in homework center
- 2 EAs to support teachers

Extended Year or Summer Programs

- Increase the target student ratio to 50%
- Increase the staffing proportionally according to the increased coverage
- Special education summer program remains the same

School Administration

- Maybe over staffing in the base model

Maintenance & Operations

- The Elementary group panelists raised concerns about having too many custodians in the Middle school program design, but the Middle group panelists decided to keep the 10 custodians.

Task 3: A Change from High Poverty to a High Poverty, High EL Model

Changes based on the High Poverty Model:

Personnel:

- More supports needed for ELs close to graduation
- Increase summer school attendance
- More support for college application completion
- Translators needed
- No change in FTEs— but courses offered might be different
- Credit recovery program—covered in high poverty model already
- Similar budgeting for testing coordination
- Sufficient technology /software
- Panel notes that population might increase if kids enter at a late age, could graduate after 18

Nonpersonnel:

- Increase curriculum/materials by 25%

Task 4: A Change from the Base Model to a High SE Mode

- The panel agreed that the changes in High Schools would be similar as the changes in Elementary Schools.
- According to the instructions of the Special Education Specialist of the Panel, the PJP team transferred the Elementary Task 6 Model proportionally (based on special ed student numbers) to High School Task 6 Model, and kept the comparative richer program design from either the original base model or transferred task 6 model.

Task 5: A Change from the Base Model to a Smaller School

General Strategies

- The high school principal Matt stresses that we need to preserve additional staff in 2 areas -college/career counseling and technology education program? (with proportional decrease, but preferably can have more resources)
- It's important to increase art, dance, drama, and music teachers to 0.2 FTE (students need at least 1 period of those classes). Need to enrich VAPA by keeping small class sizes.
- Rounded counselor FTEs up from 1.9 (proportionately reduced) to 2.0.
- Proportionately reduced other personnel and non-personnel.
- Reduced APs to 1 (similar ratio to students as in middle school).
- Base model had 2 APs for behavior/security—reduced this to 0.5 for smaller school.
- Reduced to 2 clerical staff- same as in similarly-sized middle school low enrollment model.

- Reduced to 2 custodians and 1 security person- same as in similarly-sized middle school low enrollment model.

Note: The panel agreed that the changes in High Schools should be the same as the changes in Middle Schools, with the cost proportionally increased based on different enrollment in middle and high schools.

Task 6: Determine Programmatic Priorities: A reduction of 10 percent from the Base Model Budget

How would a budget decrease of approximately 10% affect your instructional high school program? What would you prioritize? **Please also indicate what impact you might expect to student outcomes in this scenario.**

Length of the School Year & Day

Panelist 2: Reduced planning/training days from 10 to 8 for teachers, assistants, support staff and from 35 to 30 for principal.

Panelist 4: Increased teacher load from 5 to 5.5 which means they keep the one common planning period per day and receive approximately 2 periods of individual planning time per week. As a result, dropped extracurricular FTE by a total of 7. Even with this reduction, teachers continue to retain sufficient planning time throughout the week and retains important common planning time.

Core Instructional Program

Panelist 1: Trimmed FTE across subject areas to allow for class sizes of 30.

Panelist 2: Reduced academic coaches to 4.0; Eliminated educational assistants for social studies and science with the idea that assistants can be used flexibly across content areas driven by student need.
Reduced to 2.0 reading specialist FTE; Reduced to 6 FTE for CTE courses

Panelist 4: Dropped academic coaches from 6.8 to 5.0. Prioritize their time to struggling teachers and other teachers lean on PD activities with peers to advance their learning and professional growth.

English Learner Specialists

Panelist 2: Reduced to 1.5 EL specialist.

Instructional & Pupil Support Services

Panelist 1: Reduced academic counselors to 1 each for 9th and 10th, and 2 counselors for 11th and 12th each. Reduced librarian and tech consultants.

Panelist 2: Reduced number of guidance counselors from 10 to 8 and other school personnel from 2.4 to 2.0.

Panelist 4: Reduced counselors by a total of 3, now 1.5 FTE per grade level and 1 for college/career guidance. Dropped school psychologists to 1.0 and other student support positions to 2.0 as well. Prioritize activities under mandated activities then align remaining time to priorities of the school.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs
Panelist 1: Eliminated contracted instructional services.

Panelist 4: Reduced non-personnel expenditures back to current school-wide cost. Effective decision-making can be made to allocate non-labor expenses that are prioritized under the goals and strategies of the school.

Student Athletic Programs
Panelist 2: Reduced coach stipend to $2000.

Substitutes
Panelist 2: Reduced from 11 to 8 days of subs/FTE.

School Administration
Panelist 2: Reduced APs by 1 FTE; Reduced to 8 clerical staff.

Panelist 4: Reduced AP by 1.0 FTE.

Maintenance & Operations
Panelist 2: Reduced security personnel to 4.

District and Regional SE Services and Resources Task

Using the questions below, each panel should describe district and/or regional level services provided for SE students. Please remember that these resources and services should complement school level instructional programs. In addition, panels will have the opportunity to review the work completed in the Base Model when the panels reconvene.

What staff and non-personnel expenditures are needed to provide related services not already captured in your school prototypes for all SE students (e.g., those served in neighborhood schools, district programs, or special school placements) and how will these services be delivered?

Please assume that these are related services that may be required by only a relatively small percentage of students in any given school and would therefore likely be more efficiently provided out of the central district office.

- 639 special education students in the district
- San Jose USD currently has 1 director and 5 managers to support 3,000 special education students, but the staffing is not adequate
- 1 FTE director/administrator
- 0.5 FTE Interpreter
- Medical services and speech pathologists are accounted in the school-level cost models
- 2 FTEs modified physical education teacher (handicapped students)
- Needed: resource profiles at the district level
- Contract out the services if there is only a small number of students who need the service
- Assume: 33% of OHI and 33% SLD students need the OT service; need 4 FTEs occupational therapists (caseload 27)
- For high school: work study coordinator, one for each high school and one at the district level

According to the Special Education Specialist, most districts would have the following breakdown of specialists:

- Learning Specialists (teachers who have special education credentials - who provide academic instruction and support for students with learning disabilities and for the other 12-qualifying categories). A resource specialist who serves students with non-intensive needs can carry a caseload of 28-students. For students with more intensive needs, 50% or more of their day in special education, those caseloads are usually significantly less, more like 12 - 14 students per Learning Specialist.
- Speech and Language Therapists - usually 1-per school - they can carry a caseload of about 56-students with speech and language deficits
- Occupational Therapist - maybe 4 to 6 for a district of that size. Not every student with an IEP will require OT support.
- APE - Adaptive PE Specialist - 2-per district of that size

- Inclusion Specialist/Behavior Specialist - 5-6 for the district - their role is to integrate students with intensive needs into the general education setting.
- School Psychologist - 1 per school
- Deaf & Hard of Hearing Specialist - 1-per district
- Physical Therapist - 2 per district
- Paraeducators - 6-8 per school to serve students with intensive needs (1:1 support) and in specialized programs (SDC, RSP, etc.)
- Assistive Technology Specialist - 2-per district - for students who may need assistive technology for communication and to access instruction
- Nurses, 1-per school would probably be ideal.

PROGRAM DESIGN DOCUMENT – Southern Panel

As mentioned in the general instructions, "the purpose of these tasks is for your team to describe educational programs that, in the judgment of its members, will provide an adequate opportunity for the specified student populations to meet the Desired Education Goals." While the ultimate goal of these deliberations is to arrive at a cost corresponding to an amount necessary for an 'adequate' education in California, we feel it is equally important to understand the design elements from which the numbers are generated.

This PROGRAM DESIGN document is intended for recording panel deliberations on instructional programs designed for schools with varying demographic compositions. This document has three main purposes:

1. To serve as a guide to help panels think about the different resources necessary for delivery of these programs. These resources will be further specified in the Cost Model.

2. To provide the AIR research team and policy makers insight into what resources are considered most effective and necessary to meet the desired educational goals.

3. To build as much transparency as possible into this process. This is particularly important when thinking about how these results will be presented and used by various stakeholders.

This document is organized around the tasks and activities found in the general and the specific task instruction set in the "Instructions" tab in your binder. Please note that all boxes provided in this document are designed to expand as you enter information, and there are projection screens so that all panel members can view the information as it is being entered into the document. AIR has assigned a data entry specialist to assist the panels in entering the narrative developed by the panel into the PROGRAM DESIGN document.

There are no specific restrictions on what information should be included in this document. Please enter as much information as necessary to capture the essential elements and issues that arise during your panel deliberations. Hard copies of the PROGRAM DESIGN document will also be provided so that each panel member can take his/her own notes. Final versions of these documents will be distributed to the panels at the end of the three days or subsequently after that via email. If you have any questions or concerns at any point during these exercises, please consult the facilitator assigned to your panel.

We recognize that this is a daunting task and one that could conceivably require substantially more time than the two-and-a-half days we have provided for this work. However, it is important to keep in mind

that the purpose of this exercise is not to prescribe how all California schools should necessarily implement their instructional programs nor exactly how they should allocate their budgets among various resources and services. We are **NOT** asking you to create a "one size fits all" model. *We are asking for what you consider to be a reasonable model of services and programs that might legitimately achieve the desired results at the lowest possible cost. This model will be used to help guide the modification of the existing school funding formula to be used to provide access to resources in schools and districts across the entire state.*

General Instructions

Task 1 has three separate activities and is the most extensive of all the tasks. As mentioned, this task will likely require a fairly substantial portion of your overall time, and the work you do for this task should help to make the remaining tasks easier to accomplish.

Tasks 2-6 each have three distinct activities (one for each school level) that focus on the changes in instructional program design with respect to varying EL, and SE levels and budget cuts. For these remaining tasks, panels should not work to recreate the entire instructional program. Instead, panels should focus primarily on any changes in the program design resulting from the changes in student demographics.

Using the guiding questions below, each panel should develop elementary, middle and high school instructional programs aimed at achieving the desired educational goals. These questions are subsumed into six different themes. However, we recognize that these themes are not necessarily distinct and may overlap with one another. Panels should address these questions and themes in any order that they see fit. **We do not expect that panels will necessarily address each and every question listed below, but rather will use these as a guide to think about instructional programs.**

Below is a table with the themes and questions that you might consider during this phase of your deliberations. These are not necessarily exhaustive, but are rather suggestive of some of the kinds of things you should consider prior to working with the COST MODEL Excel worksheets. We strongly encourage the panels to provide information on the **rationale** behind their decisions and program designs.

Imagine you are no longer at your current school and district, but are charged with creating an instructional design for a new school along with the colleagues joining you in this exercise. This program should be designed to meet the expectations of the Goals Statement.

General Philosophy and Characteristics - What is the overarching instructional design for this school? - What will the instructional day and week look like for the typical student and teacher? - Given the structure of the instructional day, what personnel will be necessary? - What is the desired distribution of salary schedule step 1-4, 5-8 and 9 or more teachers? Will their roles differ? - What are the target class sizes and teacher caseloads? - What are the rationales and expectations behind each of these general philosophies and characteristics?

Special Populations - How will the special education (SE) program be structured? - To what extent will SE students be included in regular schools and classrooms? - How will the EL program be structured? - How will native languages and cultures be retained and promoted? - What are the rationales and expectations behind each of these decisions surrounding special populations?	Supplemental Programs - Which students should receive early childhood education and preschool services? How will these students be selected? - Which students will be targeted in the extended day and year programs? What will be the focus and structure? - Which personnel and non-personnel resources will be necessary to deliver these supplemental programs? - What are the rationales and expectations behind each of these decisions surrounding supplemental programs?
Professional Development (PD) - What types of PD will teachers receive? What will be the focus, frequency, structure and duration? - To what extent will more 'informal' (i.e. – coaching, collaborative planning time, etc.) PD opportunities be employed? - Who will attend and deliver these opportunities? - What are the rationales and expectations behind each of these decisions surrounding supplemental programs?	Non-personnel Expenditures - What types of instructional materials and supplies will be used for classroom instruction? - What types of instructional materials and supplies will be available for special needs populations? - What technology will be available to students and teachers? - What are the rationales and expectations behind each of these decisions surrounding non-personnel expenditures?
Support Personnel - In terms of additional personnel, what instructional support and pupil services will students receive? - What roles will these additional personnel hold? - What are the rationale and expectations behind each of these decisions surrounding support personnel?	

General Programmatic Issues That Cut Across Grade Levels

- NF2 (collaborating between and among schools)
- General foundational principles of the base model rationale are in support of Social-Emotional Practices (SEL), the prioritization of interventions, and in favor of the roles of counselors to support this work.
- Disparity for cultural proficiencies; layering of gender awareness in the language provide; what electives do they choose.
- LCFF funding, in YR 2; use supplemental funding for classroom reduction; can use these funds in resourceful ways. Sustaining classroom reduction since it shows to increase gains
- Focus on preschool (K-3)
- Professional Development can only be done well with enough time
- Support and build school administrator leadership & PD knowledge
- Also factor in PD for teachers to be able to get teachers to efficaciously learn necessary skills to support variety of student needs.
- Support for teachers in PD including connecting the core teachers' skills. Creating a partnership [co-teaching model] and in building individualized supports.
- Special ED- build from a perspective of inclusion
- Think systematically to provide teachers some type of RTI model
- There is also a correlation between EL and Special ED challenges
- DLL- to support students to master reading and in writing in their native language before learning a new language; not having students being pulled out of their class rather there is designated support during class- block schedules lends itself to this
- When training new teachers, think about the language objective in addition to the content objective; roles of community liaisons to connect families to education and development of DLL.
- Type of Support needed for DLL success: social workers (even stronger, multilingual ones)
- New National Academy on Dual Language- know this information as we develop programs.
- Consider Wraparound Systems
- Consider vertical alignment, but also not being bound to this.

- **Homework Framework**

  -Examples of Models; incorporating practical skills to achieve student gains/ doing homework meaningful, family-oriented.

  -Educate parents to understand the importance of homework. Not issue anything strenuous or time-consuming with a focus on building fluency, particularly for Reading/English and Mathematics.

  -General rule is +10 minutes per grade level.

  -Utilize resources like Boys and Girls and Club; not all schools have access to the resources.

- Planning Time
  -PLC: all grade levels released together for collaborative planning

Elementary Group Goals:

- Think more about the instructional approach
- Team-based approach that would allow a group of professionals to address needs, emotional and academic of the student (multi-tiered system of approach). An enriching school atmosphere is a draw for teachers and would give educators opportunity to intervene early and often.
- Integrating instruction, it is not the teacher's student but the school's student; collaborative approach.
- Instructional Design
  -How to streamline resources, when students receive interventions that teacher get their preparation time. Reflective practice
  -Developing ways to incorporate data-informed decisions. Careful not use terminology data-driven, which usually means assessment.
- Focus more on building the PD to execute and implement the additional language.
- A team that is focused and moving from the time that the school day starts.
  -In schedule- everything should feel deliberate/ intentional

Elementary School Program

Task 1: The Base Model Instructional Program Design

Please enter description and rationale below **(**the box will automatically expand to fit your narrative).

Grade levels vary by district. For this activity focus is K-5

Length of the School Year and Day

- There is variation among schools, but the team will focus on a Full Day to be able to build in language intervention support, and to incorporate K and preschool.
- 185 days total school days for children, plus 10 days of planning for teachers
- Hours are 37.5 contract hours/week- =7.5*5
- Student Hours 32.5/week =6.5*5
- The FTE is an issue, because if we extend the day it's important to pay teachers the extra time.
- Education Aids: +10 contract days; for appropriate PD; same hours as teachers because when teachers are preparing for classrooms they share in classroom tasks like making copies, making calls to parents.
- Teachers burn out from the expanded school year timeline.
- Maximizing time in the classroom, but also adding reflective time for the teacher to prepare and build on the individualized support and build their instructional practices
- But also match the length of the day to the development of the student along with the realistic capacity of the teacher, i.e. Kindergarteners needs breaks throughout the day
- Idea to incorporate LCAP goals into the teacher preparation time.
- There are additional extended professional obligations that are not counted in these days.
- Regarding the contract time for other staff: we assigned 25 hours in the planning, training, or administration cell for the clerical/office/non-certified school staff to open the office and do the registration
- The composition of the teacher staff, reflects that more experienced teachers will provide support and will provide leadership. It also allows for teachers to gain seniority. Embedded teacher support

Core Instructional Program

- Pulling out model only if classes are very large.
  -in pull out, there is research showing that students miss out different aspects of instruction.
  -No pull out in the model and doing small group instruction in the model; ELA, Math specialists
  -push-in model can be used to provide differentiated instruction
- TK and K: number of students suggests that TK and K should be separated in the cost model.

-Revised class size to 16 students for TK and K, FTEs for teachers match 6 FTEs for Educational Assistances (EA) for 96 students.

- Grade 1: 4 teachers 2 EAs; half the number of EAs to Teachers because students are more self-controlled
- Grade 2: Teachers: 4 EAs: 2 number is dependent on whether the person is a reading specialist
- Grade 3: Teachers: 4 EAs: 2
- Grade 4: class size should not go over 25 students; the academic demands for 4th graders have increased
- Grade 5: teachers do not need as many EAs per classroom. An interventionist is needed for this grade.
- Rationale for more EAs and more interventionists for upper grades to emphasize the early intervention support which goes a long way in the rest of the grade levels, therefore for earlier grades you need one to one teacher to EA, but in upper levels one EA for 2 full time teachers.
- Composition of Teaching Staff: Not always same teachers that support same grade levels.
- An academic coach is a credentialed teacher showing success through students exhibiting gains across grades shooting for an administrative position.
- Make sure that there are good coaches to help in both ends of the spectrum,
- 2.5 academic coaches- there to support teachers
  -in some districts there is a small % of gifted students, so there might not be a specialized gifted instructor. But there can be practice meeting the needs of the gifted students (met by differentiation and infusion of resources).
  -And for districts or schools with a higher % of lower proficiency students, there might not be supports for gifted students.
- With 30 teachers in the school, 2.5 academic coaches are needed, but depending on the district, there could be a traveling academic coach, especially those with expertise in a specific content area needs to be available across schools.
- 1 Arts and performing arts teachers; they do not need as much collaboration time as the rest of the teachers. Push in teachers for performing arts, but push out students for classes like P.E.
  -integration of arts and performing arts to ELA; so, planning needs to be accommodate this integration
- All the grade together for Math specialists
- 1 Music, P.E. teacher plus 2 P.E. EAs; with all grade levels being taught by P.E. teachers
  -Increased P.E. teachers to take care of the watch of the TK and K.
  -PE is structured as having all the classes from a grade together, to provide teachers with collaborative time. This structure can be flexible with younger classes
- 1 Science Specialist
- Other: Add another full-time teacher for a language class for the whole school. This will allow the school to offer an additional language program.
- No pullout in the model for English language arts & reading specialists, and math specialists
- **Rationale**:

-Vertical Alignment- parent orientation; find out where gaps are and use vertical in fall and spring

- -Collaboration and P-3 meetings where cross-grade level collaboration takes place at alternating professional learning community sessions. Language arts and math, work as a team, Integrated across subject
  -Multitiered model of support includes SEL with monitoring students to provide prescriptive interventions
  -more differentiation at level 1 for TK and K. The model is intervening often and early.

TK & Kindergarten

- Quantity of 96 students (combo) in pre K and K seems disproportionately more students than any other grade level.
- Despite quantity, the average class size should be 16 students; with all 5 BA-level teachers
- If we want TK expansion, we can use ADA funding and then use a block for 3 and 4-year olds
  -Keep the program Full Day
  -so, it would be the pre K/TK older 4 year olds and the other would be the
  -state preschools which are income and needs based
- TK expansion for four-year olds, older and younger four-year olds
- More differentiation at K, early intervention

English Language Specialists- (Dual Language Learner- DLL)

- Balanced approach with the goal of integration starting at TK and K and continuing through primary grades.
- In districts with a variety of languages, like LAUSD, balance models are not offered for every language.
- There are challenges of immigrant students coming into the classroom
- LTL: (Long term ELs); pass proficiency tests but do not have high literacy. Students who have had not had sufficient intervention are at-risk of becoming an LTL.
- Bilingual resource teacher- Pushing out as often as possible is important.
- You need a specialist to handle all other classroom needs
- We want teacher to make the reclassification work.
- Consider newcomers ELD model:
  -morphology
  -more strategic to meet needs Recommendation: three languages. Blended role
- Split the grade span (integrated, designated, nonnegotiable)
  -EL 4th and 5th grade is in danger of becoming LTLs.
  -Have a primary and upper grade specialist
  -specialist should mirror the top three languages spoken at the school or 3 teachers with different languages
  -For some districts language feels like a separate piece to standards met requirements
- Focus on instruction and administration and assessment as secondary.

- For bilingual resource teachers:
  - Pushing as often as possible and supporting, need a specialist, testing, reclassification, someone sitting at plc and looking at data

Special Education Program

- Low-severity: can't go over 28 caseloads
- Ideally 1 speech pathologist per school
- Gen SPED: 2.5 teachers, 0 F.5 EA
- Speech Pathology: 0.5, 0.5 for both low and high severity cases to be a fully inclusive model
  -don't want to act as case carriers of non-speech related students,
- Some schools don't have case teachers, they have "asset teachers" they mentor resource teachers and make calls with leads facilitating IEPs.
- Low Severity Related Services: .5 with no EAs; Seasoned teacher to mentor (coach)
- High Severity: General special education 1 FTE and 1 EA; the EA will follow the kids in the general special education; 0.5 FTE related services caseload teacher for Mobility, social emotional learning and academic

Instructional & Pupil Support Services

- **Composition of Teaching Staff**: embedded leadership: Step 1-4: 30%; Step 5-8: 35%; Step >9 35%
- 1 Librarian: in some schools this encompasses technical consultants (0.5 FTE)
- Other: Family Community Liaison 0.5 FTE
- An alternate model where the Social workers are doing some counseling with behavioral expertise transmission.
  -psych do assessments, but Social workers do the counseling piece; some schools have >1 Social worker with trauma informed practice intervention
  -universal screeners, some schools handle this as whoever has expertise; Social workers do the follow up support/ support service models vary by schools
  -at Elementary school level, be heavier on the social worker
  Requirements for Guidance Counselors:
- **1 guidance counselor; 1 Social workers**
  -Psychologists must meet deadlines. Social workers can address student mental meltdowns and shut down their workday to meet the needs of the student. Conduct behavioral assessments.
  -So, psychologists and social workers share some of the same tasks but also complement each other in different areas in expertise
  - Social workers can support students in crises, for Tier I and Tier II support
  -One way to think of roles though this language is more for building an understanding on how roles may differ: Counselors as proactive and Social workers being responsive to student need.
  -School-based counseling support
  -at LAUSD, social workers fall under Mental Health
- Counselors- sit in on Student Tier 1 support meetings, provide curriculum support
- For California you need a Masters in many of these positions, ensure they have Pupil Support Services credential.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Books for all students and support materials.
- Teacher is designing the instruction with the EA implementing what the teacher designs.
- Generous tech budget in anticipation of computer (digital literacy) standards
- It is a PD shift if implementing devices into instruction
  -Also in hiring practices, technological skills are a prerequisite.
- Chromebook devices ($200/per device), which are considered laptops with their keyboard.
  -starting at 2nd grade
  -By at least 3rd grade students need one-to-one devices because they will be tested in SBAC on a digital device.
  -Estimated expenditures of $200,000 to cover the technology needs of the students.
- GiGiMath program for K-2 ($200 per child)
- Books: funding should align to adoption waves; adoption goes in 7-year cycles; if we can ensure that the amount roles over, we can apply a dollar amount
  -include dollar amount for manipulatives
  -$120/per student (with the assumption that not all subjects are adopted every year)
- Developmentally appropriate environmental materials, e.g. younger classrooms need supplies.
- Increase budget for instructional supplies and equipment to factor
  -software programs are typically expensive
  -replacement of equipment every few years
  - skewing of software prices
  - and being mindful of state funds that don't roll over.
- Instructional Contracted Services:
- School administration contracted services: includes costs of audit services and accounting
- Pupil support contracted services: any services not in the house; this number is generated by the SACs data.
- Communications:
  -cell phones for principals, walkie-talkies for teachers
- Rentals, Leases, and Repairs
  -Leases: 3 copiers (~$8,000 per copier) bump up the cost to add another copier

Add the following for students in special education:

- $1,500 for STS Math licenses
- $500 per kit for Reading Intervention kits (i.e. Fontas & Pinell) – 1 total per grade level
- $750 for Lexia reading software
- $500 Seeing stars intervention kit
- $300 per kit for Ironbox Math kit
- $300 for Guided Reading kits and High interest Low skill book kits - 2 sets per grade level and teachers can then share & switch out with each other

- $1,100 per license GoalBook Toolkits Software Program (THIS IS A MUST HAVE) - 1 license per SpEd teacher to be renewed yearly

Instructional contracted services

Add the following for students in special education:

- $50,000 for 1 additional NPS placements
- $240 per day for a Substitutes - average for my staff is about 8 days per year per staff member

Professional Development (PD) Expenditures

- +10 (185 teaching days) contract days for teachers to use as they need, i.e. prepare classroom, PD: either before school year to prepare the classroom or 1/monthly, to use as they need
- In smaller districts, there is no afforded time to prepare. Teachers are putting in lots of hours, but they are currently not being compensated. There are periodic early release Wednesdays.
- Embedding Structured PD for teachers, i.e. Instructional development department has an elementary school coach and they have time to create PD and there is an interventionist has chimes in with the models for the pedagogy. Blending these resources to create the PD and support needed for teachers.
- Conferences: Build in cost into PD to attend conferences.
- Structure:
  -How to integrate subjects, especially with new adoption
  -Modifying mathematical practices
  -Have teachers think of what they need to meet needs of their students and to respond to standards
  -Takes in framework: how to assess what we want students to learn.
  -How to help parents navigate the Common Core and new standard implementation and SEL learning.
  -Good vocabulary instruction: how to determine word meaning
  -Factor in bias issues: gender, race, socio-economic
  -Ensure teachers and specialists are attending appropriate, grade-level PD

Non personnel PD costs: non-salaried costs

- Development supplied and equipment increased ($3,000) to meet the increased number of PD days (10 days); but non-instructional supplies are met.
- Travel and Dues: newspaper subscriptions, professional development, and [contracted services] conferences- builds the knowledge base of specialists.
- PD Contracted Services: Add about $1500 per vendor (add travel and dues to support this)
  -$3,448, Total school wide costs: $6,896
  For special education add $3,900

School Administration Days

- Principals: +25 (185 student days)
- APs: +15

- Clerical Staff: +25 they have to be available for principals and to greet the families before school starts, they deal with enrollment and registration packets at the end of the year, build relationships with families for enrollment/ align this with the principal's schedules
- Some bargaining units might not place Counselors in the school administration team

Extended Day Instruction & Other Programs Outside of Regular Hours

- Build enrichment courses for students into school day: Chorus, PE, Arts; building preparation for this in prep periods
- Factor in family scenario when determining 10 PD days
- Total of 150 days, exclude first and last week of school and parent teacher conference week
- Offered to all students
- Intervention Programs
  -student to teacher ratios decrease for intervention services; 6 teachers per 13 students
  -row 174; 155 kids, with 13 students per classroom for interventions; 50% of the 25% that needs to go to intervention
- General education: Gate (typically 10%), remedial classes [a combination of services for students not doing well and those needing extra support services], mandatory HW club
- With SPED work done by a SPED professional.
  -50% of that population- before school sensory programs; 36 students; 4 total (2 for moderate to severe and 1 for rest of cases. No EA needed.)
  -include HW club, remedial classes, sports and drama
  -Total of 150 days
- Afterschool programs staffed by vendors properly cleared by the district. There are some districts where vendor services are no longer allowed due to poor experience in the district.
- Extracurricular:
  -25% student attendance
  - Certain afterschool activities would require parent to pay for supplies. This would reduce the number of attendees
- Instructional supplies materials and equipment
  -$10 per pupil for both SPED and non-SPED

Extended Year or Summer Programs

- 62 students could be served plus 72 SPED; 20 students per classroom
- Gen Education: 15% target population served
- SPED: 75% target population served
  -SPED goal is retention and prevention from failure
  - each teacher needs an aid in SPED

Personnel

- Administrator total hours per day: 5

- Clerical hours per day: 5
- Teacher hours per day: 5 (# students/20)* +1
  -divided by 20 students, plus one hours for planning
- Instructional Supplies, materials, and equipment: $35
  -this would include museum fees and other experiential learning
  -copying supplies

School administration

- Student Enrollment of 618
- Principal: 1
- AP or VP: 1
- Clerical Staff: 2.5 (Full Time); if this site gets any bigger, another clerical staff will be needed

Maintenance & Operations

Custodial/Maintenance Staff: 2.5

Task 2: A Change from Average Poverty to a High Poverty

Overall Needs to Guide Programmatic Sections:

- With high poverty, the education system must be more intentional. This includes allocating resources to the development of safe spaces and programs to meet circumstances of students in high poverty. Overall, schools should provide access to resources that students lack at home such that they can prepare and feel like they can have a successful day at school. This model is a break the cycle approach where programmatic elements focus on making students feel valuable and nurtures their ability to contribute to society.
- A critical component to executing this design is the provision and use of afterschool funding to create and maintain a safe space for high poverty population, which is not always available to them otherwise. The funding would provide access to food, both breakfast and afterschool snack.
  Where possible, a family resource center should be available. This would include access to sinks so children can hygienically prepare for school. This is not always available to them otherwise and impacts their ability to feel ready and prepared for school.
  -Federally subsidized snacks for afterschool can be leveraged.
  -Ideally, there should always be a private space available to them for services such as laundry, dental health support, and hygiene preparation. This could be a nurse's office with the intention of this space being stocked with essential resources.
- Another critical component of this model is the building of connections between the LEA and the community such that they symbiotically support one another. This goal necessitates focused leadership and dedicated liaisons to implement the work.
  -*Parent advocacy groups or mentors/ parent community representatives/ambassadors [volunteers] can serve in this role, but the panel viewed it necessary to build out compensation for a dedicated position to sufficiently support goals of the model in this

area. *districts use different terms for this, overall the aim is to leverage parents and communities to learn and gain access to resources.
-Using the devised model to support this aim, ELAC/ELD teacher can help coordinate and connect parents to educational resources, the nurse can connect students and families to dental and health resources in the community.

- Summer Program: Strong likelihood of 75% to all day summer program because families in high poverty need onsite child care during the summer.

Length of the School Year and Day

- The length of the school year will be 185 days for TK, K and grades 1-5.
- The length of the school day will be 6.5 hours with an extended day program to support activities.
- Contracted staff time will mimic base model.
  Where possible, add a teacher with the specialized skills to work with this population. To sustain this model and maintain high quality instruction, build out the cadre of workers where more experienced teachers can train newer teachers and increase the mid-level experienced teachers to minimize burnout and turnover. Step 1-4 at 25%, Step 5-8 at 40%, and Step >9 at 35%.
- High poverty schools require more differentiation on instruction

Core Instructional Program

- Self-contained classes will mimic base model.
- TK and K classrooms will be held as separate classrooms with an average class size of 16 students with one FTE teacher and one FTE EA per classroom. This teacher to student ratio is important for younger ages given the attention and time dedicated to helping children establish behaviors and practices for school readiness and success.
- Grade 1 will have an average class size of 18 students; 4.5 FTE teachers, 2.3 FTE EAs.
- Grade 2 will have an average class size of 20 students; 4.1 FTE teachers, 2.1 FTE EAs.
- Grade 3 will have an average class size of 24 students; 1.8 FTE teachers.
- Grade 4 will have an average class size of 24 students and no EA.
- Grade 5 will have an average class size of 24 students and no EA.
- Resource Teachers will support student needs as part of school day and during extended day program. Academic Coaches (head teachers), will support professional development both informally and within formal structures devised by the LEA. Ideally, each grade level will have an experienced academic coach and one for special education. An additional academic coach is important to meet student needs per grade level in the context of developmental needs and to address instructional support.
- There will be one art and performing arts teacher per 522 students.
- There will be two English language arts and reading specialist to support students; there is an expectation that there are a substantial number of English Learners in these schools who need this individualized and specialized support. No pullout method in this model.

There will be two Math specialists to support students with individualized and specialized support. No pullout method in this model.

- There will be one PE teacher to support students and 2 FTE EAs. This teacher will be flexible and can teach multiple classrooms of the same grades at one time. This might especially helpful in support of building collaborative periods for teachers to work together and for collaborative planning.
- The development of multiple language proficiencies is imperative in this global age; the development of a language program will require one FTE teacher.

English Language Specialists- (Dual Language Learner- DLL)

- There will be native language instruction support after school
- After school language, based on leveling
- To fit ELD model, two English language arts and reading specialists with an average caseload of 87 students will support all grade levels with meaningful curriculum and strategic interventions. Since DLL students at grade 4 and 5 graders are at risk for achieving English proficiency, English language arts teachers will support students using grouping by reading level to provide more structured and individualized intervention.
- Utilizing these services will be pushed when a need is identified and with frequent intervention and monitoring. As part of the ELD model, these specialists will test, reclassify and review student progress data on a regular basis.
  -The intervention will serve as the primary period to learn. Homework will be sparse and limited to reading.
- In line with the extended school day, ELD support will also be available afterschool for high incidence languages.

Special Education Program

- Assume that Tier 1 and Tier 2 is working: 2.5 T and 0.5 EA
- **Low severity students**
  -Special education students should receive a specialized program and extra support when in general education settings. General special education teachers (2.5 FTE teachers) should have an average caseload of no larger than 21 students with the support of an EA (0.5 FTE EA).
  -The caseload manager will manage 107 students and will support both low and high severity students.
  -Speech and language pathologists serve a caseload of 53 and will be divide time between low and high severity students.
  -Related services caseload teacher will not change much

- **High severity students**
  1.5 general education FTE Teachers should have caseloads of 12 students. There should be 3 EAs per caseload or 2 EAs and 1 behavior intervention implementation specialist. The type of disability will determine the aid required for student.
  The caseload teacher will manage 37 students in the areas of mobility, social emotional support and academic support. An expert in alternative curriculum and coaching for both special education and general education teachers are also needed.

Instructional & Pupil Support Services

- To support specific conditions and needs, including social-emotional, of students in high poverty, the group advocated for more counselors and social workers than the base model. Their roles would also encompass hygiene support and helping students get school-ready before school, e.g. safe/private space for brushing teeth, band-aids, etc.
- One guidance counselor will support a caseload of 618 students. Social Worker can also provide similar services to that of counselors.
- Two social workers will support attendance tracking, socio-emotional development, and the Positive Behavioral Interventions and Supports (PBIS) program.
- Two Nurses will support student in before school day hygiene preparation. Two nurses are particularly needed for the extended school day. As part of the community building model, the nurses might connect students to medical and dental resources in the community.
- One librarian/ media specialist will support 618 students.
- One technical consultant at 0.5 FTE will be available on site. This staff member may also have another functional 0.5 FTE role at the school, e.g. P.E. FTE EA.
- In line with the community building model, two Community Liaisons will partake in parent engagement activities bearing multiple priorities including parent education, fostering parent-child relationships on education, and education to LEA on how it can support community. Community Liaisons will coordinate afterschool activities and activities with the community.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Instructional supplies and Equipment will support the purchase of Chromebook computers including 1-2 at the Family Resource Center so parents have access to the internet. At $1000/3 to account for amortization over the years.
- Educational technology goes obsolete after 3 years and should be replaced.
- Ancillary Support: per total enrollment will equip and support a family resource center.
- Community Services Supplies and Equipment will be contracted services for food, after school and to provide health supplies for the nurse office and afterschool programs.
  -$20,000 for ancillary supplies for contracted services
  -150*450 (450 students) at a $1 a week
- Instructional contracted services will be funds to support the conference room utilities, internet, and necessary resources.
- Community Services Supplies and Equipment: Contract Services food, afterschool.

Professional Development (PD) Expenditures

- Realistically, a large sum of professional development costs typically goes towards contracted services to provide a professional development activity.
- Travel and dues are the largest expenditure in professional development activities.

Extended Day Instruction & Other Programs outside of Regular School Hours

- The extended day instruction would support afterschool programming for high incidence languages.

- Aim to serve 80% of target population: Gen ED: 80% of expected; SPED: 50% of expected; Other programs: extra-curricular 80%.
  -Average Hours per day of program operation: 1 hour (because of stacked model it amounts to 2)
  -Focus on asset framework rather than deficit model with family orientation in support of student education.
  -Add early and late transportation support
- General education: wide spectrum activities
- Increased personnel to 37 for general education, 6 for special education, and 30 EAs.
- Teacher hours per day: 19 (# students/20)* +1
  -Divided by 20 students, plus one hours for planning
  -EAs split their time between different time periods [morning and afterschool]. Outside vendors are preferable to provide valuable and efficient services.
  Asset framework, family oriented, small size for Languages, larger classes for grades 4-5, *stacked programs; AP will coordinate

Extended Year or Summer Programs

- Some childcare is subsidized during the summer; LEAs should work to identify funding streams to supplant extended year or summer programs in addition to allocated funding to provide more enriching experiences.
- 60% of general education target population will be served. And 75% of special education population will be served.
- Four weeks, four hours a day

School Administration

- One principal can serve an LEA of 618.
- Two APs are the additional support needed to meet extended hour responsibilities and community activities. (*adding after school responsibilities)
- Other: One TOSA (Teacher on Special Assignment)
- Three clerical staff are needed to support during school day and during extended hours program.
- Additional Notes on Composition of Staff Rationale:
  -Depending on the school size, more principals are needed to support the additional programs designed to meet needs of students in high poverty.
  -Where possible, the LEA needs time to leverage community resources and build in community impact to support students.
  -The SPED program manager would coordinate and connect parents and students to necessary resources.

Maintenance & Operations

Custodial/Maintenance staff are necessary; 2.5 staff.

Task 3: A Change from High Poverty to a High Poverty, High EL Model

Length of the School Year and Day

- 1 Per grade level specialist

Core Instructional Program

- Teachers self-contained class, same class sizes as the High Poverty Model
  -TK-K: 6
  -g1: 4.4
  -g2: 4.1
  - Increase the number of staff in earlier grades to reduce the gap early on/ supported by research
  -g3: 3.5
  -g4: 3.5
  -g5: 3.4
  -Help language support throughout the day, especially for newcomers
  --Teacher designs instruction, repetitive subgroup instruction
- Coaching Teachers, support classroom instruction, progress monitor support, ELL testing

English Language Learner Specialists

- Add ELL specialists:
  -match to # teachers.
  -teacher designs the instruction and provides subgroup instruction; the EA provides language support and monitors students throughout the day
  -factor in PD
- Bilingual resource teachers [typically don't develop instruction or lesson-planning]; however, it is necessary to add someone who has the skill set to develop instruction
  -Bilingual resource teacher: 3 total EL specialists
  --monitoring and design lessons (credentialed teacher) Pre-K-1,2-5, and one floater because it's hard to be a content expert in all grades
  --supports EL testing, coaching teachers, supports classroom instruction, designs lessons.
  -one per grade would allow for push-in; a teacher would like a highly trained aide in the classroom; knows what the teachers needs
- Resource teachers:
  -Increase the newcomers center, field trips to practice education and make connections
  -Academic coaches: knowledgeable of ELL
  -Support push-in in classrooms.
  -Resources: add data-analysis progress monitoring software; ~$20 per student
  --data-visualization tools:
  -Online resource that leverage AI-Artificial Intelligence, make recommendations on groupings
  -increase curriculum costs for intervention programs that address EL [designated in ELL program] factored in
- Suggestion: change title: English Learner Specialist

Instructional & Pupil Length of the School Year and Day

- All support staff should be bilingual
  -Essential to provide accurate assessments and progress monitoring of students
- Other Student Support Services: 2.0 FTE community liaison

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Books and curriculum:
- -Requires additional software to support language needs of EL students (Data progress monitoring software).
- Instructional Equipment:
  - Maintain high poverty school #s
- Instructional support and supplies and equipment
- Ancillary Services
  -Includes funds for Family Resource Center.
- Communications
  -Additional Translation services to support low and high incidence languages.
- Would not need substitute teachers since resource specialist is already built into this model.

Professional Development (PD) Expenditures

- Travel and Dues
  -Added one more conference to the base formula for one more specialized conference on English Learner topic.

Extended Day Instruction & Other Programs outside of Regular School Hours

- Mirrors High Poverty Model

Extended Year or Summer Programs

- Class Size: 20 students
- Five total administrators
- Gen ED expected attendance: 60% of population; SPED expected attendance: 75%
- # of students served in extended program: 371; $19 for instructional material); SPED: 54
- Personnel:
  -Total Admin: 5
  -Clerical: 5
  -Hours: 83 hours

School Administration

- Mirrors the High Poverty level

Maintenance & Operations

- Mirrors the High Poverty level

Task 4: A Change from the Base Model to a High SE Model

Special Education Program

- Added number of FTE for Special Ed
- Low-severity students:
  -General education teachers at 4 FTE and 2 FTE EA, because SPED requires more specialized attention the ratio is increased especially with EL status (more one on one).
  -Caseload teachers manage the speech needs of children and coordinate other services. (Manage speech therapy and other interventions, coordinate other services)
  -General Education teacher may be doing inclusive work and the SPED would be assigned to a specialized student
  - The speech/language pathologist caseload would be 43.
- High Severity:
  - General education teachers at 3 FTE and 3 FTE EA, because SPED requires more specialized attention the ratio is high especially with EL status. (*Inclusion model; 1to1 ratio)
  -Related Service caseload teacher would consist of 1 FTE Teacher.
  - The speech/language pathologist caseload would be 43.

Instructional & Pupil Support Services

- School psychologist: would deal with more assessments so increase to 2 (1 more from base model).
- Other support services: Health Aid to support Nurse who would support conducting more assessments due to increased caseload. (More impediments)

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Books and Curriculum
  -Base Model was $120; with the $5,000 addition to the average per pupil adds up to $128
  -More intervention would necessitate increased funds to purchase books and instructional materials.
  -Allocation assumes cost of instructional materials is $750 per student plus the purchase of two Individual Curriculum kits
  -Specialized software license would amount to about $5,000 for overall books and curriculum
- Pupil Support Supplies and Equipment
  -Assistive Technology is necessary to support students' learning," students with hearing impairments, the requirement is based on individualized student needs.
  -Where needed, individualized sensory materials need to be purchased.
  - iPad, sensory materials, individual per kid
  Added $4,000 to cover the equipment
- Communications:
  -Translation services are necessary to support translation of IEPs.

Add the following for students in special education:

- $3,000 for STS Math licenses
- $500 per kit for Reading Intervention kits (i.e. Fontas & Pinell) – 2 total per grade level
- $1,500 for Lexia reading software
- $1,00 Seeing stars intervention kit
- $300 per kit for Ironbox Math kit
- $300 for Guided Reading kits and High interest Low skill book kits - 4 sets per grade level and teachers can then share & switch out with each other
- $1,100 per license GoalBook Toolkits Software Program (THIS IS A MUST HAVE) - 1 license per SpEd teacher to be renewed yearly

Instructional contracted services

Add the following for students in special education:

- $50,000 for 1 additional NPS placements
- $240 per day for a Substitutes - average for my staff is about 8 days per year per staff member

Professional Development (PD) Expenditures

- Contracted Services: bringing in an expert; adding about $2,000 for a contracted expert

Extended Day Instruction & other Programs outside of Regular School Hours

- The extended day program would comprise of 36 students with a caseload of 9 per teacher.
- Will have 9 teachers for the extracurricular activities to support Sped Ed students

Extended Year or Summer Programs

SPED:

- Enrollment: ratios is 9, so we need 10 teachers
- Personnel
  -Teachers: 15; hours: 27
  -EAs: each teacher needs an aid; so hours are 45 hours a week?
  --SPED students can have special circumstances, e.g. seizures and teachers need aids; you are in different classrooms now
  -- magnified gap of a SPED mod-severe case over time/ the higher the grade level

School Administration

- Principal: 1
- Assistant Principal: 1
- Other professional administrative support: APIS: intensive support vice principal/student services Administrative, provide robust support for T1 services

Task 5: A Change from the Base Model to a Smaller School

- There is variation in scope of small schools
- If you are a school with a dairy farm, extra funds are allocated and given designation of School Choice.
- Focus on small class sizes, instructional aids across grade levels.
- Add a P.E. teacher; have other programs that enrich a child's education such as art, music education. Typical low funds in small schools deters this type of enrichment.
  - Adding a 0.5 status for enrichment education teachers
  -SPED, principal is often supporting SPED teacher or contracting with the County.
- Psychologists that also meets the Counselor role 0.5, 0.5; psychologist and Counselor can be the same person (0.5 + 0.5=1.0)

Length of the School Year and Day

- 185 days
- Contracted Time for Staff
  -same PD as base model
  -Hours distribution of staff is the same as the base model

Core Instructional Program

- EAs: 3
- -TK or K: 17 or less Teachers: 3.2; EAs: 3.2
  -G1: 18 students; Teachers: 2.4 EAs: 2.4
  -G2: 20 students Teachers: 2.3 EAs: 1.2 (.5TA per T)
  -G3: 24 students Teachers: 2.3 EAs: 1 (.5TA per T)
  -G4: 24 students Teachers: 2.3 EAs:
  -G5: 24 students Teachers: 2.2 EAs:
- Resource teachers and subject matter experts:
  -Academic Coaches: Teachers: *0.5= 1.5 EAs: 0
  -Art & Performing: 0.5
  -Reading Specialists: 0.5 (*some of these teachers might be the same person)
  -Music : 0.5
  -P.E.: 1.0 Assistants: 0 (if you have a general education, you can have another content teachers like science teacher to take on this role) (To allow for Prep time)
  -Science Specialist: 0.5
  -Other: 0.5 FTE Community Liaison

English Language Learner Specialists

- Bilingual resource teachers: would be the same person as the reading specialists.
- English language development resource teachers: Highlight the importance of those tasks

Special Education Program

- Low severity caseload: 21 Teachers: 1.3 EAs: 1 Related Services: 0.5 Speech Pathologist: 0.5, 0.5
- High severity
  -General education: more severe needs are more burdensome
  -Related services caseload teacher: mobility, social emotional, academic
  -speech/language pathologist: same person as above
  -Have one person, 1FTE, to have continuity

Instructional & Pupil Length of the School Year and Day

- Social workers: combining social worker, guide counselor, community liaison

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- Books and Curriculum: Basic components, * aligned to text adoptions
- Instructional Supplies and Equipment: Same per-pupil expenditure as base model
- Instructional Support Supplies and Equipment: *Chromebook for students at 2nd grade 1, white board, Gigi math ($200 per kid) to help address the computer science standard
- School Administration Contracted Services: Includes costs of audit services, budgetary contracts with assistant at county level, contract with county, library
- Pupil Support Contracted Services: *Any services not in house
- Rentals, Leases, and Repairs: Same per-pupil expenditure as base model

Professional Development (PD) Expenditures

- Travel and dues: staff have to travel long distances for PD, small school does not have multiple people to send to PD
- Calculated $650 per FTE

Extended Day Instruction & other Programs outside of Regular School Hours

- Assumed lower enrollment than what was assumed in the Base Model

Extended Year or Summer Programs

- Assumed higher enrollment rate on general education and the same enrollment rate for Special Ed

School Administration

- Will only need 2 FTEs for the clerical and office staff, slightly lower than the base model which was 2.5

Maintenance & Operations

- Will only need 2 FTEs, slightly lower than the base model which was 2.5

Middle School Program

Task 1: The Base Model Instructional Program Design

Length of the School Year & Day
Time students spend in school
The school year has to be a minimum of 180 instructional days. There should also be an extended year for summer school programs for remediation and enrichment.

Contract time for staff
There will be 10 pupil free days for district and site days. Two days that are for district initiatives, 1 preservice day for veteran teachers and 1 orientation day for new teachers, 1 day to set up the classroom, 1 day to clean the classroom, and five days for deep embedded collaboration.

Education assistants require professional development but do not need as much as teachers. Educational assistants should receive 5 professional development days.

Administrators should have a total of 205 days and other administrative and clerical staff should have 195 days.

Typical daily course loads
Student should have 7 periods per day which includes 1 advisory/homeroom period. Teachers should provide instruction for 5 periods per day and prepare for instruction and participate in professional development, to collaborate with other teachers, including general and special education teachers, for the remaining 2 periods.

Composition of staff
There should be a balance between new and veteran teachers. 30% of teachers in Steps 1-4, 40% of teachers in Steps 5-8, and 30% of teachers in Steps 9 and higher.

Core Instructional Program
Core courses
The following 5 courses are required for all students. These courses, excluding physical education should have an average class size of 28 students. A class-size of 28 will allow teachers to group students into 4 groups of 7 students and provide instruction to those smaller groups. Physical education should have an average class size of 45 students.

- English Language Arts
- Mathematics
- History/Social Studies
- Science, which includes health
- Physical Education, for 2 years

There will also be 1 elective course and 1 intervention or enrichment course (for example, AVID).

Elective courses include art, foreign languages, music, computer science, and media arts. The computer science and media arts course should each have a designated computer lab. All electives courses including CTE and computer education should also have an average of 28 students per class.

Middle school students often get frustrated with too many intervention courses and feel trapped with the same group of students. There will be intervention courses in 2 core courses: English language arts and mathematics. All English language learners should enroll in an English language arts intervention course and 50% of students in poverty should enroll in both English language arts and mathematics intervention courses. The intervention courses class-size should be smaller than the core course, an average of 18 students per course.

Educational assistants are not needed because of the small class size (educational assistants for English learners are included in that section).

Resource teachers & specialists
There should be 2 instructional coaches: 1 coach for literacy and 1 coach for mathematics. Both coaches should be digitally literate and able to provide technological support to teachers.

It was estimated that approximately 5% of students are gifted and 5% are talented. However, the identification of gifted and talented students is low among at-risk populations. There should be a .2 FTE gifted resource teacher.

English Learner Specialists
It was estimated that approximately 20% of English learners are newcomers, unaccompanied minors.

There should be 2 English language learner specialists. One specialist will provide English Language Development (ELD) 1 and 2 courses (these courses are for beginning students of English) for newcomers and will provide push-in for one class period for newcomers. One specialist will support out of classroom needs and will provide integrated and designated coaching.

Two instructional assistants for newcomers will travel with them to support them with translation in their native language.

School counselor time should include time for ELs in that designated section.

Special Education Program

Low severity students
Special education students should receive a specialized program and extra support when in general education settings. General special education teachers should have an average caseload of 15 students. Related services and caseload teachers are case managers. A 0.3 FTE

staff is needed for this role. Speech and language pathologists should also serve autistic students at .4 FTE that is split with the high severity students. Speech and language pathologist should also have a smaller caseload: 15 students.

High severity students
Caseloads for more severe students should be lower: 8 students. There should also be 2 educational assistants for each teacher and 1 behavior intervention implementation specialist at 0.6 FTE that is split with the low severity students.

Instructional & Pupil Support Services

There should be 2 counselors, with approximately 300 students each, to support students in academic planning. Counselors will support English learners, dual language learners, gifted and talented, and homeless and foster students, and will schedule classes.

One school psychologist will run initial student assessments, college data to monitor student progress and support pre-special education students.

One social worker will support attendance tracking, socio-emotional development, and the Positive Behavioral Interventions and Supports (PBIS) program, and are the link with the community.

One school credentialed nurse will participate with IEPs, track immunizations, and support diabetic students.

One librarian is needed.

Other student support staff includes 1 credentialed community liaison for community and family engagement, conflict resolution, restorative justice, and 1 educational assistant staff as a translator to support teachers with translation with families and to translate printed materials.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

Books and curriculum
Textbooks and software licenses are replaced every 6 years in the five core areas (ELA, Math, Foreign Language and Science) and computer education at $110 each (5.60 courses needing replacement books/licenses every six years). Consumables are replaced every year in 3 subjects at $35 each.

Add the following for 30% of ELs (newcomer students):

- Software at $100 a piece
- Workbooks at $35 a piece
- Dictionary at $15 a piece

Add the following for students in special education:

- $1500 for STS Math licenses for all 66 students
- $500 per kit for Reading Intervention kits (i.e. Fontas & Pinell) - 1 per grade level
- $750 for Lexia reading software for 66 students
- $300 for Ironbox Math kit
- $300 per kit for Guided Reading kits and high interest Low skill book kits - 2 sets per grade level and teachers can then share & switch out with each other
- $1100 per license for GoalBook Toolkits Software Program (THIS IS A MUST HAVE) - 1 license per SpEd teacher

Instructional supplies and equipment

Educational technology goes obsolete after 3 years and should be replaced. One Chromebook and maintenance is needed for each student at $400 each. Each teacher, administrator and certificated staff should also have a computer at $1,000 each. There should be 2 computer labs (one for digital media arts and one for STEM) with 70 computers each, servers and other necessary equipment and maintenance at $125,000 per lab. In addition, every classroom should include standard 21st century upgrades like a printer, document camera, and an LCD projector at $5,000 each.

Each department (7 total) should receive $2,000 for basic supplies.

Approximately 50% of students will need uniforms at $15 each.

Provided an additional $20,685 per year to purchase equipment necessary for STEM CTE programs such as robotics, biomedicine, etc. This is downwardly adjusted from the $50,000 provided under the high school base program design.

Add the following for ELs:

- $30 software licenses for each EL student.
- $200 of thinking maps and other EL-relevant instructional materials for each classroom.

Pupil support supplies and equipment

Add the following for students in special education:

- $1300 for Second Step 6-8 grade kit (SEL learning)
- $2500 for Second Step 6-8 online module (SEL learning)

Instructional contracted services

Add the following for students in special education:

- $50, 000 for 1 NPS placement
- $240 per day for substitutes

Professional Development (PD) Expenditures

All teachers should receive textbook adoptions and standards alignment.

There should be 3 contracted services for professional development: 1 in STEM, 1 in literacy/writing coach for across the curriculum, and 1 for bullying/socio-emotional coaching. Each cost $2,500 for a one-day session.

All teachers and administrators should attend 1 conference within 3 years. The average costs to attend a conference, including travel and lodging is $3,000.

$3900 for PBIS training module

Student Athletic Programs

Not applicable.

Extended Day Instruction & Other Programs Outside of Regular School Hours

Instructional programs: General education
Enrollment, days per year, & hours per day. General education students will be served with low-severity special education students. Ten percent of general education (non-special education) students and 10% of low-severity special education students will receive after-school tutoring 4 days per week for one hour per day. These same percentages of students will receive tutoring on 18 Saturdays of the school year (excluding the weeks at the beginning and end of the school year) for 4 hours per day.

Personnel. The average class-size should be smaller than the class-size for the core instructional program: 20 students.

Non-personnel costs per pupil served. The cost of supplies, materials, and equipment is about 10% of the total staffing cost, $59 per student.

Instructional Programs: Special Education
Enrollment, days per year, & hours per day. Extended day instruction will be offered to all high severity special education students, but it is expected that 85% of these students will attend: 20% of all special education students. These students will also receive after-school tutoring 4 days per week for one hour per day and tutoring on 18 Saturdays of the school year (excluding the weeks at the beginning and end of the school year) for 4 hours per day.

Personnel. The average class-size should be smaller than the class-size for the core instructional program: 5 students.

Non-personnel costs per pupil served. The cost of supplies, materials, and equipment is about 20% of the total staffing cost, $465 per student.

Other programs: Extra-curricular
Enrollment, days per year, & hours per day. General education students will be served with low severity special education students. Twenty percent of general education (non-special education) students and 20% of special education students will participate in an after-school enrichment program for 2 days per week and 2 hours per day and Saturday enrichment 7 days out of the school year for 4 hours per day.

Personnel. The average class-size should be smaller than the class-size for the core instructional program: 30 students.

Non-personnel costs per pupil served. The cost of supplies, materials, and equipment is about 7.5% of the total cost, $63 per student.

Extended Year or Summer Programs

Instructional programs: General education
Enrollment, days per year, & hours per day. 25% of non-EL and low severity special education students and 50% of English learner students will attend summer school for remediation and enrichment for 20 days four hours per day.

Incoming 6th graders (30% of all students should spend 10 days in a summer bridge program).

Personnel. Intervention class sizes should not have larger classes than the class size for regular school year: 18 students. Administrators and clerical staff will need 5 hours per day, 4 hours during instructional time and 1 hour to cover before and after instruction. Educational assistants are not needed.

Non-personnel costs per pupil served. Additional costs include phot copies, novels for literacy, and other basic materials at 10% of the total staffing cost, $30 per student.

Instructional programs: Special education
Enrollment, days per year, & hours per day. The purpose of summer school for special education students is to increase retention and prevent regression. One-hundred percent of high severity students are expected to attend for 20 days, 4 hours per day.

Personnel. Intervention class sizes should be 8 students to allow for modifications. Educational assistants are not needed.

Non-personnel costs per pupil served. The cost of supplies, materials, and equipment is about 15% of the total staffing cost, $84 per student.

School Administration

There should be 1 principal and 1 assistant principal. Only 1 assistant principal is needed for a non-high poverty school. The assistant principal will support discipline and the Positive Behavioral Interventions and Supports (PBIS) program. One other professional administrative staff will share IEPs with one other clerical staff who will also perform other secretarial tasks.

Additional clerical and office staff include 1 records clerk, 1 attendance clerk, and 1 other secretary. There should be a total of 4 clerical and office staff.

Two-thousand-dollar stipends should be provided to each department chair (in ELA, Math, Social Studies, Science, PE, Special Education and Art) and the two academic coaches that were specified. This amount is higher than the typical amount because group thought typical amounts are low for the amount of work these staff perform.

Maintenance & Operations

There should be 3 custodians, 1 day custodian, 1 night custodian, and 1 maintenance custodian. The panel requested that the cost to be based on 12 months rather than 10 months. No changes are needed to the Resource Cost Model because we assumed that the Occupational Employment Statistics (OES) compensation rate is the average of 10 and 12-month positions. There should also be 1 full-time security.

Task 2: A Change from Average Poverty to a High Poverty

Length of the School Year & Day

Contract time for staff
New teachers (10% of the total teacher population) should have 3 additional days of professional development at the beginning of the school year.

Typical daily course loads
An advisory class should be added at the beginning and the end of the school day for a total of 1 additional hour. The total number of periods should be 8. Teachers should then instruct for 6 periods.

Composition of staff
There should be a greater percentage of veteran teachers with experience differentiated instruction and wrap around methods. 20% of teachers in Steps 1-4, 30% of teachers in Steps 5-8, and 50% of teachers in Steps 9 and higher.

Core Instructional Program

Core courses
Class-size should be no more than 20 students for all courses except for art and PE. These class-sizes can stay the same at a PTR of 28:1 for art and 45:1 for math. Additional intervention courses will be taken by 55 percent of students in ELA and 34 percent of students in math, which will both have a PTR of 18:1.

All students should have a 30 minutes course at the beginning of the day for advisory and goal setting and 30 minutes at the end of the day to check in (like a homeroom class/AVID class). Both of these times should also be devoted to differentiated instruction to address different levels of achievement, making one-on-one connections and address student trauma, family dysfunction, discipline, and socio-emotional learning needs.

Resource teachers & specialists
Two reading specialists should be added (None were included in the base model) and 0.8 FTE staff should be added for an SEL coach and to address the achievement gaps for science and social science.

English Learner Specialists
One English language development resource teacher should be added (a total of 3; 2 were in the base model). One will support newcomer ELD and 2 will also support newcomer ELD and will support long-term ELs, plan and support with teachers, do push-ins, administer tests and progress monitoring, and meeting with parents.

Special Education Program
There should be a focus on maintaining teachers and providing more targeted professional development.

Low severity students
Class-size should be reduced to 14 students. An educational assistant should be added (a total of 2).

High severity students
Class-size should be reduced to 6 students. An educational assistant should be added (a total of 6).

Instructional & Pupil Support Services
A half-time guidance counselor should be added to support the extended year program, which is 20 days.

Two social workers should be added (for a total of 3 or a caseload of 1 per 200 students) to address socio-emotional needs and student trauma. 0.5 of a social workers time will support unaccompanied minors.

One school nurse assistant should be added (None were in the base model).

A 0.5 librarian should be added to support extended library hours with the extended school day.

A 0.5 professional other student support services staff should be added to support parent engagement and education (a community liaison), parents through the IEP process, and connect families with services. A 0.5 assistant other student support services staff should be added to assist with childcare during parent meetings.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

Instructional support supplies and equipment
Additional consumables and software in both ELA and math ($36 per student for ELA and math consumables and $46 per student in each subject for software) will be needed for interventions for students in poverty.

Pupil support supplies and equipment
Students should receive an afternoon snack to fill nutritional gaps during the extended school day, at $1.00 per student. Food should be provided for all 20 parent meetings at $3 per parent. Parents of about 10% of students attend meetings.

Community services supplies and equipment
The parent center should include 5 computers at $1000 each.

Community services contracted services
There should be two parent academies (parent education for 8 weeks per session) at $6000 per session.

Instructional contracted services
There should by $5,000 for motivational speakers.

Professional Development (PD) Expenditures
Professional development should be more targeted and focus more on collaboration. There should be 3 additional contracted services for professional development at $2,500 each.

Student Athletic Programs

Extended Day Instruction & Other Programs Outside of Regular School Hours

Instructional programs: General education
Enrollment, days per year, & hours per day. Students should attend fewer afterschool tutoring days because all students already have an extended day, from 4 days in the base to 3 days.

Instructional programs: Special education
Enrollment, days per year, & hours per day. Students should attend 1 additional hour of tutoring (from 1 hour in the base).

Other programs: Extra-curricular
Enrollment, days per year, & hours per day. Thirty-nine percent (19% is in the base model) of general education students and non-severe special education students will participate in an after-school enrichment program. There should be a total of 18 Saturdays (up from 7 in the base model).

Non-personnel costs per pupil served. More students will need basic supplies so the cost should be 10% (from 7.5% in the base) of the total cost.

Extended Year or Summer Programs

Instructional programs: General education
Enrollment, days per year, & hours per day. Ninety-three percent (from 50%in the base), all students in poverty, will attend summer remediation and enrichment programs.

Non-personnel costs per pupil served. Ten thousand dollars should be spent on marketing the summer school programs to get a high attendance rate (flyers on doors, meetings, emails).

Instructional programs: Special education
Personnel. Intervention class sizes should be 6 students (from 8 in the base model) and there should be 8 hours of educational assistant per day. One additional counselor and 1 additional security is needed.

Task 3: A Change from High Poverty to a High Poverty, High EL Model

General Strategies

1) Staff needs appropriate credentials, and need to be bilingual
2) Books for Spanish, stipends for time for teachers to get their bilingual credential

English Learner Specialists

Added 3.0 FTE ELD resource teachers (to represent the languages of the increased numbers of EL students) and 3.0 FTEs of education assistants.

3) Double the amount of ELL specialists, we have six total and the breakdown will be two will serve new comers, dedicated classes of newcomers, during the designated ELL time, they would also teach interrupted formula education. Work on their literacy skills in their native language
4) Two of the specialists would focus on long term English learners having their own dedicated courses, or through pushing in for the designated time on the English classroom
5) 2 other ELL specialists are out of the classroom position focus: on coaching, designated and integrated ELD teachers, give professional development support, progress monitoring of ELL and RFPES
6) Meet with parents and oversee the newcomer center.
7) ELL testing and any other compliance needs
8) Fulltime assistant, add three more, four out of the five will be newcomers, difference content area
9) Which will need support, newcomer center, help parents connect with resources

Instructional & Pupil Support Services

10) Guidance counselors dedicated to newcomers and ELL
11) One of the social workers dedicated to ELL supports

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

12) 10% of ELL students will be in a dual language program, 2 of their math and social science classes will be dual language, and will also take foreign language, account for two different languages. It costs $150 per student, which is included in the base model books

Books and curriculum spending increased by purchasing for 100 newcomer students the following items:

13) Software for newcomers at $100 a piece
14) Workbook at $35 a piece
15) Dictionary at $15 a piece

Instructional supplies and equipment spending increased due purchases of the following:

16) $30 software licenses for each EL student.
17) $200 of thinking maps and other EL-relevant instructional materials for each classroom.
18) Newcomer center $20 for new book school and community resources

Community services supplies and equipment spending increased by $20 purchases for 100 newcomer students and their families.

Professional Development (PD) Expenditures
19) PD for two teachers: $5,0000

Task 4: A Change from the Base Model to a High SE Model

Core Instructional Program

General education teachers will need additional support because 1 out of 7 students in the class is a special education student. For the high poverty model, we lowered the class-size to 24 students. For the high special education model, keep class-size at 28 students and add one educational assistant for every core class (one educational assistant for every teacher). This change is not needed for art, music, and physical education because students in these courses likely have their own educational assistant (high severe are likely in these courses).

Special Education Program

Low severity students
Add two teachers and one educational assistant to cover then increased number of students in special education. In addition, with an increased special education population, there are multiple level of intervention needs. One additional teacher is needed for specialized instruction/intervention. This drops the average general special education teacher case load to 13 students for the low-severity special education population.

The 0.3 related services caseload teacher is not needed because we added a dedicated special education administrator.

The speech and language pathologist staffing should be increased proportionally.

High severity students
The caseload should remain at the same proportions.

Instructional & Pupil Support Services

One school psychologist should be added to administer additional IEP assessments and support increased counseling for functional behavior planning and assessments (not IES assessment, PBIS positive behavior implementation support). One assistant nurse should also be added.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

Books and curriculum

- $1500 for STS Math licenses
- $500 per kit for Reading Intervention kits (i.e. Fontas & Pinell) – 2 total per grade level
- $750 for Lexia reading software
- $300 per kit for Guided Reading kits and high interest Low skill book kits – 4 total sets per grade level and teachers can then share & switch out with each other

Instructional support supplies and equipment

Students in special education need additional resources. For all students in special education, add $36 each for both ELA and math each for consumables. For all student in special education, add $46 each for both ELA and math each) intervention software.

Instructional contracted services
Add the following for students in special education:

- $50, 000 for 1 additional NPS placement

Professional Development (PD) Expenditures

Add two more staff for specialized training for connecting general and special staff, collaboration strategies, integration of SPED services and general education classrooms.

Extended Day Instruction & Other Programs Outside of Regular School Hours

No change to expected attendance proportions. General Education Program: 10% of general education and low-severity special education students. Special Education Program: 85% of high-severity special education students. Extra-Curricular Program: 20% of general education and low-severity special education students.

Extended Year or Summer Programs

Class-size should be 8 students and 2 EAs per classroom

School Administration

One other professional administrative staff should be added to support MTSS, IEPs, SSTs and additional support of general education teachers to integrated SPED students in their classrooms.

Task 5: A Change from the Base Model to a Smaller School

Length of the School Year & Day
Add 2 weeks before (1 week) and after (1 week) school year for additional instructional purposes.

Teacher distribution: 30% (Steps 1-4), 30% (Steps 5-8), 40% (Steps 9 and above)
More veteran teachers are necessary to provide adequate instruction for smaller enrollments because instructors will take on multiple roles and subject areas.

Core Instructional Program
Class-size is 20:1 for all except PE is 30:1
1 academic coach (for math and science)
1 reading specialist (for ELA)
No gifted resource teacher and no other.

Two certificated experts to help in all areas but one will not just do reading interventions, they will also help teachers. Both will do interventions and coaching. Will also cover gifted and talented.

English Learner Specialists
Bilingual stays at 2
ELD resource should be set to 0.9. It was decreased proportionately to maintain PTR of 56:1 (same as the Base Model).

Special Education Program
Proportions (caseloads) should stay the same. Need to be adjusted downward for enrollment decline.

Instructional & Pupil Support Services
Reduce counselors from 2.0 to 1.0 FTEs
Remove 1.0 FTE social worker
Remove 0.5 certificated and 0.5 classified FTEs from Other Student Support Services

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs
Books and curriculum
Follows the base model. Textbooks and software licenses are replaced every 6 years in the five core areas (ELA, Math, Foreign Language and Science) and computer education at $110 each (5.60 courses needing replacement books/licenses every six years). Consumables are replaced every year in 3 subjects at $35 each.

Instructional supplies and equipment

Non Personnel for Instructional Supplies and Equipment follows the base model, but allows for only one computer/media arts lab and the additional resources for STEM CTE courses (e.g., robotics) has been scaled down accordingly from the base model.

Special education costs are cut proportionally.

Professional Development (PD) Expenditures
Different from the base model, there will be no external staff trainings in the middle school small schools task.

Student Athletic Programs
There will be six athletics coaches, each of whom will receive an annual stipend of $600.
A total of $7,000 will be made available for student transportation to offsite athletics events.
A total of $3,500 will be made available for contracted services associated with student athletics.

School Administration
Compared to the base task, there will be 1 FTE fewer other professional administrative staff and 2.0 FTE fewer clerical/office staff because there are enough adults in other roles in the school to handle the demands of a school of this size

There will be $11,000 less in stipends offered to administrative staff. The two $2,000 stipends for the reading specialists are not needed and each remaining 7 department chairs get $1,000 each.

Maintenance & Operations
There will be 1.0 FTE fewer custodian/maintenance staff and no security personnel staff because 2 custodial staff and no security are enough for a school of this size.

High School Program

Task 1: The Base Model Instructional Program Design

Length of the School Year & Day

Time students spend in school
(Identical to middle school) The school year has to be a minimum of 180 instructional days. There should also be an extended year for summer school programs for remediation and enrichment.

Contract time for staff
(Identical to middle school) There will be 10 pupil free days for district and site days. Two days that are for district initiatives, 1 preservice day for veteran teachers and 1 orientation day for new teachers, 1 day to set up the classroom, 1 day to clean the classroom, and five days for deep embedded collaboration.

Education assistants require professional development but do not need as much as teachers. Educational assistants should receive 5 professional development days.

Administrators should have a total of 205 days and other administrative and clerical staff should have 195 days.

Typical daily course loads
The typical number of periods will be 6, but some students will have 7 periods for intervention/ extra-curricular activities. Teachers should provide instruction for 6 periods per day and prepare for instruction and participate in professional development, to collaborate with other teachers, including general and special education teachers, for the remaining one period.

Composition of ataff
(Identical to the middle school). There should be a balance between new and veteran teachers. 30% of teachers in Steps 1-4, 40% of teachers in Steps 5-8, and 30% of teachers in Steps 9 and higher.

Core Instructional Program

Core courses & athletic courses
All students have to take A-G requirements to be college-ready. High schools typically have less intervention courses because students need to take courses for graduation requirements. Advisory and relationship building should be embedded in the day for about 30 minutes per day. During this time, grades 9 and 10 will also focus on onboarding and grades 11 and 12 will focus on career and college readiness.

All students (100%) will take English Language Arts and mathematics for all 4 years. In addition, 20% of 9th graders and 10% of 10th graders will take an additional ELA and math intervention course. Foreign language is required for 2 years (50% of students). History/Social Science is required for 3 years (75% of students). Science will be required for 3 years (75% of students) and will include 1 year of health to meet the state mandates. Art/visual and performing arts (VAPA) is required for 1 year. Students meeting this requirement will be spread evening across art, dance, drama/theater, music.

Physical education is required for 2 years (50% of students). Twenty percent of students will take a physical education course and 30% of students will participant in sports/athletics teams. The average class-size for physical education courses will be 45 students. Sports-athletic teams will be staffed by 1 head coach, 1 assistant coach, 1 director of athletics and 1 administrator

All classes, excluding physical education and VAPA courses should have an average of 28 students. A class-size of 28 will allow teachers to group students into 4 groups of 7 students and provide instruction to those smaller groups. Physical education and VAPA courses should have an average class size of 45 students.

Career and technical courses
CTE is generalized in the RCM because schools emphasize different CTE courses. 85% of students will take one of a variety of CTE courses. There will also be 37% of students each year that will take a computer education course.

Resource teachers
There should be 1 ELA coach, 1 math coach, 1 intervention teacher to work with at-risk students and support teachers in classrooms, 1 technician, and a 0.8 floater (a total of 4.8 staff).

You cannot deny a student from AP course. The gifted and talented program is accommodated in the core program. It is not offered the same as it is for middle school. It is more open access at high school so a staff is not needed.

English Learner Specialists
(Identical to the middle school model because the demographics are similar)

It was estimated that approximately 20% of English learners are newcomers, unaccompanied minors.

There should be 2 English language learner specialists. One specialist will provide English Language Development (ELD) 1 and 2 courses (these courses are for beginning students of English) for newcomers and will provide push-in for one class period for newcomers. One specialist will support out of classroom needs and will provide integrated and designated coaching.

Two instructional assistants for newcomers will travel with them to support them with translation in their native language.

School counselor time should include time for ELs in that designated section.

Special Education Program

Low severity students
There should be 1 teacher for each core course (5 core, including one elective) so that the teachers are teaching to their expertise, and 1 additional teacher for ELA and 1 additional teacher for math (total of 7 teachers).

A 0.2 speech pathologist is needed because these responsibilities will mostly be performed by contract services. There is less testing and assessment in high school because most of the students would have transitioned out of services.

High severity students
There should be a total of 6 teachers and 10 educational assistants. Of these staff, 1 teacher and 4 educational assistants should be assigned to emotionally disturbed students and 1 teacher and 2 education assistants should be assigned to intellectually disabled students. The remaining staff will serve high severity students.

There should be 2 related services caseload teachers: 1 for case management and 1 for transitional services.

There should be a 0.8 FTE speech and language therapist because high severity students will also have some of these needs.

Instructional & Pupil Support Services

There should be 1 counselor for every 300 students. There should also be 2 psychologists, 2 social workers (0.5 FTE staff will be dedicated to ELs), 1 school nurse and 1 assistant nurse, 1 librarian and 2 librarian assistants, 2 technical consultants, 1 community liaison, 1 dean of PBIS, 1 translator (the EL population is low), and a 1.4 FTE assistant for translator services, childcare for parent meetings, and to provide support in the parent center.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

(Similar to middle school)

Books and curriculum
Textbooks and software licenses are replaced every 6 years in the five core areas (ELA, Math, Foreign Language and Science) and electives including computer education at $110 each (5.37 courses needing replacement books/licenses every six years). Consumables are replaced every year in 3 subjects at $35 each.

Add the following for 30% of ELs (newcomer students):

- Software at $100 a piece
- Workbooks at $35 a piece
- Dictionary at $15 a piece

Add the following for students in special education:

- $3000 for STS Math licenses for all students
- $500 per kit for Reading Intervention kits (i.e. Fontas & Pinell) - 1 per grade level
- $1500 for Lexia reading software for all students
- $300 for Ironbox Math kit
- $300 per kit for Guided Reading kits and high interest Low skill book kits - 2 sets per grade level and teachers can then share & switch out with each other
- $1100 per license for GoalBook Toolkits Software Program (THIS IS A MUST HAVE) - 1 license per SpEd teacher

Instructional supplies and equipment

Educational technology goes obsolete after 3 years and should be replaced. One Chromebook and maintenance is needed for each student at $400 each. Each teacher, administrator and certificated staff should also have a computer at $1,000 each. There should be 4 computer labs (for digital media arts and for STEM) with 70 computers each, servers and other necessary equipment and maintenance at $125,000 per lab. In addition, every classroom should include standard 21st century upgrades like a printer, document camera, and an LCD projector at $5,000 each.

Each department (Visual Arts and Performing Arts, English Language Arts, Foreign Languages, Health Education, History/Social Science, Mathematics, Physical Education, Science, Special Education, Career/Technical or 10 total) should receive $2,000 each for basic supplies.

Approximately 50% of students will need uniforms at $15 each.

Provided an additional $50,000 per year to purchase equipment necessary for STEM CTE programs such as robotics, biomedicine, etc.

Add the following for ELs:

- $30 software licenses for each EL student.
- $200 of thinking maps and other EL-relevant instructional materials for each classroom.

Pupil support supplies and equipment

Add the following for students in special education:

- $15000 for Ripples Effect Program for Teens

Instructional contracted services

Add the following for students in special education:

- $100, 000 for 2 NPS placements
- $240 per day for substitutes

Professional Development (PD) Expenditures

(Identical to the middle school)

All teachers should receive textbook adoptions and standards alignment.

There should be 3 contracted services for professional development: 1 in STEM, 1 in literacy/writing coach for across the curriculum, and 1 for bullying/socio-emotional coaching. Each cost $2,500 for a one-day session.

All teachers and administrators should attend 1 conference within 3 years. The average costs to attend a conference, including travel and lodging is $3,000. $3900 for PBIS training module

Student Athletic Programs

There should be a total of 64 athletic teams across 17 sports for boys, girls or combined, with varsity and junior varsity for each.

1. Football, boys only
2. Volleyball, boys and girls
3. Baseball, boys and girls
4. Softball, boys and girls
5. Basketball, boys and girls
6. Soccer, boys and girls
7. Track, boys and girls
8. Cross-country, boys and girls
9. Lacrosse, boys and girls
10. Badminton, boys and girls
11. Tennis, boys and girls
12. Dance teams, boys and girls
13. Cheer, combined
14. Polo, boys and girls
15. Golf, boys and girls
16. Wrestling, boys and girls
17. Gymnastics, boys and girls

Administrative personnel
These staff are included in the Core Instructional Program section.

Coaches
A $2,500 stipend will be paid to varsity coaches and a $1,500 stipend will be paid to junior varsity coaches. There should also be a part-time trainer.

Non-personnel costs of the program
Each of the 60 teams will play a total 10 away games, with a travel cost of $70 per hour for 6 hours each. Ten additional games will be home games.

Supplies, materials, and equipment typically costs a total of $200,000 per year for a school size of 2,000 students. The cost is adjusted for a school size of 1,400 students, about $100 per student.

Insurance will be needed for at-risk students (students in poverty) at $10 per student and for up to 3 sports.

Each home game (10 for each of the 60 teams) will also require 2 referees at an average cost of $100 for each referee.

Extended Day Instruction & Other Programs Outside of Regular School Hours
(Similar to the middle school model)

Instructional programs: General education
Remediation and enrichment should occur during periods 0 and 7. Zero period can include AVID, AP courses, and other course for gifted and talented students.

Enrollment, days per year, & hours per day. General education students will be served with low severity special education students. Twenty-five percent of non-special education students and 25% of low-severity special education students will receive after-school tutoring 5 days per week for one hour per day. These same percentages of students will receive tutoring on 18 Saturdays of the school year for 4 hours per day. Program will not be offered the first and last weeks of the instructional year.

Personnel. The average class-size for the high school tutoring program should be smaller than for the middle school program because the achievement gaps are wider. Therefore, the class-size for high school afterschool tutoring program should be 15.

Non-personnel costs per pupil served. The cost of supplies, materials, and equipment is about 10% of the total staffing cost, $68 per student.

Instructional programs: Special education
Enrollment, days per year, & hours per day. Extended day instruction will be offered to all high severity special education students, but it is expected that 85% of these students will attend. These students will also receive after-school tutoring 4 days per week for one hour per day and tutoring on 18 Saturdays of the school year (excluding the weeks at the beginning and end of the school year) for 4 hours per day.

Personnel. The achievement gaps are wide so class-size should be small. For SPED, the pupil teacher ratio is 5 to 1.

Non-personnel costs per pupil served. The cost of supplies, materials, and equipment is about 10% of the total staffing cost.

Other programs: Extra-curricular

Enrollment, days per year, & hours per day. Thirty-five percent of general education and low-severity special education students will participate in an enrichment program (clubs and activities) 2 days per week for 2 hours per day.

Personnel. The pupil teacher ratio for extra-curricular programs is assumed to be at 30-to-1 on average across the different activities.

Non-personnel costs per pupil served. All students should participate in sports competitions and travel to outside games to supports whole-child development. The cost of travel, supplies, materials and equipment is $500 per student.

Extended Year or Summer Programs
(Similar to the middle school model)

Instructional programs: General education
Enrollment, days per year, & hours per day. 25% of non-EL and 25% of low-severity special education students and 50% of English learner students will attend summer school for remediation and enrichment for 20 days four hours per day.

Personnel. Intervention class sizes should not have larger classes than the class size for regular school year. 20 students. Credit recovery requires 40 hours per semester to recover 5 credits, 20 days for 4 hours per day.

Non-personnel costs per pupil served. Schools typically use what they already have purchased for the school year. Specifics licenses/software are also required/used. The average cost is $110 per license.

Instructional programs: Special education
Enrollment, days per year, & hours per day. The purpose of summer school for special education students is to increase retention and prevent regression. One-hundred percent of high severity students are expected to attend for 20 days, 4 hours per day.

Personnel. Intervention class sizes should be 8 students to allow for modifications, credit recovery and achievement gaps are larger. Five educational assistants are also required for each student to have a full-time assistant.

Non-personnel costs per pupil served. Students need licenses at $110 each and about 10 students will need additional materials at $50 each.

School Administration

There should be 1 principal, 2 vice principals, 2 deans, and 7 clerical staff (registrar, data technician, attendance clerk, clerk for ASB, sports program secretary and secretaries for admin).

Maintenance & Operations
There should be 5 custodians, 2 day custodians, 2 night custodians, and 1 maintenance custodian. This is typical for a school of 2,000 students (which has 7 custodians) and has been adjusted for 1,471 students. There should also be 3 full-time security personnel.

Task 2: A Change from Average Poverty to a High Poverty

General Strategies

Should include after school, extended activities, fun activities. Students in high poverty schools do not know how the systems work. It is not always about the number of people, the quality of the programs. LCAP programs should also be considered, as well as community liaisons. Students in high poverty schools do not feel like there are adults they are connected to. They feel like they cannot connect to adults in the school because the students may be behind in work and cannot approach adults.

Length of the School Year & Day

Contract time for staff
New teachers (10% of the total teacher population) should have 3 additional days of professional development at the beginning of the school year.

Core Instructional Program
All students (100%) will take English Language Arts and mathematics for all 4 years. In addition, 40% of 9th graders (from 20% in the base model) and 20% of 10th graders (from 10% in the base model) will take an additional ELA and math intervention course. The additional intervention courses will have a PTR of 18:1.

Class-size should be 24 students, but class-size for electives can be higher. Class-size for performing arts, theater, dance, music is 45 students.

English Learner Specialists
One English language development resource teacher should be added (a total of 3; 2 were in the base model). One will support newcomer ELD and 2 will also support newcomer ELD and will support long-term ELs, plan and support with teachers, do push-ins, administer tests and progress monitoring, and meeting with parents.

Special Education Program
Identical to the base model because the ratios are already low. 1.25 FTE of General Special Education teachers added to address additional trauma among low-severity special education students.

Instructional & Pupil Support Services
Add 2 counselors, 1 CTE counselor and 1 college counselor.

Add social workers (1 per 200 students) to address socio-emotional needs and student trauma. 0.5 of a social workers time will support unaccompanied minors who are newcomer EL students with additional transitional and/or additional needs to adjust to their new environment. Will

provide social and emotional support to address needs specific to those who have come to the country without adults.

Add 1 librarian for 736 students per librarian.

One professional other student support services staff should be added to support parent engagement and education (a community liaison), parents through the IEP process, connect families with services, restorative justice, and food pantry supervision. A 0.6 assistant other student support services staff should be added to assist with childcare during parent meetings.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

Instructional support supplies and equipment
High poverty students need additional resources (binders, backpacks). For 40% of 9th grades (25% of all students) add $36 for both ELA and math each. For 20% of 10th grades (25% of all students) add $36 for both ELA and math each. Add $46 for 40% of 9th grade and 20% of 10th grade for ELA and math intervention software programs, like iReady.

Instructional contracted services
$5,000 for motivational speakers.

Replicate what was done for middle school for non-personnel PD costs.

Professional Development (PD) Expenditures
Professional development contracted services should be double the amount of the base model.

Extended Day Instruction & Other Programs Outside of Regular School Hours

Other programs: Extra-curricular
Enrollment, days per year, & hours per day. Participation should be increased to 70% (double the base model) to keep students engaged in school and off the street. Almost all students in poverty should be offered an extra-curricular activity.

Extended Year or Summer Programs

Instructional programs: General education
Enrollment, days per year, & hours per day. Eighty-six percent, all students in poverty, will attend summer remediation and enrichment programs. There should also be a summer transition/Link Crew type program for incoming 9th graders and 25% of 12th graders. The program should be 5 days for 4 hours per day. There should be 50 students per teacher.

Personnel. No change in staffing. Stipends to compensate Link Crew program teachers were added in administration section.

Instructional programs: Special education
Personnel. Intervention class sizes should be 6 students

School Administration
There should be an additional assistant principal for a total of 3 (from 2 in the base model).

$1,200 stipends should be paid to 5 teachers for a 9th grade transitional/bridge program.

Maintenance & Operations
One security should be added for a total of 4 (from 3 in the base model)

Task 3: A Change from High Poverty to a High Poverty, High EL Model

English Learner Specialists
Added 3.0 FTE ELD resource teachers (to represent the languages of the increased numbers of EL students) and 3.0 FTEs of education assistants.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs
Books and curriculum spending increased by purchasing for 117 newcomer students the following items:

1) X at $100 a piece
2) Y at $35 a piece
3) Z at $15 a piece

Instructional supplies and equipment spending increased due purchases of the following:
20) $30 software licenses for each EL student.
21) $200 of maps and other EL-relevant instructional materials for each classroom.

Task 4: A Change from the Base Model to a High SE Mode

Core Instructional Program
For the high special education model, keep class-size at 28 students and add one educational assistant for every core class (one educational assistant for every teacher). Class-size change not needed for CTE, art, music, and physical education because students in these courses like have their own educational assistant (high severe are likely in these courses).

Special Education Program

Low severity students
Add four teachers and two educational assistants to cover then increased number of students in special education. In addition, with an increased special education population, there are multiple level of intervention needs. Three additional teachers are needed for specialized instruction/intervention. This drops the average general special education teacher case load to 13 students for the low-severity special education population.

High severity students
The caseload should remain at the same proportions.

Instructional & Pupil Support Services
Add one more SPED guidance counselor to support certificates of completion, casework, credit recovery, workability, and high school transition.

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

Add the following for students in special education:

- $2000 for STS Math licenses
- $500 per kit for Reading Intervention kits (i.e. Fontas & Pinell) – 2 total per grade level
- $750 for Lexia reading software
- $300 per kit for Guided Reading kits and high interest Low skill book kits – 4 total sets per grade level and teachers can then share & switch out with each other

Instructional contracted services
Add the following for students in special education:

- $100,000 for 2 additional NPS placements

Professional Development (PD) Expenditures
Add three more specialized external staff trainings for connecting general and special staff, collaboration strategies, integration of SPED services and general education classrooms, and varying needs/disabilities.

Extended Day Instruction & Other Programs Outside of Regular School Hours

No change from the base for general education. Class-size should be 8 students and 2 EAs per classroom for special education.

School Administration
One other professional administrative staff and 1 clerical staff should be added to support MTSS, IEPs, SSTs and additional support of general education teachers to integrated SPED students in their classrooms. Clerical staff also need a laptop.

Task 5: A Change from the Base Model to a Smaller School

Length of the School Year & Day
Similar to the middle school small schools task.

Core Instructional Program
Similar to the middle school small schools task.

3.8 fewer coach FTEs and 1 additional reading specialist FTE

English Learner Specialists
Increased bilingual resource teachers proportionately from middle school small schools task (increased by 0.2 FTEs)
1.0 fewer English language development resource teachers

Special Education Program
Increased all staff proportionately from middle school small schools task

Instructional & Pupil Support Services
Decreased staffing as follows:
Guidance Counselors – 3.8 FTEs
School Psychologists – 1.4 FTEs
Social Workers – 1.4 FTEs
Technical Consultants – 1.0 FTEs
Other Student Support Services – 2.0 FTEs

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs
Books and curriculum
Follows the base model. Textbooks and software licenses are replaced every 6 years in the five core areas (ELA, Math, Foreign Language and Science) and computer education at $110 each (5.60 courses needing replacement books/licenses every six years). Consumables are replaced every year in 3 subjects at $35 each. Same as for middle schools, small schools model.

Instructional supplies and equipment
Non Personnel for Instructional Supplies and Equipment follows the base model, but allows for only one computer/media arts lab and the additional resources for STEM CTE courses (e.g., robotics) has been scaled down accordingly from the base model. Same as for middle school small schools task.

All other non-personnel
Copied proportionately from middle school small schools task

Special education costs are cut proportionally.

Professional Development (PD) Expenditures
Different from the base model, there will be no external staff trainings in the middle school small schools task.

Student Athletic Programs
There will be six athletics coaches, each of whom will receive an annual stipend of $1,200.
A total of $14,000 will be made available for student transportation to offsite athletics events.
A total of $7,000 will be made available for contracted services associated with student athletics.
Each of these have been doubled from the middle school small schools task.

School Administration
Compared to the base task, there will be 2.0 FTE fewer vice principals, one fewer FTE other professional administrative staff and 5.0 FTE fewer clerical/office staff because there are enough adults in other roles in the school to handle the demands of a school of this size

Maintenance & Operations
There will be 3.0 FTE fewer custodian/maintenance staff and only 1.0 FTE security personnel staff because 2 custodial staff and one security are enough for a school of this size.

District and Regional SE Services and Resources Task

Using the questions below, each panel should describe district and/or regional level services provided for SE students. Please remember that these resources and services should complement school level instructional programs. In addition, panels will have the opportunity to review the work completed in the Base Model when the panels reconvene.

What staff and non-personnel expenditures are needed to provide related services not already captured in your school prototypes for all SE students (e.g., those served in neighborhood schools, district programs, or special school placements) and how will these services be delivered?

Please assume that these are related services that may be required by only a relatively small percentage of students in any given school and would therefore likely be more efficiently provided out of the central district office.

One mental health social worker for emergencies and crisis situations, as needed. Materials needed are office supplies.

Travel related for conferences.

One director (to run the special education program) and associate or assistant director (to assist with running the program). The administrator will also need professional development/conference attendance at $1500-$1000 per conference. The administrator and assistant will go to one conference per year and the director and assistant will need computers.

We will come back to the travel costs for the service provider. Average is $75/month for mileage. These are all 12-month positions.

Two interpreters are needed all year round. It is the law to translate IEPs and other written documents and provide sign language. Minimal travel is required, they do mostly paper work.

Medical Nursing Services: Expect the school nurses to do those tasks so not needed at the district level.
Medical costs: supplies, gloves, testing equipment, catheters at $10 per student for medical supplies. Some students need more, some less.

Speech language pathologist: 1 coordinator or manager to manage the department. These are speech pathologist that provides supervision, travel, order protocols. They order about $4,000 worth of testing kits and materials for the speech department.

One adapted physical education person is needed. This person travels a lot and will service all schools at $100 for mileage per month. Equipment is needed but staff will use a lot of what the school has at $2 per kid for basic things needed for lessons, classroom supplies, balls…

A full-time audiologist is not needed; 0.2 staff is needed for 1 day per week. Equipment (like an audiometric machine) but is replaced every 5 years at $2,000.

No deaf and hard of hearing. This is needed or deaf kids. This is different from the audiologist. 1 deaf and hard of hearing teacher. Lots of travel. $100 per month for travel for 10 months. Supplies, classroom material not equipment. $100 per month for activities and materials.

Mobility instructor are for the 10 orthopedic kids but are not utilized often. Someone is needed 0.5 time to travel to school sites. Materials and supplies for magnifiers, walkers are need at about $300 per student.

Occupational therapists are most often used in elementary schools. Two therapists and 1 assistant is needed for 10 months. These staff travel a lot. $1,500 testing kits and protocols are needed. There will also be one conference per year at $500 per person.

A physical therapist is needed 2 days per week for 10 months per year. An assistant is not needed with the small caseload. The physical therapist will travel and will need equipment. The physical therapist should receive the same amount as the physical education staff because they can trade off.

Four program specialists are needed (assuming there are 10 schools in the district). Program specialists are assigned to specific schools and assist the schools with placement decisions, whether students should be moved to less or more restrictive environments, participate in more complex IEPs, and provide general special education support. A program specialist that is an expert in special education professional development is also needed

A vision therapist is needed for 1 day per week for 12 months for the 3 students. Vision therapist's travel relatively less than other staff at $50 per month. The physical therapist will need basic materials similar to the mobility instructor at $300 per student.

Work study/transition skills staff was also added in the high school model. One staff and one assistant are needed at the district to build the transition from middle to high school, matriculation. Travel is needed for both staff for half of the region for 10 months $50 per month. Material needed are licenses for workability, vocational study kits (2 each at the high school level and 1 each at middle school level). There will also be community based trips for transition skills, 2 or 3 per year at $250 per bus for 4 schools total (middle and high) and 2 trips per school.

Programmatic Priorities Task

How would a budget decrease of approximately 10% affect your instructional elementary school program? What would you prioritize? **Please also indicate what impact you might expect to student outcomes in this scenario.**

- Decided to keep the same model of support and class sizes.

- The core is the school program and try to preserve the PE, art, music and languages classes
- Will focus on eliminating the after school and summer programs

Length of the School Year and Day

-Same PD as base model, hours distribution of staff is the same as the base model

Core Instructional Program

Kept same class size

- Reduced the number of FTE for Academic Coaches: from 2.5 FTEs to 1 FTE

English Language Learner Specialists

- No change

Special Education Program

- No change

Instructional & Pupil Length of the School Year and Day

- Reduced the Guidance Counselor to 0.5 FTE and the social worker to 0.5 FTE
- Decided to not have a technical consultant person

Non-Personnel Expenditures for Instruction, Support, and Administrative Programs

- No change

Professional Development (PD) Expenditures

- No change

Extended Day Instruction & other Programs outside of Regular School Hours

- Eliminated the program

Extended Year or Summer Programs

- Eliminated the program for general education but kept the one for special education

School Administration

- Will only have a principal and clerical office support, which the later was reduced by 0.5 FTEs.
- Eliminated the role of the AP

Maintenance & Operations

- No change

Appendix G: Professional Judgment Panelist Cost Estimates

Exhibit G-1. Comparison of Elementary School Adequacy Projected Costs by Cost Component and (Non)Personnel Type

Elementary School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	North	South	North	South	North	South	North	South	North	South
Programmatic Component Breakdown										
Core Instruction	$6,808	$8,404	$7,307	$8,850	$8,202	$10,190	$6,808	$8,316	$6,632	$8,728
Special Populations	$3,344	$3,467	$3,642	$3,477	$4,388	$3,919	$4,517	$4,884	$3,513	$3,757
Student Support	$1,062	$1,695	$1,631	$2,291	$1,765	$2,305	$1,405	$2,088	$1,191	$2,003
School Administration	$1,236	$889	$1,236	$1,232	$1,236	$1,232	$1,236	$1,069	$1,394	$1,532
General Nonpersonnel	$1,338	$1,321	$1,345	$1,367	$1,076	$1,401	$1,371	$1,660	$1,347	$1,231
Extended Time	$853	$578	$1,068	$859	$1,068	$872	$885	$725	$908	$786
Total	**$14,640**	**$16,353**	**$16,228**	**$18,075**	**$17,734**	**$19,919**	**$16,222**	**$18,742**	**$14,985**	**$18,037**
(Non)Personnel Breakdown										
Certified	$11,388	$12,415	$12,558	$13,900	$13,825	$14,331	$12,425	$14,063	$11,987	$13,836
Non-Certified	$1,681	$2,519	$2,044	$2,677	$2,546	$4,050	$2,192	$2,907	$1,437	$2,796
Nonpersonnel	$1,571	$1,419	$1,626	$1,499	$1,363	$1,539	$1,605	$1,773	$1,561	$1,405
Total	**$14,640**	**$16,353**	**$16,228**	**$18,075**	**$17,734**	**$19,919**	**$16,222**	**$18,742**	**$14,985**	**$18,037**

Source: AIR calculations based on PJP resource specification

Exhibit G-2. Comparison of Elementary School Adequacy Projected Costs by Cost Component and (Non)Personnel Type - Percentages

Elementary School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	North	South	North	South	North	South	North	South	North	South
Programmatic Component Breakdown										
Core Instruction	47%	51%	45%	49%	46%	51%	42%	44%	44%	48%
Special Populations	23%	21%	22%	19%	25%	20%	28%	26%	23%	21%
Student Support	7%	10%	10%	13%	10%	12%	9%	11%	8%	11%
School Administration	8%	5%	8%	7%	7%	6%	8%	6%	9%	8%
General Nonpersonnel	9%	8%	8%	8%	6%	7%	8%	9%	9%	7%
Core Instruction	6%	4%	7%	5%	6%	4%	5%	4%	6%	4%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
(Non)Personnel Breakdown										
Certified	78%	76%	77%	77%	78%	72%	77%	75%	80%	77%
Non-Certified	11%	15%	13%	15%	14%	20%	14%	16%	10%	16%
Nonpersonnel	11%	9%	10%	8%	8%	8%	10%	9%	10%	8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: AIR calculations based on PJP resource specification

Exhibit G-3. Average Elementary School Adequacy Projected Costs by Cost Component and (Non)Personnel Type

Elementary School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	Average	Percent	Average	Percent	Average	Percent	Average	Percent	Average	Percent
Programmatic Component Breakdown										
Core Instruction	$ 7,606	49%	$ 8,078	47%	$ 9,196	49%	$ 7,562	43%	$ 7,680	47%
Special Populations	$ 3,405	22%	$ 3,559	21%	$ 4,153	22%	$ 4,701	27%	$ 3,635	22%
Student Support	$ 1,378	9%	$ 1,961	11%	$ 2,035	11%	$ 1,747	10%	$ 1,597	10%
School Administration	$ 1,062	7%	$ 1,234	7%	$ 1,234	7%	$ 1,152	7%	$ 1,463	9%
General Nonpersonnel	$ 1,329	9%	$ 1,356	8%	$ 1,239	7%	$ 1,516	9%	$ 1,289	8%
Extended Time	$ 716	5%	$ 963	6%	$ 970	5%	$ 805	5%	$ 847	5%
Total	**$ 15,497**	**100%**	**$ 17,152**	**100%**	**$ 18,827**	**100%**	**$ 17,482**	**100%**	**$ 16,511**	**100%**
(Non)Personnel Breakdown										
Certified	$ 11,902	77%	$ 13,229	85%	$ 14,078	91%	$ 13,244	85%	$ 12,912	83%
Non-Certified	$ 2,100	14%	$ 2,360	15%	$ 3,298	21%	$ 2,549	16%	$ 2,117	14%
Nonpersonnel	$ 1,495	10%	$ 1,563	10%	$ 1,451	9%	$ 1,689	11%	$ 1,483	10%
Total	**$ 15,497**	**100%**	**$ 17,152**	**100%**	**$ 18,827**	**100%**	**$ 17,482**	**100%**	**$ 16,511**	**100%**

Source: AIR calculations based on PJP resource specification

Exhibit G-4. Comparison of Middle School Adequacy Projected Costs by Cost Component and (Non)Personnel Type

Middle School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	North	South	North	South	North	South	North	South	North	South
Programmatic Component Breakdown										
Core Instruction	$6,279	$5,453	$7,973	$7,497	$7,973	$7,497	$6,279	$7,594	$6,560	$8,115
Special Populations	$2,036	$2,286	$2,048	$2,827	$2,534	$3,606	$3,309	$3,581	$2,117	$2,360
Student Support	$2,144	$1,945	$2,886	$2,598	$2,902	$2,602	$2,223	$2,283	$2,491	$3,289
School Administration	$1,213	$1,092	$1,478	$1,092	$1,478	$1,092	$1,213	$1,243	$1,741	$1,790
General Nonpersonnel	$1,058	$1,563	$1,129	$1,924	$1,162	$1,973	$1,084	$1,708	$1,058	$1,084
Extended Time	$583	$315	$941	$615	$659	$619	$611	$387	$790	$444
Total	**$13,312**	**$12,655**	**$16,454**	**$16,553**	**$16,708**	**$17,389**	**$14,720**	**$16,797**	**$14,757**	**$17,081**
(Non)Personnel Breakdown										
Certified	$9,687	$9,440	$12,191	$12,579	$12,688	$13,114	$10,512	$10,781	$10,775	$13,872
Non-Certified	$2,317	$1,514	$2,805	$1,826	$2,561	$2,084	$2,872	$4,141	$2,652	$1,681
Nonpersonnel	$1,308	$1,701	$1,458	$2,149	$1,459	$2,191	$1,336	$1,874	$1,331	$1,529
Total	**$13,312**	**$12,655**	**$16,454**	**$16,553**	**$16,708**	**$17,389**	**$14,720**	**$16,797**	**$14,757**	**$17,081**

Source: AIR calculations based on PJP resource specification

Exhibit G-5. Comparison of Middle School Adequacy Projected Costs by Cost Component and (Non)Personnel Type - Percentages

Middle School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	North	South	North	South	North	South	North	South	North	South
Programmatic Component Breakdown										
Core Instruction	47%	43%	48%	45%	48%	43%	43%	45%	44%	48%
Special Populations	15%	18%	12%	17%	15%	21%	22%	21%	14%	14%
Student Support	16%	15%	18%	16%	17%	15%	15%	14%	17%	19%
School Administration	9%	9%	9%	7%	9%	6%	8%	7%	12%	10%
General Nonpersonnel	8%	12%	7%	12%	7%	11%	7%	10%	7%	6%
Extended Time	4%	2%	6%	4%	4%	4%	4%	2%	5%	3%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
(Non)Personnel Breakdown										
Certified	73%	75%	74%	76%	76%	75%	71%	64%	73%	81%
Non-Certified	17%	12%	17%	11%	15%	12%	20%	25%	18%	10%
Nonpersonnel	10%	13%	9%	13%	9%	13%	9%	11%	9%	9%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: AIR calculations based on PJP resource specification

Exhibit G-6. Average Middle School Adequacy Projected Costs by Cost Component and (Non)Personnel Type

Middle School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	Average	Percent	Average	Percent	Average	Percent	Average	Percent	Average	Percent
Programmatic Component Breakdown										
Core Instruction	$ 5,866	45%	$ 7,735	47%	$ 7,735	45%	$ 6,937	44%	$ 7,338	46%
Special Populations	$ 2,161	17%	$ 2,438	15%	$ 3,070	18%	$ 3,445	22%	$2,239	14%
Student Support	$ 2,045	16%	$ 2,742	17%	$ 2,752	16%	$ 2,253	14%	$2,890	18%
School Administration	$ 1,153	9%	$ 1,285	8%	$ 1,285	8%	$1,228	8%	$1,766	11%
General Nonpersonnel	$ 1,311	10%	$ 1,527	9%	$ 1,568	9%	$ 1,396	9%	$1,071	7%
Extended Time	$ 449	3%	$ 778	5%	$ 639	4%	$ 499	3%	$ 617	4%
Total	**$ 12,984**	**100%**	**$ 16,504**	**100%**	**$ 17,049**	**100%**	**$ 15,758**	**100%**	**$ 15,920**	**100%**
(Non)Personnel Breakdown										
Certified	$ 9,564	74%	$ 12,385	75%	$ 12,901	76%	$ 10,647	68%	$ 12,323	77%
Non-Certified	$ 1,916	15%	$ 2,315	14%	$ 2,322	14%	$ 3,506	22%	$ 2,166	14%
Nonpersonnel	$ 1,505	12%	$ 1,804	11%	$ 1,825	11%	$ 1,605	10%	$ 1,430	9%
Total	**$ 12,984**	**100%**	**$ 16,504**	**100%**	**$ 17,049**	**100%**	**$ 15,758**	**100%**	**$ 15,919**	**100%**

Source: AIR calculations based on PJP resource specification

Exhibit G-7. Comparison of High School Adequacy Projected Costs by Cost Component and (Non)Personnel Type

High School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	North	South	North	South	North	South	North	South	North	South
Programmatic Component Breakdown										
Core Instruction	$6,539	$4,663	$8,108	$5,387	$8,108	$5,387	$6,539	$6,217	$6,902	$7,023
Special Populations	$2,014	$1,883	$2,020	$2,049	$2,128	$2,356	$2,846	$2,905	$1,915	$1,951
Student Support	$2,753	$1,643	$2,739	$2,274	$2,734	$2,238	$2,554	$1,731	$2,862	$3,131
School Administration	$1,321	$752	$1,321	$870	$1,321	$870	$1,321	$854	$1,889	$1,454
General Nonpersonnel	$1,058	$940	$1,125	$1,146	$1,234	$1,183	$1,083	$1,064	$1,058	$1,207
Extended Time	$762	$1,334	$857	$1,915	$857	$1,915	$814	$1,376	$943	$956
Total	**$14,447**	**$11,215**	**$16,170**	**$13,641**	**$16,383**	**$13,948**	**$15,156**	**$14,147**	**$15,568**	**$15,721**
(Non)Personnel Breakdown										
Certified	$10,544	$8,328	$12,343	$10,245	$12,454	$10,449	$11,320	$9,463	$11,668	$12,194
Non-Certified	$2,308	$1,269	$2,400	$1,329	$2,400	$1,436	$2,463	$2,935	$2,195	$1,692
Nonpersonnel	$1,594	$1,618	$1,427	$2,067	$1,529	$2,063	$1,373	$1,749	$1,705	$1,836
Total	**$14,447**	**$11,215**	**$16,170**	**$13,641**	**$16,383**	**$13,948**	**$15,156**	**$14,147**	**$15,568**	**$15,721**

Source: AIR calculations based on PJP resource specification

Exhibit G-8. Comparison of High School Adequacy Projected Costs by Cost Component and (Non)Personnel Type - Percentages

High School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	North	South	North	South	North	South	North	South	North	South
Programmatic Component Breakdown										
Core Instruction	45%	42%	50%	39%	49%	39%	43%	44%	44%	45%
Special Populations	14%	17%	12%	15%	13%	17%	19%	21%	12%	12%
Student Support	19%	15%	17%	17%	17%	16%	17%	12%	18%	20%
School Administration	9%	7%	8%	6%	8%	6%	9%	6%	12%	9%
General Nonpersonnel	7%	8%	7%	8%	8%	8%	7%	8%	7%	8%
Extended Time	5%	12%	5%	14%	5%	14%	5%	10%	6%	6%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
(Non)Personnel Breakdown										
Certified	73%	74%	76%	75%	76%	75%	75%	67%	75%	78%
Non-Certified	16%	11%	15%	10%	15%	10%	16%	21%	14%	11%
Nonpersonnel	11%	14%	9%	15%	9%	15%	9%	12%	11%	12%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

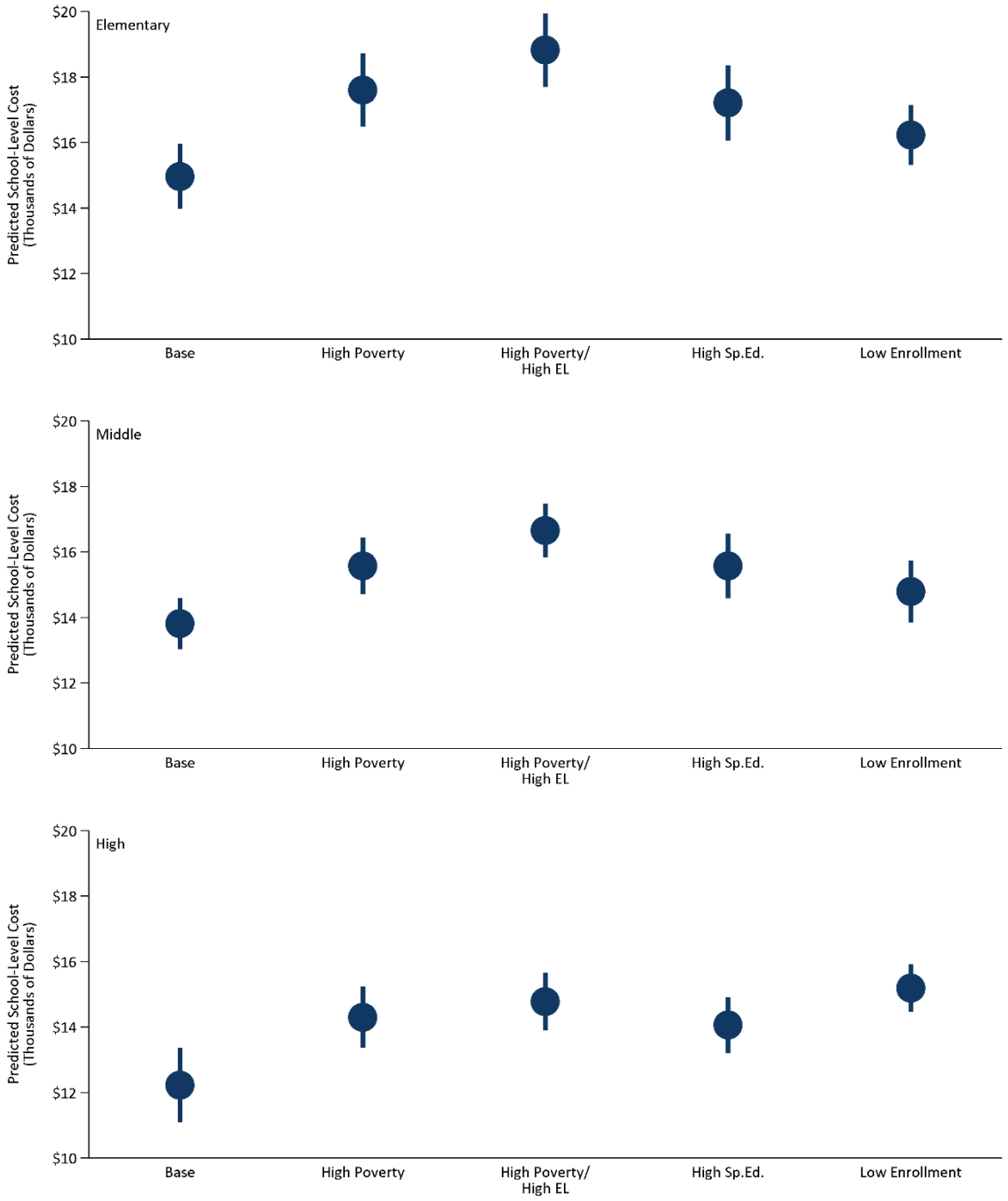
Source: AIR calculations based on PJP resource specification

Exhibit G-9. Average High School Adequacy Projected Costs by Cost Component and (Non)Personnel Type

High School	Base Model		High Poverty		High Poverty and High EL		High Special Education		Low Enrollment	
	Average	Percent	Average	Percent	Average	Percent	Average	Percent	Average	Percent
Programmatic Component Breakdown										
Core Instruction	$ 5,601	44%	$ 6,748	45%	$ 6,748	44%	$ 6,378	44%	$ 6,963	45%
Special Populations	$ 1,949	15%	$ 2,035	14%	$ 2,242	15%	$ 2,876	20%	$ 1,933	12%
Student Support	$ 2,198	17%	$ 2,507	17%	$ 2,486	16%	$ 2,143	15%	$ 2,997	19%
School Administration	$ 1,037	8%	$ 1,096	7%	$ 1,096	7%	$ 1,088	7%	$ 1,672	11%
General Nonpersonnel	$ 999	8%	$ 1,136	8%	$ 1,209	8%	$ 1,074	7%	$ 1,133	7%
Extended Time	$ 1,048	8%	$ 1,386	9%	$ 1,386	9%	$ 1,095	7%	$ 950	6%
Total	**$ 12,831**	**100%**	**$ 14,906**	**100%**	**$ 15,166**	**100%**	**$ 14,652**	**100%**	**$ 15,646**	**100%**
(Non)Personnel Breakdown										
Certified	$ 9,436	74%	$ 11,294	76%	$ 11,452	76%	$ 10,392	71%	$ 11,931	76%
Non-Certified	$ 1,789	14%	$ 1,864	13%	$ 1,918	13%	$ 2,699	18%	$ 1,943	12%
Nonpersonnel	$ 1,606	13%	$ 1,747	12%	$ 1,796	12%	$ 1,561	11%	$ 1,771	11%
Total	**$ 12,831**	**100%**	**$ 14,905**	**100%**	**$ 15,166**	**100%**	**$ 14,652**	**100%**	**$ 15,644**	**100%**

Source: AIR calculations based on PJP resource specification

Exhibit G-10. Predicted School-Level Per-Pupil Cost by School Level and PJP Scenario



Appendix H: Descriptive Statistics

Exhibit H-1. School Demographics

	Mean	Standard Deviation	5th Percentile	95th Percentile
Enrollment	666	532	49	1,876
Ln(Enrollment)	6.14	1.08	3.93	7.54
Special Education Proportion	12.5%	8.8%	5.8%	19.2%
Free or Reduced-Price Lunch Proportion	58.1%	28.7%	6.6%	93.9%
English Learner Proportion	24.1%	19.4%	1.4%	62.9%
Unduplicated Target Student Proportion	64.2%	28.0%	13.6%	97.1%
Middle School Enrollment Proportion	22.8%	34.5%	0.0%	100.0%
High School Enrollment Proportion	16.8%	36.5%	0.0%	100.0%
N	8,296			

Source: California Department of Education (CDE) Student & School Data Files (https://www.cde.ca.gov/ds/sd/sd/)

Exhibit H-2 District Demographics

	Mean	Standard Deviation	5th Percentile	95th Percentile
Enrollment	64,986	138,1589	2029	497,212
Enrollment: <500	1.0%			
Enrollment: 500-1,000	1.3%			
Enrollment: 1,000-2,000	2.6%			
Enrollment: >2,000	95.1%			
Special Education Proportion	11.7%	2.0%	8.4%	14.3%
Free or Reduced-Price Lunch Proportion	56.6%	24.2%	13.1%	87.4%
English Learner Proportion	21.9%	12.2%	5.1%	44.7%
Unduplicated Target Student Proportion	62.1%	23.7%	17.2%	90.3%
Middle School Enrollment Proportion	23.0%	7.7%	0.0%	34.2%
High School Enrollment Proportion	29.7%	23.7%	0.0%	100.0%
Comparable Wage Index (Mean Centered)	0.0%	7.8%	-9.1%	14.5%
N	934			

Note: The district demographics are weighted by enrollment
Source: California Department of Education (CDE) Student & School Data Files (https://www.cde.ca.gov/ds/sd/sd/)

Exhibit H-3. Regression Results

	District Administration Per Pupil	District Administration Ratio	Transportation Per Pupil	Transportation Ratio	Food Per Pupil	Food Ratio
Enrollment: Quartile 2	-0.393***	-0.189***	-0.249**	0.0195	-0.246**	-0.0280
	(0.0753)	(0.0480)	(0.0946)	(0.0843)	(0.0922)	(0.0602)
Enrollment: Quartile 3	-0.761***	-0.419***	-0.352***	0.0247	-0.405***	-0.0616
	(0.0746)	(0.0522)	(0.105)	(0.0934)	(0.0925)	(0.0610)
Enrollment: Quartile 4	-1.027***	-0.616***	-0.605***	-0.168	-0.446***	-0.0510
	(0.0812)	(0.0566)	(0.122)	(0.106)	(0.0997)	(0.0641)
Enrollment: Quartile 5	-1.252***	-0.869***	-0.537***	-0.127	-0.515***	-0.141*
	(0.0863)	(0.0608)	(0.139)	(0.119)	(0.106)	(0.0684)
High School District	0.253***	0.178*	0.366***	0.288***	-0.0361	-0.143*
	(0.0642)	(0.0731)	(0.0777)	(0.0752)	(0.0610)	(0.0600)
Unified School District	0.0915**	0.00556	0.135*	0.0425	0.0586	-0.0457
	(0.0285)	(0.0339)	(0.0663)	(0.0580)	(0.0380)	(0.0354)
Suburb	0.0463	0.135**	-0.113*	-0.0156	-0.0919*	0.0139
	(0.0310)	(0.0437)	(0.0534)	(0.0511)	(0.0362)	(0.0263)
Town	-0.0470	0.149**	0.174*	0.366***	-0.111*	0.0818*
	(0.0386)	(0.0525)	(0.0795)	(0.0760)	(0.0475)	(0.0343)
Rural	-0.0617	0.194***	0.523***	0.744***	-0.0336	0.184***
	(0.0683)	(0.0542)	(0.110)	(0.0899)	(0.0727)	(0.0347)
Comparable Wage Index	0.928***	0.343*	0.0888	-0.472	0.00821	-0.579***
	(0.166)	(0.167)	(0.326)	(0.341)	(0.162)	(0.134)
FRL Proportion	0.306***	0.0715	0.552***	0.280*	1.461***	1.196***
	(0.0803)	(0.111)	(0.138)	(0.128)	(0.110)	(0.0831)
EL Proportion	0.161	0.0314	-0.124	-0.317	0.242	0.138
	(0.142)	(0.173)	(0.205)	(0.194)	(0.180)	(0.167)
Special Education Proportion	1.041*	0.480	2.978***	2.685***	0.584	-0.434
	(0.467)	(0.604)	(0.691)	(0.678)	(0.680)	(0.585)
Constant	6.192***	-2.415***	5.272***	-3.430***	5.653***	-2.891***
	(0.202)	(0.222)	(0.398)	(0.406)	(0.231)	(0.169)
N	927	934	934	935	933	934
pseudo R^2	0.363	0.006	0.276	0.007	0.636	0.012

Note: Standard errors in parentheses. The regressions are weighted by enrollment. Per-pupil regressions were run with Poisson regressions and ration regressions were run using fractional logit regressions. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: AIR calculations from PJP resource specifications; California Department of Education (CDE) Student & School Data Files (https://www.cde.ca.gov/ds/sd/sd/)

Exhibit H-3. Regression Results -Continued

	Maintenance and Operations Per Pupil	Maintenance and Operations Ratio	Security Per Pupil	Security Ratio
Enrollment:	-0.338***	-0.109*	1.020*	1.252**
Quartile 2	(0.0575)	(0.0459)	(0.423)	(0.465)
Enrollment:	-0.510***	-0.174**	1.481***	1.838***
Quartile 3	(0.0634)	(0.0635)	(0.397)	(0.420)
Enrollment:	-0.689***	-0.284***	2.187***	2.577***
Quartile 4	(0.0684)	(0.0721)	(0.415)	(0.439)
Enrollment:	-0.822***	-0.446***	2.266***	2.653***
Quartile 5	(0.0723)	(0.0786)	(0.410)	(0.433)
High School	0.233***	0.154***	1.643***	1.598***
District	(0.0357)	(0.0363)	(0.240)	(0.246)
Unified School	0.191***	0.102***	0.852***	0.797***
District	(0.0286)	(0.0208)	(0.202)	(0.200)
Suburb	-0.109*	-0.0142	0.688*	0.696*
	(0.0433)	(0.0186)	(0.293)	(0.289)
Town	-0.167**	0.0319	0.375	0.471
	(0.0583)	(0.0322)	(0.348)	(0.350)
Rural	-0.178*	0.0638	0.606	0.656*
	(0.0713)	(0.0790)	(0.330)	(0.326)
Comparable Wage	0.396*	-0.172	0.479	0.111
Index	(0.170)	(0.105)	(1.158)	(1.190)
FRL Proportion	0.417***	0.145**	2.444***	2.309***
	(0.118)	(0.0521)	(0.586)	(0.598)
EL Proportion	-0.115	-0.250*	-1.072	-1.358
	(0.113)	(0.105)	(0.961)	(1.001)
Special Education	0.131	-0.671	-4.877	-4.086
Proportion	(0.607)	(0.355)	(4.930)	(4.911)
Constant	6.970***	-1.563***	-0.590	-9.617***
	(0.247)	(0.147)	(1.644)	(1.687)
N	926	935	935	935
pseudo R^2	0.278	0.002	0.267	0.037

Note: Standard errors in parentheses. The regressions are weighted by enrollment. Per-pupil regressions were run with Poisson regressions and ration regressions were run using fractional logit regressions. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: AIR calculations from PJP resource specifications; California Department of Education (CDE) Student & School Data Files (https://www.cde.ca.gov/ds/sd/sd/)