

Funding a Suitable Education in Kansas

Prepared by



March 2018

Schools for Fair Funding contacted JL Myers Consulting (JLMC) in November of 2017 concerning the possibility of preparing a Kansas school funding adequacy study. The purpose of the study was to identify the cost of providing an education that meets the standards set out by the Kansas Supreme Court in the Gannon court case including the Rose Standards. The Kansas Supreme Court has twice ruled that the Kansas Legislature needed to provide more money to ensure a constitutional and adequate education system in Kansas.

This adequacy study includes two reports. The first report by JLMC includes an introduction that addresses the challenge of meeting the Kansas standards, introductory information for JLMC and Picus Odden & Associates (POA), and a description of the results when the new adequacy level base cost is used and an estimate of how this change will impact school funding in Kansas. The second report is “An Evidence-Based Approach to School Finance Adequacy in Kansas” done by POA.

Introduction

The standard-based education reform movement that began in the late 1980s led to the development of adequacy studies. Over nearly three decades of work, researchers have developed four approaches to create estimates of adequacy for use in state school funding formula. The four approaches are:

1. The professional judgment (PJ) approach. The PJ approach is the most widely used adequacy approach. The PJ approach relies on the experience and expertise of highly qualified educators in the State to identify the resources needed to ensure that all districts, schools, and students can meet state standards and requirements. Researchers identify prices for the resources and then cost out those resources. The approach identifies both a base cost and adjustments for special needs students.
2. The successful school districts (SSD) approach. The SSD approach determines an adequate per student base cost amount by using the actual expenditure levels of school districts that are currently meeting or exceeding State performance objectives. This approach assumes that every school district, in order to be successful, needs the same level of base funding that is available to the most successful districts. The approach does not identify adjustments for special needs students.
3. The evidence-based (EB) approach. The EB approach was developed by POA and uses information from research and can be used to define the resource needs of a prototypical school or district to ensure that students in the school or district can meet state standards. The approach

not only estimates resource levels but also specifies the programs and strategies through which such resources could be used efficiently. The approach is used to identify a base cost figure and adjustments for special needs students.

4. The fourth approach, the cost function or statistical (CF) approach, is an econometric method that estimates the level of funding needed to achieve a given level of student achievement as measured on assessments while controlling for student and district characteristics. Due to its complexity and reliance on econometric modeling techniques, the approach has proven difficult to explain in situations other than academic forums.

JLMC chose to use an EB approach for this study. Using a PJ approach or the CF approach would exceed the time available and would likely be a higher cost study than using the EB approach. Using a SSD approach would provide a base cost but would not directly address the weights needed for special needs students. The CF approach has not shown to include all of a State’s standards but has been based on limited output data. The CF approach has not been used to provide a transparent way to justify weights for special needs student. Both the SSD and CF approaches are limited by use of achievement rates that do not fully address proficiency standards (i.e. The Kansas Consolidated State Plan shows that 58% of all students are non-proficient in reading and 67% of all students are non-proficient in math). The table below shows Kansas Performance level for various student groups. The EB approach focuses on research that indicates “how much more” is needed to address the proficiency gap.

Subgroups	Reading/ Language Arts: Baseline Data	Percentage Not Proficient	Reading/ Language Arts: Long-term Goal	Math: Baseline Data	Percentage Not Proficient	Math: Long-term Goal
	(% scoring in Level 3 & Level 4)	(% not scoring in Level 3 & Level 4)	(% scoring in Level 3 & Level 4)	(% scoring in Level 3 & Level 4)	(% not scoring in Level 3 & Level 4)	(% scoring in Level 3 & Level 4)
	2016	2030	2016	2030	2030	
All students	42.0	58.0	75.0	33.0	67.0	75.0
Economically disadvantaged students	27.7	72.3	75.0	19.8	80.2	75.0
Children with disabilities	15.4	84.6	75.0	10.9	89.1	75.0
English learners	19.7	80.3	75.0	15.4	84.6	75.0
African- American students	21.0	79.0	75.0	13.2	86.8	75.0
Hispanic students	26.1	73.9	75.0	18.7	81.3	75.0
White students	48.4	51.6	75.0	38.7	61.3	75.0
Asian students	55.7	44.3	75.0	54.6	45.4	75.0
American Indian or Alaska Native students	31.5	68.5	75.0	21.8	78.2	75.0

The firm selected to do the adequacy work was Picus, Odden and Associates (POA). POA has been prime contractor on more school finance adequacy studies than any other research group. The EB approach is derived from research and best practices that identify programs and strategies that boost student learning. The two major types of research are: research on student achievement effects with a focus on randomized controlled trial, the “gold standard” of evidence on “what works”, and studies of schools and districts that have dramatically improved student performance on state assessments.

The challenge to POA or any researcher attempting an adequacy study is understanding the State Standards. Those standards include the proficiency test scores mentioned above but also include accreditation regulations, remediation expectations, and Court definitions of “minimum standards adequacy.” The Kansas Supreme court’s definition of adequacy used as a reference the Rose Standards from a Kentucky Supreme court case. In the *Rose v. Council for Better Education* case the Kentucky Supreme Court identified seven student capacities including content knowledge and personal skills.

The school accreditation process in Kansas is called the Quality Performance Accreditation (QPA). QPA regulations will be used through 2017-18 and then a new accreditation model will be put in place. The new Kansas Education Systems Accreditation (KESA) will require school districts to demonstrate progress towards the Rose Standards. Schools meeting the current QPA standards are not required to meet the Rose Standards.

How much time is needed for students to meet standards is an issue in the cost of an adequate education. Remediating students that are already below expected performance levels is more expensive than those currently at or above expected levels. A majority of Kansas students have been educated in a system that has been “judicially declared to be inadequately funded for at least 12 of the last 15 years.” This means that the costs of the time needed for remediation could be even higher than any statistical model will estimate. Although the EB approach puts significant attention to future remediation, no studies can properly take this need into account and may underestimate the actual costs over time.

As mentioned above the Kansas Supreme court cited the Rose standards as minimum adequacy. Other Kansas courts have recognized that the Rose capacities are equated to the college-and-career readiness, especially related to Rose standards 6 and 7 (see the Matrix below).

JLMC is including the matrix below to show how the Rose Standards are connected to the EB model elements. POA is correct in asserting that all elements of the EB model are needed to ensure that students are able to meet the state’s educational requirements and be college and career ready. It is important to note that all eight rows of elements are necessary. The Rose Standards are student focused and do not directly link to needed non-student elements. Adequate school facilities costs, transportation costs, and food service costs are examples of needs not covered by the EB model or most adequacy approaches.

**Kansas Evidence Based Adequacy Report
Matrix Linking the Rose Standards with the EB Model**

	Rose Standard	Evidence Based Model Elements that Address the Standard*
1	Sufficient oral and written communication skills to enable students to function in a complex and rapidly changing civilization	<p>All Students</p> <ul style="list-style-type: none"> 1a. Pre-School, 1b. Full day kindergarten 2. Elementary core teachers/classes 3. Secondary core teachers/classes 4. Elective/specialist teachers 6. Core tutors/tier 2 intervention 7. Substitute teachers 10. Library media specialists 13. Gifted and talented funds 15. Instructional materials 16. Assessments 17. Technology and equipment 19. Extra Duty Funds/Student Activities <p>Struggling Students</p> <ul style="list-style-type: none"> 22. Tutors 23. Additional Pupil Support Staff 24. Extended Day 25. Summer School 26. ELL staff 27. Alternative Schools 28. Special Education
2	Sufficient knowledge of economic, social, and political systems to enable the student to make informed choices	Same as for standard 1
3	Sufficient understanding of governmental processes to enable the student to understand the issues that affect his or her community, state, and nation	Same as for standard 1
4	Sufficient self-knowledge and knowledge of his or her mental and physical wellness	Same as for standard 1
5	Sufficient grounding in the arts to enable each student to appreciate his or her cultural and historical heritage	Same as for standard 1 Emphasis on standard 4 – Elective/Specialist Teachers
6	Sufficient training or preparation for advanced training in either academic or vocational fields so as to enable each child to choose and pursue life work intelligently	Same as for standard 1 plus 8. Core pupil support staff, core guidance counselors and nurses 18. CTE Equipment/materials
7	Sufficient levels of academic or vocational skills to enable public school students to compete favorably with their counterparts in surrounding states, in academics or in the job market	Same as for standard 6
1-7	Additional expectations of public school systems to ensure that students receive all of the services in an equitable and cost-effective manner	<p>Items not focused directly on students, but essential to the operation of a school and necessary to support teachers' direct instruction</p> <ul style="list-style-type: none"> 5. Instructional facilitators/coaches 7. Substitute teachers 9. Supervisory and Instructional Aides 11. Principals and assistant principals 12. School site secretarial and clerical staff 14. Intensive professional development 20. Operations and maintenance 21. Central office personnel and non-personnel resources 29. Staff compensation

*See Table 3.1 in “An Evidence-Based Approach to School Finance Adequacy in Kansas” following for more detail on the resource allocation for each Evidence Based Element of the Model

Study Leaders' Biographical Information

JL Myers Consulting

JL Myers Consulting was created by John L. Myers in 2015 to provide education policy consulting work. Myers has worked with national, state and local policymakers for 40 years on a variety of educational issues. His work across the country on school finance equity and adequacy began while serving as Education Program Director for the National Conference of State Legislatures (NCSL) from 1987 to 1993. In 1989, he assisted the Kentucky Legislature in responding to the *Rose v. Council of Better Education* court case. In 1991, Myers made a presentation to Kansas policy leaders at a meeting called for by Judge Bullock and held at the State Supreme Court.

Myers joined the firm now known as Augenblick, Palaich and Associates in 1993. He was a partner in the firm for 10 years and held the title of Vice President for an additional 10 years from 2005-15. He was owner of JL Myers Group from 2003 to 2005. During the last 30 years, he worked on many school finance equity and adequacy studies including studies in Kansas and the following states: Iowa, Wyoming, South Carolina, Mississippi, Maryland, Indiana, North Dakota, Nebraska, Colorado, Connecticut, South Dakota, Montana, Pennsylvania, Wisconsin, and Washington DC.

Kansas school finance connections for Myers began when he served as a member of the Kansas House of Representatives from 1977 to 1983. From 1983 to 1987, he worked as an aide to the Governor of Kansas, including time as Director of Policy and Executive Assistant.

Myers was a partner in Augenblick & Myers when he participated in two studies completed for the State of Kansas. "A Comprehensive Study on the Organization of Kansas School Districts," was done for the Kansas State Board of Education in 1999-2000. "Calculation of the Cost of a Suitable Education in Kansas in 2000-2001 Using Two Different Analytic Approaches," was completed for the Legislative Coordinating Council of the Kansas State Legislature in 2002. The findings of that study led to depositions and testimony in the Montoy court case in 2003 and testimony before the three-judge panel in the Gannon case in 2012.

Picus Odden & Associates

Picus Odden & Associates mission is to improve the way public resources for education are translated into improved student learning. The firm's principle partners – Lawrence O. Picus and Allan Odden – have vast experience working on school finance issues in over three fourths of the states and scores of school districts across the nation. We have extensive experience working collaboratively with our clients to assess and evaluate the operation of state funding systems. A recent analysis of school finance adequacy studies conducted since 2003 showed that our firm has been the prime contractor on more adequacy studies than any other firm in the United States.¹

Lawrence O. Picus and Allan Odden are the developers of the Evidence-Based (EB) method for estimating the funding resources needed to ensure students perform at high levels. Picus and Odden offer the skill and knowledge necessary to meet the specific needs of a Kansas adequacy study. We have recently conducted EB analyses for the states of Maryland, Michigan, North Dakota, Vermont, and Maine. We have conducted EB studies in several other states as well, including Kentucky, Arkansas,

¹ Aportela, A., Picus, L., Odden, A. & Fermanich, M. (2014). *A Comprehensive review of state adequacy studies since 2003*. Denver, CO: Augenblick, Palaich & Associates

Wyoming, Washington, Wisconsin, Oregon, New Jersey, Ohio, and Arizona. Our model is the basis of the school funding systems in Arkansas, Wyoming, Washington, North Dakota and for a brief time in Ohio.

We have also conducted equity studies in nearly 25 states including a report prepared for the Kansas Board of Education as part of the *Montoy* litigation in 2000. Picus also testified as an expert witness for the State of Kansas in the *Montoy* case.

Picus is currently Professor of Education Finance and Policy and Associate Dean for Research and Faculty Affairs at the USC Rossier School of Education. Odden is Professor Emeritus in the College of Education at the University of Wisconsin, Madison. Both Picus and Odden have served as presidents of the Association for Education Finance and Policy (formerly the American Education Finance Association). No other school finance consulting firm has this level of senior partner expertise or standing in the professional school finance community.

Results and Impact on Kansas Funding Formula

State school finance formulas are unique systems that involve student weighting and revenue sources specific to the state. The revenues include Federal, State and Local revenues. In order to create a new state funding formula, the use of a school finance adequacy study's base cost and adjustments involves significant additional decision making. Comparing the revenues in an existing funding formula to the expenditures of a new base and adjustments is not simple. The crosswalk provided is a model of revenue levels needed to meet the expenditures used in the new adequacy approach. It requires costing out the EB expenditure components and identifying the comparable current revenues.

The results of the EB adequacy study is a per pupil EB base expenditure that is estimated to be \$9,615. The study also recommends extra per pupil weights for ELL students, poverty students, preschool students, alternative schools and special education students. This base cost is not comparable to the existing Kansas formula's base cost of \$5,353, which includes a State base of \$4,006 and a Local base of \$1,347. The following crosswalk shows that a comparable base cost for the EB study would be \$6,770. This is an increase in the State base of \$1,202 and a local base increase of \$215.

The comparable current spending total is \$5,212 million. That is the result of subtracting capital outlay funds, bond and interest funds, food service expenditures, transportation expenditures and KPERS increase from current revenues of \$7,081 million. The EB comparable spending total is \$6,795 million. That is the result of applying the \$9,615 base to FTE and adding the additional funding based on recommended student weights times identified ELL students, poverty students, alternative school students, pre-school students, and special education students. The special education funding is created by using a census based approach for students identified as mild and moderate needs. In addition, the study recommends the State fund all costs for those students with severe disability. For comparison purposes the crosswalk subtracts the cost of census based special education from the total current special education spending to establish the amount for the new severe disability costs.

The total additional funding needed to implement the EB adequacy study and ensure that Kansas students are able to meet state standards is \$1,583 million.

Revenue Crosswalk

Current Revenues and Formula Components

General Fund 2018 BASE	\$4,006	
LOB 2018 Base (30% of \$4490)	\$1,347	
	\$5,353	
Adjusted Enrollment excl 4yr at-risk & Kdg:	433,915.7	KSDE 2018 Legal Max Col 4
Kindergarten Students:	35,764.0	KSDE 2018 Legal Max Col 6
Virtual FTE:	6,322.6	KSDE 2018 Legal Max Col 30 + Col 31
Total ELL Headcount:	52,090.0	KSDE SF18-043 FY17 count
ELL Poverty Headcount:	38,566.0	FY18 Free/Reduced from less FY17 poverty ELL on SF18-043
Free and Reduced Lunch Headcount	235,314.0	KSDE Free/Reduced Headcount
Total 2018 Legal General Fund	\$ 3,287,996,005	KSDE 2018 Legal Max Col 39
Total 2018 Legal Local Option Budget	\$ 1,108,049,302	KSDE 2018 Legal Max Col 44
Combined 2018 General Fund and LOB	\$ 4,396,045,307	

Current 2018 Federal, State and Local Revenues

2018 revenues from http://datacentral.ksde.org/dist_funding/text/999.pdf

General and Supplemental General Funds:		
Federal Revenue	\$ 12,511,866	
State Revenue	\$ 3,764,348,626	
Local Revenue	\$ 666,259,163	
Total General and Supplemental General Funds	\$ 4,443,119,655	
Capital Outlay Funds:		
Federal Revenue	\$ 11,005,657	
State Revenue	\$ 60,529,951	
Local Revenue	\$ 623,514,005	
Total Capital Outlay Funds	\$ 695,049,613	
Bond and Interest Funds:		
Federal Revenue	\$ -	
State Revenue	\$ 188,287,804	
Local Revenue	\$ 386,318,753	
Total Bond and Interest Funds	\$ 574,606,557	
All Other Funds		
Federal Revenue	\$ 477,474,012	
State Revenue	\$ 421,651,714	
Local Revenue	\$ 468,914,548	
Total All Other Funds Revenue	\$ 1,368,040,274	
Total 2018 Current Federal, State and Local Revenues	\$ 7,080,816,099	

For EB Comparison

Total 2018 Current Federal, State and Local Revenues	\$ 7,080,816,099	
Less Capital Outlay Funds	\$ (695,049,613)	from above
Less Bond and Interest Funds	\$ (574,606,557)	from above
Less Food Service Expenditures	\$ (245,443,910)	from 2016 Census Operating Report
Less Transportation Expenditures	\$ (198,855,379)	from 2016 Census Operating Report
Less Budgeted KPERS Increase	\$ (154,891,555)	from http://datacentral.ksde.org/dist_funding/text/999.pdf
Total Current Federal, State and Local Funding for Comparison	\$ 5,211,969,085	
Excludes:		
Bond and Interest		
Capital Outlay		
Transportation		
Food Service		
Holds KPERS constant.		

EB Evidence Based Components		
Evidence Based Recommendations:		
Base Per Pupil	\$ 9,615	
Additional Per Pupil for:		
ELL Students	\$ 3,929	
Poverty Students (non-ELL)	\$ 3,046	
Refugees and Alternative School Students	\$ 6,078	
Preschool Base Per Pupil	\$ 13,486	with expansion to all 4 year olds
Special Education Mild and Moderate Base	\$ 640	times all students
Special Education Excess Costs for Severe and Profound Disabilities	100%	
EB Calculated 2018 Needs		
Recommended Base	\$ 9,615	
x Current FTE Enrollment excl preschool incl virtual	476,002.3	FY18 LegalMax Adjusted Enrollment (col 4) plus Kindergarten (col 6) plus virtual FTE (col 30 & 31)
EB Base Funding:	\$ 4,576,762,115	
EB Recommended ELL additional funding	\$ 3,929	
x Current ELL Headcount	52,090.0	KSDE SF18-043 FY17 count
EB ELL Funding:	\$ 204,661,610	
EB Recommended Poverty additional funding	\$ 3,046	
x Current Free and Reduced (non ELL)	196,748.0	FY18 Free/Reduced from KSDE Free/Reduced Headcount less poverty ELL on SF18-043
EB Poverty Funding:	\$ 599,294,408	
EB Recommended Refugee and Alternative School additional funding	\$ 6,078	
x Estimated Refugee and Alternative School Students	5,055.0	Estimated 59 students per 1200 high school students in high schools with enrollment exceeding 600 students
EB Refugee and Alternative School Funding:	\$ 30,724,290	
EB Recommended Preschool Base	\$ 13,486	
x Current Potential Preschool Students	35,764.0	Estimated Preschool students using Kindergarten Enrollment FY18 LegalMax (col 6)
EB Preschool Funding	\$ 482,313,304	
EB Recommended Mild and Moderate Special Education additional funding	\$ 640	
x Current Enrollment + Potential Preschool Students	511,766.3	FTE enrollment above + preschool students above
EB Mild and Moderate Special Education Funding:	\$ 327,530,432	
EB Recommended Additional Severe Disability Special Education Funding at 100%	\$ 573,636,242	Special Education Expenditures from: http://datacentral.ksde.org/dist_funding/text/999.pdf less mild and moderate funding above
EB 2018 Funding Recommendation (Federal, State and Local)	\$ 6,794,922,401	
Excludes:		
Bond and Interest		
Capital Outlay		
Transportation		
Food Service		

2018 Funding Comparison

EB 2018 Funding Recommendation (Federal, State and Local)		\$ 6,794,922,401
Excludes:		
Bond and Interest		
Capital Outlay		
Transportation		
Food Service		
Total 2018 Current Federal, State and Local Funding for Comparison		\$ 5,211,969,085
Excludes:		
Bond and Interest		
Capital Outlay		
Transportation		
Food Service		
Holds KPERS constant		

Current 2018 Total Funding Comparison:	\$1,582,953,316
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EB Current 2018 Needs in General and Supplemental General Fund

EB Funding Recommendation for 2018 (Federal, State and Local)	\$ 6,794,922,401	
Less All Other Funds Revenue (excl. Food Service and KPERS increase to hold constant)	\$ (967,704,809)	Removed to find funding needed for General and Suppl General Funds only
Less Federal Revenue in General and Supplemental General Funds	\$ (12,511,866)	Removed to find state and local portion of General and Suppl General Funds only
Plus Transportation Expenditures	\$ 198,855,379	added back in because it is funded through the current formula
EB Total 2018 State and Local Funding Needed from Current Formula	\$ 6,013,561,105	Current Federal and Other Funds Removed

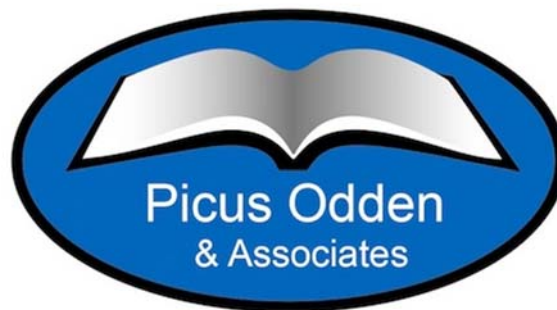
Recalculated EB Funding to Determine New Base for Current Kansas School Funding Formula (For Comparison)

EB Total 2018 State and Local Funding Needed from General Fund and LOB	\$ 6,013,561,105	General and Supplemental General Fund
Less EB Preschool Funding (includes expansion to all 4 year olds)	\$ 482,313,304	Requires Full Funding with Preschool Base
Less EB Full Special Education Funding	\$ 901,166,674	Requires Full Funding of Special Education
Less EB Full Transportation Funding	\$ 198,855,379	Requires Full Funding of Transportation Costs
EB Remaining Needed for General and Supplemental General Fund (Excl. Preschool, Special Education and Transportation above)	\$ 4,431,225,748	
Current 2018 Formula Weights (not changed to EB Recommendations):		
Adjusted Enrollment	433,915.7	KSDE 2018 Legal Max Col 4
Kindergarten	35,764.0	KSDE 2018 Legal Max Col 6
Low and High Enrollment Wtd FTE	54,680.4	KSDE 2018 Legal Max Col 8
Bilingual Wtd FTE	10,677.8	KSDE 2018 Legal Max Col 9
Career/Tech Ed Wtd FTE	9,557.7	KSDE 2018 Legal Max Col 11
At-Risk Wtd FTE	90,514.3	KSDE 2018 Legal Max Col 14
High Density At-Risk Wtd FTE	13,057.9	KSDE 2018 Legal Max Col 17
Virtual FTE	6,322.6	KSDE 2018 Legal Max Col 30 + Col 31
Total 2018 Weighted Enrollment (Excl Preschool, Special Ed, Transportation, Facilities and Special Levies)	654,490.4	

Calculated Base (including LOB) to Match EB Recommended Statewide Increase	New Base	Current Base	Additional Needed
<small>(General and Supplemental General Fund divided by Total Weighted Enrollment)</small>	\$ 6,770	\$ 5,353	\$ 1,417
If Funded with Required and Equalized 30% LOB:			
State Base <small>(Recommended Base divided by 1.3)</small>	\$ 5,208	\$ 4,006	\$ 1,202
Local Base <small>(State Base times 30%)</small>	\$ 1,562	\$ 1,347	\$ 215
	\$ 6,770	\$ 5,353	\$ 1,417

AN EVIDENCE-BASED APPROACH TO SCHOOL FINANCE ADEQUACY IN KANSAS

**Prepared for the
Schools For Fair Funding, Inc., A coalition of 40 Kansas School Districts**



**Allan Odden
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PICUS ODDEN & ASSOCIATES

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Chapter 1 Introduction and Overview

INTRODUCTION

Using the Evidence-Based (EB) Model, this document provides a set of recommendations Kansas can use to determine how the state could provide adequate funding to all school districts to allow them to offer every student in the state an equal opportunity to achieve the Rose Standards in the state's college and career ready standards

For the past eighteen years, Picus Odden & Associates (known as Lawrence O. Picus and Associates prior to 2013) has worked across the country, primarily with state legislatures, helping states determine how to fund schools adequately. Adequate has been defined as providing a level of resources that would enable all districts and schools to provide every student with an equal opportunity to learn to high performance standards. Over time, as both curriculum and performance standards have been increased and as states have adopted college and career ready standards for reading/language arts, mathematics, and science, the EB model has been updated to meet the changing expectations of PreK-12 schools.

ORGANIZATION OF THE REPORT

Two chapters follow this introductory chapter. Chapter 2 describes the school improvement theory that undergirds the EB funding model. Chapter 2 draws from research we and others have conducted on schools that have dramatically moved the student achievement needle. Such schools exist across the country and vary by location – urban, suburban, and rural – and by school size – large, medium, and small.

Chapter 3 then “unpacks” the elements of an effective school and includes specific recommendations for every element of the model. The table in this chapter that lists all the EB elements and their values represents the core EB model as of early 2018. These elements include class size, extra help for struggling students, professional development, student support services (including guidance counselors and nurses), and ways that instruction and teachers can be organized to bolster their effectiveness to increase student performance and reduce achievement gaps linked to student demographics.

Chapter 4 provides information on the Evidence Based Professional Judgment Panel that provided the judgement of education professionals in the state to review the EB recommendations and provide advice as to the adequacy of the resources included in the model for their individual state.

Finally, Chapter 5 reports the results of calculating Base Per Pupil Cost and Weights and the estimate adequacy costs based on the model described.

Please note that this EB report does not include transportation, food services, or capital construction costs.

Before proceeding we provide a metaphor for how the EB funding model, and the school improvement model embedded within it, can be viewed. The EB approach to school finance adequacy provides a set of resource and program recommendations that we call the “Education Hybrid Car.” The typical hybrid car costs about the what the average car costs in America but gets double the miles per gallon (50 v. 25 miles per gallon). One can easily spend more on a car than the cost of a basic hybrid (about \$25,000-\$30,000) but not get the high mileage; for example, one could buy a speedy V-8 engine-powered car, with moon roof and leather. If one is interested in high gas mileage – or, in this case, better school performance – one can easily spend much more and get neither.

The EB School model costs about the average of what is currently spent on schools across the country (Odden, Picus & Goetz, 2010) but the school cases that we have studied and which deploy strategies that are funded by the EB model (e.g., Odden, 2009, 2012), generally produce twice the level of student achievement. Moreover, it is our professional position that if Kansas provided school funding at the level of the EB model and if schools used the resources in the model as indicated in Chapter 2, then student achievement in Kansas would dramatically rise. The following chapter describes the high performance EB school funding model.

Chapter 2

The Evidence Based School Improvement Model

Although the intent of this report is to identify the array of educational goods that would allow Kansas districts and schools to provide each student an equal opportunity to meet the state’s student performance standards including the court required Rose Standards, and to identify the per pupil costs of that basket of education goods, this chapter provides the details of the school improvement strategy that is embedded within the EB funding model. Although we cannot claim a direct linkage between funding and student performance, the Evidence-Based (EB) model is designed to identify a level of resources that would enable all districts and schools to provide every student with robust opportunities to meet college and career ready standards, which should dramatically move the student achievement needle.

No matter what course of studies a high school student completes – college prep or career tech – all of Kansas’ students are expected to achieve to college and career-ready standards in order to be competitive – after high school or college – in today’s global, knowledge-based economy. This includes children from low-income homes, students of color, English language learners (ELL) and students with mild and moderate disabilities. The basket of educational goods and services and a cost-based funding model to support that basket must be sufficiently robust to allow students in all school districts in the state to have sufficient opportunities to attain these rigorous standards.

Before presenting an overview of each component of the Evidence-Based approach to school finance adequacy in Chapter 3, this chapter provides a more general description of the school improvement strategies that undergird the EB Model and describe how the key resource elements are used to increase student performance.

THE HIGH-PERFORMANCE SCHOOL MODEL EMBEDDED IN THE EVIDENCE-BASED APPROACH TO SCHOOL FINANCE ADEQUACY

The EB Model used to estimate a cost-based spending level for schools has been designed to allow districts and schools to provide every child with an equal opportunity to learn to State performance standards, and thus significantly improve student performance and reduce achievement gaps related to demographics. The EB Model is unique in that it is derived from research and best practices that identify programs and strategies that boost student learning. Further, the formulas and ratios for school resources developed from that research have been reviewed by dozens of educator panels in multiple states over the past decade. The EB Model relies on two major types of research:

1. Reviews of research on the student achievement effects of each of the EB Model’s individual major elements, with a focus on randomized controlled trials, the “gold standard” of evidence on “what works.” These analyses can be found in the fifth edition of our school finance text (Odden & Picus, 2014) and in our most recent adequacy studies conducted for Michigan (Odden & Picus, 2018).

2. Studies of schools and districts that have dramatically improved student performance over a 4-6-year period – what is sometimes labeled “a doubling of student performance” on state assessments.

As a result of our research and work in other states, the EB approach today is more explicit in identifying the components of the school improvement strategies that deploy the resources in the funding model, and it does a better job of articulating how all the elements of the EB Model are linked at the school level to strategies that, when fully implemented, produce notable improvements in student achievement (Odden & Picus, 2014, Chapter 5).

High performing and improving schools have clear and specific student achievement goals, including goals to reduce achievement gaps linked to poverty and minority status. The goals are nearly always specified in terms of performance on state assessments.

Compared to traditional schools where teachers work in isolated classrooms, improving schools organize instruction differently. Regardless of the context – urban, suburban, or rural, rich or poor, large or small – improving and high performing schools organize teachers into collaborative teams: grade level teams in elementary schools and subject or course teams in secondary schools. With the guidance and support of instructional coaches, the teacher teams work with student data – usually short-cycle or formative assessment data – to:

- Plan standards-based curriculum units,
- Teach those units simultaneously,
- Debrief on how successful the units were, and
- Make changes when student performance does not meet expectations.

This collaborative teamwork makes instruction “public” over time by identifying a set of instructional strategies that work in the teachers’ school. Over time all teachers are expected to use the instructional strategies that have been demonstrated to improve student learning and achievement.

High performing and improving schools also provide an array of “extra help” programs for students struggling to achieve to standards. This is critical because the number of struggling students is likely to increase as more rigorous programs are implemented and the goal is to prepare all students for college and careers. Individual tutoring, small group tutoring, after-school academic help and summer school focused on reading and mathematics for younger students, and courses needed for high school graduation for older students, represent the array of “extra help” strategies these improving schools deploy. Their approach is to “hold standards” constant and vary instructional time.

These schools exhibit multiple forms of leadership. Teachers lead by coordinating collaborative teams and through instructional coaching. Principals lead by structuring the school to foster instructional improvement. The district leads by ensuring that schools have the resources to deploy the strategies outlined above with a focus on producing aggressive student performance

goals, improving instructional practice, and taking responsibility for student achievement results.

Successful and improving schools seek out top talent. They know that the challenge to prepare students for the competitive and knowledge-based global economy is difficult and requires smart and capable teachers and administrators to effectively get the educational job done.

The study team continues to enhance the details of the strategy of school improvement embedded in the EB Model. The most recent summary of the research undergirding the EB funding model can be found in the Odden and Picus (2014) school finance textbook, and in several books that profile schools and districts that have moved the student achievement needle (Odden & Archibald, 2009; Odden, 2009; Odden, 2012). We recently studied dramatically improving schools in Maryland, Vermont, and Maine as part of school finance studies we completed in those states. We found the theory of improvement embodied in the EB Model reflected in nearly all the successful schools we studied (Picus, Odden, et al., 2012; Picus, Odden, et al., 2013; Odden & Picus, 2015). In addition, other researchers and analysts have found similar features of schools that significantly improve student performance and reduce achievement gaps (e.g., Blankstein, 2010, 2011; Chenoweth, 2007, 2009, 2017).

After a comprehensive set of studies and analyses, Greg Duncan and Richard Murnane (2014) reached conclusions similar to those embedded in the EB Model. They note that if all students in a school are to have a chance at success in the emerging global economy, they will need high-quality preschool programs, followed by effective elementary and secondary schools. The key features needed in each school include: 1) leadership focused on improving instructional practice, 2) within-school organization of teachers into teams that over time create a set of effective instructional practices and then deploy them systematically in all classrooms, 3) a culture of assistance (e.g., instructional coaches and ongoing professional development) and accountability (e.g., adults taking responsibility for the impact of their school actions on student performance), and 4) an array of extra help strategies to extend learning time for any student who needs more time to achieve to standards.

Although the details of studies of improving and high performing schools vary, and different authors highlight somewhat different elements of the process, the overall findings are more similar than different. This suggests all schools can improve if they have adequate resources AND deploy those adequate resources in the most effective ways.

The EB Model offers a framework for the use of resources by districts and schools to help them focus those resources on programs and strategies that would allow them to produce substantial gains in student academic performance. In addition to the above more global description of the EB effective schools, we have organized the key elements of the school improvement model embedded in the EB Model into ten areas. In general, we find schools and districts that produce large gains in student performance follow ten similar strategies (see Chapter 4 and 5 of Odden & Picus, 2014; Odden, 2009), resources for each of which are included in the EB Funding Model:

1. Analyze student data to become deeply knowledgeable about performance issues and to understand the nature of the achievement gap. The test score analysis usually first includes review of state test results and then, over time, analysis of formative/short cycle (e.g., Renaissance Learning Star Enterprise) as well as benchmark assessments (e.g., NWEA MAP) to help tailor instruction to precise student needs, to progress monitor students with an Individual Education Plan to determine whether interventions are working, and to follow the performance of students, classroom, and the school over the course of the academic year. Improving schools are “performance data hungry.”
2. Set high goals such as aiming to educate at least 95% of the students in the school to proficiency or higher on state reading and math tests; seeing that a significant portion of the school’s students reach advanced achievement levels; having more high school students take and pass AP classes; and making significant progress in closing the achievement gap. The goals tend to be explicit and far beyond just producing “improvement” or “making AYP.” Further, because the goals are ambitious, even when not fully attained they help the school produce large gains in student performance.
3. Review evidence on good instruction and effective curriculum. Successful schools throw out the old curriculum, replace it with a different and more rigorous curriculum, and over time create their specific view of what good instructional practice is to deliver that curriculum. Changing curriculum is a must for schools implementing more rigorous college and career ready standards. And such new curriculum requires changes in instructional practice. Successful schools also want *all* teachers to learn and deploy new content-based, instructional strategies in their classrooms and seek to make good instructional practice systemic to the school and not idiosyncratic to teachers’ individual classrooms.
4. Invest heavily in teacher training that includes intensive summer institutes and longer teacher work years, provide resources for trainers, and, most importantly, fund instructional coaches in all schools. Time is provided during the regular school day for teacher collaboration focused on improving instruction. Nearly all improving schools have found resources to provide instructional coaches to work with school-based teacher data teams, to model effective instructional practices, to observe teachers and to give helpful but direct feedback. This focus has intensified now that schools are delivering a more rigorous curriculum focused on educating all students to college and career proficiency levels. Further, professional development is viewed as an ongoing and not a “once and done activity.”
5. Provide extra help for struggling students and, with a combination of state funds and federal Title 1 funds, provide some combination of tutoring in a 1:1, 1:3, or 1:5 teacher to student format. In some cases, this also includes extended days, summer school, and English language development for all ELL students. These Tier 2 interventions in the Response to Intervention (RTI) approach to helping struggling students achieve to

standards are absolutely critical. For many students, one dose of even high-quality instruction is not enough; many students need multiple extra help services in order to achieve to their potential. No school producing large gains in student learning ignored extra help strategies altogether or argued that small classes or preschool were substitutes.

6. Restructure the school day to provide more effective ways to deliver instruction. This can include multi-age classrooms in elementary schools, block schedules and double periods of mathematics and reading in secondary schools, and “intervention” periods at all school levels. Schools also “protect” instructional time for core subjects, especially reading and mathematics. Further, most improving schools today organize teachers into collaborative teams – grade level teams in elementary schools and subject/course teams in secondary schools. These teams meet during the regular school day, often daily, and collaboratively develop curriculum units, lesson plans to teach them, and common assessments to measure student learning that results from them. Further, teams debrief on the impact of each curriculum unit, reviewing student learning overall and across individual classrooms.
7. Provide strong leadership and support for data-based decision making and improving the instructional program, usually through the superintendent, the principal and teacher leaders. Instructional leadership is “dense” and “distributed” in successful schools; leadership derives from the teachers coordinating collaborative teacher teams, from instructional coaches, the principal and even district leaders. Both teachers and administrators provided an array of complementary instructional leadership.
8. Create professional school cultures characterized by ongoing discussion of good instruction with teachers and administrators taking responsibility for the student performance results of their actions. Over time, the collaborative teams that deliver instruction produce a school culture characterized by: 1) high expectations of performance on the part of both students and teachers, 2) a systemic and school-wide approach to effective instructional practice, 3) a belief that instruction is public and that good instructional practices are expected to be deployed by every individual teacher, and 4) an expectation that the adults in the school are responsible for the achievement gains made or not made by students. Professionals in these schools accept responsibility for student achievement results.
9. Bring external professional knowledge into the school, e.g., hiring experts to provide training, adopting new research-based curricula, discussing research on good instruction, and working with regional education service agencies as well as the state department of education. Successful schools do not attain their goals by “pulling themselves up by their own boot straps.” Faculty in successful schools aggressively seek outside knowledge, find similar schools that produce results and benchmark their practices, and operate in ways that typify professionals.

10. Finally, talent matters. Many improving schools today consciously seek to recruit and retain the best talent, from effective principal leaders to knowledgeable, committed, and effective teachers. They seek individuals who are mission-driven to boost student learning, willing to work in a collaborative environment where all teachers are expected to acquire and deliver the school's view of effective instructional practice, and who are accountability focused.

Such successful schools also create a learning atmosphere inside the schools, have a schoolwide approach to discipline and classroom management, and require that every student be accountable to any adult for his/her behavior and that all adults take interest in all students and hold them accountable for the behavioral practices in the school. In addition, these effective schools reach out to parents, insure that parents know the expectations of the school and help their children with homework, and welcome all parents into the school.

In sum, the schools that have boosted student performance that we and others have studied deployed strategies strongly aligned with those embedded in the EB Model. These practices bolster our claim that if such funds are provided *and* used to implement these effective and research-based strategies, then significant student performance gains should follow.

Three Tier Approach

It should be clear that the design of the EB Model reflects the Response to Intervention (RTI) model. RTI is a three-tier approach to meeting student needs. Tier 1 refers to core instruction for all students. The EB Model seeks to make core instruction as effective as possible with its modest class sizes, provisions for collaborative time, and robust professional development resources. Effective core instruction is the foundation on which all other educational strategies depend. Tier 2 services are provided to students struggling to achieve to standards before being given an individualized education program (IEP) and labeled as a student with a disability. The EB Model's current Tier 2 resources include one core tutor for every prototypical school and additional resources, triggered by poverty and ELL student counts, for tutoring, extended day, summer school, additional pupil support and ELL services. We argue also that the robust levels of Tier 2 resources allow schools to provide a range of extra help services, that often are funded only by special education programs, that get many modestly struggling students back "on track," and thus reduce the levels of special education students. Tier 3 includes all special education services.

Chapter 3

Using the EB Model to Identify Adequacy for Kansas Schools

INTRODUCTION

This chapter provides the formulas and funding levels of every element in the EB Funding Model. The elements of the EB Funding Model are divided into five sections:

1. Staffing for core programs, which include preschool, full-day kindergarten, core teachers, elective/specialist teachers, substitute teachers, instructional facilitators/coaches, core tutors, core guidance counselors and nurses, supervisory aides, librarians, school computer technicians, principals/assistant principals, and school secretarial and clerical staff.
2. Dollar per student resources for gifted and talented students, professional development, instructional materials and supplies, formative/short cycle assessments, computers and other technology, career and technical education equipment and materials, and extra duty/student activities.
3. Central functions, which include maintenance and operations, central office personnel and non-personnel resources.
4. Resources for struggling students including at-risk tutors, at-risk pupil support, extended day personnel, summer school personnel, ELL personnel, alternative school personnel and special education.
5. Personnel compensation resources including salary levels, health insurance, benefits for workers' compensation, unemployment insurance, retirement, and social security.

Before providing the summary of the EB formulas and elements, we discuss two more general issues necessary to understand how we proceed from school and district level resources to per pupil funding figures: student counts and prototypical schools and districts.

Student Counts

The EB model recommends that states use an ADM student count to distribute general aid. The model also needs a measure of the number of students from poverty backgrounds to trigger specific resources. In the past, this usually has been the number of students eligible for the federal free and reduced-price lunch program. Since districts can now provide free lunches to all students if they have a large number of students from poverty, the count of free and reduced lunch students is not available in some districts, often the largest districts in the state. So, the issue is whether to use a different indicator. One state, Illinois, provides a good example of the latter and uses the non-duplicated count of children receiving services through the programs of Medicaid, the Supplemental Nutrition Assistance Program, the Children's Health Insurance Program, or Temporary Assistance for Needy Families). English Language Learning (ELL) students and students with disabilities will be as currently defined by the state.

Previously the EB model defined at-risk students as the non-duplicated count of students from poverty and ELL students, and for all these students provided additional resources that included tutoring, extended day, summer school and additional pupil support. In addition, all ELL students also received an additional allocation for ESL services. This definition confused most people who concluded that the model provided ELL students just the ESL resources. Consequently, the EB model has changed its approach. In this report, all ELL students trigger tutoring, extended day, summer school, ESL, and additional pupil support resources. Then, all non-ELL poverty students also trigger tutoring, extended day, summer school and additional pupil support resources.

Prototypical Schools

A key component of the EB model is the use of prototypical schools and districts to indicate the general level of resources in schools and districts, and to serve as a heuristic to calculate the base per pupil amount, and then the student weights. The EB model identifies resources for prototypical elementary, middle, and high schools, as well as a prototypical district. The model needs to use specific sizes in order for the prototypes to indicate the relative level of resources in the schools. Although our modeling is based on these prototypes, this does not imply Kansas or any other state should adopt new policies on school or district size.

Research on School Size

School sizes differ substantially within and across all states. No state has a specific policy on school size, though some – including New Jersey, North Dakota, and Wyoming – use prototypical school sizes to develop and/or operate their funding formula. A number of other states include “ideal” size configurations for different levels of schools in their facility guidelines – something that clearly creates incentives for specific school sizes.

Research on school size is quite consistent in its conclusions. Most of the research on school size addresses the question of whether large schools – those significantly over 1,000 students – are more efficient and more effective than smaller school units (schools of 300 to 500), and whether cost savings and performance improvements can be identified by consolidating small schools or districts into larger entities. The research generally shows that school units of roughly 400-600 elementary students and between 500 and 1,000 secondary students are the most effective and most efficient (Lee & Smith, 1997; Raywid, 1997/1998; Ready & Lee, 2004).

Moreover, the research on diseconomies of small and large scale, which should consider both costs and outcomes, generally does not provide solid evidence for a consolidation policy. In an early review of the literature, Fox (1981) concluded that little research had analyzed output in combination with input and size variables. Ten years later, after assessing the meager extant research that did address costs as well as outcomes, Monk (1990) concluded that there was little support for either school or district consolidation, a conclusion also reached by Leithwood and Jantzi (2009). More recent research comes to similar conclusion. In reviews of scale economies and diseconomies and potential cost savings from consolidation, Andrews,

Duncombe & Yinger (2002) and Duncombe and Yinger (2007, 2010) found that the optimum size for elementary schools was in the 300-500 student range, and for high schools was in the 600-900 range. Both findings suggest that the very large urban districts and schools across America – and in some Kansas districts – are larger than the optimum size and perhaps need to be downsized somehow, but that the potential cost savings from consolidation of small districts and schools are realistically scant. In sum, the research suggests that elementary school *units* be in the range of 400-500 students and that secondary school *units* be in the range of 500-1,000 students.

These findings have been reinforced by several studies of small high schools in both New York City and Chicago, each of which had initiatives to create many smaller high schools, sometimes including several school units in one building. These schools generally enrolled 550 or fewer students, less than 400 students in Chicago K-8 schools. Schwartz, Stiefel and Wiswall (2013) found that achievement increased significantly in the New York City small high schools, a parallel finding of Barrow, Claessens and Schanzenbach (2010) in a similar set of experiments in Chicago high schools. Likewise, Lee and Loeb (2010) found that grade 6 and 8 math achievement was higher in small (less than 400 students) Chicago K-8 schools than in large ones (greater than 750 students).

The Evidence Based Model's Prototypical School Sizes

The EB approach starts by identifying resources for prototypical elementary, middle, and high schools with enrollments of 450, 450 and 600 respectively. It uses this approach and these prototypes to indicate the relative level of resources in schools, as well as to calculate a base per pupil cost. These prototypical school sizes reflect research on the most effective school sizes, although few schools are exactly the size of the prototypes. Although many schools in Kansas and other states are larger, as well as smaller, than these prototypical school sizes, these prototypical sizes can still be used to determine a new base per pupil figure, as the new base per pupil figure would be provided for all students in a school or district, whatever the actual size. States such as Arkansas, New Jersey and North Dakota have taken this approach.

Additionally, as is shown in Element 21, the EB model begins with a prototypical district size of 3,900, which comprises four 450-student elementary schools, two 450-student middle schools, and two 600-student high schools. This configuration is then used to estimate a district-level central office cost per student. Several states have used the micro-EB formulas and ratios to estimate a base per pupil cost estimate for their foundation school finance formula structure. States using this approach include Arkansas, New Jersey, and North Dakota. Although actual school sizes vary in each of those states, the prototypes provide good estimates of a base cost per pupil in the context of each of those states. Our Wisconsin Study (Odden et al., 2007) estimated a base per pupil cost using prototypical schools and a prototypical district, then compared that to a district specific figure created by adapting the ratios and formulas to every school and district size. In Wisconsin, we found that the difference between the two methods was about \$50 per pupil, a small amount in a base spending level of approximately \$10,000 per pupil. The EB prototypes should not be construed to imply Kansas needs to replace all school

sites with smaller or larger buildings or break school districts into smaller units; they are used as heuristics to determine the estimated base cost per student.

2018 CORE EB KANSAS RECOMMENDATIONS

Table 3.1 provides is a detailed summary of the core 2018 EB Kansas model resources:

Table 3.1 Summary of 2017 Kansas Adjusted Evidence-Based Model Recommendations

Model Element	2016 Evidence-Based Recommendation
Staffing for Core Programs	
1a. PreSchool	Full day preschool for children aged 3 and 4. One teacher and one aide in classes of 15.
1b. Full-Day Kindergarten	Full-day kindergarten program. Each K student counts as 1.0 pupil in the funding system.
2. Elementary Core Teachers/ Class Size	Grades K-3: 15 (Average class size of 17.3) Grades 4-5/6: 25
3. Secondary Core Teachers/ Class Size	Grades 6-12: 25. Average class size of 25
4. Elective/ Specialist Teachers	Elementary Schools: 20% of core elementary teachers Middle Schools: 20% of core middle school teachers High Schools: 33 1/3% of core high school teachers
5. Instructional Facilitators/ Coaches	1.0 Instructional coach position for every 200 students
6. Core Tutors/ Tier 2 Intervention	One tutor position in each prototypical school (Additional tutors are enabled through poverty and ELL pupil counts in Elements 22 and 26)
7. Substitute Teachers	5% of core and elective teachers, instructional coaches, tutors (and teacher positions in additional tutoring, extended day, summer school, ELL, and special education)
8. Core Pupil Support Staff, Core Guidance Counselors, and Nurses	1 guidance counselor for every 450 grade K-5 students 1 guidance counselor for every 250 grade 6-12 students 1 nurse for every 750 K-12 students, which supports a half time nurse in each prototypical elementary and middle school and a full-time nurse in each prototypical high school. (Additional student support resources are provided on the basis of poverty and ELL students in Element 23)

Model Element	2016 Evidence-Based Recommendation
9. Supervisory and Instructional Aides	2 for each prototypical 450-student elementary and middle school 3 for each prototypical 600-student high school
10. Library Media Specialist	1.0 library media specialist position for each prototypical school
11. Principals and Assistant Principals	1.0 principal for the 450-student prototypical elementary school 1.0 principal for the 450-student prototypical middle school 1.0 principal and 1.0 assistant principal for the 600-student prototypical high school
12. School Site Secretarial and Clerical Staff	2.0 secretary positions for the 450-student prototypical elementary school 2.0 secretary positions for the 450-student prototypical middle school 3.0 secretary positions for the 600-student prototypical high school
Dollar Per Student Resources	
13. Gifted and Talented Students	\$40 per pupil
14. Intensive Professional Development	10 days of student-free time for training built into teacher contract year, by adding five days to the average teacher salary \$125 per pupil for trainers (In addition, PD resources include instructional coaches [Element 5] and time for collaborative work [Element 4])
15. Instructional Materials	\$190 per pupil for instructional and library materials \$50 per pupil for each extra help program triggered by poverty and ELL students as well as special education
16. Short Cycle/ Interim Assessments	\$25 per pupil for short cycle, interim and formative assessments
17. Technology and Equipment	\$250 per pupil for school computer and technology equipment
18. CTE Equipment/ Materials	\$10,000 per CTE teacher for specialized equipment
19. Extra Duty Funds/Student Activities	\$300 per student for co-curricular activities including sports and clubs for grades K-12 \$50 per preschool student
Central Office Functions	
20. Operations and Maintenance	Separate computations for custodians, maintenance workers and groundskeepers, and \$305 per pupil for utilities

Model Element	2016 Evidence-Based Recommendation
21. Central Office Personnel/ Non-Personnel Resources	A dollar per student figure for a prototypical 3,900 student Central office based on the number of FTE positions generated – 8 professional and 15 classified positions – and the salary and benefit levels for those positions. The per pupil figure also includes \$300 per pupil for misc. items such as Board support, insurance, legal services, etc.
Resources for Struggling Students	
22. Tutors	1.0 tutor position for every 100 ELL students and one tutor position for every 100 non-ELL poverty students.
23. Additional Pupil Support Staff	1.0 pupil support position for every 125 ELL students and one tutor position for every 125 non-ELL poverty students.
24. Extended Day	1.0 teacher position for every 120 ELL and for every 120 non-ELL poverty students.
25. Summer School	1.0 teacher position for every 120 ELL and for every 120 non-ELL poverty students.
26. ELL staff for English Language Learner (ELL) Students	<p>As described above:</p> <ul style="list-style-type: none"> 1.0 tutor position for every 100 ELL students 1.0 pupil support position for every 125 ELL students 1.0 extended day position for every 120 ELL students 1.0 summer teacher position for every 120 ELL students, <p>In addition,</p> <ul style="list-style-type: none"> 1.0 ESL teacher position for every 100 ELL students.
27. Alternative Schools	<p>One assistant principal position and one teacher position for every 7 ALE students in an ALE program.</p> <p>One teacher position for every 7 Welcome Center eligible ELL students.</p>
28. Special Education	<p>8.1 teacher positions per 1,000 students, which includes: 7.1 teacher positions per 1,000 students for services for students with mild and moderate disabilities and the related services of speech/hearing pathologies and/or OT PT. This allocation equals approximately 1 position for every 141 students.</p> <p style="text-align: center;">Plus</p> <p>1.0 psychologist per 1,000 students to oversee IEP development and ongoing review.</p> <p style="text-align: center;">In addition</p> <p>Full state funding for students with severe disabilities, and state-placed students, and Federal Title VIB, with a cap on the number covered at 2% of all students.</p>

Model Element	2016 Evidence-Based Recommendation
Staff Compensation Resources	
29. Staff Compensation	For salaries, average of previous year For benefits: Retirement or pension costs: 10.81% per employee Health Insurance: \$12,000 per employee Social Security: 6.2% up to \$128,400 Medicare: 1.45% Workers' Compensation: 0.4% for certified employees Workers' Compensation: 4.1% for classified employees Unemployment Insurance: 0.1%

Chapter 4

Evidence Based Professional Judgment Panel

An important component of our Evidence Based (EB) approach to estimating school finance adequacy is to seek the judgement of education professionals in the state to review the EB recommendations and provide advice as to the adequacy of the resources included in the model for their individual state. To meet this requirement, we held a three-hour webinar on January 23, 2018 with eleven individuals from Kansas. Education community stakeholders and school officials nominated panelists, and all nominated individuals were invited to attend the EB webinar. The study team specifically sought to include a range of school staff.

A goal was to have half of the members of the panel be teachers from different levels of schools (elementary, middle, and high school) as well as teachers with varying work assignments including core subjects, elective classes, special education, English for speakers of other languages (ELL), and others. The study team wanted teachers with experience in helping to improve student performance in schools, because that experience would make them particularly helpful in understanding the resource implications of programs to meet new Common Core and college and career ready state standards. The study team also sought lead teachers, mentor teachers, instructional coaches, and certificated personnel serving in the role of tutors. In addition to teachers, the webinar had participation from: school site administrators and central office administrators.

The eleven participants at the webinar were:

- Elementary Principal – Scott May
- Secondary Principal – Tony Helfrich
- Counselor – Jodi Grover
- Elementary Teacher - Peg Meyer
- High School Teacher - Stan Bergkamp
- Special Education Teacher – Mandy Higgins
- Early Childhood Teacher - Tasia Markowitz,
- ELL Teacher - Monica LaForte
- Assistant Superintendent for Learning and Instruction – Cindy Couchman
- Director of Finance – Lisa Peters
- Superintendent – Justin Henry

Several days prior to the meetings, all webinar participants received an e-mail outlining the purpose of the webinar along with an electronic copy the draft EB report. The panel met for three hours on January 23 and was supported by Lawrence Picus from Picus Odden & Associates. Picus presented an overview of the EB model and then sought input – model element by model element – regarding the appropriateness of the model’s resources for Kansas schools. The study team also solicited panel members’ views on how the allocation of those

resources could improve student learning. The findings from the webinar form the basis for the findings presented in this section.

The webinar panel felt overall that the level of resources in the EB model would be adequate to meet the State Board of Education academic standards for students. There were three areas where panelists recommended that the study team consider changes or identified potential concerns with the EB model, but for now have not been changed in the EB model. The three areas are Pre-K, counselling and nurses, and special education. Those areas along with an evidence based rationale for why those resources have not been changed in our base model are outlined below. It is important to note the following:

1. The panel unanimously agreed that the model as presented would be adequate to meet state standards.
2. The changes discussed by the panel can be used to change Table 3.1 recommendations and change the resulting adequacy costs.

Element 1a: Pre-K

The webinar panelists felt that the Pre-K resources were generally adequate, but recommended an additional half time aide for each full day Pre-K program. They felt the additional resources were important to help staff the class when one aide needed to leave the classroom to help clean up accidents and messes that are frequent with very young children.

We have not added this to the base EB model for Kansas and point out that the EB model provides not only the one teacher and one aide for every 15 students in its prototypical preschool program, but also the elective teachers (so preschool teachers in a PreK-3 setting can engage in collaborative work with other early elementary grade teachers), instructional coaches, counselors and nurses, professional development, instructional materials, assessments, and technology resources that are provided to elementary schools. The EB PreK model as is also meets all the program benchmarks of the National Institute for Early Education Research.

Element 8: Core Counseling and Nurses

Panelists recommended that counseling resources at the elementary school be increased to one counselor for every 250 students so it matched the resource levels of middle and high schools. They felt that these resources were critical to supporting the increased needs of students at all levels.

We have not increased the base EB model. Earlier versions of the EB model provided student or pupil support resources without specifying guidance counselor or nurse positions. During the past five years, that approach has been changed to provide guidance counselor and nurse positions in the core program, and to provide additional pupil support positions (e.g., social workers, additional counselors, and family liaison persons) on the basis of poverty and ELL student counts as described in Element 23 below. Thus, core student support services now

specify guidance counselor and nurse positions. In areas with larger numbers of struggling students, additional resources for counselors are provided based on anticipated needs.

Panelists were concerned that more nurses would be important given the increased needs of students for medication and the challenges of serving more than one school during the day. They felt absent a nurse at most, if not all, schools, the demands placed on school clerical staff (or others) to help with student medications was too much.

We have not increased the allocation of nursing staff in the EB model. We recognize that the physical and medical needs of students have changed dramatically over the past several years. Many students need medications during the school day and school staff often administer these medications. Many students have additional medical or physical needs and our experience in several states suggests these needs have been growing over the past decade. Consequently, the EB Model has been enhanced over the years to provide nurses as core positions. Drawing from the staffing standard of the National Association of School Nurses,² the EB Model provides core school nurses at the rate of one nurse position for every 750 students. Nurses can be allocated in the prototypical district so each high school has a full-time nurse and each 450-student elementary and middle school has a half-time nurse.

Element 28: Special Education

Panelists expressed some concern about the census based approach to special education, and worried that the lack of para professionals was a problem in providing adequate support for students with disabilities. Because of the importance and complexity of this issue, we outline in more detail the evidence behind our recommendations for special education staffing in the appendix to this report. We have not changed our recommendations for special education staffing based on the evidence presented in the appendix.

² <https://www.nasn.org/>

Chapter 5 Calculating the Base Per Pupil Cost and Pupil Weights

To estimate adequacy costs based on the model described in Table 3.1, we developed an Excel-based simulation that provides the Evidence Based base cost per pupil as well as computes pupil weights for special education, at risk students and English Language Learners. Critical to these estimates are the costs of personnel. Table 4.1 shows the salary data that were used in developing our cost estimates.

**TABLE 4.1
2016-17 AVERAGE SALARY BY POSITION**

Position	Average Salary
Principal	\$84,737
Assistant Principal	\$78,907
Teacher	55,120
Instructional Coach	\$61,203
Substitute Teacher	\$55,120
Guidance Counselor	\$58,492
Nurse	\$50,927
Instructional/Supervisory Aide	\$21,076
Library Media Specialist	\$61,579
School Secretary/Clerical	\$33,215
Custodian	\$31,751
Maintenance Worker	\$45,065
Grounds Maintenance	\$31,751
Superintendent	\$113,117
Business Manager	\$87,774
Director – Personnel/HR	\$87,774
Asst. Supt. of Instruction	\$87,774
Director of Pupil Services	\$62,346
Director of Assessment	\$54,777
Director of Technology	\$66,228
Director of O&M	\$52,486
Secretary/Clerical	\$37,946
Network/Systems Supervisor	\$66,228
School Computer Technician	\$40,000
Psychologist	\$69,349

To estimate total compensation, the model used the benefit rates in Table 3.1. With these compensation estimates, the per pupil EB base expenditure is estimated to be \$9,615. The extra per pupil for ELL students is \$3,929 that produces an extra weight of 0.41; the extra per pupil for non-ELL poverty students is \$3,046 that produces an extra weight of 0.32. The per pupil EB preschool cost estimate is \$13,486 that computes to a weight of 0.40 relative to the base per pupil expenditure estimate of \$9,615. The cost estimate for alternative schools and

the ELL Welcome Center program for refugee ELL students is \$15,693 per pupil which computes to an extra weight of 0.63 relative to the base per pupil figure of \$9,615.

The special education cost estimate and derived weight require further explanation. It is important to first note that the EB model assumes the state funds 100 percent of the excess costs of programs for students with severe and profound disabilities.

To estimate costs for students with mild and moderate disabilities, the EB model uses a “census” approach and computes an additional amount based on the count of all students in a district not on the special education student count in each district. The EB estimate for the cost of special education is \$640 per pupil for *all* students.

This equates to a weight of 0.07 applied to the total number of students in a district (or state). The effect is that the total revenue generated through the EB model for special education for children with mild and moderate disabilities is equal to the base EB cost estimate (in this model \$9,615) times 0.07 for all students in the district (or state). Or looked at another way, every student (except those with severe and profound disabilities) in a district (or state) generates 1.07 times the EB base cost estimate.

References

- Andrews, M., Duncombe, W. & Yinger, J. (2002). Revisiting economies of size in American education: Are we any closer to a consensus. *Economics of Education Review*, 21(3), 245-262.
- Barrow, L., Claessens, A. & Schanzenbach, D.W. (2010). *The Impact of Small Schools in Chicago: Assessing the Effectiveness of Chicago's Small High School Initiative, Working Paper 18889*. Cambridge, MA: National Bureau of Economic Research.
- Blankstein, A. (2010). *Failure Is Not An Option, 2nd Edition*. Thousand Oaks: Corwin Press.
- Blankstein, A. (2011). *The Answer is in the Room: How Effective Schools Scale Up Student Success*. Thousand Oaks: Corwin Press.
- Borman, G. D., Hewes, O.L. & Brown, S. (2003). Comprehensive school reform and achievement: A meta-analysis. *Review of Educational Research*, 73(2), 125-230.
- Chenoweth, K. (2007). *It's Being Done: Academic Success in Unexpected Schools*. Cambridge, MA: Harvard Education Press
- Chenoweth, K. (2009). *How It's Being Done: Urgent Lessons from Unexpected Schools*. Cambridge, MA: Harvard Education Press.
- Chenoweth, K. (2017). *Schools that Succeed*. Cambridge, MA: Harvard Education Press.
- Donovan, S., and Cross, C. (2002). *Minority students in special and gifted education*. Washington, DC: National Academy Press.
- Duncombe, W. & Yinger, J. (2007). Does School District Consolidation Cut Costs? *Education Finance and Policy*, 2(4), 341-375.
- Duncombe, W. D. & Yinger, J. M. (2010). School district consolidation: The benefits and costs. *The School Administrator*, 67(5), 10-17.
- Duncan, G. J. & Murnane, R.J. (2014). *Restoring Opportunity: The Crisis of Inequality and the Challenge for American Education*. Cambridge, MA: Harvard Education Press.
- Fletcher, J. (2010). Spillover Effects of Inclusion of Classmates with Emotional Problems on Test Scores in Early Elementary Schools. *Journal of Policy Analysis and Management*, 29 (69–83).
- Fox, W. F. (1981). Reviewing economies of size in education. *Journal of Education Finance*, 6(3), 273-296.

- Frattura, E. and Capper, C. (2007). *Leading for Social Justice: Transforming Schools for All Learners*. Thousand Oaks, CA: Corwin Press.
- Giangreco, M.F. (2015). Testimony to the Education Committee of the Vermont House of Representatives. January 29, 2015
- Gottfried, M.A. (2014). Classmates with Disabilities and Students' Noncognitive Outcomes. *Educational Evaluation and Policy Analysis*, 36 (1), 20-43.
- Lee, V. & Smith, J. (1997). High school size: Which works best, and for whom? *Educational Evaluation and Policy Analysis*, 19(3), 205-228.
- Lee, V., & Loeb, S. (2000). School Size in Chicago Elementary Schools: Effects on Teachers' Attitudes and Students' Achievement. *American Educational Research Journal*, 37: 3-31.
- Leithwood K., & D. Jantzi. (2009). A Review of Empirical Evidence About School Size Effects: A Policy Perspective. *Review of Educational Research*, 79: 464-490.
- Levenson, N. (2011). *Something has got to change: Rethinking special education*, Working Paper 2011-01. Washington, D.C.: American Enterprise Institute.
- Levenson, N. (2012). *Boosting the quality and efficiency of special education*. Dayton, OH: Thomas Fordham Institute.
- Lyon, G. R., Fletcher, J. M., Shaywitz, S. E., Shaywitz, B. A., Torgesen, J. K., Wood, F. B., et al. (2001). *Rethinking Learning Disabilities*. Washington, DC: Thomas Fordham Foundation. URL: http://www.edexcellence.net/library/special_ed/index.html
- Madden, N. A., Slavin, R., Karweit, N., Dolan, L. J. & Wasik, B. A. (1993). Success for all: Longitudinal effects of a restructuring program for inner-city elementary schools, *American Educational Research Journal*, 30: 123–148.
- Mellard, D. (2004). *Understanding Responsiveness to Intervention in Learning Disabilities Determination*. Lawrence, Kansas: National Research Center on Learning Disabilities. Retrieved January 17, 2007 at: <http://nrclid.org/publications/papers/mellard.pdf>
- Monk, D. (1990). *Educational finance: An economic approach*. New York: McGraw-Hill.
- Odden, A. (2009). *Ten strategies for doubling student performance*. Thousand Oaks, CA: Corwin Press.

- Odden, A. (2012). *Improving student learning when budgets are tight*. Thousand Oaks, CA: Corwin Press.
- Odden, A. and Archibald, S. (2009). *Doubling Student Performance and Finding the Resources to Do It*. Thousand Oaks, CA: Corwin Press.
- Odden, A., and Picus, L. O. (2014). *School Finance: A Policy Perspective, 5th edition*. New York: McGraw-Hill.
- Odden, A. & Picus, L.O. (2015). Using the Evidence-Based Method to Identify a Base Spending Level and Pupil Weights for the Maryland School System. Denver, CO: Augenblick Palaich and Associates.
- Odden, A., Picus, L.O., & Goetz, M. (2010). A 50 State Strategy to Achieve School Finance Adequacy. *Educational Policy*. 24(4), 628-654.
- Picus, Lawrence O., Allan Odden, William Glenn, Michael Griffith, & Michael Wolkoff. (2012). An Evaluation of Vermont's Education Finance System. Downloaded from www.picusodden.com from the Resources and State Studies tabs.
- Picus, L. O. & Odden, A. (2018). *An Evidence-Based Approach to School Finance Adequacy in Michigan*. Downloaded from www.picusodden.com from the Resources and State Studies tabs.
- Picus, L. O., Odden, A., Goetz, M., Griffith, M., Glenn, W., Hirshberg, D., & Aportela, A. (2013). *An Independent Review of Maine's Essential Programs and Services Funding Act: Part 1*. Downloaded from www.picusodden.com from the Resources and State Studies tabs.
- President's Commission on Excellence in Special Education (2002). *A new era: Revitalizing special education for children and their families*. Washington, DC: US Department of Education.
- Raywid, M.A. (1997/1998). Synthesis of research: Small schools: A reform that works. *Educational Leadership*, 55(4), 34-39.
- Ready, D. & Valerie Lee. (2004). *Educational Equity and School Structure: School Size, Overcrowding and Schools-Within-Schools*. New York: Teachers College Press.
- Schwartz, A.E., Stiefel, L., & Wiswall, M. (2013). Do Small Schools Improve Performance in Large, Urban Districts: Causal Evidence from New York City. *Journal of Urban Economics*, 77:27-40.
- Slavin, R. E. (1996). Neverstreaming: Preventing learning disabilities. *Educational Leadership*, 53(4), 4-7.