

## **COST STUDY ANALYSIS**

**Elementary and Secondary Education in Kansas:  
Estimating the Costs of K-12 Education  
Using Two Approaches**

### ***Executive Summary***

**A Report to the Legislative Post Audit Committee  
By the Legislative Division of Post Audit  
State of Kansas  
January 2006**

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# ***Legislative Post Audit Committee***

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January 9, 2006

To: Members of the Kansas Legislature

This document summarizes the findings from our completed cost studies, *Elementary and Secondary Education in Kansas: Estimating the Costs of K-12 Education Using Two Approaches*.

This report contains the results of both the input-based and outcomes-based studies of K-12 education costs mandated by the 2005 Legislature. We would be happy to discuss these findings or any other items in the report with you at your convenience.

Finally, in developing the report, Legislative Post Audit has amassed considerable data related to school districts' education costs. We will be happy to use those data to answer additional questions you may have. We look forward to working with you during the 2006 legislative session.

A handwritten signature in black ink that reads "Barbara J. Hinton". The signature is fluid and cursive.

Barbara J. Hinton  
Legislative Post Auditor



## **EXECUTIVE SUMMARY**

LEGISLATIVE DIVISION OF POST AUDIT

### **OVERVIEW: Information Related to K-12 Public Education**

#### **Financing Public K-12 Education in Kansas**

The School District Finance and Quality Performance Act provides the formula for computing State aid for the 300 unified school districts in Kansas. This is done in several steps.

- First, the Legislature establishes the amount of Base State Aid Per Pupil (BSAPP).
- Second, what's often referred to as a "foundation-level" of funding is determined by multiplying each district's adjusted enrollment by the Base State Aid Per Pupil. Enrollment adjustments are made using a series of weights that add students to each district's basic enrollment based on factors such as the number of students in the district qualifying for free lunches, and the FTE number of special education students.
- The third step is determining the State's share of this foundation-level of funding. This is done by subtracting what's called the "local effort" from the amount computed above. Local effort is the sum of locally generated resources, such as proceeds from a mandatory Statewide 20-mill property tax, unexpended and unencumbered balances remaining in a district's General Fund, certain federal funds, and other miscellaneous local revenues available to help finance the district's educational activities. In Kansas, the State's share of this foundation-level of funding is called General State Aid.

#### **Litigation That Led to the Cost Studies**

In 1999, two school districts filed suit in Shawnee County District Court alleging the State's funding formula failed to make suitable provisions to fund K-12 education as required by Article 6 of the Kansas Constitution. In January 2005, the Kansas Supreme Court ruled that the Legislature had failed to meet its burden to "make suitable provision for finance" of public schools.

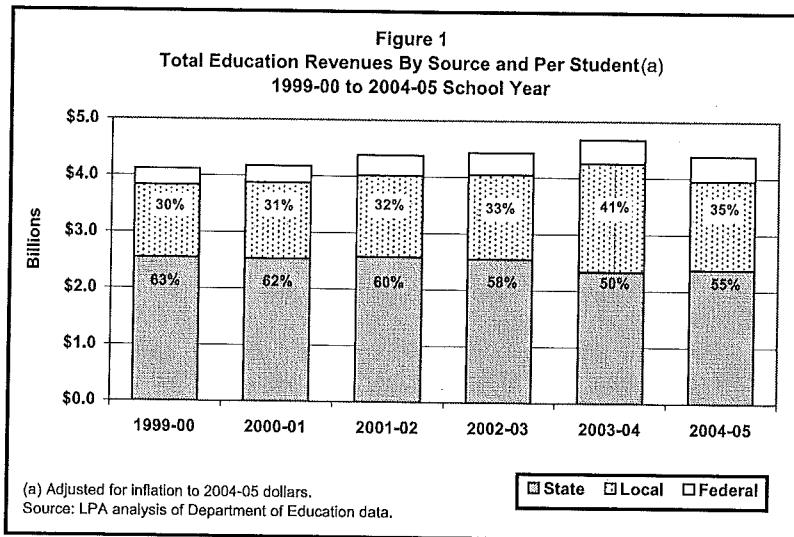
During the 2005 regular legislative session, the Legislature authorized \$141.1 million in additional funding for public schools for the 2005-06 school year. The same legislation also required Legislative Post Audit to "conduct a professional cost study analysis to determine the costs of delivering the kindergarten and grades one through 12 curriculum, related services, and other programs mandated by State statute in accredited schools."

On June 3, 2005, the Supreme Court ordered the Legislature to increase school funding by \$285 million by July 1, 2005, based on a 2002 cost study the Legislature commissioned from the firm of Augenblick and Myers. Updated for inflation to 2003-04, that study estimated that \$853 million in additional funding should be provided for schools. The \$285 million ordered by the Court represented one-third of that amount. After the Court's ruling, the Legislature met in special session and provided another \$148.4 million for a total increase in school funding of \$289.5 million—\$4.5 million more than the Court ordered. Additionally, the legislation providing that funding called for Legislative Post Audit to conduct two cost studies, one input-based and one outcomes-based. The Court retained the option of ordering the additional amount recommended by the Augenblick and Myers study pending its review of Legislative Post Audit's cost studies.

# K-12 Public School Revenues and Expenditures

## REVENUES

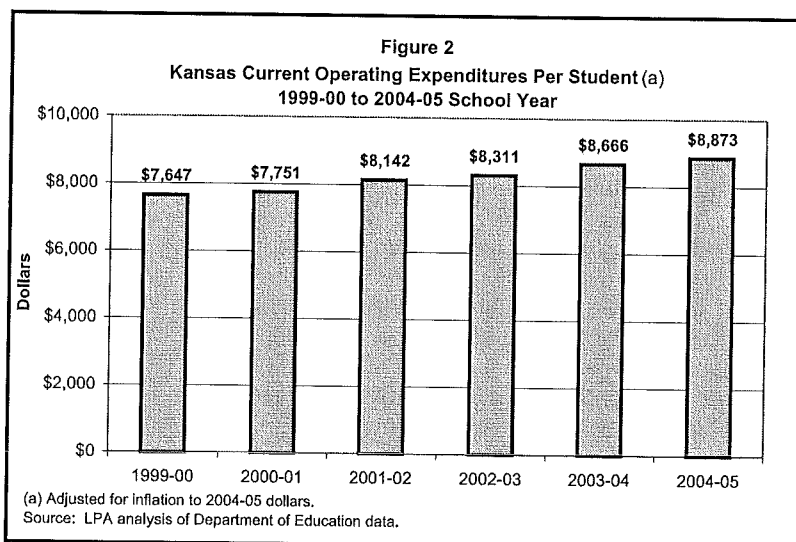
For the 2004-05 school year, Kansas school districts received almost \$4.4 billion, or nearly \$10,000 per FTE student. Those revenues are made up of State, federal, and local sources. Revenues for Kansas school districts for the 1999-00 to 2004-05 school years are shown in *Figure 1*.



NCES data show that Kansas school districts received about 57% of their total revenues from State sources in 2002-03 (the most recent year for which comparable data from other states were available). This was more than any of the five nearby states we reviewed—the next highest was Oklahoma (55%); the lowest was Nebraska (34%).

## EXPENDITURES

Adjusted for inflation, districts' total expenditures have increased about 15% over the past six years, from \$3.9 billion to \$4.4 billion. Districts are often compared on the basis of "operating expenditures" per student. Operating expenses don't include one-time expenditures



such as construction costs for new buildings, and therefore allow for more uniform comparisons among districts. Kansas' operating expenditures per student in 2004-05 were \$8,873. Operating expenses for Kansas school districts for the 1999-00 to 2004-05 school years are shown in *Figure 2*.

Data from the National Center for Education Statistics shows that for 2002-03, the most

recent year for which data are available, Kansas' operating expenditures per student were lower than those in Nebraska, Iowa and Missouri, but higher than Colorado and Oklahoma.

### Trends in Student Populations

Overall enrollments in Kansas have been declining for several years. After reaching a peak of 469,758 students in 1998-99, enrollment has declined to 466,037 students in 2005-06. The decline is not occurring in all districts. Some districts have experienced significantly declining enrollment since 1999-00, while others have seen explosive growth.

Overall, special needs students have been growing as a percent of Kansas' K-12 student populations. Since 1999-00, the number of students enrolled in Special Education has increased by 16%, and the number of students from low-income families has increased by 26%. The changes in total enrollment and in special needs groups between 1999-00 and 2004-05 are shown in **Figure 3**.

<b>Figure 3 Enrollment Change by Major Population Category 1999-00 to 2004-05 School Years</b>				
<b>Population Category</b>	<b>Enrollment Count</b>	<b>1999-00</b>	<b>2004-05</b>	<b>% Change 2000-2005</b>
Regular Education	FTE	445,759.3	436,688.9	-2.0%
Special Education (a)	FTE	23,027.8	26,808.6	16.4%
Vocational Education	FTE	12,470.4	14,926.6	19.7%
Free-lunch Student	Headcount	107,248	134,811	25.7%
English as a Second Language (a)	Headcount	18,277	23,113	26.5%
<small>(a) Data were only available for 2000-2004. Source: LPA analysis of Department of Education data.</small>				

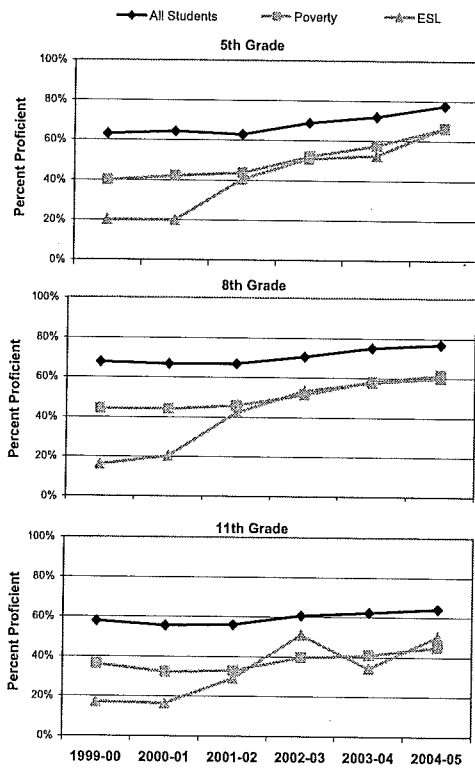
### Trends in Student Achievement

The percent of Kansas students who have scored "proficient" or above on Statewide assessment tests generally has increased since 2002. Taken as a whole, Kansas students have exceeded performance outcomes established by the State Board of Education. But when those figures are broken down into various subgroups, such as students coming from families in poverty, most special needs or minority subgroups are struggling to achieve outcomes.

Student performance on Statewide assessments from 1999-00 to 2004-05 is shown in **Figure 4** (reading) and **Figure 5** (math) on the next page.

On National Assessment of Education Progress exams (NAEP), which often are called "the nation's report card," Kansas students have scored above the national average. A recent study of states' NAEP scores by Standard and Poors showed that even after differences in various states' student populations were taken into account, Kansas students performance on both 4th and 8th grade math exams exceeded the average.

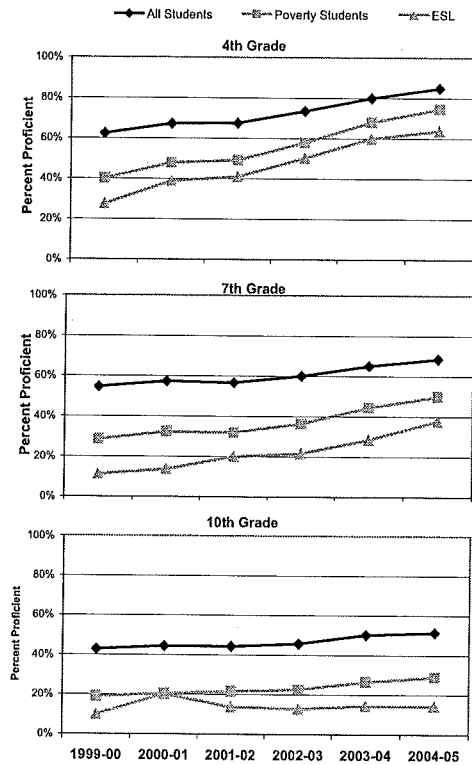
**Figure 4**  
Kansas Reading Assessment Scores



KS Board of Education Proficiency Level Goals (%)				
	2001-02	2002-03	2003-04	2004-05
5th and 8th	51.2%	51.2%	57.3%	63.4%
11th	44.0%	44.0%	51.0%	58.0%

Source: Department of Education data.

**Figure 5**  
Kansas Math Assessment Scores



KS Board of Education Proficiency Level Goals (%)				
	2001-02	2002-03	2003-04	2004-05
4th and 7th	46.8%	46.8%	53.5%	60.1%
10th	29.1%	29.1%	38.0%	46.8%

Source: Department of Education data.



## **QUESTION 1: What Are the Estimated Costs for K-12 Public Education in Kansas, and How Do Those Estimates Compare with Current State Funding Levels?**

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The cost studies we conducted were designed to identify the estimated costs for K-12 public education in the following areas:

- base-level costs for **regular education** using two different approaches: an input-based approach and an outcomes-based approach
- the **enrollment weights** associated with small and large districts
- the additional costs (and weights) for **special needs students** (at-risk, bilingual, and Special Education students)
- two of the other costs funded as part of State funding formula (Vocational Education and transportation)
- regional variations in costs (primarily because of differences in teacher salaries across the State)

Our results are summarized in this section, along with a comparison of our cost study results and current State and local funding levels.

### **Comparing the Estimated Foundation-Level Costs for Our Cost Studies With the Current Formula**

Our cost estimates show that the additional amount of foundation-level funding needed for 2006-07 would be at least \$316.2 million using the input-based approach, and would be \$399.3 million using the outcomes-based approach.

*Figure 6* on the next page compares the estimated cost study results and funding amounts under the current school finance formula for each funding category in the General Fund Budget (i.e., base-level, bilingual, and transportation), inflated to 2005-06 and to 2006-07 dollars. For the input-based approach, there are three estimates that are based on three different assumptions about average class sizes. In the column labeled "current funding formula," we are assuming that the Base State Aid Per Pupil remains at \$4,257 for both years.

As the figure shows, the total estimated General Fund cost using our input-based approach would be at least \$3.1 billion for 2006-07. Using the outcomes-based approach, the estimated cost would be \$3.2 billion for that same year. All these estimates are greater than the \$2.8 billion we estimated would be funded under the current school finance formula.

For 2006-07, the figure also shows the additional foundation-level funding that would be needed if any of these estimates were adopted. The additional funding needed under the input-based approach would be at least \$316 million. Under the outcomes-based approach, \$399 million in new funding would be needed.

In reviewing these estimated costs, the reader needs to be aware of the following:

- a. **Increases in base-level costs generally are offset by decreases in the costs associated with the enrollment weights.** The two combined were not significantly higher for the cost study results than the current funding formula. In 2006-07, for example, their combined estimated cost was about the same as the current formula for the input-based approach (class-size 25), and was about 3% higher for the outcomes-based approach.

**Figure 6**  
**Comparison of General Fund Budgets**  
**Current Funding Formula vs. Cost Study Results**  
**2005-06 and 2006-07 School Years**

2006-07	Current Funding Formula	LPA Cost Study Results			Outcomes-Based
		Input-Based Class Size 25	Input-Based Class Size 18/23	Input-Based Class Size 20	
Base-level	\$1,916,749,583	\$2,034,622,465	\$2,207,874,235	\$2,298,602,182	\$2,097,531,320
Low Enroll/Correlation	\$224,226,407	\$98,961,136	\$95,211,550	\$91,043,504	\$107,221,777
At-Risk (Poverty)	\$111,926,321	\$297,943,455	\$323,313,878	\$336,599,781	\$307,155,622
Urban Poverty	---	\$52,181,878	\$56,625,259	\$58,952,155	\$53,795,299
Bilingual Education	\$21,744,330	\$12,347,529	\$13,398,944	\$13,949,545	\$12,729,305
Special Education (a)	\$323,071,000	\$401,926,010	\$401,926,010	\$401,926,010	\$401,926,010
Vocational Education (a)	\$32,449,408	\$21,646,723	\$21,646,723	\$21,646,723	\$21,646,723
Transportation (a)	\$83,441,506	\$69,042,249	\$69,042,249	\$69,042,249	\$69,042,249
Regional Cost Adjustment	---	\$41,111,343	\$44,109,210	\$45,538,910	\$41,834,371
New Facilities (b)	\$14,815,637	\$14,815,637	\$14,815,637	\$14,815,637	\$14,815,637
Ancillary Facilities (b)	\$20,941,034	\$20,941,034	\$20,941,034	\$20,941,034	\$20,941,034
Declining Enrollment (b)	\$2,461,397	\$2,461,397	\$2,461,397	\$2,461,397	\$2,461,397
Other Adjustments (b), (c)	\$188,526	\$188,526	\$188,526	\$188,526	\$188,526
<b>TOTAL GENERAL FUND</b>	<b>\$2,752,015,150</b>	<b>\$3,068,189,384</b>	<b>\$3,271,554,653</b>	<b>\$3,375,707,655</b>	<b>\$3,151,289,271</b>
<b>Estimated Additional Foundation-Level Funding</b>	<b>\$0</b>	<b>\$316,174,234</b>	<b>\$519,539,503</b>	<b>\$623,692,505</b>	<b>\$399,274,121</b>

2005-06	Current Funding Formula	LPA Cost Study Results			Outcomes-Based
		Input-Based Class Size 25	Input-Based Class Size 18/23	Input-Based Class Size 20	
Base-level	\$1,916,749,583	\$1,970,025,334	\$2,137,776,542	\$2,225,623,972	\$1,876,006,390
Low Enroll/Correlation	\$224,226,407	\$95,819,224	\$92,188,683	\$88,152,968	\$95,897,847
At-Risk (Poverty)	\$111,926,321	\$288,484,063	\$313,049,001	\$325,913,091	\$274,716,237
Urban Poverty	---	\$50,525,158	\$54,827,467	\$57,080,486	\$48,113,858
Bilingual Education	\$21,744,330	\$11,955,508	\$12,973,541	\$13,506,662	\$11,384,935
Special Education (a)	\$282,271,234	\$374,206,975	\$374,206,975	\$374,206,975	\$374,206,975
Vocational Education (a)	\$32,449,408	\$20,959,462	\$20,959,462	\$20,959,462	\$20,959,462
Transportation (a)	\$80,792,326	\$66,850,230	\$66,850,230	\$66,850,230	\$66,850,230
Regional Cost Adjustment	---	\$39,621,027	\$42,523,715	\$43,908,024	\$37,736,047
New Facilities (b)	\$14,815,637	\$14,815,637	\$14,815,637	\$14,815,637	\$14,815,637
Ancillary Facilities (b)	\$20,941,034	\$20,941,034	\$20,941,034	\$20,941,034	\$20,941,034
Declining Enrollment (b)	\$2,461,397	\$2,461,397	\$2,461,397	\$2,461,397	\$2,461,397
Other Adjustments (b), (c)	\$1,418,733	\$1,418,733	\$1,418,733	\$1,418,733	\$1,418,733
<b>TOTAL GENERAL FUND</b>	<b>\$2,709,796,411</b>	<b>\$2,958,083,784</b>	<b>\$3,154,992,418</b>	<b>\$3,255,838,672</b>	<b>\$2,845,508,783</b>

(a) LPA developed the estimated costs for these programs and services based on analyses of the costs per student. Because these estimated costs aren't tied to the base-level cost, they don't vary for the different cost study results.  
(b) We didn't analyze the need for this funding in our cost studies. We included the same costs for all cost study results because the Legislature has made a policy decision to provide additional funding in these areas.  
(c) This is primarily additional funding that is provided to recently consolidated districts.  
Source: LPA cost study results.

Having a higher base and lower weights would result in most smaller districts receiving less State funding under our projections than under the current formula. That's because most of the moneys tied to enrollment weights go to smaller districts.

- b. **Between 2005-06 and 2006-07, the total estimated cost under the outcomes-based approach would increase by almost 11%, compared with an increase of 3.7% under the input-based approach.** Almost all the increase for the input-based approach is because of inflation. The outcomes-based model also grew because of inflation, but increased significantly more because of increases in the testing standards adopted by the Board of Education for the 2006-07 school year. These standards will continue to increase in the future.
- c. **The additional costs associated with students in poverty accounted for at least \$238 million of the estimated increases in foundation-level funding.** For example, the estimated cost associated with these students in 2006-07 for the input-based approach (class-size 25) would be \$350 million, and would be \$361 million for the outcomes-based approach. Those compare with \$112 million under the current formula.

The costs we project for students in poverty are much higher than under the current formula because the weights developed using the outcomes-based approach were substantially higher than the current poverty weight. We also added an urban-poverty weight to account for significantly higher costs in high-poverty, inner-city districts.

- d. **The additional costs associated with Special Education accounted for about \$75 million of the estimated increases in foundation-level funding.** That's because the current Special Education funding formula significantly overstates the amount of regular education costs districts realistically could avoid or save when students are receiving Special Education services.
- e. **Applying the regional cost adjustment to our estimates added at least \$41 million to our Statewide projections for 2006-07.** This reflects the fact that districts with the highest regional cost index tended to be the largest districts, which have a high percentage of all the teachers in the State.

### **Comparing Estimated Base-Level Costs and Pupil Weights From Our Cost Studies With the Current Formula**

*Figure 7* on the next page presents the results of our work in each area compared with the State's current school finance formula. The work we did was based on historical expenditures through either 2003-04 or 2004-05, depending on the availability of the information at the time we were doing our analyses. The figure shows our estimates inflated to both the current school year (2005-06) and the next school year (2006-07).

### **Estimated Base-Level Costs and Enrollment Weights for Regular Education: INPUT-BASED APPROACH**

#### **BACKGROUND**

This cost study approach was designed to estimate the costs of providing the curriculum, services and programs mandated by State statute as well as high school graduation requirements developed by the State Board of Education and State scholarship and college admissions requirements developed by the State Board of Regents. It does not consider student performance outcomes in determining the level of funding needed.

**Figure 7  
Comparing Cost Study Results to the  
Current State Funding Formula  
2005-06 and 2006-07**

	Current Funding Formula	Input-Based Approach (Using 3 Class-Size Models)			Outcomes-Based Approach
		Average 25 students/class	Average 18/23 students/class	Average 20 students/class	
Base-level costs per FTE student	05-06 = \$4,257 06-07 = \$4,257	05-06 = \$4,375 06-07 = \$4,519	05-06 = \$4,748 06-07 = \$4,904	05-06 = \$4,943 06-07 = \$5,105	05-06 = \$4,167 06-07 = \$4,659
Low-enrollment weight (to 3 decimals)	range: 1.014-0.021	range: 1.122-0.000	range: 0.956-0.000	range: 0.879-0.000	range: 0.773-0.008
Correlation (high-enrollment) weight (to 3 decimals)	0.021 for districts $\geq 1,662$	range: 0.000-0.028 for districts $\geq 2,000$	range: 0.000-0.029 for districts $\geq 2,000$	range: 0.000-0.024 for districts $\geq 2,000$	0.008 for districts $\geq 1,700$
At-Risk (poverty) weight (per free-lunch student)	0.193	0.484			
Additional Urban-Poverty weight (per free-lunch student)	---	0.726			
Bilingual weight (two different bases)	0.395 per FTE bilingual student	0.100 per headcount bilingual student			
Additional cost per FTE Special Education student	05-06 = \$10,736 06-07 = \$12,185	05-06 = \$14,232 06-07 = \$15,159			
Additional cost per FTE Vocational Education student	05-06 = \$2,129 06-07 = \$2,129	05-06 = \$1,375 06-07 = \$1,420			
Additional cost per student transported >2.5 miles	05-06 = \$594 06-07 = \$613	05-06 = \$491 06-07 = \$507			
Regional cost adjustment (applied to teacher salaries)	---	range: -2% to +5% of costs			
Given above cost estimates, additional amount needed to provide "foundation-level" funding compared with current funding levels (in millions)	---	06-07 = \$316.2	06-07 = \$519.5	06-07 = \$623.7	06-07 = \$399.3
"Hold-harmless" provision so no district would receive less than under the current funding formula (in millions)	---	06-07 = \$35.1	06-07 = \$7.0	06-07 = \$0.7	06-07 = \$9.4

Source: LPA analysis of school district and Department of Education data.

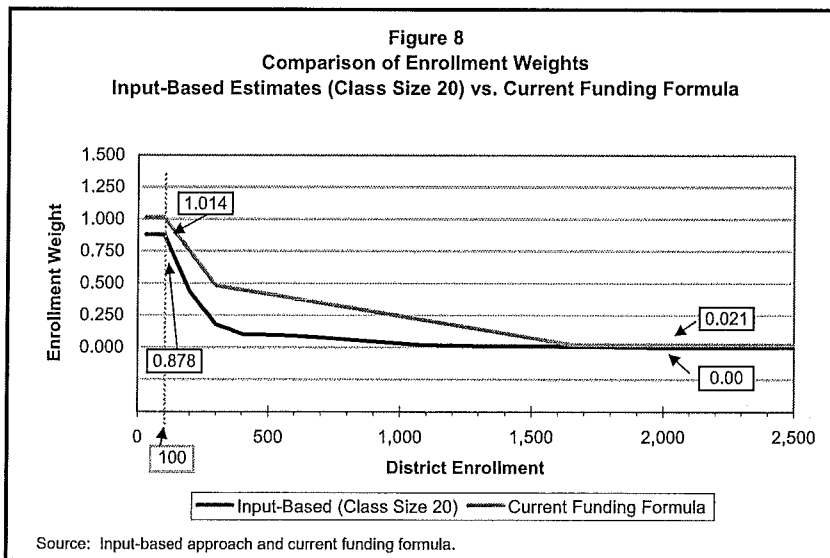
We used a modified resource-oriented approach, which involves building eight prototype districts of various sizes ranging from 100 to 15,000 students. We determined the level of staffing and other resources needed to operate each prototype district at an "above-average" level of efficiency, and we priced those resources. The prototype districts were compared to 94 actual Kansas school districts with enrollments similar to those of the prototypes. The total costs determined for each of our prototypes were used to estimate enrollment weights for all districts in Kansas.

Because smaller class sizes require more teachers and larger class sizes require fewer teachers, total costs can change significantly based on the assumptions made about class-sizes. To provide the Legislature with information about how these costs can change, we estimated costs using the following three average class-size models:

- 20 students per class
- 25 students per class
- 18 students per class in grades K-3, and 23 students per class in grades 4-12

**RESULTS**

- Depending on the class-size model used, the estimated base-level cost of providing what’s mandated by State statute would range from \$4,375 to \$4,943 per student for 2005-06. At each level, the base cost per student is higher than the Base State Aid Per Pupil provided in the current funding formula.
- The enrollment weights estimated in the input model generally are lower than those in the current formula, especially for the smaller districts. The enrollment weights from our input model and the current formula are shown in *Figure 8*.



As the figure shows, districts with 100 or fewer students would receive an additional weighting of 0.878 – meaning it would cost them 88% more than the base level cost to deliver what’s mandated by State statute for regular education. This is significantly less than the current weighting of 1.014 in the current formula.

As the figure shows, districts with 100 or fewer students would receive an additional weighting of 0.878 – meaning it would cost them 88% more than the base level cost to deliver what’s mandated by State statute for regular education. This is significantly less than the current weighting of 1.014 in the current formula.

- Our cost estimates for the eight prototype districts were \$300 to \$2,100 per student lower than comparable estimated expenditures for our 94 comparison districts. Some of the reasons why:
  - We allocated fewer instructional staff. For example, assuming an average class size of 20 students, our prototype district with 15,000 students would be allocated about 6% fewer instructional staff than our comparison districts actually had. An average class size of 25 resulted in an allocation of about 24% fewer instructional staff for this same size of district.
  - We allocated fewer non-instructional staff. For example, under both the 20 and 25 class-size models for the 15,000 prototype district, we allocated about 21% fewer non-instructional positions than the comparison districts had.
  - We allowed non-salary expenditures at the 33rd percentile. This means we allocated non-salary expenditures at a level that 1/3 of the districts already were achieving, but that 2/3 of the districts would have to become more efficient to achieve. The result was non-salary

expenditures that were 2%-12% below the median of historical expenditure levels for our sample districts.

## Estimated Base-Level Costs and Enrollment Weights for Regular Education: OUTCOMES-BASED APPROACH

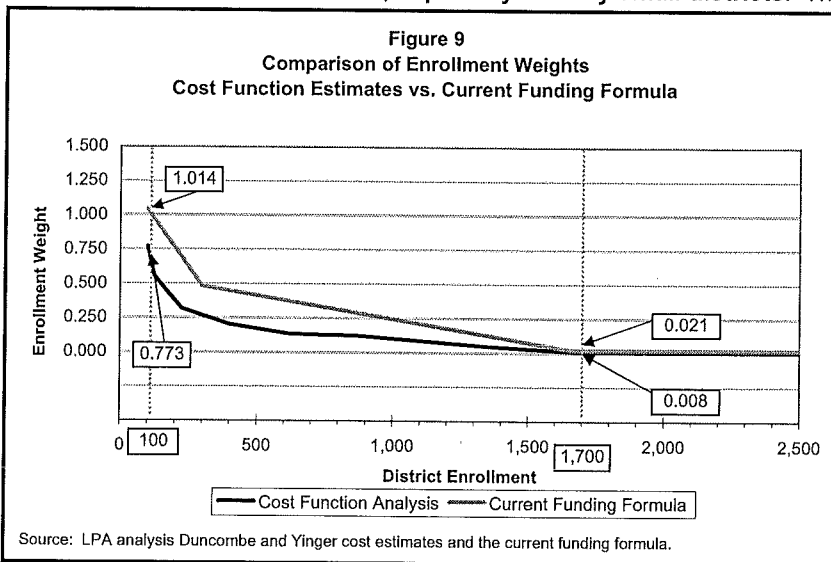
### BACKGROUND

This cost study approach was designed to estimate the cost of meeting the performance outcome standards adopted by the State Board of Education. As part of this approach, we hired consultants to conduct a cost function analysis. In a cost function analysis, sophisticated statistical tests are used to understand the relationships between districts' historical costs and a variety of factors, such as district size, student characteristics, teacher salaries, student performance, and district efficiency. Those relationships are incorporated into a cost model, that is then used to estimate the cost of meeting the performance outcome standards.

We used the results of the cost function analysis to estimate the base-level cost of meeting the performance outcome standards in different years, as well as to develop a set of student weights for enrollment, poverty, and bilingual students. Because the original spending data used to build the cost model included federal sources of funding, we adjusted the initial base-level costs and weights downward to better reflect the costs the State might fund.

### RESULTS

- The estimated base-level cost of meeting the 2005-06 performance outcome standards set by the Board of Education is **\$4,167 per student**. This is \$90 per student less than the current Base State Aid Per Pupil (\$4,257). In part, that's because the performance standards for 2005-06 are relatively low. The estimated base-level cost in **2006-07** is \$4,659 per student, which is \$402 per student more than the current Base State Aid Per Pupil. That's partly the result of inflation, but the performance standards also are higher in 2006-07. For example, between 2005-06 and 2006-07, the standard for 10th grade math increases from 47% proficiency to 56%, and the standard for 5th grade reading increases from 63% proficiency to 70%. Those standards will continue to increase each year through 2013-14, when 100% of all students must reach proficiency on Statewide math and reading exams. See **Appendix A** for each year's reading and math standards.
- The enrollment weights estimated with the outcomes-based approach are lower than those in the current formula, especially for very small districts. The enrollment weights



from the cost function analysis and the current formula are shown in **Figure 9**.

As the figure shows, for districts with 100 or fewer students, we estimated an additional weighting factor of 0.773, which is significantly lower than the weighting of 1.014 in the current formula.

For districts with 1,700 or more students, the outcomes-based enrollment weight is 0.008, which is about one-third as much as the weight of 0.021 in the current formula.

- **District size, student characteristics, teacher salaries, and district efficiency appear to explain a lot of the variation in district spending per student.** With a few exceptions, districts that spent significantly more than the cost function predicted they'd spend were more heavily staffed than the average district in the State.

## **Additional Costs for Serving AT-RISK Students**

### **BACKGROUND**

As part of the cost function analysis, the consultants analyzed the relationship between the number of students who qualify for free lunch in a district and that district's costs. We used these results to develop an at-risk weight that measures the effect of poverty on district costs. In addition, because urban poverty is associated with a variety of more serious social problems, including drugs and violent crime, the consultants included an additional measure of urban poverty in the cost model—the percent of students qualifying for free lunch multiplied by the student density of a district.

We used the relationship between this measure and district costs to develop an additional urban-poverty weight. That weight applies to only four districts—Kansas City, Kansas City-Turner, Topeka, and Wichita—where student outcomes often are significantly below standards. In Kansas City, for example, only 4%-17% of the 10th grade students at four Kansas City high schools were proficient in math in 2004-05, compared with the standard of 47%.

Both of these weights measure how much more it costs for students in poverty to achieve the same level of performance as other students achieve. Because this is consistent with the purpose of at-risk programs—bringing at-risk students up to the same level of performance as regular education students—we applied the at-risk and urban poverty weights to both cost study approaches.

As we noted in the previous section, both the at-risk and urban poverty weights have been adjusted downward to remove federal funding and better reflect the costs the State might fund.

### **RESULTS**

- **The estimated at-risk weight is 0.484 per free lunch student in most school districts, which is higher than the current weight of 0.193.** The urban-poverty weight, which estimates the significantly higher costs incurred in high-poverty, inner-city school districts, is 0.726. There's no urban-poverty weight in the current formula.
- **When the at-risk and urban-poverty weights are applied Statewide for 2006-07, they result in at least \$350 million in at-risk funding under the input-based approach (class-size 25) and \$361 million in funding under the outcomes-based approach.** This is significantly more than the \$112 million in at-risk funding estimated for 2006-07 under the current formula.

## **Additional Costs for Serving BILINGUAL Students**

### **BACKGROUND**

As part of the cost function analysis, the consultants analyzed the relationship between the number of bilingual students in a district and that district's costs. We used these results to develop a bilingual weight. Like the at-risk and urban-poverty weights, the bilingual weight measures how much more it costs for bilingual students to achieve the same level of

performance as other students achieve. Because this is also consistent with the purpose of bilingual programs, we applied this weight to both cost study approaches. This weight also has been adjusted downward to remove federal funding.

**RESULTS**

- The estimated bilingual weight is 0.100 per bilingual student (headcount). This is significantly lower than the current bilingual weight of 0.395, but the two weights aren't comparable because the current formula uses a bilingual student FTE (not headcount), that is based on student contact hours with a "bilingual-endorsed" teacher. Because many bilingual services are provided to students in settings or districts where there are no "bilingual-endorsed" teachers, bilingual student FTE significantly understates the bilingual students in a district.
- The bilingual weight developed as part of the cost function analysis may be somewhat understated for a couple of reasons. First, because most bilingual students also qualify for free lunch, it's possible that some of the costs associated with educating bilingual students were picked up by the at-risk weight. In addition, the headcount of bilingual students that districts report may not be entirely accurate. Some districts may not report all their bilingual students, and others may not be reporting them uniformly.

**Additional Costs for Serving SPECIAL EDUCATION Students**

**BACKGROUND**

During 2004-05, almost 80,000 students received Special Education services. This represents nearly 26,000 FTE Special Education students (based on the percent of a student's time spent in Special Education). Districts reported spending a total of about \$575 million for these services. State funding for Special Education is intended only to cover the "excess" portion of those costs—the amount that's over and above the average cost of regular education services and that's not reimbursed from other sources, such as Medicaid. Typically only a portion of excess costs are funded by the State, and districts must provide any remaining funding. The 2005 Legislature set the State's share (categorical aid) at 89.3% for 2005-06, and 92.0% for every year thereafter.

**RESULTS**

- We estimated that the additional costs for Special Education for 2005-06 were about \$419 million. We developed this cost estimate based on a detailed review of 19 sample

districts and the eight cooperatives or interlocals that served them. State categorical aid (89.3%) would be about \$374 million, which is nearly \$92 million more than the \$282 million the Legislature appropriated for this year. These estimates are shown in **Figure 10**.

Our estimated costs are much higher because, in our opinion, the current formula for

<b>Figure 10 Computing the Additional Estimated Costs for Special Education 2005-06 (amounts in millions)</b>			
Calculations:	LPA Estimate	Estimate Under Current Formula	Difference
	2005-06	2005-06	
Estimated Direct Costs of Special Education (direct cost / student X # FTE students)	\$582.9	\$605.2	(\$22.3)
Less estimated federal aid	(\$100.1)	(\$100.1)	\$0
Less estimated Medicaid reimbursements	(\$30.0)	(\$30.0)	\$0
Less estimated SRS contribution	(\$1.5)	(\$1.5)	\$0
Less costs/student for regular education	(\$32.3)	(\$157.5)	(\$125.2)
<b>Estimated Additional / "Excess" Costs</b>	<b>\$419.0</b>	<b>\$316.1</b>	<b>\$102.9</b>
<b>Estimated State Categorical Aid (89.3% of Additional / "Excess" Costs)</b>	<b>\$374.2</b>	<b>\$282.2</b>	<b>\$92.0</b>
<b>Additional Amount Per FTE Student in Special Education</b>	<b>\$14,232</b>	<b>\$10,736</b>	<b>\$3,496</b>

Source: LPA analysis of Department of Education data.



computing the "excess" cost of Special Education significantly overstates how much districts realistically could reduce their regular education costs when students receive Special Education services. As Figure 10 shows, the current formula subtracts out the average operating costs per student for regular education from districts' Special Education costs. This step assumes there's a 1:1 reduction in districts' regular education costs for each FTE Special Education student.

As our analysis in **Figure 11** shows, most students who receive Special Education services still spend all or most of their time inside the regular education classroom. For these

<b>Figure 11</b> <b>Location of Special Education Services in 2003-04</b> <b>(Outside the Regular Education Classroom)</b>	
FTE Special Education students who spent...	Special Education FTE Enrollment (Total = 26,809)
...NONE of their time receiving Special Education services outside the regular education classroom	7,380 (28% of total)
...LESS THAN 2 HOURS / DAY receiving Special Education services outside the regular education classroom	5,625 (21% of total)
...AT LEAST HALF their time receiving Special Education services outside the regular education classroom (avg. 3+ hrs/day)	9,051 (34% of total)
Source: LPA analysis of Department of Education data.	

students, districts' regular education costs wouldn't change at all.

For students who do spend most of their time outside the regular education classroom, districts may be able to reduce their instructional costs somewhat. But because most of the services for those students still

are provided in the same school building, we think it's unlikely districts could reduce their costs for such things as operations and maintenance, district administration, librarians, principals, secretarial staff, and all the other non-instructional costs that make up average operating costs.

For these reasons, we adjusted the formula to subtract only the average instructional costs for Special Education students who spend more than half their time outside the regular education classroom.

- **Most variations in our sample districts' costs per FTE student resulted from differences in the number or average salaries of certified teachers or paraprofessionals, and transportation costs.**

## **Additional Costs for Serving VOCATIONAL EDUCATION Students**

### **BACKGROUND**

School districts aren't required to offer Vocational Education programs, but the State has chosen to help pay for approved programs through a weighting factor in the current funding formula. In the 2005-06 school year, 278 of 300 school districts had at least one approved Vocational Education program, and nearly 15,000 FTE students participated in approved programs in 2004-05. Districts reported spending a total of \$68.1 million on Vocational Education, with the State paying for \$28.8 million of that through the funding formula.

We estimated the additional costs of Vocational Education programs through a detailed review of expenditures at 21 sample districts that had approved programs. Our estimate was based largely on districts' actual expenditures for Vocational Education (including many expenditures that weren't reported to the Department of Education) that were above and beyond the cost of

other regular education classes. We have adjusted our estimate downward to remove federal funding and better reflect the costs the State might fund.

## **RESULTS**

- **For the 2005-06 school year, the estimated additional cost for Vocational Education is \$1,375 per FTE student, which is less than the \$2,129 per FTE student in the current formula.** Using the current Base State Aid Per Pupil of \$4,257 as a base, our estimate of Vocational Education costs results in a weight of 0.323, which is less than the current weight of 0.500.
- **Most of the variations we saw in our sample districts' costs were attributable to differences in capital outlay or bond expenditures, salaries and benefits, numbers of teachers, instructional supplies, and tuition payments to neighboring school districts, area vocational technical schools, and cooperatives.**

## **Additional Costs for TRANSPORTING Students**

### **BACKGROUND**

State statute requires school districts to transport certain students to and from school, and the State helps pay for some of the costs. During the 2004-05 school year, districts transported more than 186,500 local public school students to and from school, and reported spending \$102.5 million on regular education transportation. The State provided \$78.1 million to help districts pay the transportation costs for students who live 2.5 or more miles from school. We evaluated the current transportation formula, paying particular attention to how transportation costs are allocated between students transported more or less than 2.5 miles.

### **RESULTS**

- **We estimated that the cost of transporting students 2.5 or more miles would be about \$67 million in 2005-06, which is \$14 million less than the funding levels under the current formula.** We concluded the current formula overstated transportation costs for several reasons. First, the current formula was built on the premise that students who live 2.5 or more miles from school are twice as expensive as students who live closer. In practice, however, the current formula sometimes allocates as much as 13 times more transportation costs to students who live 2.5 or more miles from school—those students the State is helping to pay for. Second, the cost of transporting non-resident (out-of-district) students is included in the current calculations, and the State inadvertently reimburses districts for some of these costs.

## **REGIONAL VARIATIONS in Teacher Salaries**

### **BACKGROUND**

Teacher compensation is the largest cost districts face, and teacher costs can vary significantly across the State. Currently, there's no regional cost adjustment based on teacher salaries—the Legislature added a cost-of-living provision in 2005, but the Kansas Supreme Court stayed that provision. To determine how the cost of hiring a comparable teacher varies from district to district, we used sophisticated statistical techniques to create a teacher-wage model.

The teacher-wage model examines the relationship between teacher salaries and differences in teacher characteristics, cost of living, working conditions, community amenities, and district efficiency. We used the model to build a teacher salary index that shows how much more or less than the average salary each district would have to pay teachers due to factors that

are outside their control. Because teacher salaries and benefits typically make up half of a district's costs, we applied our results to only 50% of each district's costs.

## **RESULTS**

- **We estimate that education costs vary regionally from about 5% above the average to 2% below the average.** The differences in teacher salaries primarily were due to differences in the working conditions in school districts and the cost of living in communities. Districts with the largest increases are high-poverty urban districts (Kansas City, Topeka, and Wichita) and districts in the Johnson County suburbs.
- **Applying the regional cost adjustment to each district for the 2006-07 school year added at least \$41 million to Statewide projections.** That's because districts with the highest regional cost index tended to be the largest districts and have a high percentage of all teachers in the State.

## **Results of Our Cost Studies Compared With State and Local Funding Levels**

### **PERCENT OF FOUNDATION-LEVEL COSTS PAID BY THE STATE**

- **If the State were to fund all the increase in estimated costs, its share of the total foundation-level funding would increase from 80% under the current formula to as much as 83.6%.** As noted in the Overview, foundation-level funding for school districts currently comes from a mix of State dollars and what's called local effort, which primarily consists of the Statewide 20-mill property tax levy. Thus, any increases in foundation-level funding can be financed by:
  - increasing State funding for school districts.
  - increasing the local effort for school districts (by raising the mandatory Statewide 20-mill property tax levy). Each additional mill would bring in an estimated \$25.5 million in 2006-07.
  - increasing both State funding and the local effort amount.

If the State were to finance all the estimated increase in foundation-level funding, its share as a percent of total foundation-level funding would increase to as much as 83.6%, depending on which cost estimate is used. If the local mill levy were raised to fund all the increase in estimated costs, the State's share would drop from 80% to as low as 65%, and the local effort would increase correspondingly. This information is summarized in *Figure 12* on the next page.

## **Other Increases in State and Local Funding That Would Result from Increasing the Foundation-Level Funding**

If the Legislature increases the foundation-level funding, districts' local option budgets could increase substantially, and the State would have to pay as much as \$30 million to \$56 million in additional State Supplemental Equalization Aid. Raising the foundation level of funding would provide additional revenues for districts' general fund budgets, and could increase their local option budgets. That's because a district's local option budget is based on a percentage of its general fund budget.

**Figure 12**  
**Percent of Cost Study Results That Could Be**  
**Paid for With State Funding--Two Scenarios**  
**2006-07 School Year**

SOURCES OF FUNDING	Current Funding Formula	Input-Based Class Size 25		Input-Based Class Size 18/23		Input-Based Class Size 20		Outcomes-Based		
<b>TOTAL GENERAL FUND</b>										
Amount Funded;										
Current Formula	\$2,752,015,150		\$2,752,015,150		\$2,752,015,150		\$2,752,015,150		\$2,752,015,150	
Add'l Est. Amount	\$0		\$316,174,234		\$519,539,503		\$623,692,505		\$399,274,121	
<b>Total</b>	<b>\$2,752,015,150</b>	<b>100.0%</b>	<b>\$3,068,189,384</b>	<b>100.0%</b>	<b>\$3,271,554,653</b>	<b>100.0%</b>	<b>\$3,375,707,655</b>	<b>100.0%</b>	<b>\$3,151,289,271</b>	<b>100.0%</b>
<b>% Funded by the State IF the State Funded All the Additional Estimated Foundation Cost</b>										
State Foundation Funding	\$2,198,825,906	79.9%	\$2,515,000,140	82.0%	\$2,718,365,409	83.1%	\$2,822,518,411	83.6%	\$2,598,100,027	82.4%
Local Sources	\$542,461,279	19.7%	\$542,461,279	17.7%	\$542,461,279	16.6%	\$542,461,279	16.1%	\$542,461,279	17.2%
Federal (Impact Aid)	\$10,727,965	0.4%	\$10,727,965	0.3%	\$10,727,965	0.3%	\$10,727,965	0.3%	\$10,727,965	0.3%
<b>% Funded by the State IF an Increase in the Local Mill Levy Funded All the Additional Estimated Foundation Cost</b>										
State Foundation Funding	\$2,198,825,906	79.9%	\$2,198,825,906	71.7%	\$2,198,825,906	67.2%	\$2,198,825,906	65.1%	\$2,198,825,906	69.8%
Local Sources	\$542,461,279	19.7%	\$858,635,513	28.0%	\$1,062,000,782	32.5%	\$1,166,153,784	34.5%	\$941,735,400	29.9%
Federal (Impact Aid)	\$10,727,965	0.4%	\$10,727,965	0.3%	\$10,727,965	0.3%	\$10,727,965	0.3%	\$10,727,965	0.3%
Source: LPA cost study results.										

If the foundation-level funding is increased significantly, some districts might reduce their local option budgets, but there's no way for us to know whether or to what extent that would happen. **Figure 13** shows the maximum effect of the cost study results if districts' local option budgets would grow at the same rate as the increases in their general fund budgets.

As the figure shows, such increases would have a secondary impact on State funding, because most districts' local option budgets are subsidized with State Supplemental Equalization Aid.

**Figure 13**  
**Maximum Potential Effect of Cost Study Results on Local Option Budgets**  
**2006-07 School Year**

2006-07	Current Funding Formula	LPA Cost Study Results			
		Input-Based Class Size 25	Input-Based Class Size 18/23	Input-Based Class Size 20	Outcomes-Based
<b>LOCAL OPTION BUDGETS</b>					
Local Property Taxes (a)	\$448,806,294	\$503,979,965	\$537,563,085	\$554,465,264	\$516,106,711
State Supp. Equalization Aid					
Under current funding formula	\$222,186,876	\$222,186,876	\$222,186,876	\$222,186,876	\$222,186,876
Maximum add'l amount	0	\$29,987,232	\$47,372,120	\$56,326,737	\$38,017,397
Total Supp. Equalization Aid	\$222,186,876	\$252,174,108	\$269,558,996	\$278,513,613	\$260,204,273
<b>TOTAL LOCAL OPTION BUDGETS</b>	<b>\$670,993,170</b>	<b>\$756,154,073</b>	<b>\$807,122,080</b>	<b>\$832,978,877</b>	<b>\$776,310,983</b>
(a) Maximum effect of cost study results if districts' local option budgets would grow at the same rate as the increases in their general fund budgets.					
Source: LPA cost study results.					

The maximum additional amount of this aid, if any of our estimates were adopted, would range from \$30 million to \$56 million under the input-based approach, and would be \$38 million under the outcomes-based approach.

Finally, **Figure 14** shows how total State funding from all sources would increase if the foundation-level funding were increased using any of our cost estimates. The totals shown here should be viewed as a maximum as well: they reflect the additional amount the State would pay if it funded all the increase in the foundation-level funding, and if districts' local option budgets would grow at the same rate as the increases in their general fund budgets.

**Figure 14**  
**State Funding for School Districts--All Sources**  
**(If the State Funds All the Additional Foundation-Level Funding)**  
**Current Funding Formula vs. Cost Study Results**  
**2006-07 School Year**

	Current Funding Formula	LPA Cost Study Results			
		Input-Based Class Size 25	Input-Based Class Size 18/23	Input-Based Class Size 20	Outcomes-Based
<b>General Fund</b>					
General State Aid	\$1,875,754,906	\$1,875,754,906	\$1,875,754,906	\$1,875,754,906	\$1,875,754,906
Special Education Aid	\$323,071,000	\$323,071,000	\$323,071,000	\$323,071,000	\$323,071,000
New State Aid	\$0	\$316,174,234	\$519,539,503	\$623,692,505	\$399,274,121
<b>Total General Fund</b>	<b>\$2,198,825,906</b>	<b>\$2,515,000,140</b>	<b>\$2,718,365,409</b>	<b>\$2,822,518,411</b>	<b>\$2,598,100,027</b>
<b>Districts' Local Option Budgets</b>					
State Supp. Equalization	\$222,186,876	\$222,186,876	\$222,186,876	\$222,186,876	\$222,186,876
New Supp. Equalization	\$0	\$29,987,232	\$47,372,120	\$56,326,737	\$38,017,397
<b>Total LOB</b>	<b>\$222,186,876</b>	<b>\$252,174,108</b>	<b>\$269,558,996</b>	<b>\$278,513,613</b>	<b>\$260,204,273</b>
<b>Other State Funds</b>					
KPERS Contribution	\$175,389,495	\$175,389,495	\$175,389,495	\$175,389,495	\$175,389,495
New KPERS Contribution	\$0	\$18,549,491	\$30,304,637	\$36,313,619	\$23,321,964
Capital Outlay	\$19,197,016	\$19,197,016	\$19,197,016	\$19,197,016	\$19,197,016
Bond & Interest	\$57,724,510	\$57,724,510	\$57,724,510	\$57,724,510	\$57,724,510
Miscellaneous (a)	\$27,490,524	\$27,490,524	\$27,490,524	\$27,490,524	\$27,490,524
<b>Total Other State Funds</b>	<b>\$279,801,545</b>	<b>\$298,351,036</b>	<b>\$310,106,182</b>	<b>\$316,115,164</b>	<b>\$303,123,510</b>
<b>TOTAL STATE FUNDING</b>	<b>\$2,700,814,328</b>	<b>\$3,065,525,285</b>	<b>\$3,298,030,587</b>	<b>\$3,417,147,188</b>	<b>\$3,161,427,810</b>

(a) Adult Education, Area Vocational Technical School, Driver Training, Food Service, Professional Development, Parent Education, and Tuition Reimbursement.  
Source: LPA cost study results.

In addition to the increases discussed earlier, this table shows the estimated increases in the KPERS contributions the State makes on behalf of school districts would be at least \$19 million under the input-based approach, and would be about \$23 million under the outcomes-based approach.

If some or all of the increase in foundation-level funding came from an increase in the local 20-mill property tax levy, and if districts lowered their local option budgets, the State's General Fund and Supplemental Equalization Aid funding amounts would be less than this figure shows.

## Other Issues for the Legislature's Consideration

- **The Legislature may want to consider holding harmless those districts that would receive less than their current level of State funding under either the input-based or outcomes-based approaches.** The additional amount it would take Statewide to ensure that no district receives less in 2006-07 than it does now would be as follows:

➤ Input-based (class-size 25)	\$35.1 million
➤ Input-based (class-size 18/23)	\$ 7.0 million
➤ Input-based (class-size 20)	\$ 0.7 million
➤ Outcomes-based	\$ 9.4 million

If the Legislature decides to hold school districts harmless, that additional funding also could have a ripple effect in 2006-07 on funding for State Supplemental Equalization Aid and the KPERS contribution the State makes on districts' behalf.

- **The Legislature may want to consider having us provide different "what-if" scenarios using our cost study models.** Because K-12 education funding levels ultimately will depend on the Legislature's policy choices, we designed our cost studies to allow different assumptions or decisions to be factored in. Variations could include using different average class-size models; using different student performance outcomes; using different assumptions regarding district-level efficiency (such as using the 50th or 25th percentiles); using different assumptions regarding our analysis of the additional costs of Special Education, Vocational Education, or transportation; or applying our regional cost index to all salary costs or total district costs.
- **The Legislature, 2010 Commission, At-Risk Council, and others may want to consider a number of other factors that could impact the amount of State funding for school districts, the student performance results achieved, or the quality of information the Legislature has to make informed decisions.** Among the issues we've identified and discussed in this cost study that will need further review:
  - Whether there is sufficient accountability to ensure that the additional moneys school districts receive will be used efficiently and effectively, will be used to address the student populations they are intended for, and will result in improved student performance.
  - How the State wants to finance any increase in foundation-level funding for school districts. As noted earlier, the Legislature could increase State funding, increase the Statewide mill levy from 20 mills to some higher amount, or do a combination of the two.
  - Whether the percent of the additional costs the State pays for Special Education should be reduced from its current statutory level of 92% for 2006-07. If the Legislature adopts our cost estimate, the State would be funding 83% of the non-federally funded share of Special Education costs, which is higher than most neighboring states pay.
  - Whether to take any actions to limit the growth in school districts' local option budgets. If the Legislature adopts any of our cost study estimates, the resulting increase in foundation-level funding would allow districts' local option budget—and the State's Supplemental Equalization Aid—to significantly increase, unless local boards of education reduce them.
  - Whether it would be cost-effective for districts' internal accounting records to be maintained on a more uniform basis to facilitate cross-district comparisons of detailed expenditures.
  - Whether, in reporting expenditure information to the Legislature, the Department of Education should allocate expenditures made by Special Education cooperatives and interlocals to their member districts (as we did for our analyses), so the Legislature will have more comparable information in the future when it looks at expenditures by district.

## **QUESTION 2: Which Special Needs Students Receive Services, and What Services are Available to Them?**

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### **At-Risk Programs and Services**

#### **BACKGROUND**

State at-risk funding is part of a broad effort to provide additional services to students who aren't performing adequately in school. In addition to State funding, Federal Title I funding is used to improve the quality of education in high-poverty schools, and various other federal programs and grants are available.

Current State law requires districts to use 5.2% of their State at-risk funding for services to help students master basic reading skills by the end of the 3rd grade; the remainder of the funding must be spent on services for identified at-risk students. These services must be above and beyond what is offered to all students. The Department's guidelines for identifying at-risk students emphasize demonstrable academic weaknesses, such as not working at grade level. However, districts can use their own criteria for identifying at-risk students, and they design their at-risk programs based on the needs of the students and resources available.

Funding for the at-risk program is tied to the federal free lunch program under the National School Lunch Act. For each student who is eligible for the program, the State pays districts an additional 19.3% of the Base State Aid Per Pupil (BSAPP). The 2005 Legislature increased the at-risk weight from 0.100 to its current level of 0.193. This will give districts an estimated \$111.2 million for 2005-06—more than double the previous year's amount.

Until 2005-06, no separate accounting fund existed for districts to record their at-risk funding and expenditures; therefore historical accounting information isn't available. For the 2003-04 school year, districts reported spending \$61.5 million on at-risk programs.

#### **RESULTS**

We selected 11 districts to review in detail and found that overall:

- **Districts don't report the number of at-risk students served on a uniform and consistent basis.** Some report the number of students eligible for free lunches, others report students participating in State-funded at-risk programs only, and others report students participating in all at-risk programs. These reported figures aren't audited by the Department of Education. In addition, districts' definitions for which students actually qualify for at-risk services also vary widely. This affects the number of at-risk students they report.
- **The State's basis for funding at-risk services has little relationship to the number of students who receive those services.** Poverty serves as the basis for funding the at-risk program, but a lack of academic progress is the basis for receiving at-risk services. For a sample of districts, we compared lists of students who qualified for free lunches to lists of students who received at-risk services during 2004-05. The results are shown in **Figure 15** on the next page. Two important points stand out:
  - Small districts in our sample provided at-risk services to far fewer students than the number of students counted for funding purposes, and they tended not to be the same students. For example, Stafford provided at-risk services to 73 students, but the district had 147 free-lunch students who served as the basis for funding purposes.
  - Several larger districts identified all students who qualified for free lunches as being eligible for and receiving at-risk services. This resulted in a large number of students being reported as receiving at-risk services.

**Figure 15  
Comparing Students Receiving At Risk Services  
To Students Counted for At-Risk Funding  
2004-05**

District #, Name	# Students eligible for Free Lunches 9/20/2004	Comparison 1: Headcounts of Students Receiving At-Risk Services with Free-Lunch Students		Comparison 2: Names of Students Receiving At-Risk Services with Free-Lunch Students	
		# Students receiving At-Risk Services	Difference (# served minus # free lunches)	Students who got At-Risk services AND free lunches	% match (a)
326 Logan	63	47	16 fewer	13	21%
217 Rolla	94	59	35 fewer	28	30%
349 Stafford	147	73	74 fewer	57	39%
404 Riverton	255	39	216 fewer	13	5%
253 Emporia	2,279	1,876	403 fewer	1,134	50%
480 Liberal	2,593	2,949	356 more	2,593	100% (b)
457 Garden City	3,511	4,770	1,259 more	1,756	50%
512 Sh. Mission	3,654	6,609	2,955 more	2,205	60%
443 Dodge City (c)	4,004	4,976	972 more	4,004	100% (b)
500 Kansas City	12,593	17,708	5,115 more	12,593	100% (b)
259 Wichita	25,389	39,290	13,901 more	25,389	100% (b)

Source: LPA analysis of data reported by sample districts.

(a) Percent of students eligible for free lunches who also received at-risk services.

(b) These districts say that all free-lunch students are at risk, and all of them receive at-risk services.

(c) Excludes 4-year-old At-Risk program (124 students)

- The most common types of at-risk services provided included after-school activities, special reading and math programs, alternative school settings, and counseling services. Some districts used at-risk moneys for global programs intended to service all students in school buildings with a significant number of students considered to be at-risk. Such programs include class-size reduction and full-day kindergarten.
- Districts in our sample spent much more than they received in State at-risk funding. In 2004-05, these districts received about \$21 million in State at-risk funding, but reported spending nearly \$67 million.

## **Bilingual Programs and Services**

### **BACKGROUND**

State and federal laws require school districts to provide language support services to students who aren't proficient in English. During 2004-05, a total of 81 districts received State bilingual education funding. Services were provided to an estimated 24,524 students, whose most common first language was Spanish (82%). Districts spent \$20.7 million from their Bilingual Education Funds in 2004-05.

To be eligible for State bilingual funding, districts must have a State-approved program. This entails identifying and assessing students, developing a program, using specially trained "bilingual-endorsed" teachers (who have taken a series of university-level classes to work with



bilingual students), measuring students' progress, and providing notification to parents in their native languages.

Kansas provides bilingual funding only for the time students spend with a bilingual-endorsed teacher or paraprofessional supervised by such a teacher ("contact hours"). The State pays districts an additional 39.5% of the Base State Aid Per Pupil for each FTE bilingual student (six contact hours represents one FTE). The 2005 Legislature increased the bilingual weight from 0.20 to its current level of 0.395. This will give districts an estimated \$22.5 million for 2005-06—more than double the previous year's amount.

## **RESULTS**

We selected 10 districts to review in detail, and found that:

- **Districts haven't reported the number of students they serve on a uniform and consistent basis.** For the 2003-04 school year, 229 districts reported they had no bilingual students. Although we didn't try to verify this information, the 2000 Census shows that 114 of these districts had households with school-age children where English wasn't spoken well. These Census data reflect a slightly different time period, but it seems unlikely that none of these 114 districts had any students who needed bilingual services. In addition, the bilingual students that districts do report aren't always reported consistently. Department officials noted that the figures that are reported aren't audited, that pre-kindergarten children sometimes were included and sometimes weren't, and that definitions changed slightly one year.
- **Funding bilingual education based on service contact hours doesn't link funding with need.** Districts are providing bilingual services to significantly more students than the ones currently being counted for funding purposes. For example, Dodge City provided services to 2,766 students, but received funding for only slightly more than 1,800 FTE bilingual students.
- **The current funding formula treats districts unequally. That's because some districts are able to generate contact hours more easily than others.** For example, McPherson averaged \$77 in State bilingual funding for each student it served, while Rolla received \$647. McPherson had one bilingual-endorsed teacher who traveled between schools to provide one-on-one services. This didn't generate many contact hours. In contrast, Rolla had many endorsed teachers, including elementary school teachers. When a bilingual-endorsed elementary school teacher has at least one bilingual student in class, the district gets State bilingual funding for nearly every minute of every day.
- **Districts may not receive funding for all the bilingual services they provide.** Paraprofessionals provided services to many bilingual students—in some cases a paraprofessional may be the only person who speaks the student's first language. However, districts can't claim funding for these services unless they have a bilingual-endorsed teacher to supervise the paraprofessional. In addition, some districts also have an influx of students—particularly migrant students—after the official count date for funding.
- **Nearby states (Oklahoma, Colorado, Missouri, Nebraska, and Iowa) all base bilingual funding on headcount, not on the time students spend with a bilingual-endorsed teacher.**
- **Districts use a wide variety of methods to provide English language services. Types of services provided depend on the number of bilingual students, how proficient they are in English, the number of endorsed teachers or paraprofessionals, and the overall financial resources available.** For example, nearly all our sample districts used

"pull-out" techniques, where bilingual students leave the regular classroom for additional instruction. On the other hand, only four districts offer dual language programs (where native English and non-English speaking students receive half their instruction in English and half in Spanish) or true "bilingual" programs (where all students speak the same native language and instruction is initially provided in that language with the gradual introduction of English).

- **In providing bilingual services, our sample districts spent about \$14 million during 2004-05, much more than the \$7 million they received in State bilingual funds.**

### **Special Education Programs and Services**

- **School districts are responsible for providing appropriate Special Education services to their students.** In the 2004-05 school year, 30 districts provided their own services, while 270 districts were members of cooperatives or interlocals (these groups allow districts to pool their resources to provide services more efficiently and effectively than they could alone).
- **State and federal law requires each school district, to the maximum extent appropriate, to educate students with disabilities in the same setting as students who are not disabled.** Services can be provided in a regular classroom—for example, a paraprofessional may tutor a student one-on-one, or help the student with note-taking during a lecture—or in a pull-out setting, where students receive some or all their services in a separate classroom or building.
- **Districts incur significant costs for certain high-needs students. State law allows districts to apply for catastrophic aid to help manage the costs of students whose Special Education services are anticipated to cost more than \$25,000 annually.** Specifically, the State pays 75% of service costs in excess of \$25,000.

In the 2003-04 school year, the State paid about \$1.2 million in catastrophic aid to districts for 84 students. On average, services for these students cost about \$45,000, but services for one student exceeded \$260,000. Some of these students require extensive medical support, others may be severely emotionally disturbed and require lots of supervision, while others may need to be accompanied at all times by interpreters or may require special equipment.

### **QUESTION 3: What Does the Educational Research Show About the Correlation Between the Amount of Money Spent on K-12 Education and Educational Outcomes?**

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#### **BACKGROUND**

Because of the large number of studies that have been done over the years to look at the relationship between increased spending and student outcomes, we had to focus our efforts on trying to identify studies that were most relevant, that had already summarized results from other studies, or that were widely cited. To accomplish this we reviewed some existing literature, contacted faculty from schools of education at Kansas universities, reviewed bibliographies, and contacted other school evaluation agencies.

#### **RESULTS**

- **Scholars who have reviewed the work of other researchers offer differing opinions about whether more resources improve educational outcomes.** Among the literature we summarized were two well-known reviews of earlier studies looking at the effects of increases in specific inputs on student outcomes: a 2003 study by Eric Hanushek and a 1994 study by Greenwald, Hedges, and Laine. Both looked at results published in those earlier studies, and both found that a majority of the results weren't statistically significant. However, they disagreed on the bottom-line meaning. Hanushek concluded there wasn't a clear relationship, based on the large proportion of statistically insignificant results. After performing additional statistical tests, the Greenwald group concluded there was a relationship between increasing resources and improving student outcomes.
- **Other input-specific studies we reviewed found that reduced class sizes were most statistically linked to improved student performance.** Four of five class-size studies we reviewed found that smaller classes led to improved student outcomes. Among those studies was one examining the achievement of Tennessee students who'd been randomly assigned to small or regular-size classes for one to four years. The improvement of children who'd been in the small classes (13-17 students) persisted at least through 8th grade. Perhaps as many as 33 states have implemented class-size reduction initiatives.

Studies of factors other than class size were less consistent.

- **Expenditures per Student.** A study of spending and staffing allocations in Arkansas, Louisiana, New Mexico, and Texas found that increased expenditures per pupil were linked to improvements in student performance in Louisiana, but the opposite was true in Arkansas. The same study found that 9 of 12 districts that had consistently improved student outcomes had lower increases in spending for administration than did comparison districts. In contrast, a Standard & Poor's study of nine states found no correlation.
- **Teacher Quality.** An Alabama study found that having teachers with advanced degrees correlated with improved math scores, but teacher experience didn't. That same study found that students whose teachers had scored higher on their own college entrance exams tended to perform better in reading. A different study found that students in states with higher proportions of teachers with advanced degrees didn't have significantly higher scores than students in other states.
- **Recent literature calls for improvements in research to better answer questions about relationships between inputs and outcomes.** Researchers have cited various limitations in studies that have been done in the past. Among the concerns are that studies have used too few variables to determine the full effects of changes, and studies have used available data rather than data that would be most relevant. Researchers also say studies need to be designed to specifically address efficiency issues.

**APPENDIX A**  
**Cost Study Scope Statement Approved by the**  
**Legislative Post Audit Committee**

**Elementary and Secondary Education in Kansas:**  
**Estimating the Costs of K-12 Education Using Two Approaches**

The 2005 Legislature passed HB 2247, which provided \$142 million in additional funding for public schools during fiscal year 2006. That legislation also called for Legislative Post Audit to conduct a “professional cost study analysis to determine the costs of delivering the kindergarten and grades one through 12 curriculum, related services and other programs mandated by state statute in accredited schools.” That study, to be conducted at the direction of the Legislative Post Audit Committee, is required to be completed by the first day of the 2006 legislative session.

Among other things, in its ruling on June 3 the Supreme Court said the cost study required by HB 2247 did not appear to “demand consideration of the costs of ‘outputs’—achievement of measurable standards of student proficiency.” The Court also said that “without consideration of outputs, any study conducted by post audit is doomed to be incomplete.”

In response to this ruling and to the Legislative Post Auditor’s request for clarification regarding the scope of the cost study analysis, the 2005 Legislature amended HB 2247 during the special session with the passage of 2005 Special Session SB3. The new legislation requires that two cost study analyses be performed:

- one using an input-based approach to estimate how much it should cost school districts to deliver the curriculum, services, and programs mandated by State statute. This approach doesn’t address meeting performance outcome standards set by the State Board of Education.
- the other using an outcomes-based approach to estimate how much it should cost school districts to meet the performance outcome standards set by the Board of Education (those outcome standards are attached).

Both cost study analyses still are required to be completed by the start of the 2006 legislative session.

To fulfill the requirements for two cost study analyses as called for by 2005 Special Session SB3, Legislative Post Audit would address the following questions:

Input-Based Approach	Outcomes-Based Approach
<p><b>Question 1: What should it cost for <u>regular</u> K-12 education to deliver the curriculum, related services, and programs mandated by State statute?</b> To answer this question, we would identify the curriculum, services, and programs mandated by State statute, as well as high school graduation requirements developed by the Board of Education and State scholarship requirements developed by the Board of Regents. (Note: most requirements relate to required courses of instruction.) For up to 8 different-sized districts, we would develop models that do the following:</p> <ul style="list-style-type: none"> <li>● identify the resources needed to deliver these curricula, services, and programs</li> <li>● estimate the cost of these resources, taking into account cost differences (primarily teacher salaries) in different geographic regions of the State</li> <li>● identify reasonable estimates of other costs for operating schools and school districts—including administration, support, supplies, and transportation—and explore significant variations among such cost categories for a limited sample of districts to assess whether they appear to be caused by the school or district’s size or location, or by some other factor such as local spending decisions or preferences.</li> <li>● use those models to estimate costs for all school districts</li> <li>● compare our estimates with districts’ actual resource levels and costs, and make any adjustments needed to our models to ensure they reflect reasonable assumptions.</li> </ul> <p>Because State statutes don’t specify the resource levels districts should have, we will make a number of judgments about what is adequate and reasonable, including class sizes, administrative and operational costs, and computer needs. Our judgments may come from sources such as other cost or correlation studies, interviews with school officials, averages for similar-sized districts, and industry “benchmarks.” We plan to provide estimated costs using several different average class-size assumptions.</p>	<p><b>Question 1: What should it cost for <u>regular</u> K-12 education to meet the performance outcome standards set by the Board of Education?</b> To answer this question, we would do the following:</p> <ul style="list-style-type: none"> <li>● collect data from the last 5 years on                         <ul style="list-style-type: none"> <li><input type="checkbox"/> <u>spending per pupil</u>. We would exclude funds that clearly aren’t related to student outcomes, such as driver’s education, adult education, bond and interest payments, and community service operations.</li> <li><input type="checkbox"/> <u>student performance</u>. These include scores on Statewide assessment tests and graduation rates</li> <li><input type="checkbox"/> <u>district characteristics</u>. These include enrollment, wealth, density, and salary levels.</li> <li><input type="checkbox"/> <u>student characteristics</u>. These include race, poverty, numbers of special-needs students, etc.</li> </ul> </li> <li>● use statistical tests to identify the relationships between spending, performance, and the other factors. We would contract with consultants to provide the expertise needed to conduct such tests.</li> <li>● incorporate all these factors into a model that has two parts:                         <ul style="list-style-type: none"> <li><input type="checkbox"/> an estimate of what it should cost an average school district to meet the outcome standards</li> <li><input type="checkbox"/> a series of adjustments that take into account differences in district and student characteristics.</li> </ul> </li> </ul> <p>For districts that are not meeting outcomes, this approach will identify a level of spending that should give them the opportunity to achieve those outcomes, provided they spend their money effectively. For districts that are exceeding outcomes, this approach will identify a level of spending that would be sufficient to allow them to meet outcomes. Finally, this approach provides an estimate of the total cost of achieving certain outcomes, but gives no information about the specific resources needed (i.e., number of teachers or other types of staff).</p> <p>NOTE: With outcomes-based approach, it would be considered methodologically unsound to <u>limit</u> the cost study only to those curricula, related services, and other programs mandated by State statute, because other non-mandated programs, services, and resources (such as alternative high schools, extracurricular activities, after-school tutoring, nurses, etc.) may have contributed to students’ achievement of these outcomes.</p>

2. **What are the additional estimated costs for educating K-12 special needs students, and how do those costs vary by district size and location?** For each category of special needs students funded through the Kansas school finance formula, we would determine what special requirements the State has placed on school districts to educate those students, and would review records and interview administrators and educators to determine how and what types of programs and services are being provided. To determine the additional costs associated with special education and vocational education, we would review records for a sample of districts, identify which costs appear to be reasonable and necessary, and determine how much these districts spent per student for these programs. To determine the additional costs associated with educating bilingual and at-risk students, we would use information provided by the statistical tests used in the outcomes-based approach (Question 1) to determine the “weighted cost” of bringing these students up to the same performance level as general education students. To the extent possible for each area, we would note factors that could contribute to differences in costs among our sample districts.
  
3. **For bilingual and at-risk students, is there a significant relationship between the students counted for funding purposes and the students who actually receive those services?** To answer this question for a sample of school districts, we would use data reported or maintained by school districts to do the following:
  - For bilingual students, determine the relationship between the number of students whose “contact hours” with certified bilingual instructors were used as the basis for State bilingual funding for 2004-05, and the number who had been identified that year as having limited English proficiency (LEP).
  - For at-risk students, determine the relationship between individual students in the free-lunch program in 2004-05 (the basis used for funding purposes), and students who participated in at-risk programs and services.

To the extent possible, we would note factors that could be contributing to large variations we see in this area among districts within the two programs.

4. **What does educational research show about the correlation between the amount of money spent on K-12 education and educational outcomes?** To answer this question, we would gather and review the most recent studies available that examine the relationship between educational spending and educational outcomes. We would also interview any experts we can identify. We would summarize the findings of those studies and interviews and report on what they show.
  
5. **What percent of the estimated cost of providing educational services and programs was funded by the various types of State aid those districts received, and what percent of the cost was funded by districts’ local option budgets?** To answer this question, we would obtain information about the total amount of State aid each district in our sample received in the 2004-05 school year. We also would determine the amount of funding each sampled district provides through its local option budget. Based on the cost information we gather under questions 1 and 2 above, for both the input-based approach and the outcomes-based approach we would compute the percent of those costs that would have been covered by the State aid the district received, and the percent covered by districts’ local option budgets. To the extent possible, we would note factors that could contribute to significant differences in the percent funded.

**Estimated time to complete:** All staff - approximately 6-8 months

