NO. 113,267

IN THE SUPREME COURT OF THE STATE OF KANSAS

LUKE GANNON,
by his next friends and guardians, *et al*.,

Plaintiffs/Appellees,

vs.

STATE OF KANSAS, *et al.*,

Defendants/Appellants.

OPENING BRIEF OF PLAINTIFFS/APPELLEES
APPENDICES 1-11

Appeal from the District Court of Shawnee County, Kansas
Honorable Judges Franklin R. Theis, Robert J. Fleming, and Jack L. Burr
Case No. 10-c-1569

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Appendix 1:
Excerpt from Kansas' Consolidated State Plan Regarding 2016 Performance Levels

This Chart is an excerpt from the State of Kansas' Consolidated State Plan (attached as Appendix 2). (Plaintiffs added the red text demonstrating the failure rates.) Kansas is required to submit a plan pursuant to the Elementary and Secondary Education Act of 1965 ("ESEA"), as amended by the Every Student Succeeds Act ("ESSA"). Kansas submitted a Plan signed by both Commissioner of Education Randy Watson and former Governor Brownback.

That plan is publicly available at: http://www.ksde.org/Portals/0/ECSETS/ESEA/KSconsolidatedstateplan01182018_Approved.pdf. It is appropriate for this Court to take judicial notice of the Consolidated State Plan, and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

Kansas Performance Levels

The Kansas Assessment Program (KAP) results are reported in four performance levels. Level 1 indicates that the student has demonstrated limited ability to understand and use the skills and knowledge necessary for college and career readiness. Level 2 indicates that the student has demonstrated a basic ability to understand and use the skills and knowledge necessary for college and career readiness. Level 3 indicates that the student has demonstrated an effective ability to understand and use the skills and knowledge needed for college and career readiness. Level 4 indicates that the student has demonstrated an excellent ability to understand and use the skills and knowledge necessary for college and career readiness. Levels 1 and 2 are categorized as not proficient. Levels 3 and 4 are proficient.

(i) Baseline data. *The following table shows the state 2016 baseline data for all students and subgroups of students:*

Subgroups	Reading/ Language Arts: Baseline Data (% scoring in Level 3 & Level 4) 2016	Percentage Not Proficient (% not scoring in Level 3 & Level 4)	Reading/ Language Arts: Long-term Goal (% scoring in Level 3 & Level 4) 2030	Math: Baseline Data (% scoring in Level 3 & Level 4) 2016	Percentage Not Proficient (% not scoring in Level 3 & Level 4)	Math: Long-term Goal (% scoring in Level 3 & Level 4) 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**

Excerpt (with added columns calculating Percentage Not Proficient) from page 14-15 of the Kansas Consolidated State Plan as approved by the U.S. Department of Education found at
http://www.ksde.org/Portals/0/ECSETS/ESEA/KSconsolidatedstateplan01182018_Approved.pdf

Appendix 2:
Kansas' Consolidated State Plan

Kansas' Plan, signed by both Commissioner of Education Randy Watson and former Governor Brownback, is publicly available at:http://www.ksde.org/Portals/0/ECSETS/ESEA/KSconsolidatedstateplan01182018_Approved.pdf. It is appropriate for this Court to take judicial notice of the Consolidated State Plan, and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

Revised State Template for the Consolidated State Plan

The Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act

U.S. Department of Education
Issued: March 2017

OMB Number: 1810-0576
Expiration Date: September 30, 2017

Introduction

Section 8302 of the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the Every Student Succeeds Act (ESSA),[1] requires the Secretary to establish procedures and criteria under which, after consultation with the Governor, a State educational agency (SEA) may submit a consolidated State plan designed to simplify the application requirements and reduce burden for SEAs. ESEA section 8302 also requires the Secretary to establish the descriptions, information, assurances, and other material required to be included in a consolidated State plan. Even though an SEA submits only the required information in its consolidated State plan, an SEA must still meet all ESEA requirements for each included program. In its consolidated State plan, each SEA may, but is not required to, include supplemental information such as its overall vision for improving outcomes for all students and its efforts to consult with and engage stakeholders when developing its consolidated State plan.

Completing and Submitting a Consolidated State Plan

Each SEA must address all of the requirements identified below for the programs that it chooses to include in its consolidated State plan. An SEA must use this template or a format that includes the required elements and that the State has developed working with the Council of Chief State School Officers (CCSSO).

Each SEA must submit to the U.S. Department of Education (Department) its consolidated State plan by one of the following two deadlines of the SEA's choice:

- **April 3, 2017**; or
- **September 18, 2017**.

Any plan that is received after April 3, but on or before September 18, 2017, will be considered to be submitted on September 18, 2017. In order to ensure transparency consistent with ESEA section 1111(a)(5), the Department intends to post each State plan on the Department's website.

Alternative Template

If an SEA does not use this template, it must:

1) Include the information on the Cover Sheet;
2) Include a table of contents or guide that clearly indicates where the SEA has addressed each requirement in its consolidated State plan;
3) Indicate that the SEA worked through CCSSO in developing its own template; and
4) Include the required information regarding equitable access to, and participation in, the programs included in its consolidated State plan as required by section 427 of the General Education Provisions Act. See Appendix B.

Individual Program State Plan

An SEA may submit an individual program State plan that meets all applicable statutory and regulatory requirements for any program that it chooses not to include in a consolidated State plan. If an SEA intends to submit an individual program plan for any program, the SEA must submit the individual program plan by one of the dates above, in concert with its consolidated State plan, if applicable.

Consultation

Under ESEA section 8540, each SEA must consult in a timely and meaningful manner with the Governor, or appropriate officials from the Governor's office, including during the development and prior to submission of its consolidated State plan to the Department. A Governor shall have 30 days prior to the SEA submitting the consolidated State plan to the Secretary to sign the consolidated State plan. If the

[1] Unless otherwise indicated, citations to the ESEA refer to the ESEA, as amended by the ESSA.

Governor has not signed the plan within 30 days of delivery by the SEA, the SEA shall submit the plan to the Department without such signature.

Assurances

In order to receive fiscal year (FY) 2017 ESEA funds on July 1, 2017, for the programs that may be included in a consolidated State plan, and consistent with ESEA section 8302, each SEA must also submit a comprehensive set of assurances to the Department at a date and time established by the Secretary. In the near future, the Department will publish an information collection request that details these assurances.

For Further Information: If you have any questions, please contact your Program Officer at OSS.[State]@ed.gov (e.g., OSS.Alabama@ed.gov).

Cover Page

Contact Information and Signatures	
SEA Contact Colleen Riley, Director	Telephone: (785) 296-4949
Mailing Address: Kansas State Department of Education Landon State Office Building 900 SW. Jackson St., Suite 620 Topeka, KS 66612	Email Address: criley@ksde.org
By signing this document, I assure that: To the best of my knowledge and belief, all information and data included in this plan are true and correct. The SEA will submit a comprehensive set of assurances at a date and time established by the Secretary, including the assurances in ESEA section 8304. Consistent with ESEA section 8302(b)(3), the SEA will meet the requirements of ESEA sections 1117 and 8501 regarding the participation of private school children and teachers.	
Authorized SEA Representative (Printed Name) **Randy Watson**	Telephone: (785) 296-3202
Signature of Authorized SEA Representative	Date: 1/8/18
Governor (Printed Name) **Sam Brownback**	Date SEA provided plan to the Governor under ESEA section 8540: 8/3/17
Signature of Governor	Date: 9/11/17

Programs Included in the Consolidated State Plan

Instructions: Indicate below by checking the appropriate box(es) which programs the SEA included in its consolidated State plan. If an SEA elected not to include one or more of the programs below in its consolidated State plan, but is eligible and wishes to receive funds under the program(s), it must submit individual program plans for those programs that meet all statutory and regulatory requirements with its consolidated State plan in a single submission.

☒ Check this box if the SEA has included all of the following programs in its consolidated State plan.

or

If all programs are not included, check each program listed below that the SEA includes in its consolidated State plan:

☐Title I, Part A: Improving Basic Programs Operated by Local Educational Agencies

☐Title I, Part C: Education of Migratory Children

☐Title I, Part D: Prevention and Intervention Programs for Children and Youth Who Are Neglected, Delinquent, or At-Risk

☐Title II, Part A: Supporting Effective Instruction

☐Title III, Part A: English Language Acquisition, Language Enhancement, and Academic Achievement

☐Title IV, Part A: Student Support and Academic Enrichment Grants

☐Title IV, Part B: 21st Century Community Learning Centers

☐Title V, Part B, Subpart 2: Rural and Low-Income School Program

☐Title VII, Subpart B of the McKinney-Vento Homeless Assistance Act: Education for Homeless Children and Youth Program (McKinney-Vento Act)

Instructions

Each SEA must provide descriptions and other information that address each requirement listed below for the programs included in its consolidated State plan. Consistent with ESEA section 8302, the Secretary has determined that the following requirements are absolutely necessary for consideration of a consolidated State plan. An SEA may add descriptions or other information, but may not omit any of the required descriptions or information for each included program.

Kansas Introduction

In October 2015, after nearly a year of development, the Kansas State Board of Education announced a new vision for education in Kansas:

Kansas leads the world in the success of each student.

*This vision calls for a more student-focused system that provides support and resources for individual success. While this vision was developed, "**Kansans Can**" became the unifying call to action.*

With the Kansans Can vision in hand, Kansas State Department of Education (KSDE) leaders and state board members conducted more than 20 community visits across the state with parents, educators and business leaders. During these visits, Kansans shared their thoughts on education; what they believe defines a successful 24-year-old; important characteristics and skills for an employee; and more. The feedback was compiled into data, which was then taken back into communities across the state to make sure KSDE heard the voices of Kansans. From there, board members and KSDE staff members updated the KSDE mission statement, defined a successful Kansas high school graduate, and identified five outcomes to help measure the progress toward achieving the new vision.

Mission:

To prepare Kansas students for lifelong success through rigorous, quality academic instruction, career training, and character development according to each student's gifts and talents.

Definition of a Successful Kansas High School Graduate:

A successful Kansas high school graduate has the academic preparation, cognitive preparation, technical skills, employability skills and civic engagement to be successful in postsecondary education, in the attainment of an industry-recognized certification or in the workforce, without the need for remediation.

Outcomes for Measuring Progress:

- *Kindergarten readiness*
- *Individual Plan of Study focused on career interest*
- *High school graduation rates*
- *Postsecondary completion/attendance*
- *Social/emotional growth measured locally*

A wide representation of Kansans are at the table as the Kansans Can vision for Kansas students is implemented. In the following Kansas Consolidated Plan for meeting the requirements of the Elementary and Secondary Education Act (ESEA) as amended by the Every Student Succeeds Act (ESSA), the KSDE consulted with a large group of stakeholders. Key to this consultation was the KSDE Elementary and Secondary Education Act Advisory Council whose membership contained representatives of the following: superintendents, principals, teachers at all levels and various subjects, counselors, nurses, paraprofessionals, parents, students with disabilities, native Americans, racial and ethnic groups, higher education, community members, and others. The Kansas Assessment Advisory Council, Kansas Technical Advisory Council, Kansas Association of School Boards, Kansas Association of Special Education Administrators, Kansas Special Education Advisory Council, Kansas Parent Information Resource Center and Families Together and the Kansas State Board of Education provided input.

Further, the KSDE has sought technical assistance from, among others, the National Center for Educational Outcomes, the National Center for Systemic Improvement, the Council of Chief State School Officers, and the Central Comprehensive Center.

A. Title I, Part A: Improving Basic Programs Operated by Local Educational Agencies (LEAs)

1. Challenging State Academic Standards and Assessments *(ESEA section 1111(b)(1) and (2) and 34 CFR §§ 200.1−200.8.)*[2]

Standards

Legislative regulation[3] *requires that the Kansas State Board of Education (SBOE) establish curriculum standards that reflect high academic standards for the core academic areas of mathematics, science, reading, writing and social studies. Additionally, the standards are to be reviewed at least every seven years. Although legislative regulation requires the establishment of curriculum standards, it also indicates that the standards shall not, in any manner, impinge upon any district's authority to determine its own curriculum; thus, Kansas falls in the category of a "local control" state.*

The Kansas State Department of Education's process for curriculum standards review requires identifying educators who represent the student population. The KSDE must ensure that the committees are diverse in terms of gender, ethnicity/race, educational levels, and educator type, and that it has representation of our 10 State Board districts. Consequently, from its inception, standards committees have ensured the inclusion of educators from both the special education and English as a Second Language area. Kansas is committed to delivering high quality instruction for learning to all students; therefore, affording the opportunity to speak with one voice, and emphasizing the focus and belief in high expectations of each and every student.

As stated in the introduction, Kansas defines a successful Kansas high school graduate as having the ***academic*** *preparation,* ***cognitive*** *preparation,* ***technical*** *skills,* ***employability*** *skills* ***and civic engagement*** *to be successful in postsecondary education, in the attainment of an industry-recognized certification or in the workforce, without the need for remediation.*

The KSDE desires that all students succeed in post-secondary education, in the attainment of an industry-recognized certification, and in the workforce. The KSDE recognizes that the attainment of a high school diploma, by itself, no longer opens the door to a successful livelihood and career. Therefore, Kansas increased expectations for achievement across domains.

[2] The Secretary anticipates collecting relevant information consistent with the assessment peer review process in 34 CFR § 200.2(d). An SEA need not submit any information regarding challenging State academic standards and assessments at this time.
[3] Kansas 2014 Legislative Session, 72-6439, http://kslegislature.org/li_2014/b2013_14/statute/072_000_0000_chapter/072_064_0000_article/072_064_0039_section/072_064_0039_k/

The Kansas standards for English language arts, mathematics and science will ensure that all Kansas students have equal opportunity to master the skills and knowledge for success beyond high school. Effective implementation of the Kansas standards requires support on multiple fronts, including strengthening teacher content knowledge, pedagogical skills, and contextualized tasks for students that effectively engage the 21st Century learner.

Kansas regulation 72-6439 requires the review of curricular standards at least every seven years. During the 2016–2017 school year, the Kansas Standards in English language arts and mathematics have been reviewed and revised. The KSDE has developed an online interactive tool, which allows constituents to provide feedback on the current Kansas College and Career Ready Standards in English language arts and mathematics. The standards review committee will consider this feedback. The Kansas State Board of Education will review the revised standards in the 2017-2018 school year. Pending KSBE approval, the revised standards will be implemented July 1, 2018.

Assessments

The Kansas State Department of Education administers the following assessments within the Kansas Assessment Program (KAP) to meet the requirements of ESEA section 1111(b) (2).

Assessment Type	Content Area	Grade Level
General Assessment	Kansas State Assessment – English Language Arts	Grades 3-8 and HS
Alternate	Dynamic Learning Maps – English Language Arts	Grades 3-8 and HS
General Assessment	Kansas State Assessment - Mathematics	Grades 3-8 and HS
Alternate	Dynamic Learning Maps - Mathematics	Grades 3-8 and HS
General Assessment	Kansas State Assessment -Science	Grades 5, 8, and HS
Alternate	Dynamic Learning Maps- Science	Grades 5, 8, and HS
ELP	English Language Proficiency	Grades K-12
Alternate ELP	KS will provide a comparable assessment	Grades K-12

Kansas continues its analysis of the learning and accommodation factors necessary to ensure that all students, including students with disabilities and English learners, have the

opportunity to demonstrate achievement of the Kansas Standards. The KSDE continues to guarantee that all activities related to the state assessments such as dissemination, outreach, and professional learning, address the needs of all students.

2. Eighth Grade Math Exception (*ESEA section 1111(b)(2)(C) and 34 CFR § 200.5(b)(4)*):

i. Does the State administer an end-of-course mathematics assessment to meet the requirements under section 1111(b) (2) (B) (v)(I)(bb) of the ESEA?

□ Yes
X No

ii. If a State responds "yes" to question 2(i), does the State wish to exempt an eighth-grade student who takes the high school mathematics course associated with the end-of-course assessment from the mathematics assessment typically administered in eighth grade under section 1111(b)(2)(B)(v)(I)(aa) of the ESEA and ensure that:

a. The student instead takes the end-of-course mathematics assessment the State administers to high school students under section 1111(b)(2)(B)(v)(I)(bb) of the ESEA;
b. The student's performance on the high school assessment is used in the year in which the student takes the assessment for purposes of measuring academic achievement under section 1111(c)(4)(B)(i) of the ESEA and participation in assessments under section 1111(c)(4)(E) of the ESEA;
c. In high school:
    1. The student takes a State-administered end-of-course assessment or nationally recognized high school academic assessment as defined in 34 CFR § 200.3(d) in mathematics that is more advanced than the assessment the State administers under section 1111(b)(2)(B)(v)(I)(bb) of the ESEA;
    2. The State provides for appropriate accommodations consistent with 34 CFR § 200.6(b) and (f); and
    3. The student's performance on the more advanced mathematics assessment is used for purposes of measuring academic achievement under section 1111(c)(4)(B)(i) of the ESEA and participation in assessments under section 1111(c)(4)(E) of the ESEA.

□ Yes
X No

iii. If a State responds "yes" to question 2(ii), consistent with 34 CFR § 200.5(b)(4), describe, with regard to this exception, its strategies to provide all students in the State the opportunity to be prepared for and to take advanced mathematics coursework in middle school.

Not Applicable

3. Native Language Assessments *(ESEA section 1111(b)(2)(F) and 34 CFR § 200.6(f)(2)(ii) and (f)(4)*:

i. Provide its definition for "languages other than English that are present to a significant extent in the participating student population," and identify the specific languages that meet that definition.

The KSDE defines "languages other than English that are present to a significant extent in the participating student population" as any one language where more than five percent of the participating student population statewide speaks the identified language, receives instruction in the native languages and services in the English learners program. The KSDE reviewed factors such as English learners that are migratory, English learners not born in the United States and

English learners who are Native Americans across grade levels in determining the five most populous languages. This review included all Local Education Agencies (LEA) in Kansas. Spanish is the most populous language and meets the definition, as shown by the following table of the most populous languages other than English in Kansas Schools, 2016:

5 Most Populous Languages Other Than English in Kansas Schools, 2016

		Spanish		Viet-namese		Chinese		Arabic		Lao	
	Total ALL Students	N with Services	%	N with Services	%	N with Services	%	N with Services	%	N with Services	%
Grade 3	40316	4104	10	124	.3	78	.1	71	.1	39	.1
Grade 4	39370	3815	10	108	.2	72	.1	51	.1	47	.1
Grade 5	38656	3766	10	118	.3	43	.1	41	.1	34	.1
Grade 6	38455	3518	9	82	.2	33	.1	46	.1	48	.1
Grade 7	38376	3429	9	121	.3	44	.1	35	0	40	.1
Grade 8	37865	3262	9	83	.2	32	.1	39	.1	44	.1
Grade 10	37971	2616	7	78	.2	27	.1	33	0	18	.1
Total	271009	24510	9	714	.2	329	.1	316	.1	270	.1

ii. Identify any existing assessments in languages other than English, and specify for which grades and content areas those assessments are available.

The KAP has key word translation available in Spanish for the Kansas math and science state assessments to grades 3-8 and once in high school. If the student is identified as an English learner and Spanish is the student's primary language, a mouse-over tool is available. With this tool, during the assessment, a student may hover over any academic word and a Spanish translation of the word appears. Additionally, Kansas provides American Sign Language videos of assessment content in math and science for grades 3-8 and once in high school.

iii. Indicate the languages identified in question 3(i) for which yearly student academic assessments are not available and are needed.

None. There are no other languages identified in question 3(i) for which assessments are not available and needed.

iv. Describe how it will make every effort to develop assessments, at a minimum, in languages other than English that are present to a significant extent in the participating student population including by providing

a. The State's plan and timeline for developing such assessments, including a description of how it met the requirements of 34 CFR § 200.6(f)(4);

Currently, Kansas does not have a need to develop other assessments. Kansas will continue to monitor languages other than English and will develop assessments as necessary.

b. A description of the process the State used to gather meaningful input on the need for assessments in languages other than English, collect and respond to public comment, and consult with educators; parents and families of English learners; students, as appropriate; and other stakeholders; and

The KSDE continues to consult with and gather meaningful input from various constituency groups, including the Kansas Assessment Advisory Council, Kansas Technical Advisory Council, Kansas Association of School Boards, Kansas Association of Special Education Administrators, Kansas Special Education Advisory Council, Kansas State Board of Education and the Elementary and Secondary Education Act Advisory Council, consisting of general education teachers, special education teachers, English Learner teachers, principals, directors of special education, other school leaders, paraprofessionals, specialized instructional support personnel, students, community partners, parents and, families, in the development of the KAP and any enhancements needed based on state demographics. The Kansas ESEA Advisory Council includes a broad base group of stakeholders representing students with disabilities and English learners. Kansas families are represented by the Kansas Parent Information Resource Center and Families Together.

c. As applicable, an explanation of the reasons the State has not been able to complete the development of such assessments despite making every effort.

Currently, Kansas does not have a need to develop other assessments. Kansas will continue to monitor languages other than English and will develop assessments as necessary.

4. Statewide Accountability System and School Support and Improvement Activities *(ESEA section 1111(c) and (d))*:
   i. Subgroups *(ESEA section 1111(c)(2))*:
      a. List each major racial and ethnic group the State includes as a subgroup of students, consistent with ESEA section 1111(c)(2)(B).

Kansas includes the following major racial and ethnic groups as a subgroup:
- *Economically disadvantaged students measured by free or reduced price lunch eligibility*
- *Children with disabilities*
- *English learners*
- *African-American students*
- *Hispanic students*
- *White students*
- *Asian students*
- *American Indian or Alaska Native students*
- *Native Hawaiian or Pacific Islander students*
- *Multi-Racial students*

b. If applicable, describe any additional subgroups of students other than the statutorily required subgroups (*i.e.*, economically disadvantaged students, students from major racial and ethnic groups, children with disabilities, and English learners) used in the Statewide accountability system.

No other subgroups are used in the statewide accountability as specified in ESEA sections 1111(c) and (d).

c. Does the State intend to include in the English learner subgroup the results of students previously identified as English learners on the State assessments required under ESEA section 1111(b)(2)(B)(v)(I) for purposes of State accountability (ESEA section 1111(b)(3)(B))? Note that a student's results may be included in the English learner subgroup for not more than four years after the student ceases to be identified as an English learner.

☐ Yes
X No

d. If applicable, choose one of the following options for recently arrived English learners in the State:

☒ Applying the exception under ESEA section 1111(b)(3)(A)(i); or
☐ Applying the exception under ESEA section 1111(b)(3)(A)(ii); or
☐ Applying the exception under ESEA section 1111(b)(3)(A)(i) or under ESEA section 1111(b)(3)(A)(ii). If this option is selected, describe how the State will choose which exception applies to a recently arrived English learner.

ii. Minimum N-Size *(ESEA section 1111(c)(3)(A))*:

a. Provide the minimum number of students that the State determines are necessary to be included to carry out the requirements of any provisions under Title I, Part A of the ESEA that require disaggregation of information by each subgroup of students for accountability purposes.

Kansas will use a minimum N size of 30 for inclusion in the accountability calculations under section 1111(c) for all students and each subgroup of students.

b. Describe how the minimum number of students is statistically sound.

During No Child Left Behind (NCLB) implementation, the KSDE convened a group of the KSDE staff and technical advisors including the State's assessment contractor, the Center for Educational Testing and Evaluation (CETE). CETE recommended a minimum subgroup size of 30. Anything smaller than 30 would lead to large numbers of subgroups being misidentified as high or low performers simply due to chance, not performance. As subgroup size diminishes, the variance of the subgroup's test measure increases, making any pronouncement about the subgroup's performance less and less reliable. At sizes below 30, the KSDE would be identifying some subgroups as high performing, and some as low performing, but many, maybe most, would be the result of chance, not performance. The ongoing process of consulting with technical advisors, as well as reviewing longitudinal data, provide the KSDE with confidence that 30 is a valid and reliable n-size for identifying under- performing subgroups for accountability. Subgroups for accountability include economically disadvantaged students from each major racial and ethnic group, students with disabilities and English Learners.

c. Describe how the minimum number of students was determined by the State, including how the State collaborated with teachers, principals, other school leaders, parents, and other stakeholders when determining such minimum number.

The KSDE consulted with various constituency groups, including the Kansas Assessment Advisory Council, Kansas Technical Advisory Council, CETE, and the Elementary and Secondary Education Act Advisory Council, consisting of educators, students, parents

and, families, including representation from the Kansas Parent Information Center and Families Together. This broad group of technical experts and the KSDE leadership agreed that the subgroup size of 30 was the appropriate n-size for Kansas.

The ongoing process of consulting with technical advisors and stakeholders, as well as reviewing longitudinal data, provide the KSDE with confidence that 30 is a valid and reliable n-size for identifying underperforming subgroups for accountability.

d. Describe how the State ensures that the minimum number is sufficient to not reveal any personally identifiable information.

Kansas follows Federal Educational Rights and Privacy Act guidelines, the General Education Provisions Act guidelines and Kansas State Statute 72-6215, Student Data Privacy Act. Kansas' threshold for reporting student data is 10, which is 1/3 the size of its minimum subgroup size for determining subgroup performance for accountability. To protect the identities of students, publicly displayed student-level data with cell size of less than 10 is not reported.

e. If the State's minimum number of students for purposes of reporting is lower than the minimum number of students for accountability purposes, provide the State's minimum number of students for purposes of reporting.

Kansas will use a minimum N size of 10 for inclusion in public reporting under section 1111(h) for all students and each subgroup of students. The minimum number of students respects privacy and is statistically reliable.

iii. Establishment of Long-Term Goals *(ESEA section 1111(c)(4)(A))*:

a. Academic Achievement.

1. Describe the long-term goals for improved academic achievement, as measured by proficiency on the annual statewide reading/language arts and mathematics assessments, for all students and for each subgroup of students, including: (i) baseline data; (ii) the timeline for meeting the long-term goals, for which the term must be the same multi-year length of time for all students and for each subgroup of students in the State; and (iii) how the long-term goals are ambitious.

The KSDE will use an academic measurement of proficiency to summarize state, district, and subgroup performance across all performance categories, as stated by ESEA subsection (b)(2)(B)(v)(I): "…annually measure, for all students and separately for each subgroup of students, the following indicators:
(i) For all public schools in the State, based on the long-term goals established under subparagraph (A), academic achievement – (I) as measured by proficiency on the annual assessment required under subsection (b)(2)(B)(v)(I)…" The KSDE will report on district dashboards at state, district, and school levels the percent of students scoring in each performance category by assessment subject, grade level, and subgroup.

Academic Measure of Proficiency Long-term Goal for All students:

At the state, district, school and subgroup level, 75 percent of students score in performance levels 3 and 4 combined on the Kansas state assessments in English language arts and mathematics by 2030.

The same long-term goal of 75 percent proficiency will be applied to each subgroup and, as a result, those groups with the greatest percent at Kansas performance levels 1 and 2 (not proficient) will require interim measures of progress that are greater than other subgroups in order to make significant gain and close gaps. This rigorous goal was chosen through a collaborative process that included reviewing assessment studies and cut scores. Kansas established a baseline and timeline for its ambitious long-term goal and annual measures of interim progress.

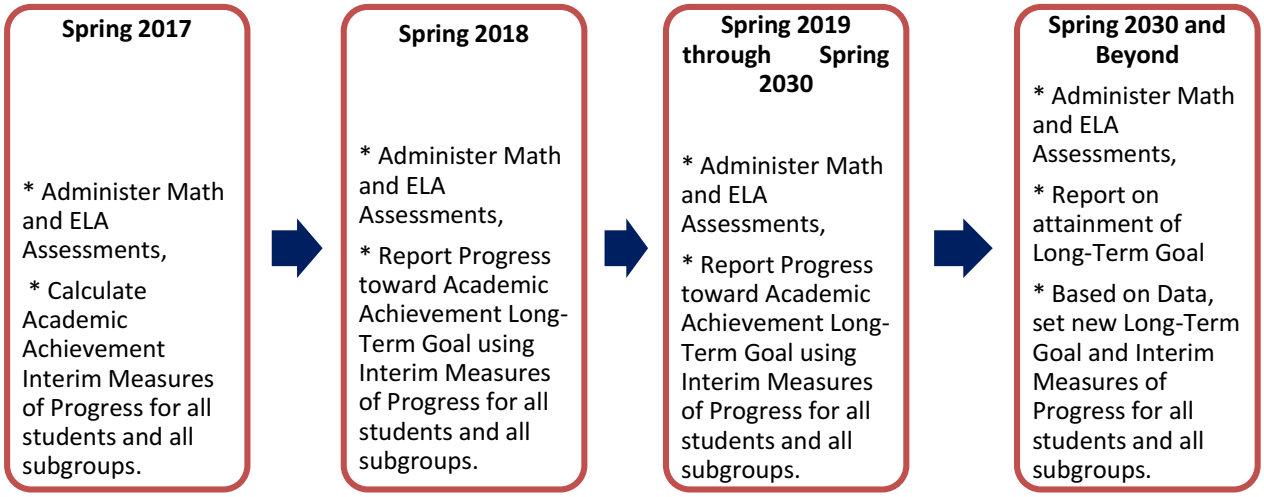
Kansas Performance Levels

The Kansas Assessment Program (KAP) results are reported in four performance levels. Level 1 indicates that the student has demonstrated limited ability to understand and use the skills and knowledge necessary for college and career readiness. Level 2 indicates that the student has demonstrated a basic ability to understand and use the skills and knowledge necessary for college and career readiness. Level 3 indicates that the student has demonstrated an effective ability to understand and use the skills and knowledge needed for college and career readiness. Level 4 indicates that the student has demonstrated an excellent ability to understand and use the skills and knowledge necessary for college and career readiness. Levels 1 and 2 are categorized as not proficient. Levels 3 and 4 are proficient.

(i) Baseline data. *The following table shows the state 2016 baseline data for all students and subgroups of students:*

Subgroups	Reading/ Language Arts: Baseline Data (% scoring in Level 3 & Level 4) 2016	Reading/ Language Arts: Long-term Goal (% scoring in Level 3 & Level 4) 2030	Math: Baseline Data (% scoring in Level 3 & Level 4) 2016	Math: Long-term Goal (% scoring in Level 3 & Level 4) 2030
All students	**42.0**	**75.0**	**33.0**	**75.0**
Economically disadvantaged students	**27.7**	**75.0**	**19.8**	**75.0**
Children with disabilities	**15.4**	**75.0**	**10.9**	**75.0**
English learners	**19.7**	**75.0**	**15.4**	**75.0**
African-American students	**21.0**	**75.0**	**13.2**	**75.0**
Hispanic students	**26.1**	**75.0**	**18.7**	**75.0**
White students	**48.4**	**75.0**	**38.7**	**75.0**
Asian students	**55.7**	**75.0**	**54.6**	**75.0**
American Indian or Alaska Native students	**31.5**	**75.0**	**21.8**	**75.0**

(ii) Timeline for meeting the long-term goal. *The long-term goal chosen by Kansans requires 75 percent of all students and all subgroups to meet performance levels 3 and 4 on state assessments in English language arts and mathematics by the year 2030. The timeline equates to a cohort of students entering kindergarten in the year 2017, matriculating through the educational system, and on track to graduate college and/or career ready without need for remediation, as demonstrated by the following timeline graphic:*



(iii) How long-term goals are ambitious. *Kansans vision for education is to lead the world in the success of each student. Kansans are demanding higher standards in academic skills as well as employability and citizenship skills for each graduating student. The rigor of the Kansas state assessments and the ambitious expectations established by the long-term goal demonstrate Kansas' commitment to its vision for all students. The long-term ambitious goal is an essential component of achieving the Kansas Can vision adopted by the elected members of the Kansas State Board of Education (KSBE) in collaboration with constituents from across Kansas.*

Findings from the Georgetown Public Policy Institute, Center on Education and the Workforce served as the catalyst for the development of the long-term goal. According to the 2013 report, "Recovery: Job Growth and Education Requirements Through 2020" by Carnevale, Smith and Strohl, workers with a high school diploma or less must earn postsecondary credentials in order to compete effectively in growing high skill fields. The Great Recession decimated low-skill blue collar and clerical jobs. The recovery added primarily high-skill, managerial and professional jobs. For the first time, workers with a Bachelor's degree of higher make up a larger share of the workforce (36 percent) than those with a high school diploma or less (34 percent). Specifically, the study states that 71 percent of Kansas jobs will require a postsecondary certificate or degree by 2020[4].

[4] Carnevale, A. & Smith N. (2013) Recovery: Job Growth and Education Reform through 2020. Georgetown Policy Institute: Center on Education and the Workforce.

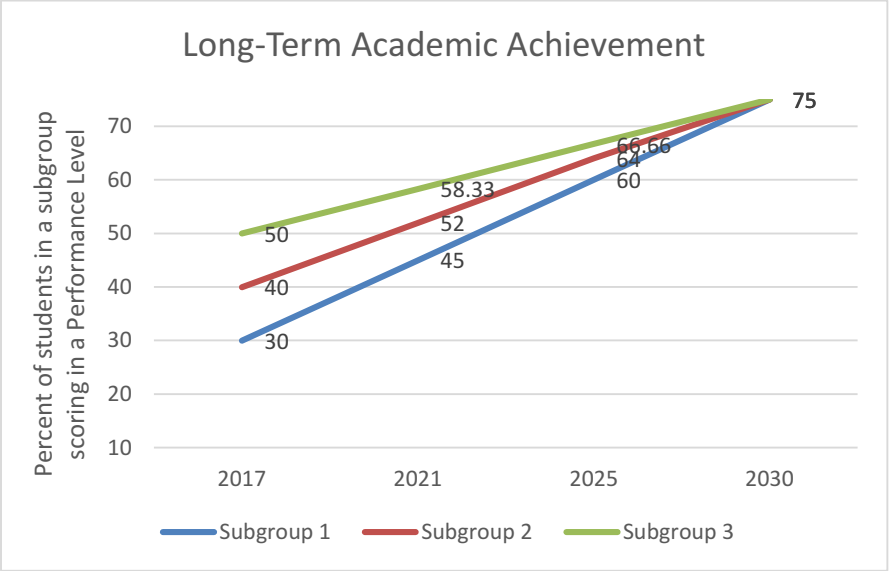
Additionally, the alignment of the Kansas assessment cut scores to the ACT informed the KSBE. According to ACT, the test measures students' high school achievement and determines academic readiness for college. Students achieve scores from 1 to 36 in each subject and an overall composite score. ACT sets College Readiness Benchmark scores for *each subject area that indicate potential success in postsecondary education[5] the KSDE worked with the Center of Educational Testing and Evaluation (CETE) to align the ACT with the Kansas Assessment Program (KAP) measures for the ELA and math assessments in 10th grade. The purpose of the alignment is to predict whether a student taking the Kansas assessment in grade 10 is on track for successfully scoring a postsecondary entrance score in grade 12 on the ACT and entering postsecondary education without the need of remediation.*

2. Provide the measurements of interim progress toward meeting the long-term goals for academic achievement in Appendix A.

   See Appendix A, Academic Achievement, for interim measures.

3. Describe how the long-term goals and measurements of interim progress toward the long-term goals for academic achievement take into account the improvement necessary to make significant progress in closing statewide proficiency gaps.

   All students and all subgroups have a common end goal. A set of interim measures toward meeting the long-term goal will be calculated for each district, school, and subgroup. These interim measures of progress are differentiated for each subgroup, thereby, narrowing proficiency gaps. The following chart shows how subgroups will have differentiated interim measures of progress based on each group's 2017 baseline data point:



[5] ACT (2017) College and Career Readiness Standards. http://www.act.org/content/act/en/education-and-career-planning/college-and-career-readiness-standards.html

The long-term goal for the Academic Achievement Indicator is 75 percent of all students and each subgroup performing at levels 3 and 4 (proficient) by 2030 in both ELA and math. The baseline for establishing interim measures of progress is 2017 with 2018 being the first year for reporting on the outcomes. Academic Achievement outcomes will be reported annually. Every three years Kansas will calculate the preceding three years' worth of results and compare the total percent at levels 3 and 4 to the expected outcomes for that point-in-time necessary to reach the long-term goal. The results of the three-year totals will be evaluated and categorized to determine if below, meets, or exceeds.

Example:
If, 2017 = 36 percent at levels 3 & 4 (long-term goal is 75 – 36 = 39. Interim measure of progress is 39/13 = 3)
Then, Expected rate of gain necessary to reach long-term goal:
2018 = 39 percent at levels 3 & 4
2019 = 42 percent at levels 3 & 4
2020 = 45 percent at levels 3 & 4
2020 actual percent at levels 3 & 4 will be compared to the expected rate to determine if below, meets, or exceeds. Subsequent determinations will happen in 2023, 2026, 2029 and lastly in 2030.

b. Graduation Rate. *(ESEA section 1111(c)(4)(A)(i)(I)(bb))*

1. Describe the long-term goals for the four-year adjusted cohort graduation rate for all students and for each subgroup of students, including: (i) baseline data; (ii) the timeline for meeting the long-term goals, for which the term must be the same multi-year length of time for all students and for each subgroup of students in the State; and (iii) how the long-term goals are ambitious.

Graduation Long-Term Goal for All Students:

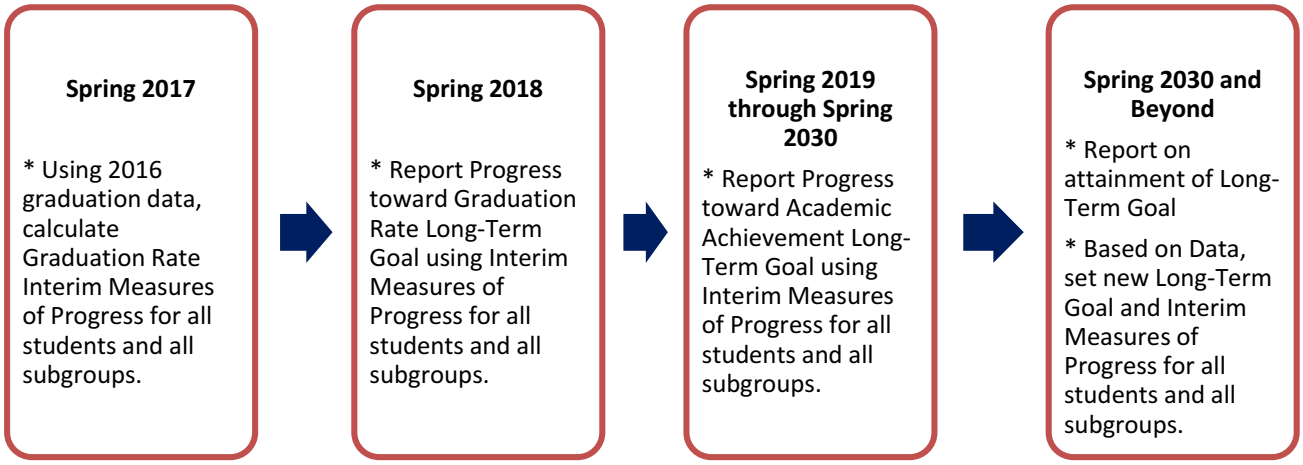
In order to lead the world in the success of each student, Kansans aim for a long-term graduation goal of 95 percent by 2030 for all districts, schools and subgroups.

The long-term goal of 95 percent in the four-year graduation adjusted cohort will be applied to each subgroup and, as a result will require interim measures of progress that are greater than other subgroups in order to make significant gain and close gaps. Annually, using the long-term graduation goal of 95 percent by 2030 for all districts, schools, and subgroups, the KSDE will set interim measure of progress, which will be an improvement of 1/13th of the gap between the subgroups' starting position and the long-term goal. This measurement will be unique to each individual subgroup, some subgroups will be accountable for a higher annual percentage of improvement in order to close the gap. The long-term goal and interim measures will be reported at the school, district, and state level for all students and all subgroups.

***(i) Baseline**. The following table shows the state 2016 baseline data for all students and subgroups of students:*

Four-Year Adjusted Cohort		
Subgroup	**Starting Point (2016)**	**Long Term Goal (2030)**
All students	**86.1**	**95**
Economically disadvantaged	**77.7**	**95**
Children with disabilities	**77.4**	**95**
English learners	**77.7**	**95**
African American	**77.1**	**95**
American Indian or Alaska	**72.5**	**95**
Asian	**93.1**	**95**
Native Hawaiian/Pacific	**82.6**	**95**
Hispanic or Latino	**79.9**	**95**
White	**88.8**	**95**
Multi-Racial	**81.9**	**95**

***(ii) Timeline.** The long-term goal chosen by Kansans requires graduating 95 percent of all students and all subgroups in the four-year adjusted cohort by the year 2030, as shown in the following timeline graphic:.*



***(iii) Ambitious.** Kansans vision for education is to lead the world in the success of each student. Kansans are demanding higher standards in academic skills as well as employability and citizenship skills for each graduating student. To give Kansas students a better chance of entering postsecondary education and getting middle-class jobs, the Kansas Board of Education has moved the graduation goal up 15 points, from 80 percent to 95 percent. A 95 percent graduation rate would put Kansas among the countries currently leading the world in secondary graduation rates.*[6]

[6] OECD (2014), *Education at a Glance 2014: OECD Indicators,* OECD Publishing, p. 43. http://dx.doi.org/10.1787/eag-2014-en

Georgetown University reports, between 1989 and 2012, job openings that require a high school degree, or less, dropped by 14 percent. Jobs that require some college or associate's degree grew by 41 percent and those jobs that require a bachelor's degree or better grew by 82 percent[3].

The rigor of the four-year adjusted cohort graduation rate and the ambitious expectations established by the long-term goal demonstrate Kansas' commitment to its vision for all students. The long-term ambitious goal is an essential component of achieving the Kansas Can vision adopted by the elected members of the Kansas State Board of Education (KSBE) in collaboration with constituents from across Kansas.

2. If applicable, describe the long-term goals for each extended-year adjusted cohort graduation rate, including (i) baseline data; (ii) the timeline for meeting the long-term goals, for which the term must be the same multi-year length of time for all students and for each subgroup of students in the State; (iii) how the long-term goals are ambitious; and (iv) how the long-term goals are more rigorous than the long-term goal set for the four-year adjusted cohort graduation rate.

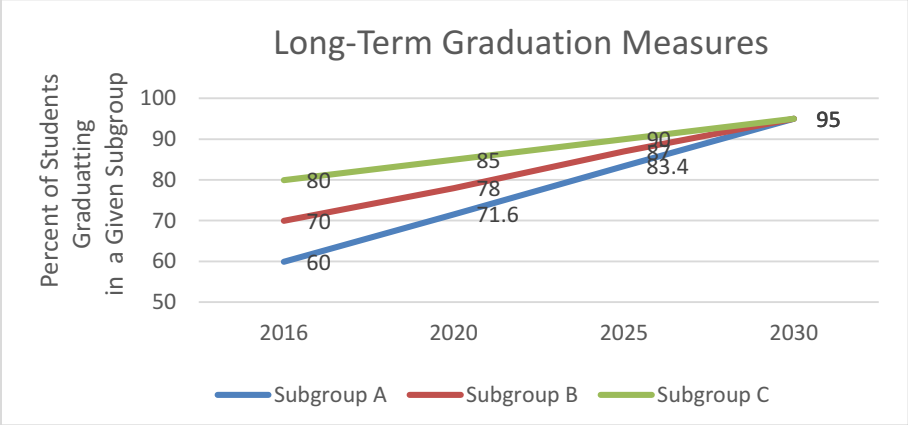
   Not applicable. Kansas will not use the extended-cohort for this measure.

3. Provide the measurements of interim progress toward the long-term goals for the four-year adjusted cohort graduation rate and any extended-year adjusted cohort graduation rate in Appendix A.

   See Appendix A, Graduation, for interim measure of progress.

4. Describe how the long-term goals and measurements of interim progress for the four-year adjusted cohort graduation rate and any extended-year adjusted cohort graduation rate take into account the improvement necessary to make significant progress in closing statewide graduation rate gaps.

   The following chart shows how three subgroups with different baseline graduation rates in 2016 will have differentiated graduation interim measures, but by 2030, targets are the same, 95 percent:



Graduation rates will be reported annually. Every three years Kansas will calculate the preceding three years' worth of results and compare the graduation rate to the expected outcomes for that point-in-time necessary to reach the long-term goal. The results of the three-year totals will be evaluated and categorized to determine if below, meets, or exceeds expectations.

Example:

If, 2017 = 60 percent four-year adjusted cohort graduation rate for students with disabilities subgroup, (long-term goal is 95 – 60 = 35. Interim measure of progress is 35/13 = 2.5)

Then, Expected rate of gain necessary to reach long-term goal:

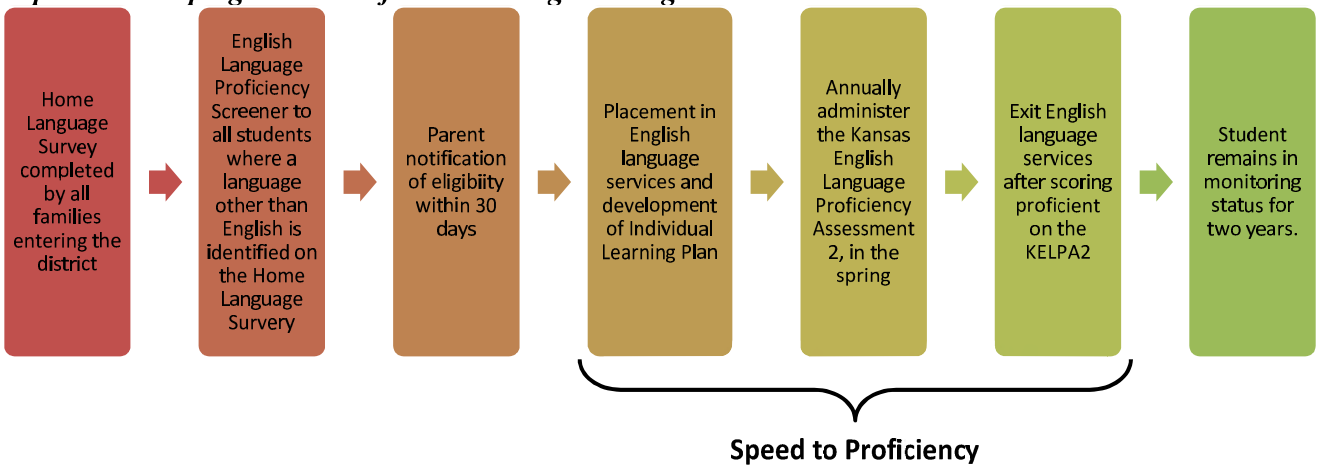
2018 = 62.5 percent four-year adjusted cohort graduation rate for students with disabilities subgroup,
2019 = 65 percent four-year adjusted cohort graduation rate for students with disabilities subgroup, 2020 = 45 percent at levels 3 & 4 2020 actual percent four-year adjusted cohort graduation rate for students with disabilities subgroup will be compared to the expected rate to determine if below, meets, or exceeds. Subsequent determinations will happen in 2023, 2026, 2029 and lastly in 2030.

c. English Language Proficiency. *(ESEA section 1111(c)(4)(A)(ii))*

1. Describe the long-term goals for English learners for increases in the percentage of such students making progress in achieving English language proficiency, as measured by the statewide English language proficiency assessment including: (i) baseline data; (ii) the State-determined timeline for such students to achieve English language proficiency; and (iii) how the long-term goals are ambitious.

The procedure to establish the long-term goal and measurements of interim progress begins with the identification of Kansas' English learners.

Steps in the EL program: Identification through Exiting:



English Language Speed to Proficiency Long Term Goal for All English Learners:

Beginning in 2021, the KSDE will use ***speed to proficiency*** *to measure the progress of English learners and to set long-term goal and interim measures of progress. The KSDE will use the statistical procedure of regression to identify the mean amount of time it takes for Kansas English learners to move to proficiency as measured by the Kansas English Language Proficiency Assessment (KELPA2). The regression procedure will describe the speed-to-proficiency distribution of all Kansas schools with KELPA2 data.*

Certain factors beyond the control of the school will be used as independent predictors in the regression procedure. Language learning is generally faster for younger children so some measure of each child's age or grade will be included as an independent predictor. The differences in growth trajectories for different ages may also require setting different goals for elementary, middle, and high schools. English learners also enter school with different levels of English proficiency so the proficiency level of each student's first KELPA2 will also be included as an independent variable.[7] *Other factors may also be included, if, by adding them, they provide a more accurate measure of each school's contribution to English learners' speed to proficiency.*

Initial ELP Level (Year 1)	Years Identified as an English Learner					
	2	3	4	5	6	7
Level 1	Level 1	Level 1	Level 2	Level 2	Level 3	Proficient
Level 2	Level 2	Level 2	Level 3	Proficient		
Level 3	Level 3	Proficient				
Proficient						

English Learners' Progress Toward Proficiency Transitional Goal for All English Learners:

By 2030, 95 percent of students, enrolled for at least one year in a school/district, will show progress toward proficiency by an increase in the percent of students that move at least one performance index level on the Kansas English Language Proficiency Assessment 2.

The KSDE will use Progress Toward Proficiency in 2018 through 2021 as a transitional goal. Based on 2017 KELPA2 scores, the KSDE will set a baseline for Progress Toward Proficiency. The KSDE will report students in three proficiency levels. English language proficiency level 1 indicates a student does not yet have the ability to produce grade-level academic content in the English

[7] Goldschmidt, P. & Hakuta, K. (2017). Incorporating English Learner Progress into State Accountability Systems. Washington DC: Council of Chief State School Officers.

language. English language proficiency level 2 indicates a student is approaching the ability to produce grade-level academic content in the English language with support. English language proficiency level 3 indicates a student can produce grade-level academic content in the English language.

In order to calculate Progress Toward Proficiency, the three proficiency levels on the KELPA2 will be divided into six English language proficiency assessment performance index levels or, the ELP API levels. EL proficiency level 1 will be ELP API levels 1 and 2, EL proficiency level 2 will be ELP API levels 3 and 4, and EL proficiency level 3 will be ELP API levels 5 and 6.

Progress toward proficiency will be reported annually as a percent of students that have moved at least one ELP API level since the last KELPA2 administration.

Example:

Student Name	***ELP API Level 2017***	***ELP API Level 2018***	***ELP API Level Increase***
Pat	*3*	*3*	*N*
Mark	*4*	*5*	*Y*
Jill	*2*	*2*	*N*
Joe	*2*	*3*	*Y*
Todd	*1*	*3*	*Y*
Beth	*4*	*4*	*N*
Mary	*3*	*5*	*Y*
Bill	*3*	*2*	*N*
Tammy	*2*	*2*	*N*
Doug	*1*	*2*	*Y*

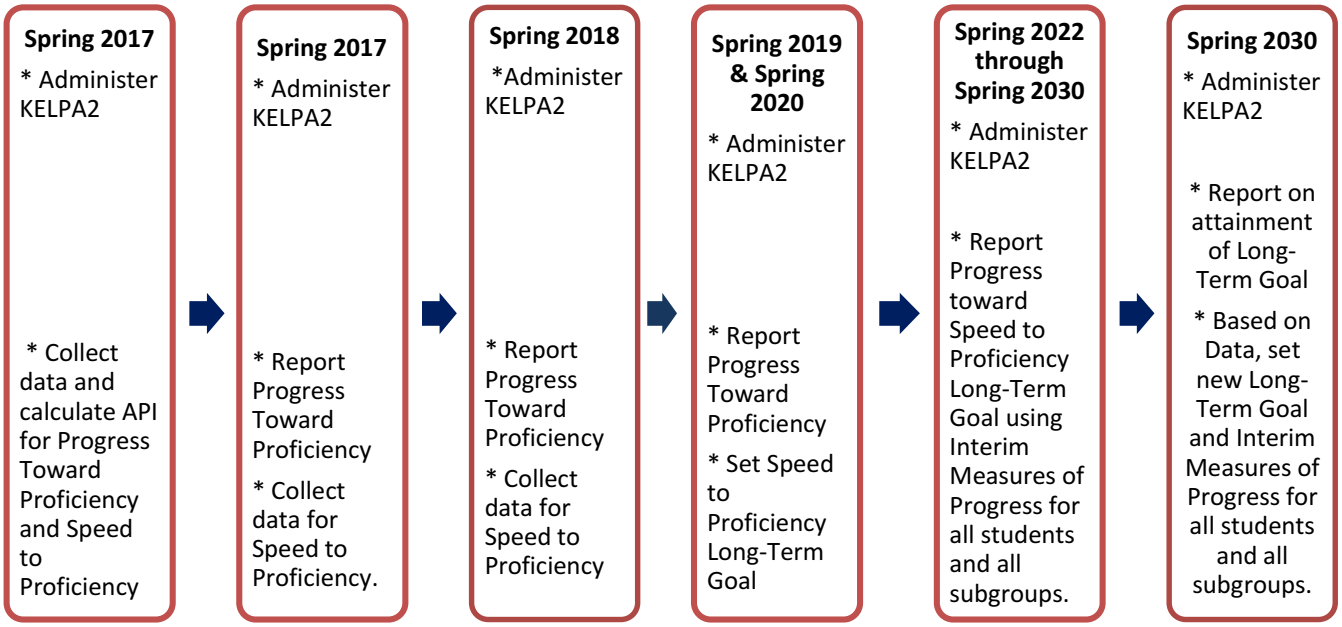
Total Number of Students Making Progress Toward Proficiency / Total Number of Students

5 ÷ 10 = .5 or 50% of Students Making Progress Toward Proficiency

Annually, using the long-term English Language proficiency goal that 95% of students show progress toward proficiency by 2030, the KSDE will set interim measures of progress, which will be an improvement of 1/12th of the gap between the starting position and the long-term goal, for all subgroups, buildings, and districts.

(i) Baseline.
The baseline year for determining progress on the KELPA2 will be 2017. Progress will be reported and measured beginning 2018.

(ii) Timeline.



(iii) Ambitious. *Kansans vision for education is to lead the world in the success of each student. Kansans are demanding higher standards in academic skills as well as employability and citizenship skills for each graduating student.*

Kansas will accumulate five years of data, beginning with the 2017 KELPA2, before using speed-to-proficiency measure to set interim and long-term goals. After the 2020-2021 school year, Kansas will have five consecutive years of data and will be able to identify higher-performing schools that have demonstrated what speed-to-proficiency are possible and use this information to set ambitious but achievable goal.

2. Provide the measurements of interim progress toward the long-term goal for increases in the percentage of English learners making progress in achieving English language proficiency in Appendix A.

The KSDE will use "Progress Toward Proficiency" as the interim measure of progress and will report annually. See Appendix A.

Annually, using the interim measures of progress found in Appendix C, the KSDE will report progress on English Language Proficiency for each subgroup, building, and district.

iv. Indicators *(ESEA section 1111(c)(4)(B))*

The Kansas State Department of Education will report indicator progress toward achieving State determined long-term goals on state, district, and school dashboards.

1. Academic Achievement Indicator. Describe the Academic Achievement indicator, including a description of how the indicator (i) is based on the long-term goals; (ii) is measured by proficiency on the annual Statewide reading/language arts and mathematics assessments; (iii) annually measures academic achievement for all students and separately for each subgroup of students; and (iv) at the State's discretion, for each public high school in the State, includes a measure of student growth, as measured by the annual Statewide reading/language arts and mathematics assessments.

(i) Academic Achievement Indicator, Based on Long-Term Goal and is Measured by Proficiency. *Peer reviewers have determined that the KAP is valid and reliable. The KSDE uses the same indicator for all schools in all districts across Kansas. The same calculation is consistently applied in English language arts and math respectively. The academic achievement indicator is the long-term academic goal and is disaggregated by subgroup. Kansas expects all students enrolled on the day the testing window opens to participate in the Kansas State Assessments. ESEA section 1111(c)(4)E(ii) requires a State to calculate the Academic Achievement indicator by including in the denominator the greater of 95% of all students (or 95% of all students in a subgroup) or the number of students participating in the assessments. Kansas will comply with this requirement. Historically, Kansas exceeds the 95 percent participation rate across the state. The KSDE continues to monitor participation rates and provides ongoing technical assistance to districts.*

(ii) Kansas Measurement of Proficiency. *The Kansas Assessment Program (KAP) results are reported in four performance levels. Level 1 indicates that the student has demonstrated limited ability to understand and use the skills and knowledge necessary for college and career readiness. Level 2 indicates that the student has demonstrated a basic ability to understand and use the skills and knowledge necessary for college and career readiness. Level 3 indicates that the student has demonstrated an effective ability to understand and use the skills and knowledge needed for college and career readiness. Level 4 indicates that the student has demonstrated an excellent ability to understand and use the skills and knowledge necessary for college and career readiness. Levels 1 and 2 are categorized as not proficient. Levels 3 and 4 are proficient.*

The Kansas Academic Achievement Indicator is a measure of proficiency based on the performance levels on the annual statewide ELA and math assessments as described in the long-term goals of academic achievement. The proficiency, as required by ESSA, is level 3.

Long-Term Goal for Academic Achievement Indicator:

> ***≥ 75 percent of all students scoring in levels 3 & 4 combined on the Kansas Assessment in math/English language arts.***

(iii) Annual Measurement that Includes all Student Groups and Subgroups.

Precondition: Any subgroup, building, or district not meeting the greater of 95% of all students or the number of students tested will be identified as below.

Using the percent proficient in math and English Language Arts, the KSDE will rank, lowest to highest, all Title and non-Title subgroups, buildings, and districts based on performance. The KSDE will determine the state median. Those below 1.5 standard deviations from the median will be identified as

below. Those between -1.5 and -1.0 standard deviations will be identified as approaching. Those between -1.0 and +1.0 will be identified as meeting. Those above 1.0 standard deviations will be identified as exceeding.

2. Indicator for Public Elementary and Secondary Schools that are Not High Schools (Other Academic Indicator). Describe the Other Academic indicator, including how it annually measures the performance for all students and separately for each subgroup of students. If the Other Academic indicator is not a measure of student growth, the description must include a demonstration that the indicator is a valid and reliable statewide academic indicator that allows for meaningful differentiation in school performance.

The intentions of ESEA include preserving equal educational opportunity, particularly for the disadvantaged. In support of this goal, Kansas has chosen to use an academic gap measure for its other academic indicator. Gaps will be measured in all elementary, middle, and junior high schools with English language arts and math state assessments. Peer reviewers have determined that the KAP is valid and reliable. The gap measure will be derived from the Assessment Performance Index (API). The API divides each of the four performance levels in half, thereby creating eight levels. This provides a greater recognition for student and building growth.

The API produces a single, numeric value for each subgroup, building, and district. That API value is used to rank subgroup, building, and districts from lowest to highest. The API is a weighted mean. The eight weights, or points per level, go up in equal increments at each level. The API assigns zero points for the lowest performance level. However, for each student who moves at least a half step upwards in performance on the state assessment, the school, district, or subgroup is awarded additional points. In order to avoid the distorting incentives of uneven rewards, additional points are awarded in equal increments of 100. Thus, districts and schools have incentives to move each student to the highest possible level, and keep them there.

The table below shows the single-subject API calculation for a school with 261 tested students.

State Assessment Performance level	API Level	points per test	# of tests	total points
4	8	700	10	7000
	7	600	15	9000
3	6	500	40	20,000
	5	400	72	28,800
2	4	300	84	25,200
	3	200	20	4000
1	2	100	16	1600
	1	0	4	0
	totals		261	95,600
	Assessment Performance Index = 95,600÷261 = 366			

The KSDE will develop the gap measure in the following way:

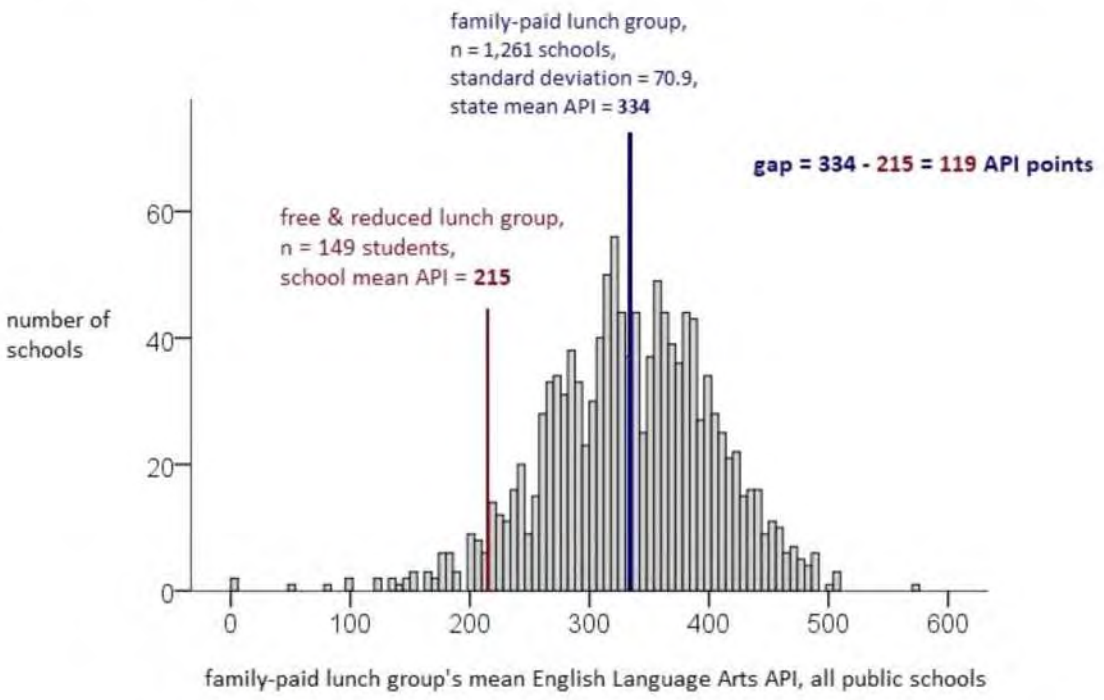
- *Using the 2017 state assessment results, the KSDE will calculate the API consistently for all subgroups at the school, district, and state levels.*
    - *ELA and math APIs will be calculated separately.*
    - *Precondition: Any subgroup, building, or district not meeting the greater of 95% of all students or the number of students tested will be identified as below.*
    - *The building and district subgroup gaps will be calculated using the state mean API score. The mean API score will exclude the subgroup population in the denominator.*
    - *For calculating a building average, each subgroup will be weighted as a percent of the total subgroup population.*
    - *A summary calculation of each building's subgroup performance will be used to rank all school buildings in the state from lowest to highest. To calculate the summary, the KSDE will aggregate all subgroup data*

and divide by the number of subgroups. This summary data provides the KSDE a comparable scale to rank buildings.

- *1.5 standard deviations from those below the mean will be identified as below. Those between -1.5 and -1.0 standard deviations will be identified as approaching. Those between -1.0 and +1.0 will be identified as meeting. Those above 1.0 standard deviations will be identified as exceeding.*

The chart below is an example of how the API is used to measure academic gaps between each student group in a school and its contrasting, complementary benchmark group:

USD 100, Building 0100, Prairie Pine Elementary's 2017 English Language Arts Gap, Local Free & Reduced Lunch Group: State Family-Paid Lunch Group



In the example above, a school-level student group, the free and reduced lunch group, is compared to a state-level contrasting group, the family-paid lunch group. For each school or district-level student group of 30, the mean API of the appropriate state-level contrasting group, composed of the State's students not in the student group, will set the benchmark of comparison for local groups.

For the traditional student groups, these contrasting state-level groups will be:

school or district student group (n > or = 30)	*contrasting state-level benchmark group*
All students at the school level	*All Students at the state level*
Free & Reduced	*Non-Free & Reduced*
Students with Disabilities (SwDs)	*Students without Disabilities*
English learners	*non-English Learners*
African-Americans	*non-African-Americans*
Hispanics	*non-Hispanics*
Whites	*non-Whites*
Asians	*non-Asians*
American Indians	*non-American Indians*
Pacific Islanders	*non-Pacific Islanders*
Multi-ethnic	*non-Multi-ethnic*

The academic gaps of some additional groups—for example, English learners with disabilities—will be reported on the report card with the other student groups that have at least 30 students in a school or district.

How will the gap-reduction goals be calculated? In the example above, the state-level, non-free and reduced lunch group has a mean English language arts API of 334. At the school level, Prairie Pine Elementary's free and reduced lunch group has a mean ELA API of 215.

Annual Meaningful Differentiation using the Academic Gap Measure

Precondition: Any subgroup, building, or district not meeting the greater of 95% of all students or the number of students tested will be identified as below.

The building and district subgroup gaps will be calculated using the state mean API score. The mean API score will exclude the subgroup population in the denominator. A summary calculation of each building's subgroup performance will be used to rank all school buildings in the state from lowest to highest.

For calculating a building average, each subgroup will be weighted as a percent of the total subgroup population.

1.5 standard deviations from those below the mean will be identified as below. Those between -1.5 and -1.0 standard deviations will be identified as approaching. Those between -1.0 and +1.0 will be identified as meeting. Those above 1.0 standard deviations will be identified as exceeding.

3. Graduation Rate. Describe the Graduation Rate indicator, including a description of (i) how the indicator is based on the long-term goals; (ii) how the indicator annually measures graduation rate for all students and separately for each subgroup of students; (iii) how the indicator is based on the four-year adjusted cohort graduation rate; (iv) if the State, at its discretion, also includes one or more extended-year adjusted cohort graduation rates, how the four-year adjusted cohort graduation rate is combined with that rate or rates within the indicator; and (v) if applicable, how the State includes in its four-year adjusted cohort graduation rate and any extended-year adjusted cohort graduation rates students with the most significant cognitive disabilities assessed using an alternate assessment aligned to alternate academic achievement standards under ESEA section 1111(b)(2)(D) and awarded a State-defined alternate diploma under ESEA section 8101(23) and (25).

   (i – iii) Graduation Rate Indicator, Based on Long-Term Goal and is Measured using 4-year Adjusted Cohort. *The graduation rate indicator is the long-term goal and is disaggregated by subgroup. The KSDE uses the same indicator for all subgroups, schools in all districts across Kansas. The four year adjusted cohort graduation rate calculation is consistently applied in all districts and is valid and reliable based on longitudinal data. The KSDE continues to monitor graduation rates and provides ongoing technical assistance to districts. Kansas does not have an alternate diploma.*

   Graduation rates will be reported annually. Kansas does not permit averaging graduation rate data over three years for small schools in order to create N size of 30 or greater.

The graduation rate will be calculated using the 4-year adjusted cohort rate for all subgroups, high schools, and districts. All high schools will be ranked lowest to highest based on the four-year adjusted graduation rate. Those below 67% will be identified as below. Those between 67% and the state average will be identified as approaching. Those above the state average and 95% will be identified as meeting. Those above 95% will be identified as exceeding.

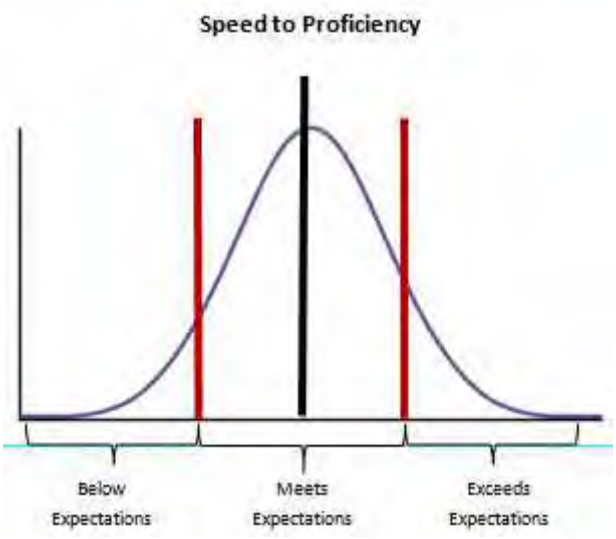
4. Progress in Achieving English Language Proficiency (ELP) Indicator. Describe the Progress in Achieving ELP indicator, including the State's definition of ELP, as measured by the State ELP assessment.

   The Kansas definition of English Language Proficiency (ELP) is when students attain a level of English Language Skill necessary to independently produce, interpret, collaborate on, and succeed in grade level content related academic tasks in English as measured by the KELPA2. Kansas will submit the KELPA2 for peer review based on US Department of Education guidance.

   Beginning in 2021, the KSDE will use speed-to-proficiency to measure the progress of English learners and to set long-term goal and interim measures of progress.

Kansas will accumulate five years of data, beginning with the 2017 KELPA2, before using speed-to-proficiency measure to set interim and long-term goals. After the 2020-2021 school year, Kansas will have five consecutive years of data and be able to identify higher-performing schools that have demonstrated what speed-to-proficiency are possible and use this information to set ambitious but achievable goals.

After the long-term goal for speed to proficiency is set in 2021, and every year thereafter, Kansas will calculate the results and compare the total percent to determine whether the speed to proficiency measure has been met. The results will become the English Language Proficiency Indicator and will have a value of one-quarter (1/4) in the system of meaningful differentiation and will be reported on the building report card.



The KSDE uses the same indicator for all schools in all districts across Kansas. The ELP calculation is consistently applied. The ELP indicator is the long-term goal and is disaggregated within the EL subgroup.

The KSDE will use, based on the long-term goal, "progress toward proficiency" as the transitional measure of progress. Progress toward proficiency will be reported annually, beginning in 2018 through 2021.

Transitional Goal: English Learners' Progress Toward Proficiency:

Students enrolled for at least one year in a school/district, will show progress toward proficiency.
Progress toward proficiency:
Individual student progress towards proficiency will be calculated by the student making positive growth in performance as compared to prior year's performance to current year on the KELPA2. Student progress is defined as demonstrating progress in a minimum of two of the four domains. There are four domains on an individual assessment. Each domain has five performance levels. For a student to demonstrate progress from one year to the next, the student must improve performance on at least two of

the four domains. A negative performance on one domain will negate positive progress in another domain when calculating overall student progress. The building growth for annual meaningful differentiation will be calculated as a percent of the assessed students that showed progress in domain-level performance. All school buildings will be ranked lowest to highest using the percentage of students showing progress toward proficiency.

An example of the decision table is shown below. Domains are across. Performance levels down.

Year	*Domain 1*	*Domain 2*	*Domain 3*	*Domain 4*	*Progress*	*Decision*
2017(baseline)	*2*	*3*	*2*	*2*		
2018	*3*	*3*	*3*	*2*	*+2*	*Yes*
2018	*2*	*2*	*3*	*3*	*+1*	*No*
2018	*1*	*2*	*4*	*4*	*0*	*No*
2018	*1*	*3*	*3*	*3*	*+1*	*No*
2018	*1*	*2*	*2*	*1*	*-3*	*No*
2018	*3*	*2*	*3*	*3*	*+2*	*Yes*

To determine Annual Meaningful Differentiation at the building level, the KSDE will rank the percent of students making progress in each building lowest to highest and determine the state median. Those below 1.5 standard deviations from the median will be identified as below. Those between -1.5 and -1.0 standard deviations will be identified as approaching. Those between -1.0 and +1.0 will be identified as meeting. Those above 1.0 standard deviations will be identified as exceeding.

5. School Quality or Student Success Indicator(s). Describe each School Quality or Student Success Indicator, including, for each such indicator: (i) how it allows for meaningful differentiation in school performance; (ii) that it is valid, reliable, comparable, and statewide (for the grade span(s) to which it applies); and (iii) of how each such indicator annually measures performance for all students and separately for each subgroup of students. For any School Quality or Student Success indicator that does not apply to all grade spans, the description must include the grade spans to which it does apply.

   (i – iii) Student Success Long-Term Goal: Decreasing the Percent of Students Scoring in API Levels 1 and 2.

The focus of the Student Success Indicator will be on the percent of students scoring at state performance level 1. The desired outcome is an increase in student achievement as represented by fewer students performing at the lowest level. The Student Success Indicator will apply to all assessed grades, 3 – 8 and 10, in both ELA and math. Precondition: Any subgroup, building, or district not meeting the greater of 95% of all students or the number of students tested will be identified as below.

Using the percent of students scoring at performance level 1 in math and English Language Arts, the KSDE will rank, lowest to highest, all Title and non-Title subgroups, buildings, and districts based on performance. The KSDE will determine the state median. Those below 1.5 standard deviations from the median will be identified as below. Those between -1.5 and -1.0 standard deviations will be identified as approaching. Those between -1.0 and +1.0 will be identified as meeting. Those above 1.0 standard deviations will be identified as exceeding.

The student success indicator of decreasing the percent of students at state performance level 1 is disaggregated by subgroups. The KSDE uses the same student success indicator for all subgroups, schools in all districts across Kansas. Annual Meaningful Differentiation *(ESEA section 1111(c)(4)(C))*

a. Describe the State's system of annual meaningful differentiation of all public schools in the State, consistent with the requirements of section 1111(c)(4)(C) of the ESEA, including a description of (i) how the system is based on all indicators in the State's accountability system, (ii) for all students and for each subgroup of students. Note that each state must comply with the requirements in 1111(c)(5) of the ESEA with respect to accountability for charter schools.

The Kansas State Department of Education, as required, will meaningfully differentiate all public schools in the State, consistent with the requirements of 1111(c)(4)(C) of ESEA.

(i) *To calculate the annual meaningful differentiation for subgroups, buildings, and districts, the KSDE will consider each of the five indicators in the Kansas Consolidated Plan, and report for each subgroup, building, and district differentiation using four levels: exceeds expectations, meets expectations, approaching expectations, and below expectations.*

Indicators applicable to Elementary and Secondary Schools that are not High Schools

- *Academic Proficiency*
- *Gap*
- *EL Proficiency*
- *Student Success*

Indicators applicable to High Schools

- *Academic Proficiency*
- *Graduation*
- *EL Proficiency*
- *Student Success*

English Language Arts and mathematics will be combined.

Using the ratings that are calculated for each indicator and weighted equally the KSDE will average the numerical rankings for each building. The overall rating for each building will be ranked lowest to highest to determine the state median. Those below 1.5 standard deviations from the median will be identified as below. Those between -1.5 and -1.0 standard deviations will be identified as approaching. Those between -1.0 and +1.0 will be identified as meeting. Those above 1.0 standard deviations will be identified as exceeding.

Other conditions might also apply for the additional identification of CSI & TSI buildings.

***(ii)** All public schools within the State, Title I and non-Title I, will be reported on the building report card and receive an annual meaningful differentiation designation. This includes virtual and alternative stand-alone schools.*

b. Describe the weighting of each indicator in the State's system of annual meaningful differentiation, including how the Academic Achievement, Other Academic, Graduation Rate, and Progress in ELP indicators each receive substantial weight individually and, in the aggregate, much greater weight than the School Quality or Student Success indicator(s), in the aggregate.

Using the ratings that are calculated for each indicator and weighted equally the KSDE will average the numerical rankings for each building. The overall rating for each building will be ranked lowest to highest to determine the state median. Those below 1.5 standard deviations from the median will be identified as below. Those between -1.5 and -1.0 standard deviations will be identified as approaching. Those between -1.0 and +1.0 will be identified as meeting. Those above 1.0 standard deviations will be identified as exceeding.

c. If the States uses a different methodology or methodologies for annual meaningful differentiation than the one described in 4.v.a. above for schools for which an accountability determination cannot be made (*e.g.*, P-2 schools), describe the different methodology or methodologies, indicating the type(s) of schools to which it applies.

Not applicable.

v. Identification of Schools *(ESEA section 1111(c)(4)(D))*

a. Comprehensive Support and Improvement Schools. Describe the State's methodology for identifying not less than the lowest-performing five percent of all schools receiving Title I, Part A funds in the State for comprehensive support and improvement, including the year in which the State will first identify such schools.

Every three years the KSDE will combine three years of annual meaningful differentiation data (combined ELA & Math + 4 indicators) and rank subgroups, buildings, and districts. The lowest 5 % of Title 1 buildings will be identified for Comprehensive Support and Improvement based on the overall three-year ranking.

Beginning fall 2018, CSI schools will be identified every third year.
The KSDE will continue to provide technical assistance through the spring 2021. Using the 2018, 2019 and 2020 state assessment scores, the second cohort of CSI schools will be identified for technical assistance beginning fall 2021 through spring 2023.

b. Comprehensive Support and Improvement Schools. Describe the State's methodology for identifying all public high schools in the State failing to graduate one third or more of their students for comprehensive support and improvement, including the year in which the State will first identify such schools.

Annually, the KSDE will identify any schools graduating less than 67 percent of all students or any subgroup in the four-year adjusted cohort, which will be reported on the KSDE dashboard beginning in 2018.

At the state-level, Kansas is on track to meet the 95 percent graduation goal by 2030. However, the district and school-level subgroup data illustrates areas in need of improvement. Kansas will be implementing a differentiated approach of technical assistance in order to support districts and schools.in reaching the long-term graduation goal, as seen below:

1. *Below Expectations - is not making the necessary progress in order to meet the long-term graduation rate goal by 2030.*
2. *Approaching Expectations – more than 67 percent of students are graduating but rate is below the state average graduation rate*
3. *Meets Expectations - is making the necessary progress in order to meet the long-term 95 percent graduation rate goal by 2030.*
4. *Exceeds Expectations – more than 95 percent of students are graduating*

Subgroups	Graduation (Interim Measure of Progress) 2016	Graduation: Interim Measures of Progress. (Yearly rate of gain to reach Goal) 2017-2030	Graduation: Long-term Goal (End Measure of Progress) 2030
All students	**86.1**	**0.68**	**95.0**
Economically disadvantaged students	**77.7**	**1.33**	**95.0**
Children with disabilities	**77.4**	**1.35**	**95.0**
English learners	**77.7**	**1.33**	**95.0**
African-American students	**77.1**	**1.38**	**95.0**
Native Hawaiian/Pacific Islander	**82.6**	**0.95**	**95.0**
Hispanic students	**79.9**	**1.16**	**95.0**
White students	**88.8**	**0.48**	**95.0**
Asian students	**93.1**	**0.15**	**95.0**
American Indian or Alaska Native students	**72.5**	**1.73**	**95.0**
Multi-Racial	**81.9**	**1.01**	**95.0**

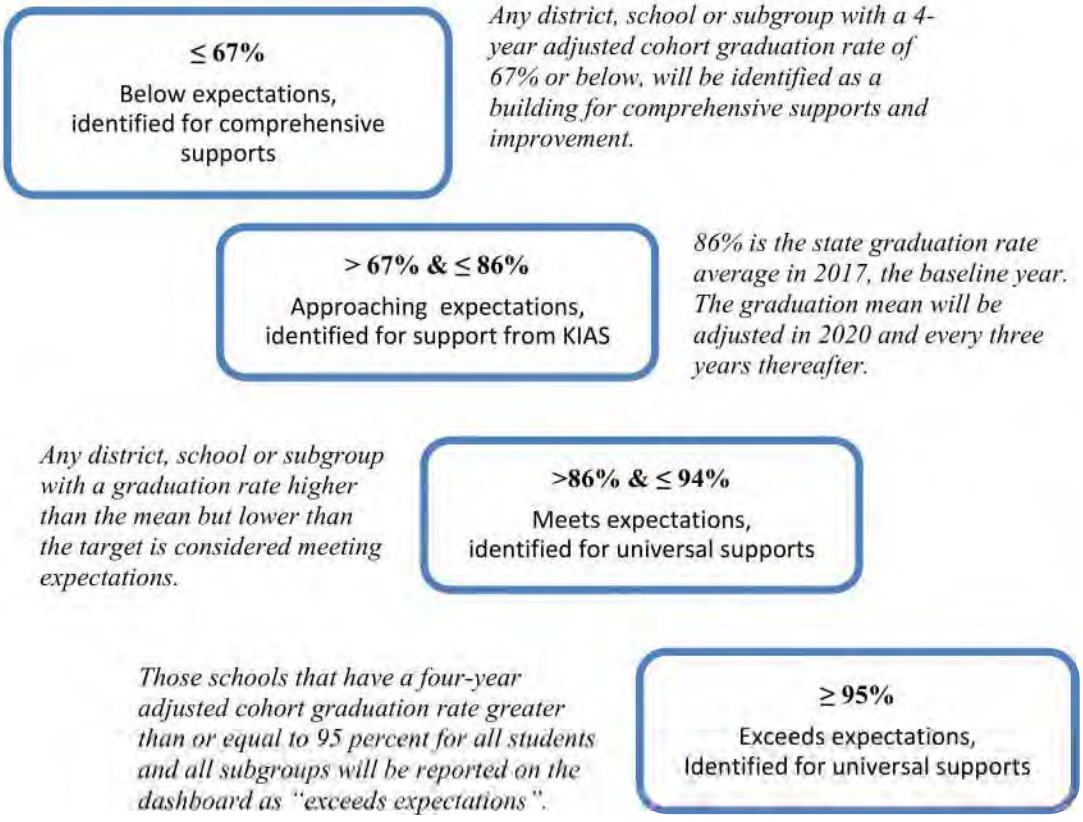
As indicated in the table above, at the state aggregate level, Kansas is on track to meet the 95 percent goal by 2030. However, the district and school-level subgroup data illustrates areas in need of improvement. Kansas will be implementing a differentiated approach of technical assistance in order to support districts and schools in reaching the long-term graduation goal.

TA 3 - Any schools graduating less than 67 percent of all students or any subgroup in the four-year adjusted cohort will be reported on the KSDE dashboard as "below expectations" and will be eligible for differentiated comprehensive support and improvement, or CSI. Districts in which these schools are located will begin working

with the Kansas Learning Network, the Kansas Technical Assistance System Network, the Kansas education service centers, and the Kansas State Department of Education, in order to implement evidence-based strategies to improve outcomes for students.

TA 2 - Schools that have greater than or equal to 67 percent graduation rate and less than or equal to 86 percent graduation rate of all students or any subgroup graduation rate in the four-year adjusted cohort will be reported on the dashboard as "approaching expectations". The districts in which these schools are located will be encouraged to participate in targeted technical assistance and professional learning provided by the Kansas Technical Assistance System Network, the Kansas educational service centers, and the Kansas State Department of Education.

TA 1 - Those schools that have a four-year adjusted cohort graduation rate above the 86 percent state average graduation rate in the four-year adjusted cohort but less than 95 percent will be reported on the dashboard as "meets expectations". The districts in which these schools are located will have available, upon request, access to the Kansas Technical Assistance System Network, the Kansas education service centers, and the Kansas State Department of Education.



c. Comprehensive Support and Improvement Schools. Describe the methodology by which the State identifies public schools in the State receiving Title I, Part A funds that have received additional targeted support under ESEA section 1111(d)(2)(C) (based on identification as a school in which any subgroup of students, on its own, would lead to identification under ESEA section 1111(c)(4)(D)(i)(I) using the State's methodology under ESEA section 1111(c)(4)(D)) and that have not satisfied the statewide exit criteria for such schools within a State-determined number of years, including the year in which the State will first identify such schools.

Any school identified for comprehensive support and improvement that fails to meet the exit criteria after three years will be provided with additional technical assistance from the Kansas Learning Network and the KSDE consultant assigned to the district. The additional technical assistance will include conducting and analyzing a comprehensive needs assessment, required professional development for district and school teams based on results of comprehensive needs assessment, and support from the KLN coaching network will be aligned to the indicators identified through the comprehensive needs assessment.

Technical assistance will be provided at the district level and focused on system changes supports, but specific to the identified schools comprehensive needs assessment results. Agreed upon next steps may include, but are not limited to, required assistance from Kansas MTSS, TASN, and regional education service centers. Additionally, the KSDE identifies schools receiving Title I, Part A funds that have received additional targeted support under ESEA section 1111(d)(2)(C) (based on identification as a school in which any subgroup of students, on its own, would lead to identification under ESEA section 1111(c)(4)(D)(i)(I) using the KSDE's methodology under ESEA section 1111(c)(4)(D)) and that have not satisfied the statewide exit criteria for such schools within three years, including the year in which the KSDE will first identify such schools.

The chart below describes the technical assistance provided by the Kansas Learning Network (KLN).

KANSAS LEARNING NETWORK

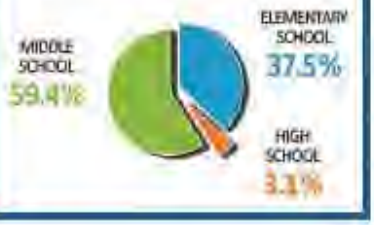
2016

The Kansas Learning Network (KLN) provides technical assistance for eligible Comprehensive Support and Improvement (CSI) schools and districts through sustained coaching in a rigorous and collaborative systems change process. KLN coaches work closely with school leadership teams to complete a comprehensive needs assessment focusing on root causes, data analysis, risk factors, and expansion of successful elements of the school system. Schools and districts then develop and carry out action plans to modify their infrastructure to improve outcomes for all learners.

SELECTION OF COACHES

A priority for KLN leadership during the past year was the selection of coaches. These individuals are responsible for providing the direct technical assistance to KLN schools and districts. The interview process borrowed from practices that the Google corporation has used. After carefully screening all application materials, the most promising candidates were invited to attend a daylong interview where they participated in experiential tasks requiring them to not only discuss their qualifications for the position but also directly demonstrate these qualifications. Interview tasks included defining school improvement, articulating coaching behaviors for KLN vision and values, problem-solving likely scenarios they would encounter as coaches, and role-playing data-based decision making with a hypothetical school team. In addition to considering individual expertise, the KLN selection committee developed an expertise matrix to ensure that KLN could support the range of schools' technical assistance needs.

PERCENTAGE OF PARTICIPATING SCHOOLS BY GRADE LEVEL



ADAPTIVE SCHOOLS FRAMEWORK

One of the early experiences for the new KLN coaches was participating in Adaptive Schools® Training, which consisted of four days of intense learning on how to build organizational capacity and facilitate systems change processes in schools. Coaches practiced several specific strategies for guiding leadership teams through a process for developing shared leadership, collaboration, and communication. Coaches have already put many of these structures into action during early meetings with participating school and district teams.

SELECTION OF SCHOOLS

In November, 2016, KSDE identified Title 1 schools that are eligible for KLN technical assistance. Using the Academic plus (A+) Methodology, each school's Academic Performance Index was considered alongside risk factors, including chronic absenteeism, cumulative poverty, percentage of English Learners, student mobility, and suspension and expulsion rates. Thirty-two total schools are eligible to receive Comprehensive Support and Improvement (CSI) through KLN.

INTERACTION WITH SCHOOLS

In recent months, KLN staff began a multiyear process of sustained technical assistance with each participating building. They started by facilitating introductory meetings, first with district leadership and then with building principals, to describe the nature of KLN support and discuss existing district initiatives. The first major task for each participating school was identifying a building leadership team to guide the change process. As part of the initial process with each district, KLN staff participated in community visits in order to build background knowledge of the unique assets and stressors in each of the districts. Schools are now beginning to determine root causes and develop improvement goals. These goals will be included in KansaStar, an online documentation and improvement tool.

KLN YEAR 1 PROGRESSION

LEARN MORE AT: KSDETASN.ORG/KLN

d. Frequency of Identification. Provide, for each type of school identified for comprehensive support and improvement, the frequency with which the State will, thereafter, identify such schools. Note that these schools must be identified at least once every three years.

The KSDE will report annually, on state, district and school report cards, progress toward long-term goals for all students and all subgroups of students. Identification of schools eligible for Comprehensive Support and Improvement, through low performing five percent, graduation and schools that fail to exit CSI, will be calculated every three years.

Title I schools in the lowest 5% will be identified for CSI beginning in 2018-19, and every three years thereafter; 2021-22, 2024-25 etc.

All high schools with a graduation rate of less than 67% will be identified for CSI beginning in 2018-19, and every three years thereafter; 2021-22, 2024-25 etc.

Those Title I schools failing to exit CSI status will be identified for additional support (ISI) beginning in 2021-22.

Year	Comprehensive Support and Improvement: Lowest Performing 5% (LP 5%)	Comprehensive Support and Improvement: Intense Support and Improvement Intense Support and Improvement (ISI) (CSI that have not exited)	Comprehensive Support and Improvement: Graduation (CSI: Grad)	Targeted Support and Improvement: (Consistently underperforming) (TSI)	Additional Targeted Support (Lowest 5%)
2018-2019	Cohort 1 schools *identified* for CSI begin working with KLN		Cohort 1 schools *identified* due to graduation rates less than 67% for schools or subgroups are identified, and begin work with KLN	Schools identified for TSI due to consistently underperforming subgroup-and begin work with KLN support	Schools identified due to individual underperforming subgroup and will begin work with KLN.
2019-2020	Cohort 1 schools *identified* for CSI continue working with KLN		Schools *identified* due to graduation rates begin work with the KLN	Schools identified for TSI begin work with KLN support	Schools identified due to individual underperforming subgroup and will begin work with KLN.
2020-2021	Schools *identified* may apply to exit CSI status and CSI Schools may continue work with the KLN *identified* schools may apply to exit CSI status		Cohort 1 schools with *identified* for graduation rate continue work Cohort 1 schools *identified* due to graduation rate may apply to exit CSI status	Schools identified for TSI begin work with KLN support	Schools identified due to individual underperforming subgroup and will begin work with KLN.
2021-2022	Cohort 2 schools identified using 2018 – 2020 state assessment data Cohort 1 schools no longer in the LP 5% may apply to be exited from CSI status	Cohort 1 schools that remain in the LP 5% of schools based on the 2018 – 2020 state assessment data are identified as ISI and ramp up work with the KLN support	Cohort 2 schools eligible for CSI due to graduation rates are identified	Schools identified for three consecutive years that fail to exit move to CSI status Schools identified for TSI begin work with KLN support	Schools identified due to individual underperforming subgroup and will begin work with KLN. Schools identified for three consecutive years that fail to exit move to CSI status

2022-2023	Cohort 2 continues work with the KLN	Cohort 1 continues ISI work with KLN	Cohort 1 schools no longer in the 5% of Title I schools with the lowest graduation rates may apply to be exited from CSI status	Schools identified for three consecutive years that fail to exit move to CSI status Schools identified for TSI begin work with KLN support	Schools identified due to individual underperforming subgroup and will begin work with KLN. Schools identified for three consecutive years that fail to exit move to CSI status
2023-2024	Cohort 2 schools are *identified* may apply to exit CSI status (LP 5%)	Cohort 1 schools are *identified* may apply to exit CSI status (LP 5%)	Cohort 2 schools work with KLN to increase graduation rates	Schools identified for three consecutive years that fail to exit move to CSI status Schools identified for TSI begin work with KLN support	Schools identified due to individual underperforming subgroup and will begin work with KLN. Schools identified for three consecutive years that fail to exit move to CSI status

e. Targeted Support and Improvement. Describe the State's methodology for annually identifying any school with one or more "consistently underperforming" subgroups of students, based on all indicators in the statewide system of annual meaningful differentiation, including the definition used by the State to determine consistent underperformance. *(ESEA section 1111(c)(4)(C)(iii))*

Using the most current three years of indicator data, the KSDE will annually calculate a summary score for each subgroup based on an equal weighting of each indicator. The overall rating for each subgroup will be ranked lowest to highest to determine the state median. Those below 1.5 standard deviations from the median will be identified for targeted support from the KLN. Kansas will comply with the requirements of ESEA section 1111(c)(4)(C)(iii).

Indicators applicable to Elementary and Secondary Schools that are not High Schools

- *Academic Proficiency*
- *Gap*
- *EL Proficiency*
- *Student Success*

Indicators applicable to High Schools

- *Academic Proficiency*
- *Graduation*
- *EL Proficiency*
- *Student Success*

English Language Arts and mathematics will be combined.

f.Additional Targeted Support. Describe the State's methodology, for identifying schools in which any subgroup of students, on its own, would lead to identification under ESEA section 1111(c)(4)(D)(i)(I) using the State's methodology under ESEA section 1111(c)(4)(D), including the year in which the State will first identify such schools and the frequency with which the State will, thereafter, identify such schools. *(ESEA section 1111(d)(2)(C)-(D))*

Annually, using three years of state assessment data the KSDE will identify schools in which any subgroups of students on its own would lead to identification. and will provide support from the Kansas Learning Network (KLN). Kansas will comply with the requirements of ESEA 1111(d)(2)(C)-(D).

Annually, using three years of annual meaningful differentiation data (combined ELA and Math plus four indicators) the KSDE will rank subgroups. Any subgroup, on its own, that performs as low as any CSI building will be identified for additional targeted support.

Technical assistance from the KLN will include conducting and analyzing a comprehensive needs assessment, required professional development for district and school teams based on results of comprehensive needs assessment, and support from the KLN coaching network will be aligned to the indicators identified through the comprehensive needs assessment. Technical assistance will be provided at the district level and focused on system changes supports, but specific to the identified schools comprehensive needs assessment results. Agreed upon next steps may include, but are not limited to, required assistance from Kansas MTSS, TASN, and regional education service centers.

g. Additional Statewide Categories of Schools. If the State chooses, at its discretion, to include additional statewide categories of schools, describe those categories.

The KSDE will not identify any additional categories of schools.

vi. Annual Measurement of Achievement *(ESEA section 1111(c)(4)(E)(iii))*: Describe how the State factors the requirement for 95 percent student participation in statewide mathematics and reading/language arts assessments into the statewide accountability system.

The expectation in Kansas is that ALL students enrolled on the day the testing window opens in the grades with state assessments will participate in those assessments.

If a district, school, or subgroup misses the 95percent participation rate target, the Kansas Integrated Accountability System (KIAS) will flag the district, which is the statewide accountability system for state and federal programs. The KIAS looks at many qualitative and quantitative risk factors around compliance and performance. The KIAS process holds buildings and districts accountable for each of these risk factors. Each risk factor is assigned a weight. The number of findings and the weight of such findings informs the corrective action process. Missing the 95% participation rate would trigger the implementation of a corrective action plan supported by the KSDE, the Technical Assistance Support Network, Kansas Education Service Centers, and other technical assistant partners. The KSDE will provide ongoing technical assistance to the district and the building in support of reaching the 95 percent participation rate.

vii. Continued Support for School and LEA Improvement *(ESEA section 1111(d)(3)(A))*

a. Exit Criteria for Comprehensive Support and Improvement Schools. Describe the statewide exit criteria, established by the State, for schools identified for comprehensive support and improvement, including the number of years (not to exceed four) over which schools are expected to meet such criteria.

Schools identified as eligible for CSI using the A+ methodology, or by moving into CSI status after being a Targeted Support and Improvement (TSI) school may be eligible to apply to exit CSI status after two years of working with the Kansas Learning Network.

In order to be granted exit status, schools must meet the following criteria:

- *Schools and the district maintain a school improvement plan within the KSDE online system for school improvement referred to as KansaStar that is aligned to the needs assessment and root cause analysis. KansaStar will provide documentation of implementation verified by the Kansas Learning Network.*
- *Schools and the district provide evidence that 1003 school improvement funds awarded have been utilized for evidence-based interventions that align to the needs assessment.*
- *Provide evidence that schools are improving in the risk factor data. Of the risk factors described in the A+ methodology described above, it is reasonable to expect schools to make improvements in the rate of suspensions and expulsions, and chronic absences.*
- *Provide evidence that progress is being made in the areas of English language arts and math proficiency. This data may include state assessment data and/or other valid and reliable assessment sources.*
- *The KSDE identifies CSI and TSI every three years. Schools that have met the requirements for exiting may be re-identified if data indicates the need for additional technical assistance.*

Exit applications and supporting documentation will be reviewed by the Kansas Integrated Accountability System (KIAS) team whose purpose is to provide general supervision in Kansas, the Director of the Kansas Learning Network, and other members of the KSDE Early Childhood, Special Education and Title Services team to determine eligibility to exit.

Schools who are identified as eligible for CSI by way of high school graduation rate may be eligible to apply to exit CSI status after two years. In order to be granted exit status, these schools must meet the following exit criteria:

- *Schools and the district maintain their school improvement plan within KansaStar that is aligned to the needs assessment and addresses the underlying issues that contribute to low graduation rates.*
- *Schools and the district provide evidence that the 1003 school improvement funds awarded have been utilized for interventions that align with the needs assessment.*
- *Data shows that schools are making progress in the area of graduation rates.*
- *The KSDE identifies CSI and TSI every three years. Schools that have met the requirements for exiting may be re-identified if data indicates the need for additional technical assistance.*

Exit applications will be reviewed for exit eligibility status by the Kansas Integrated Accountability System (KIAS) team. This team includes members of the KSDE Early Childhood, Special Education and Title Services department.

b. Exit Criteria for Schools Receiving Additional Targeted Support. Describe the statewide exit criteria, established by the State, for schools receiving additional targeted support under ESEA section 1111(d)(2)(C), including the number of years over which schools are expected to meet such criteria.

Schools identified for TSI based on low-performing subgroups of students will remain in TSI status for three years, but may be eligible to apply for exit after two years.

In order to be eligible for exit status, schools and district must meet the following criteria:

- *Schools and the district maintain school improvement plan within the KSDE online system, KansaStar, which is aligned to the needs assessment and addresses the underlying issues that contribute to low-performing subgroups.*
- *Schools and the district provide evidence that utilization of technical assistance opportunities provided by the KSDE through the KSDE sponsored conferences, symposiums, institutes, trainings and the TASN have been targeted.*
- *Data shows that schools are making progress in closing the gaps for the low-performing subgroups of students for which they were identified.*
- *The KSDE identifies CSI and TSI every three years. Schools that have met the requirements for exiting may be re-identified if data indicates the need for additional technical assistance.*

c. More Rigorous Interventions. Describe the more rigorous interventions required for schools identified for comprehensive support and improvement that fail to meet the State's exit criteria within a State-determined number of years consistent with section 1111(d)(3)(A)(i)(I) of the ESEA.

Any school identified for comprehensive support and improvement that fails to meet the exit criteria after three years will be provided with additional technical assistance from the Kansas Learning Network and the KSDE consultant assigned to the district. The additional technical assistance will include conducting and analyzing a comprehensive needs assessment, required professional development for district and school teams

based on results of comprehensive needs assessment, and support from the KLN coaching network will be aligned to the indicators identified through the comprehensive needs assessment. Technical assistance will be provided at the district level and focused on system changes supports, but specific to the identified schools comprehensive needs assessment results. Agreed upon next steps may include, but are not limited to, required assistance from Kansas MTSS, TASN, and regional education service centers.

d. Resource Allocation Review. Describe how the State will periodically review resource allocation to support school improvement in each LEA in the State serving a significant number or percentage of schools identified for comprehensive or targeted support and improvement.

The KSDE will conduct a resource review during the three year timeframe in which schools eligible for comprehensive or targeted support are implementing interventions. This review process will be integrated within the ongoing monitoring process implemented by the Kansas State Department of Education (KSDE) for identifying districts in need of additional fiscal and accountability support. The KSDE has fiscal processes in place to monitor on an ongoing basis allocations made to every LEA in the state. The KLN is part of the Kansas Technical Assistance System Network (TASN) and contains a comprehensive evaluation of all resources provided within the TASN. The TASN Evaluation focuses on the effectiveness, implementation and sustainability of school improvement efforts. More information can be located on the KSDE school finance webpage and www.ksdetasn.org

e. Technical Assistance. Describe the technical assistance the State will provide to each LEA in the State serving a significant number or percentage of schools identified for comprehensive or targeted support and improvement.

Kansas State Department of Education has developed a coordinated system of technical assistance for schools identified for comprehensive or targeted support and improvement. The technical assistance will look different in every school or district. The KSDE, along with our partners, help districts develop individualized plans for support and improvement that may include, but is not restricted to, the list of providers outlined later in this section.

All of the KSDE technical assistance providers have been chosen through an extensive vetting process that began with the implementation of the KSDE ESEA Flexibility Waiver. Through an RFP process, the KSDE chose providers that would offer technical assistance programs and services to Kansas districts and buildings that consist of evidence-based best practices. The KSDE continues to carefully vet any new partners through the RFP process.

Effective and meaningful implementation of the districts plans are achieved through an assessment of risk, as described above. Districts are supported by the KSDE coordinated technical assistance. Follow up is provided to the district by a KSDE team through on-site visits and/or development of Targeted Technical Assistance plan in coordination with existing plans. Subsequent follow up is provided in the mutually agreed identified area(s) needing further technical assistance.

The KSDE has coordinated effective technical assistance resources in the state of Kansas through the Kansas Technical Assistance System Network (TASN). Districts have access to any of the TASN partners by visiting one website. TASN partners include:

Families Together, Inc. - Families Together, Inc. is the Parent Training and Information Center (PTI) for Kansas. PTI provides support to families of children with disabilities. This support includes programs designed to build and sustain strong, healthy, informed, and actively involved family members who can work together to improve the lifelong outcomes for their child or sibling with a disability.

General Supervision, Timely and Accurate Data - The General Supervision, Timely and Accurate Data (GSTAD) project provides data management for the State Performance Plan and Annual Performance Report, including reporting district performance and supporting the Kansas Integrated Accountability System.

Infinitec - The Kansas Infinitec project provides educators in Kansas with access to resources, information, and training on state of the art assistive technology (AT) and Universal Design for Learning (UDL).

Kansas CHAMPS & DSC Training Cadre - The Kansas CHAMPS and Discipline in the Secondary Classroom (DSC) Training Cadre is a group of educators from across the state of Kansas who have received training and ongoing professional learning in order to provide the deep knowledge and use of positive behavior supports in classroom management, on an as needed basis, to educators and districts statewide.

KansaStar - Schools and the district in which they reside maintain their school improvement plan within the KSDE online system for school improvement referred to as KansaStar that is aligned to the needs assessment and root cause analysis. KansaStar will provide documentation of implementation verified by the Kansas Learning Network.

Kansas College & Career Competency Framework - The College and Career Competency (CCC) Framework supports middle and high school educators in systematically embedding intrapersonal, interpersonal, and cognitive competencies into course content. Free resources are available at www.cccframework.org.

Kansas Learning Network - The Kansas Learning Network (KLN) project provides targeted intensive support and ongoing coaching to districts and schools identified by the KSDE through an accountability systems.

Kansas LETRS Training Cadre - The Kansas LETRS Training Cadre is a group of educators from across the state of Kansas who have received training and ongoing professional development to be able to provide the deep knowledge contained with the LETRS professional development modules on an as needed basis to educators and districts statewide.

Kansas MTSS - The Kansas Multi-Tier System of Supports (MTSS) project provides resource development, training, and support for district wide implementation of the Kansas MTSS framework. This includes implementation preschool through high school and includes support for reading, math, behavior, early childhood, and secondary transition.

Kansas Parent Information Resource Center - The Kansas Parent Information Resource Center (KPIRC) project provides information, training and support to educators and families in developing and implementing effective parent engagement practices.

Kansas Recruitment & Retention - The Kansas Recruitment and Retention project provides support to Kansas districts, schools and educators through the Kansas Education Employment Board (KEEB) and to early career special education staff through the Kansas e-Mentoring for Student Success (eMSS) effort.

Kansas Enrichment Network - The Kansas Enrichment Network provides technical assistance, coaching, training and support for the 21st Century Community Learning Centers, and after school, before school and summer learning programs across the state.

TASN Coordination - The TASN Coordination project assists educators and families in connecting to resources and supports available through TASN and partners. In addition, they work closely with the KSDE ECSETS Leadership in ensuring that TASN is meeting statewide needs.

TASN Co-Teaching - The Kansas Co-Teaching project and training cadre provides training, coaching and support to districts and educators state wide to effectively use co-teaching practices within classrooms at all levels.

TASN Evaluation - The TASN Evaluation project assists the entire TASN system in designing and implementing an evaluation system that focuses on measuring the effectiveness, implementation, and sustainability of efforts.

f. Additional Optional Action. If applicable, describe the action the State will take to initiate additional improvement in any LEA with a significant number or percentage of schools that are consistently identified by the State for comprehensive support and improvement and are not meeting exit criteria established by the State or in any LEA with a significant number or percentage of schools implementing targeted support and improvement plans.

Not applicable.

5. Disproportionate Rates of Access to Educators (*ESEA section 1111(g)(1)(B)):* Describe how low-income and minority children enrolled in schools assisted under Title I, Part A are not served at disproportionate rates by ineffective, out-of-field, or inexperienced teachers, and the measures the SEA will use to evaluate and publicly report the progress of the SEA with respect to such description.[8]

The KSDE will ensure that students taught in Title I Schools are not taught at a higher rate by , inexperienced, ineffective or out-of-field teachers than their non-Title I peers. Kansans believe that all children in Kansas deserve an equal opportunity to a quality education. Kansas children, regardless of race, income or disability, deserve access to a safe and healthy place to learn, rigorous expectations, and excellent educators in every

[8] Consistent with ESEA section 1111(g)(1)(B), this description should not be construed as requiring a State to develop or implement a teacher, principal or other school leader evaluation system.

classroom. The KSDE will focus on ensuring that every Kansas child has the opportunity to learn from quality teachers.

Definitions

Key Term	*Statewide Definition (or Statewide Guidelines)*
Ineffective teacher	*Never licensed or an expired license. The staff member is not licensed or has an expired license.*
Out-of-field teacher	*The staff member holds a standard or "non-standard" license but does not hold the correct subject and/or grade level endorsement for the listed assignment.*
Inexperienced teacher	*A classroom teacher with a valid Kansas teaching license (Initial, Temporary [one year renewable], or Exchange [out-of-state]) that has taught for less than three years in a Kansas public school classroom.*
Low-income student	*Student qualifies for free and reduced price lunches.*
Minority student	*A student any race other than "white", as designated by parent/guardian.*

Questions considered by the KSDE:

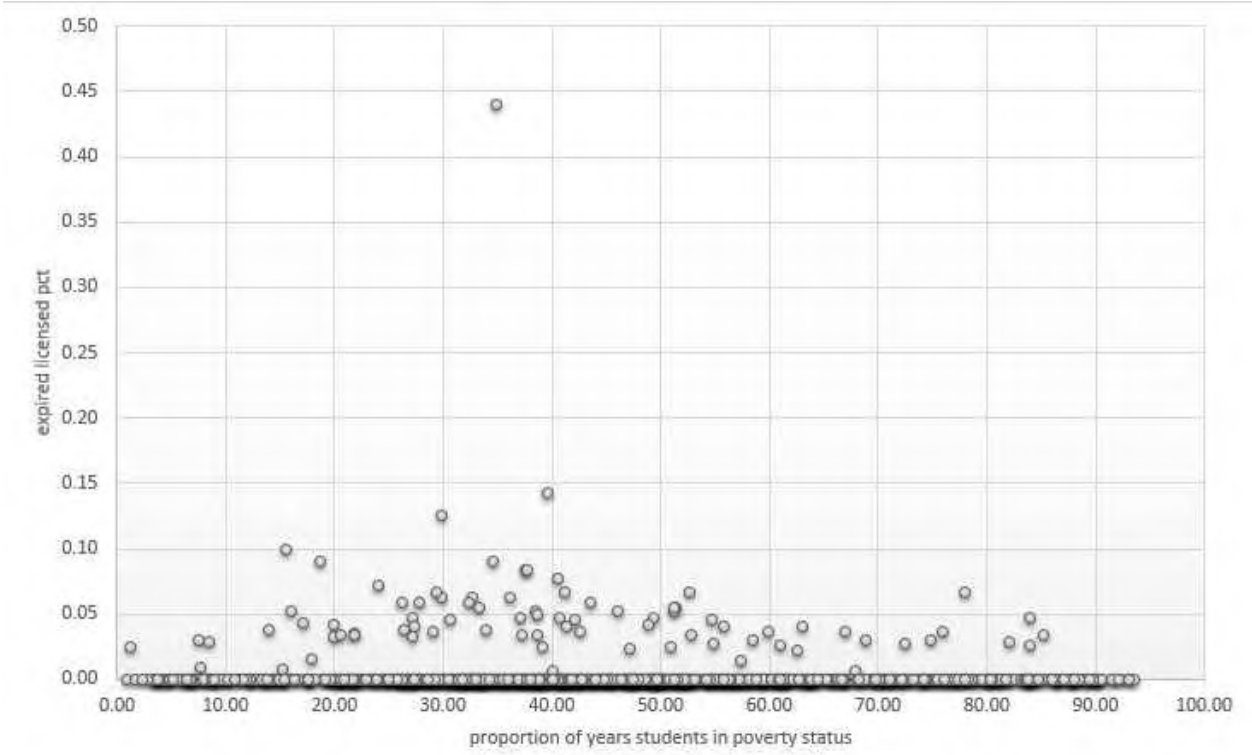
- *Do Title 1 Schools with high poverty have a greater percentage of teachers with less than three years of experience compared to low poverty districts' percentage of teachers with less than three years of experience?*
- *Do Title 1 Schools with high poverty have a greater percentage of teachers teaching out-of-field compared to low poverty districts' percentage of teachers teaching out-of-field?*
- *Do Title 1 Schools with high poverty have a greater percentage of ineffective teachers compared to low poverty districts' percentage of ineffective teachers?*
- *Are Title 1 Schools with a high percentage of minority students taught by inexperienced teachers at a greater rate compared to the average number of inexperienced teachers in the lowest percent minority districts?*
- *Are Title 1 Schools with a high percentage of minority students taught by out-of-field teachers at a greater rate compared to the average number of out-of-field teachers in the lowest percent minority districts?*
- *Are Title 1 Schools with a high percentage of minority students taught by ineffective teachers at a greater rate compared to the average number of ineffective teachers in the lowest percent minority districts?*

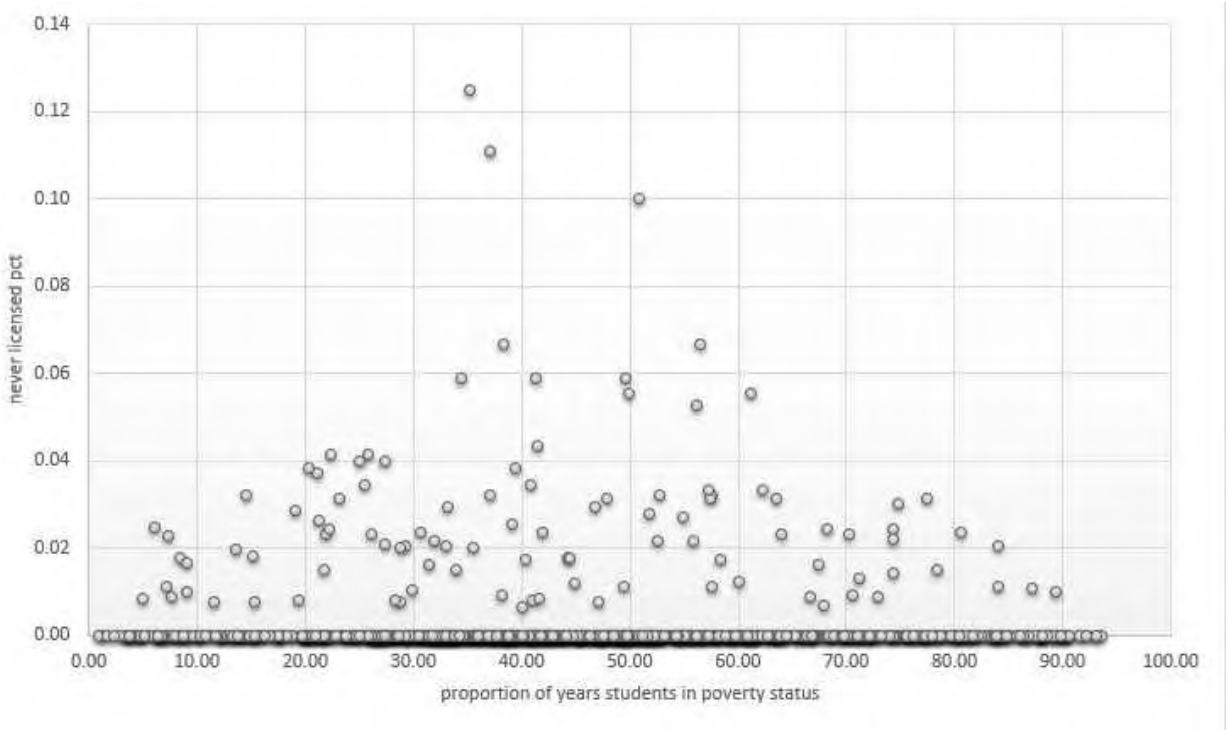
Ineffective

Data from the 2017 Licensed Personnel Report (LPR) showed 89 teachers teaching with

an expired license and 92 teachers were never licensed in Kansas. Further analysis determined that 43% of these teachers were in Title 1 Schools. This analysis will be conducted annually.

The KSDE has defined ineffective teachers as a teacher employed full time in a building who has never been licensed or is teaching on an expired license. The KSDE collects teacher employment data annually by building and is able to accurately report teachers practicing without a valid teaching license. Never licensed teachers have not demonstrated either content or pedagogy training. Teachers must have a minimum of a bachelorette degree and training in both content area and pedagogy to be licensed in Kansas. A teacher with an expired license is someone who has not completed the required professional learning to renew a license. In both cases, the KSDE believes never licensed or expired license teachers put students at a significant disadvantage. The scatter plots below depict a representation of the ineffective teacher data for low-income and minority children.




never licensed pct
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.00
10.00
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30.00
40.00
50.00
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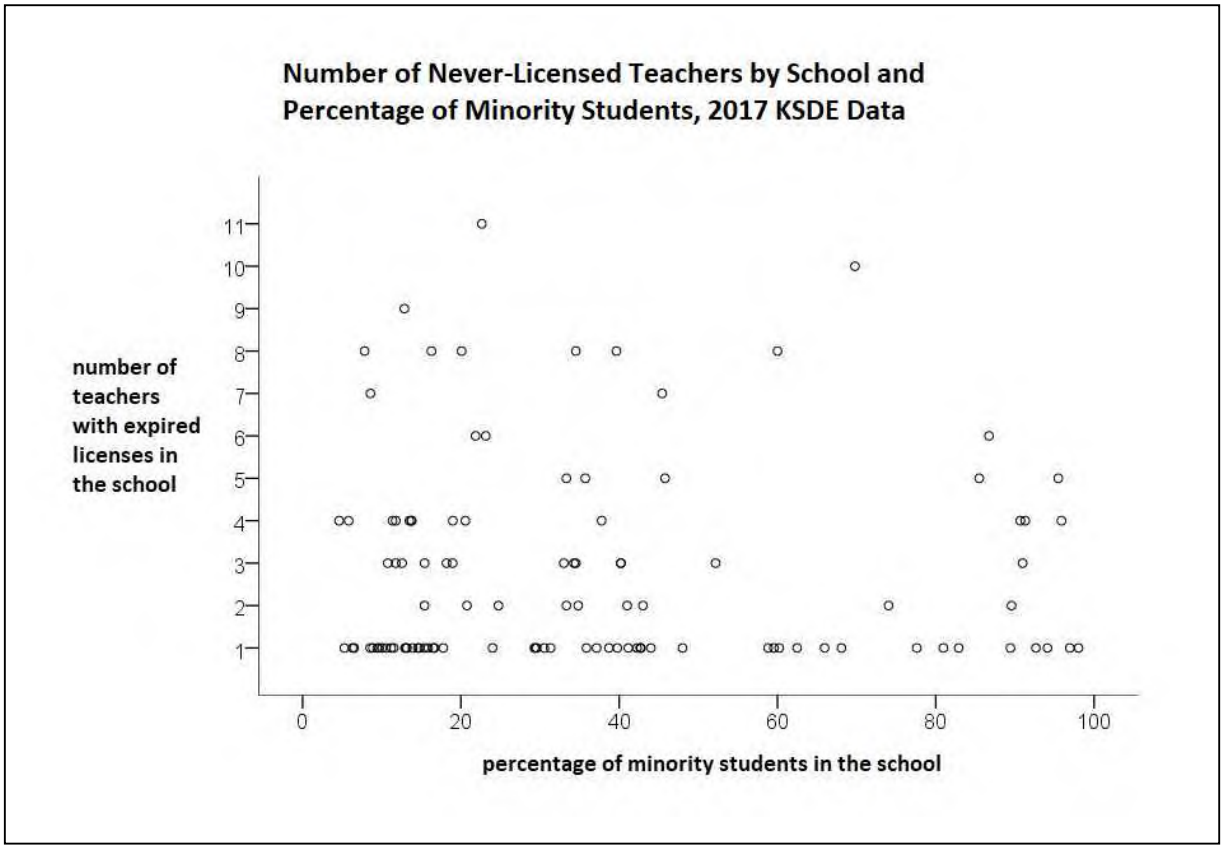
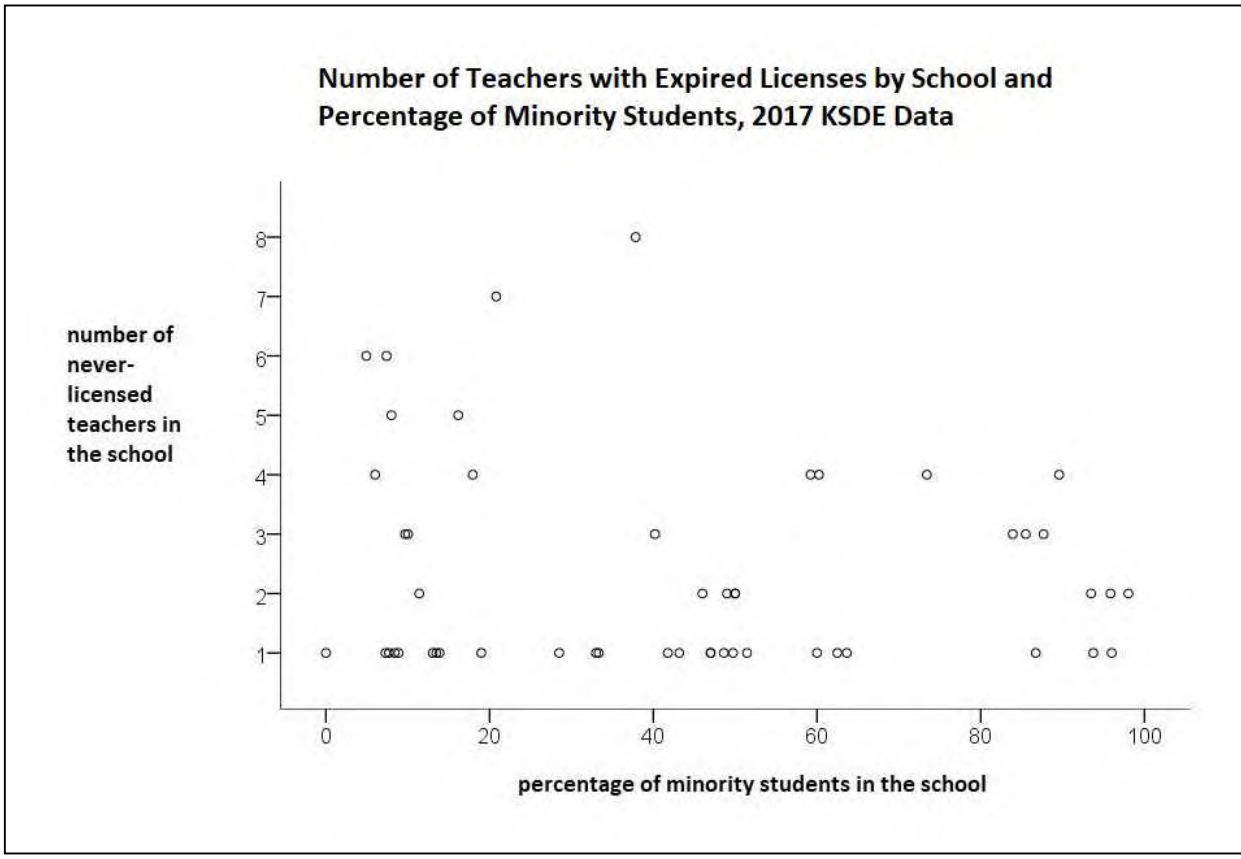
80.00
90.00
100.00
proportion of years students in poverty status


Number of Never-Licensed Teachers by School and Percentage of Minority Students, 2017 KSDE Data
number of teachers with expired licenses in the school
11
10
9
8
7
6
5
4
3
2
1
0
20
40
60
80
100
percentage of minority students in the school



Inexperienced

Scatterplot Representations of Data. In the following scatter plots, the KSDE has chosen to use the five percent of schools, including Title 1 Schools and districts at both extremes of the scatter plot to accentuate and calculate gaps in data around access to excellent educators in Kansas. Kansas also looked at the gaps between the upper and lower 10 percent and 25 percent of schools, including Title 1 Schools and districts. When the larger numbers of schools and/or districts were included, the gaps between teachers with less than three years of experience and percent poverty or percent minority was diminished. Districts are provided data for the upper and lower 10 percent and 25% to determine any discrepancies within their schools, including Title 1 Schools.

Kansas recognizes the research that supports the change in effectiveness between a first and second year teacher, however, when the KSDE analyzed data between the distribution of first and second year teachers in high poverty and high minority districts, no gap was found. Kansas chose to use the "less than three year" definition for an inexperienced teacher.

Percent Poverty Effect on Access to Excellent Educators in Title 1 Schools

Figure 1

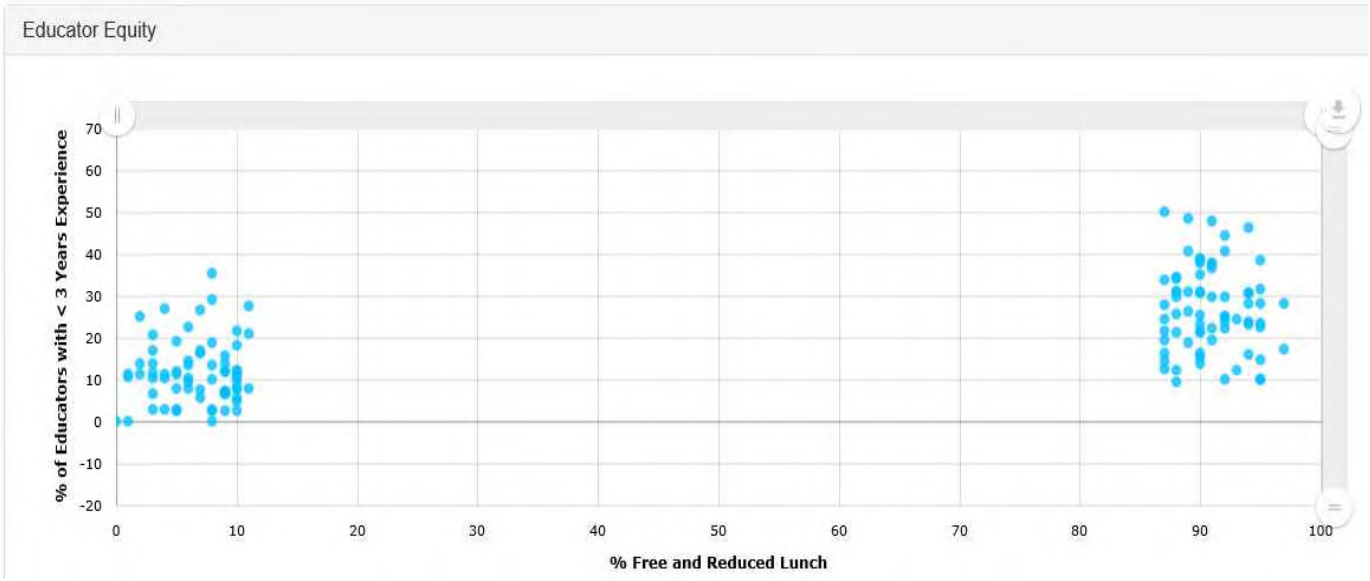


Figure 1 compares the 5 percent of schools, including Title 1 Schools, with the highest percent of poverty and the 5 percent with the lowest percent of poverty to the percent of teachers in a school with less than three years of experience. In the scatterplot above, teachers with less than three years of experience are more often seen in schools with higher poverty rates.

Gap Calculation:	
Average percent of teachers with less than 3 years of experience in the 5% of schools including Title 1 Schools with the highest percent of free and reduced price lunches	27.3
Average percent of teachers with less than 3 years of experience in the 5% of schools including Title 1 Schools with the lowest percent of free and reduced price lunches	11.24
Inexperienced Teacher and Free and Reduced Gap, Schools(difference between Row 1 and Row 2)	16.06

Figure 2

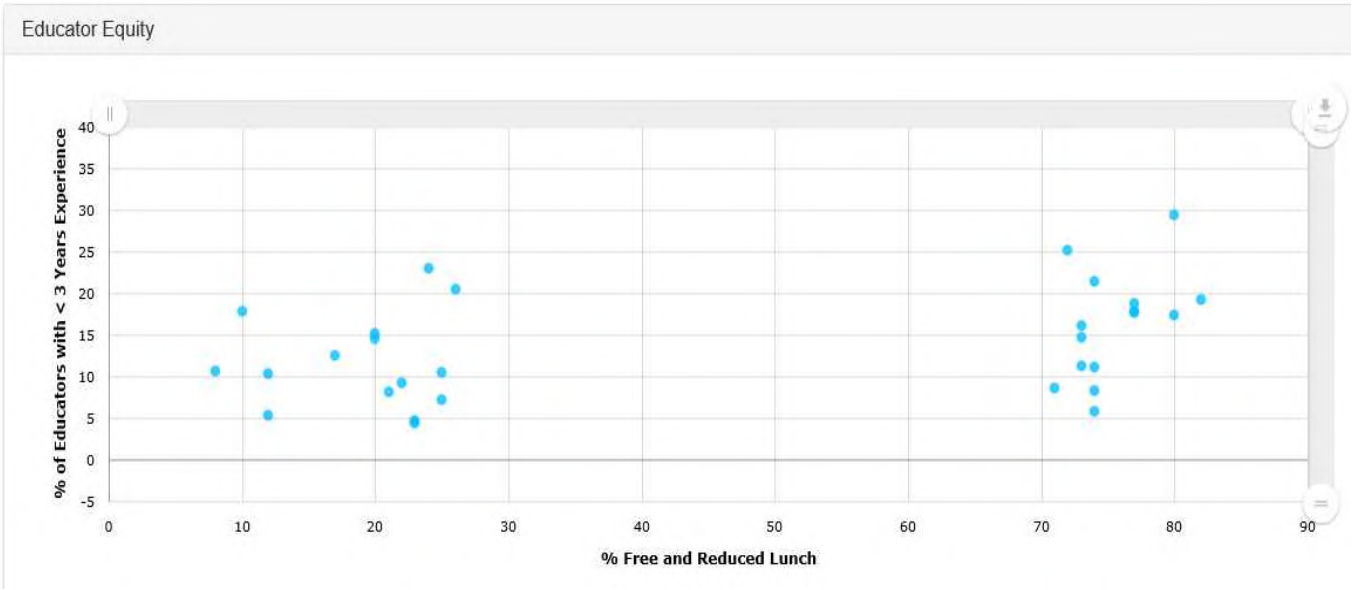


Figure 2 compares the 5 percent of districts with the highest percent of poverty and the 5 percent with the lowest percent of poverty to the percent of teachers in a district with less than three years of experience. The data shows a gap in distribution of experience. Teachers in districts with high poverty are more likely to employee teachers with less than three years of experience.

Gap Calculation:	
Average percent of teachers with less than three years of experience in the 5 percent of districts with the highest percent of free and reduced price lunches	16.71
Average percent of teachers with less than three years of experience in the 5 percent of districts with the lowest percent of free and reduced price lunches	10.93
Inexperienced Teacher and Free and Reduced Gap, District (difference between Row 1 and Row 2)	5.78

Figure 4

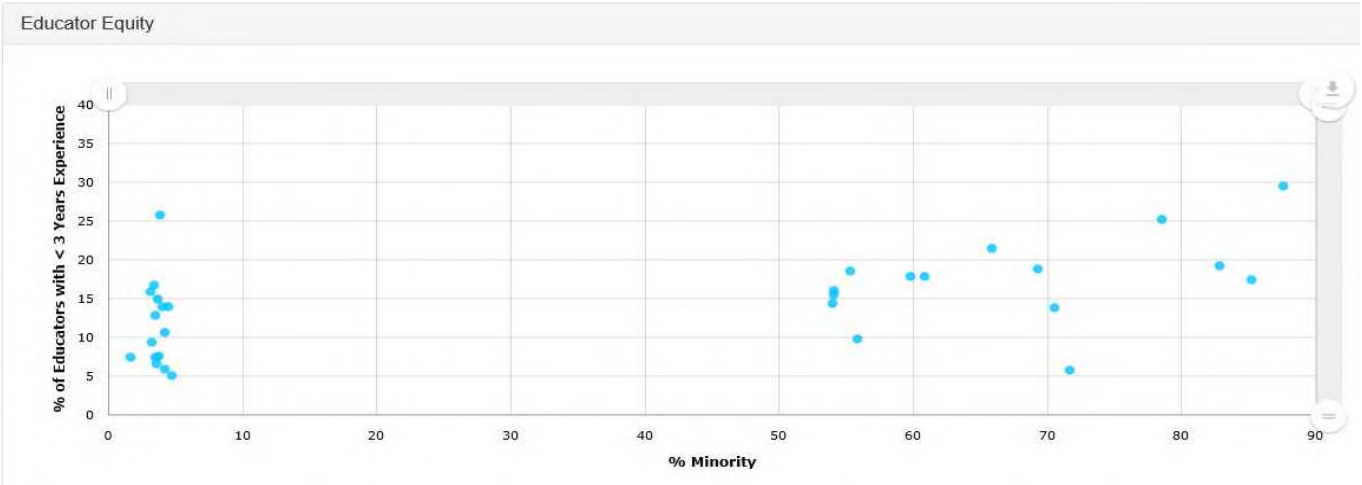


Figure 4 compares the 5 percent of districts with the highest percent minority population and the 5 percent with the lowest percent minority population to the percent of teachers in a district with less than three years of experience. The data shows a gap in distribution of experience. Teachers in districts with high minority populations are more likely to employee teachers with less than three years of experience.

Gap Calculation:	
Average percent of teachers with less than three years of experience in the 5 percent of districts with the highest percent minority students	17.56
Average percent of teachers with less than three years of experience in the 5 percent of districts with the lowest percent of minority students	12
Inexperienced Teachers and Minority Gap, District (difference between Row 1 and Row 2)	5.56

Out-of-Field

The table below illustrates the current reality in Kansas concerning out-of-field teachers. The KSDE studied out-of-field teachers, those teachers with a valid Kansas teaching license but without proper subject/area endorsements, and found that little to no gap existed. The KSDE understands that, even though no gap is apparent at the state level, there may be gaps at the individual district level. Each district has access to the specifics of their district data provided by the KSDE in order to make comparisons among schools, including Title 1 Schools.

	% Out-of – Field at Building Level in Low % F&R Buildings	% Out-of-Field at Building Level in High % F&R Buildings		% Out-of-Field at District Level in Low % F&R Districts	% Out-of-Field at District Level in High % F&R Districts		% Out-of – Field at Building Level in Low % Minority Buildings	% Out-of-Field at Building Level in High % Minority Buildings		% Out-of-Field at District Level in Low % Minority Districts	% Out-of-Field at District Level in High % Minority Districts
Ave	0.0295573	0.0664964	Ave	0.0765979	0.089657	Ave	0.0835582	0.0630853	Ave	0.1870795	0.1085507
Gap	**0.04%**		**Gap**	**0.01%**		**Gap**	**No Gap**		**Gap**	**No Gap**	

Conclusions

Data from the Kansas Educator Data Collection System, which is Kansas's system for collecting, analyzing, and reporting data on public school teachers, administrators and other staff, indicates that:

- *Gap 1: Students in Title 1 Schools with high concentrations of low-income students are taught at higher rates by **inexperienced** teachers than students in Non-Title 1 Schools with low concentrations of low-income students.*
- *Gap 2: Students in districts with high concentrations of low-income students are taught at higher rates by **inexperienced** teachers than students in districts with low concentrations of low-income students.*
- *Gap 3: Students in Title 1 Schools with high concentrations of minority students are taught at higher rates by **inexperienced** teachers than students in Non-Title 1 Schools with low concentrations of minority students.*
- *Gap 4: Students in districts with high concentrations of minority students are taught at higher rates by **inexperienced** teachers than students in districts with low concentrations of minority students.*

Likely Causes of Most Significant Differences

Root Cause Analysis. The root cause analysis consisted of two steps: (1) using available data to brainstorm a complete list of root causes behind the equity gaps and (2) categorizing these root causes by themes.

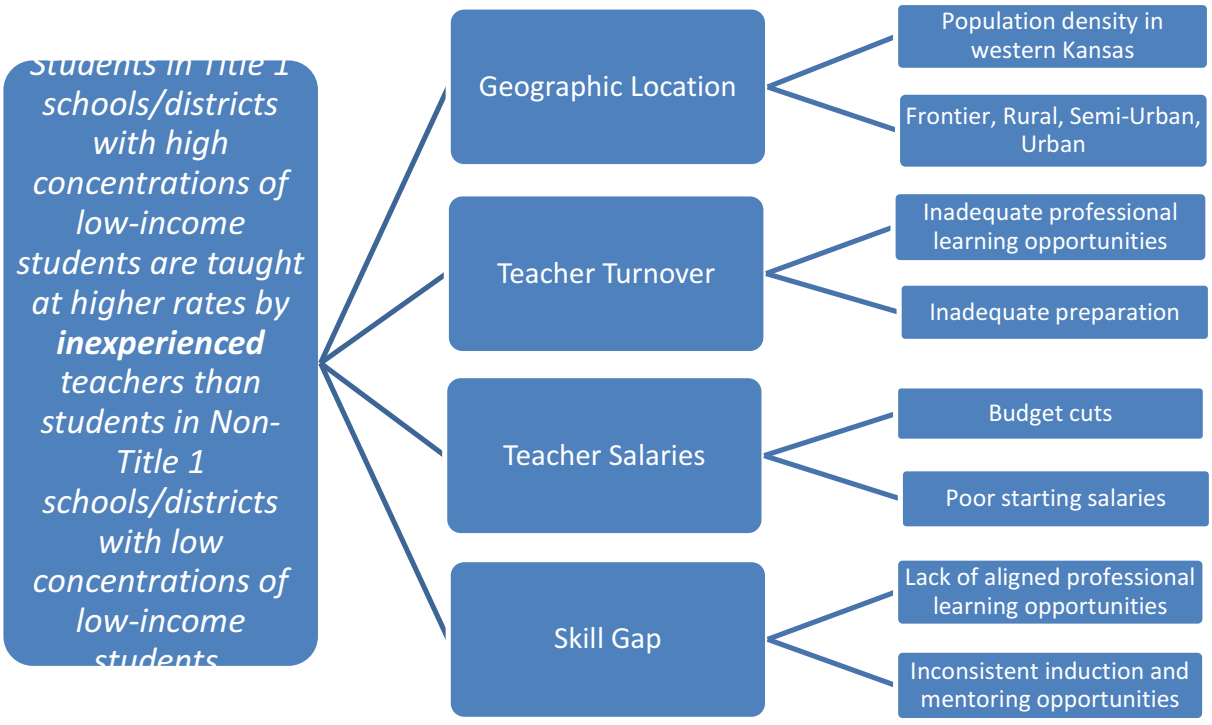
Because equity work happens at the state and district levels, the KSDE chose to combine Gaps 1 and 2, and Gaps 3 and 4. The KSDE created diagrams to illustrate the root causes believed to hinder student access to excellent teaching in Kansas in regard to these two gaps. Continuous root cause analysis of gaps appearing in current data, as well as future data, will be examined using a root cause analysis, and appropriate strategies will be implemented in order to ensure an excellent educator in every classroom.

The following two diagrams represent the process used for root cause analysis. The KSDE has analyzed data using:

- *Kansas maps for geographical comparisons,*
- *Teacher attrition rates,*
- *Teacher average salaries, and*
- *Input from various stakeholder groups.*

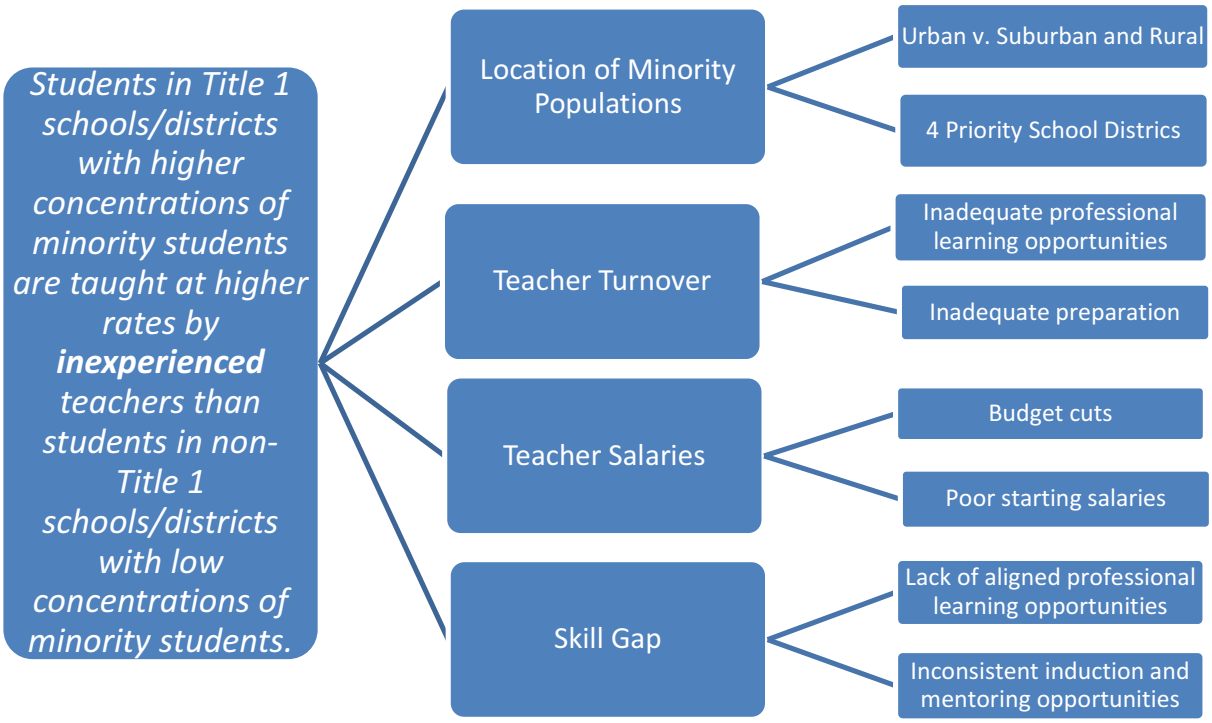
Root Cause Analysis, Equitable Access Gap to Excellent Educators

- *Gap 1: Students in Title 1 schools with high concentrations of low-income students are taught at higher rates by **inexperienced** teachers than students in non-Title 1 Schools with low concentrations of low-income students.*



Root Cause Analysis, Equitable Access Gap to Excellent Educators

- *Gap 2: Students in Title 1 Schools/districts with higher concentrations of minority students are taught at higher rates by **inexperienced** teachers than students in Non-Title 1 Schools/districts with low concentrations of minority students.*



Kansans believe: If a comprehensive approach to ensuring all students have access to excellent educators is implemented and monitored over time,

Then Kansas school districts will be better able to recruit, retain, and develop excellent educators so that all students have equitable access to excellent teaching and learning to help students achieve their highest potential in school.

Core Principles as Seen in Theory of Action

- *Consistent with regulatory language, the KSDE will focus on students who are from Title 1 Schools with larger populations of low-income students and schools with larger populations of minority students and students with disabilities. However, the KSDE recognizes that there may be other features in Kansas that would prevent students from gaining equitable access to*

excellent teachers, e.g. rural schools, advanced degrees, English language learners.

- *The KSDE has relied on multiple sources of data, using the Kansas Multi-Tier System of Supports' self-correcting feedback loop to analyze the data and identify gaps. Once gaps were discovered, additional data has been gathered for root cause analysis. Working with stakeholder groups, differing perspectives have improved the KSDE's ability to analyze the data and gain a better understanding of the root causes of lack of access to excellent teachers by all students, especially students from low-income families and minority students.*

- *The KSDE will provide supports for experienced teachers, novice teachers and teacher candidates. As an initial proxy measure, the KSDE will report the percentage of teachers in a Title 1 School who have three years of experience or less as well as those teachers with an initial license (generally, one year) and a professional license. Therefore, the KSDE will continue to support both the experienced and novice teachers with the equitable access strategies.*
- *The KSDE has developed a structure to solicit feedback from stakeholders, including the Kansas ESEA Advisory Council to ensure that the KSDE receives the input and information necessary to continuously improve the theory of action and improve equitable access.*

Four Key Strategies

To achieve Kansas's educator equity objectives, the KSDE intends to initially pursue four key strategies that correspond to the root causes behind the gaps:

1. *Ongoing professional learning;*
2. *Ongoing development, training and access to a secure system for educators to access data around the elements of the Equitable Access ;*
3. *Teacher/Leader Preparation;*
4. *A system of teacher evaluation to include ratings that will inform individual professional learning needs.*

These strategies were identified through root cause analysis with the input of key stakeholders. The KSDE provides professional learning opportunities in data analysis and root cause analysis to district staff, school staff, instructional coaches and education service centers. The KSDE will collect and report teacher experience, and licensing data at the district and school levels on the state, district, and school level report cards.

6. School Conditions (*ESEA section 1111(g)(1)(C)):* Describe how the SEA agency will support LEAs receiving assistance under Title I, Part A to improve school conditions for student learning, including through reducing: (i) incidences of bullying and harassment; (ii) the overuse of discipline practices that remove students from the classroom; and (iii) the use of aversive behavioral interventions that compromise student health and safety.

The Kansas State Department of Education understands the importance of improving school conditions and providing a safe learning environment for all kids in Kansas. As discussed in the Introduction, Social Emotional Character Development is one of the five board outcomes of the Kansas State Board of Education. The KSDE will provide supports to meet the outcome at the systems level, working with districts across Kansas that have self-identified the need for Universal Support and Improvement in the area of social emotional character development.

Creating positive learning environments is a responsibility of teachers while improving behaviors is a responsibility of schools[9]. The KSDE has a responsibility to establish policies and procedures to support schools in improving behaviors so that teachers may create positive learning environments.

The KSDE will seek out expertise in social and emotional character development, including the Kansas Technical Assistance System Network (TASN)[10] providers and Kansas MTSS[11]. Kansas has a history of implementing the CHAMPS program for increasing positive behaviors, interventions, and supports[12] and environments focused on instruction.

The KSDE makes available funds from Title I, Part A, or other included programs, to support efforts on prevention of bullying and harassment. These efforts include, but are not limited to, providing resources to district staff and families on bullying prevention, the promotion of Anti-Bullying Awareness Week, providing technical assistance on positive behavior supports, and de-escalation techniques. Resources are available through TASN and Kansas Safe Schools Resource Center. The Kansas Safe Schools Hotline is available to educators and families. The KSDE collects and analyzes data on incidents of bullying and harassment, seclusion and restraint in order to make informed decisions about supports to school districts.

The KSDE makes available funds from Title I, Part A, or other included programs, to continue the efforts on prevention of the overuse of discipline practices that remove students from the classroom that the KSDE has ongoing. These efforts include, but are not limited to, the analysis of all in-school suspension, out-of-school suspension, and expulsion data for inclusion in the data analysis used to provide targeted technical assistance to school districts. If a district's data indicates that district staff may be overusing discipline practices that remove students from the classroom, the KSDE would work with the district to try to determine the cause of this practice. The KSDE would then point district staff to resources that will help provide staff with additional tools to keep students in the classroom and not overuse exclusionary discipline.

The KSDE make available funds from Title I, Part A, or other included programs, to continue the efforts on prevention of the use of aversive behavioral interventions that compromise student health and safety. These efforts include, but are not limited to, providing resources to district staff and families to help them understand the Kansas laws on the use of aversive behavioral interventions; training for district staff in prevention techniques, de-escalation techniques and positive behavioral intervention strategies; data

[9] www.osepideasthatwork.org
[10] www.ksdetasn.org
[11] www.kansasmtss.org
[12] www.pbis.org

analysis of the use of seclusion and physical restraint; and targeted technical assistance for those schools reporting high numbers of seclusion and physical restraint duration and incidents.

The KSDE makes available funds from Title I, Part A, or other included programs, to partner with 21st CCLC after school programs, sharing transportation costs and expanding what current takes place.

The KSDE provides support to districts through Kansas Multi-Tier System of Supports (MTSS) training, a coherent continuum of evidence based, system-wide practices to support a rapid response to academic and behavioral needs, with frequent data-based monitoring for instructional decision-making. Through MTSS, the Kansas IDEA (IDEA) State Performance Plan, State Systemic Improvement Plan (SSIP), Indicator 17 coherent improvement strategy results in a realigned, reallocated, collaborative professional learning infrastructure, which increases the capacity of districts to implement evidence-based instruction and interventions for each student. The IDEA SSIP Short-term, medium, and long-term outcomes, informed by stakeholder involvement, directly align with the Kansas ESEA state plan. District adoption of the Kansas MTSS Integrated Framework includes a proactive approach to improving academic performance, positive behavioral supports and interventions that promote student health and safety, improved social and emotional competency, and decreased removals from the classroom.

7. School Transitions *(ESEA section 1111(g)(1)(D))*: Describe how the State will support LEAs receiving assistance under Title I, Part A in meeting the needs of students at all levels of schooling (particularly students in the middle grades and high school), including how the State will work with such LEAs to provide effective transitions of students to middle grades and high school to decrease the risk of students dropping out.

Within the KSDE TASN network, there is a focus on decreasing dropout rates, increasing graduation rates, and improving the preparedness of middle school students for transitioning high school and staying on-track for graduation. Within the Kansas MTSS framework, participating districts analyze early warning systems data in conjunction with the social, emotional, and behavioral content they develop and implement.

The term Early Warning Systems comes from the tool created by the National High School Center, which was based on Chicago Schools Research that indicated that the combination of attendance and failing at least one course in ninth grade had a significant impact on whether students stayed on-track to graduate in four years[13].

Kansas MTSS takes the early warning indicators a step further in implementation by working with districts to set up sustainable systems to connect at-risk students to targeted interventions at a rapid response rate to reduce the impact these risk factors pose. This rapid response system is in place for elementary, middle, and high school students to improve successful transitions between schools, as well as decrease the impact the risk factors can have on a student's preparedness and success in high school coursework.

[13] Stuit, D., O'Cummings, M., Norbury, H., Heppen, J., Lindsay, J. , & Shu, B. (2016). *Identifying Early Warning Indicators in Three Ohio School Districts.* IES Report retrieved from http://www.earlywarningsystems.org/wp-content/uploads/2016/10/REL_2016118.pdf.

Additionally, the state of Kansas has established five State Board of Education outcomes that are associated directly with positive and productive transitions between middle and high school as well as transition to post-secondary education and careers. A focus on career awareness, graduation rates, post-secondary attendance and completion, social emotional growth and individual plans of study provide the school districts across the state with guidance and fundamental activities to conduct to affect the positive transitions of all students.

Individual Plans of Study is a board objective for the Kansas State Board of Education. Kansas has implemented a plan that would ensure that every middle school and high school student in Kansas would have an individual plan of study (IPS). The IPS helps prepare students for the transition from high school to post-secondary aspirations.

The scope of projects as well as content devoted to increasing graduation rates and preparing students for high school and beyond is widespread in the state of Kansas. Kansas MTSS as a TASN project is dedicated to ensuring that middle and high schools implementing MTSS increase student engagement and improve the opportunities for college and career readiness for all students. Kansas MTSS addresses all KSBE board outcomes to include the kindergarten readiness outcome as well as the more secondary and career focused outcomes mentioned earlier. The TASN Research Collaboration group, as well as the TASN Autism Tertiary Behavior Supports group, also contribute significantly to the awareness and connection to college and career readiness across the state.

With the board outcomes and the various opportunities for content and trainings within TASN, an emphasis on smooth transitions from middle to high school and high school to adulthood is well represented.

B. Title I, Part C: Education of Migratory Children

1. Supporting Needs of Migratory Children *(ESEA section 1304(b)(1))*: Describe how, in planning, implementing, and evaluating programs and projects assisted under Title I, Part C, the State and its local operating agencies will ensure that the unique educational needs of migratory children, including preschool migratory children and migratory children who have dropped out of school, are identified and addressed through:
    i. The full range of services that are available for migratory children from appropriate local, State, and Federal educational programs;
    ii. Joint planning among local, State, and Federal educational programs serving migratory children, including language instruction educational programs under Title III, Part A;
    iii. The integration of services available under Title I, Part C with services provided by those other programs; and
    iv. Measurable program objectives and outcomes.

    The Kansas statewide recruiting system provides year-round Identification and Recruitment (ID&R) coverage for the entire state with a focus on all aspects of the migrant population. It supports services required by the unique demands of the migrant lifestyle and blends local and statewide perspectives into a substantial and resourceful system of migrant support. In all regions of the state, recruiters and liaisons work together to ensure collaboration, coordination, and a statewide perspective to ensure all eligible migrant students have the opportunity to meet the same academic and content standards as non-migratory students. The responsibilities of the statewide recruitment specialists are as follows:

    - *Review of time and effort logs of all recruiters*
    - *Directing the identification and recruitment efforts for the State of Kansas*
    - *Coordination of activities of Tier II recruiters*
    - *Identification of training/mentor needs of individual recruiters*
    - *Collaboration with the Staff Development Specialist*
    - *Review of Qualifying Activities*
    - *Evaluation of the quality of recruiter performance, and*
    - *Evaluation of the effective use of staff development*

    One of the strategies used to increase the effectiveness of the ID&R efforts is creating networks by coordinating with organizations and agencies that provide services to migrant workers and families. The recruiter prioritizes the resources that migrant students, youth or workers may need during home visit to determine if the family may qualify as migrant under the statute.

    The state of Kansas uses the continuous improvement cycle as outlined by the Office of Migrant Education. A Comprehensive Needs Assessment (CNA) is conducted to identify concerns and determine the needs of migrant children ages 3-21. A committee of stakeholders convenes to review the results of the CNA and develop recommendations to address those needs. The Needs Assessment Committee (NAC) is made up of members representing the state and districts at both the district and school level, recruiters, service centers, state and local parent advisory committee members, technical assistance providers and quality control personnel. The NAC meets to review the CNA, study current data, and identify and establish Concern Statements regarding the unique educational factors influencing migrant student

achievement for preschool children, students grades K-12, and out-of-school youth. This information is then passed on to the Service Delivery Plan committee for development of strategies to address these needs.

The results of the CNA are included in the Kansas Migrant Education Service Delivery Plan (SDP), which targets student needs and provides recommendations and strategies to meet those needs. Each year, districts receiving migrant funds, as part of their Local Consolidated Plan, submit details as to how to address the needs identified in the SDP.

To ensure unique needs of preschool migratory children and migratory children who have dropped out of school are identified and addressed, the KSDE:

- *Generates a monthly list of newly turned three year olds and sends to recruiters to verify residence in the state and offer services in the program, and*
- *Utilizes the statewide Out-of-School Youth (OSY) project, which tracks Kansas dropouts, to contact all out-of-school youth for residence verification and to provide services.*
- *Advocates for the OSY project counseled dropouts to return to school to receive a high school diploma, or encouraged them to complete a GED through online or alternative school coursework. Advocates work with local homeless liaison's to determine if dropouts are eligible for McKinney-Vento services.*
- *The KSDE has developed partnerships with the Department of Children and Families and the Kansas Department of Health and Environment as well as their federal counterparts to ensure that all migrant students, including preschool and those that have dropped out, receive services from all community, state and federal programs for which they may be eligible.*

The Kansas MEP implements a variety of instructional and support programs designed to meet the needs of migrant students including supplemental instructional services during the regular school year, summer school programs, secondary credit accrual opportunities, parent involvement activities and Parent Advisory Committee meetings, and professional development designed to increase staff ability to provide high quality instruction. In addition, Kansas conducts intensive statewide identification and recruitment across the state that is verified by processes and procedures for data quality control.

External evaluators are contracted to assist KSDE to 1) ensure objectivity in evaluating the Kansas MEP, 2) examine the implementation and effectiveness of services, and 3) make recommendations to help the State improve the quality of the services provided to its migrant students. The external evaluators work collaboratively with MEP staff to:

- *develop and update data collection tools (e.g., surveys, observation protocols);*
- *conduct evaluation interviews, structured observations, and focus groups;*
- *review student achievement data and other outcomes such as graduation rates and courses completed toward graduation;*
- *observe the operation of the local MEPs through a structured observation and summarize field notes about project implementation, including the coordination of other state and federal programs (Title I, Part A, Title III and state ESOL, etc.) with Title I, Part C to meet the needs of migratory children.*
- *analyze data and prepare an evaluation report containing information about the extent to which program processes such as professional development, parent involvement, and other activities described in the Kansas SDP are implemented as planned to achieve the State's measurable objectives.*

The implementation of services are examined for effectiveness through onsite visits from MEP staff to observe instructional strategies, conduct interviews and surveys, and examine data available on students served and the types of activities provided. Onsite observations conducted by SEA staff use the Quality of Strategy Implementation rubric (QSI). The QSI is used to rate the implementation of each strategy identified in the SDP using a five-point rating scale. A rating of four (4) indicates sufficient implementation of the strategy.

In addition, The Kansas State Department of Education structure places most of the federal program personnel on the Early Childhood, Special Education, and Title Services team. This structure allows for coordination and communication between program personnel to ensure the needs of all students are being met through all applicable programs.

2. Promote Coordination of Services (*ESEA section 1304(b)(3)*): Describe how the State will use Title I, Part C funds received under this part to promote interstate and intrastate coordination of services for migratory children, including how the State will provide for educational continuity through the timely transfer of pertinent school records, including information on health, when children move from one school to another, whether or not such move occurs during the regular school year.

Coordination of services in Kansas is supported through an ID&R Staff Development Coordinator responsible for the staff development statewide to ensure the quality of ID&R services. This Coordinator develops and presents fall and spring ID&R meetings in the regions; provides staff development sessions at a Summer State Migrant Education Program (MEP) workshop; develops and provides training for all new recruiters and seasoned recruiters for the State; implements individual ID&R staff development plans addressing the specific training needs of the recruiter; and provides one-day onsite visitations with each recruiter to review the staff development plans and the progress toward meeting its objectives.

Currently, the KSDE participates in two Consortium Incentive Grants (CIG's): the Graduation and Outcomes for Success for Out-of-School Youth (GOSOSY) CIG, and the Identification and Recruitment Rapid Response Consortium (IRRC) CIG.

Kansas serves as the lead state for the GOSOSY CIG, which partners with 16 other states. The goal of GOSOSY is to:

- *design, develop, and disseminate a system to identify, recruit, assess, and develop/deliver services to migrant out-of-school youth,*
- *provide professional development to support these activities, and*
- *institutionalize GOSOSY services into State plans to elevate the quantity and quality of services to this large, underserved population.*

Kansas is also an active member in the Identification and Recruitment Rapid Response Consortium IRRC CIG, which includes 13 other states. The goal of the IRRC is to:

- *Design and develop systems, materials, strategies, and resources for the consistent and reliable ID&R of eligible migrant children and youth that are adaptable to small and large states, summer and regular year programs, and diverse state and local contexts.*
- *Expand states' capacity through the sharing of resources, mentoring, and the deployment of a rapid response team of veteran ID&R specialists; and*
- *Disseminate effective evidence-based ID&R practices throughout the MEP community.*

The Kansas MEP is responsible for promoting inter- and intra-state coordination of services for migrant children, including providing for educational continuity through the timely transfer of pertinent school records. To assist with this task, the Kansas migrant data system houses Certificates of Eligibility (COE), as well as information on student enrollment, PFS, courses, and services/referrals for migrant-eligible children in Kansas.

The Kansas Migrant System interfaces with the U.S. Department of Education's Migrant Student Information Exchange (MSIX) to allow the State to complete inter- and intra-state student reports and support the linkage of migrant student record systems across the country. The KSDE uses the MSIX to ensure appropriate enrollment, placement and accrual of credits for Kansas migrant students. The KSDE uses the Kansas Migrant System to provide student data, as required, for the State Comprehensive State Performance Report (CSPR) and to meet other Federal and State data requirements.

Based on the state of Kansas' most recent Migrant Comprehensive Needs Assessment, the following Needs/Concerns were identified:

1. *The KSDE is concerned that, as a result of migrancy, migrant children ages three through five are not prepared for school.*
2. *The KSDE is concerned that, as a result of migrancy and mobility, fewer migrant students* score proficient or above on the Kansas English language arts and math assessments than non-migrant students*
3. *The KSDE is concerned that, as a result of migrancy, migrant students* are not accruing adequate credits to graduate on time.*
4. *The KSDE is concerned that, as a result of migrancy, only a small percentage of migrant OSY that are served are engaged in activities that lead to school re-engagement, GED prep, or other educational offerings (i.e., reading/math instruction).*

3. Use of Funds *(ESEA section 1304(b)3))*: Describe the State's priorities for the use of Title I, Part C funds, and how such priorities relate to the State's assessment of needs for services in the State.

The current measurable program objectives and outcomes for Title I, Part C, and the strategies the SEA will pursue on a statewide basis to achieve such objectives and outcomes, are consistent with section 1304(b)(1)(D) of the ESEA.

MPO 1: School Readiness
1a) By the end of the 2014-15 school year and each year thereafter, 70 percent of 4 year old preschool students that have attended a migrant-funded family literacy or preschool program for at least one school year will score kindergarten ready on an appropriate assessment.

1b) By the end of the 2014-15 school year and each year thereafter, 80 percent of migrant parents surveyed who attend at least two migrant-funded parent involvement events will assign a rating of four or five (on a five-point scale) indicating that the events helped them learn ways to help their children become ready for school.

Strategies:

1.1 Provide supplemental school readiness instruction during the regular year and summer programs to migrant three-year-old children that are not yet in school.

1.2 Coordinate with existing community programs and social services agencies addressing the needs of migrant children from birth to school age.

1.3 Distribute information to migrant families about early childhood school readiness programs available to enroll migrant infants and toddlers as well as three and four year old migrant children, as appropriate.

1.4 Provide parent education events, family literacy events, book distributions, literature/ educational materials, and strategies for parents to promote school readiness for their children.

1.5 Provide access to pre-school services for a greater number of migrant students.

MPO 2: Proficiency in English Language Arts and Mathematics

2a) By the end of the 2014-15 year and each year thereafter, the percentage gap between migrant and non-migrant elementary/middle school-aged students meeting state standards on the district/state approved English language arts assessment will decrease by two percent.*

2b) By the end of the 2014-15 year and each year there-after, 75 percent of migrant students participating in a migrant-funded summer program for at least 3 weeks will demonstrate a five percent gain on a local assessment in English language arts administered at the beginning and end of the summer program.*

2c) By the end of the 2014-15 year and each year thereafter, the percentage gap between migrant and non-migrant elementary/middle school-aged students meeting state standards on the district/state approved math assessment will decrease by two percent.*

2d) By the end of the 2014-15 year and each year thereafter, 75 percent of migrant students participating in a migrant-funded summer program for at least 3 weeks will demonstrate a 5 percent gain on a local assessment in math administered at the beginning and end of the summer program.*

2e) By the end of the 2014-15 school year and each year thereafter, 35 percent of migrant students who enter 11th grade will have received full credit for Algebra or another high math course.*

2f) By the end of the 2014-15 year and each year thereafter, the percentage gap between migrant and non-migrant students meeting state standards on the district/state approved English language proficiency assessment will decrease by 2 percent.*

2g) By the end of the 2014-15 school year and each year thereafter, there will be a quality implementation rating of four or five (on a five-point Fidelity of Implementation Index scale) for 90 percent of the academic and support services offered to migrant students in non-project areas.

2h) By the end of the 2014-15 school year and each year thereafter, there will be a 2 percent decrease in non-proficient migrant students on the State-approved English language arts assessment.*

2i) By the end of the 2014-15 school year and each year thereafter, there will be a 2 percent decrease in non-proficient migrant students on the State-approved math assessment.*

Strategies:

2.1 Provide supplemental needs-based, research-based reading instruction with appropriate progress monitoring and instructional adjustments for migrant students during the regular term and summer term.

2.2 Provide supplemental needs-based, research-based mathematics instruction with appropriate progress monitoring and instructional adjustments for migrant students during the regular term and summer term.

2.3 Provide supplemental needs-based, research-based English language instruction with appropriate progress monitoring and instructional adjustments for migrant students during the regular term and summer term.

2.4 Provide academic and support services to non-project areas through the northwest and southwest Kansas service centers.

MPO 3: Graduation from High School and Services to OSY

3a) By the end of the program year, the percent of migrant students dropping out of high school will decrease by .1 percent.

3b) By the end of the program year, 80 percent of migrant secondary students enrolled in credit accrual opportunities (e.g., PASS, summer academies, and district opportunities) will earn ½ credit toward high school graduation.

*3c) By the end of the program year, 90 percent of migrant **OSY** enrolled in instructional and supportive services will be on track in an OSY Learning Plan based on an OSY Profile [as indicated on the Quality of Strategy Implementation tool (QSI]*

Strategies:

3.1 During the regular term and summer term, offer supplemental credit accrual options and supplemental instruction leading to graduation.

3.2 During the regular term and summer term, provide educational opportunities to help middle school and high school-aged migrant students plan for postsecondary education and a career.

3.3 During the regular term and summer term, provide supplemental education for OSY appropriate for academic needs through a statewide OSY project.

3.4 During the regular term and summer term, promote academies and workshops focused on credit accrual.

3.5 Participate in interstate projects to support student achievement and outcomes such as migrant Consortium Incentive Grants, PASS programing, and other appropriate interstate collaboration efforts.

MPO 4: Non-Instructional Support Services
4a) By the end of the program year, 50 percent of migrant parents will participate in two family involvement activities (e.g., parent literacy night, parent workshops, etc.) focusing on increasing the ability to support the child's academics.

4b) By the end of the program year, 50 percent of migrant parents of students in grades 7-12 will report on a parent survey the participation in the development of the child's IPS.

4c) By the end of the program year, 80 percent of migrant parents will report an increased awareness of available resources and support.

Strategies:
4.1 Provide activities and resources to facilitate parent involvement and parent education in the schools including family literacy nights (e.g., transportation, childcare, alternate meeting times, meals).

4.2 Involve migrant parents and staff in the development and communication of the importance of migrant students' IPS.

4.3 During the regular term and summer term, collaborate with other funding sources and agencies to include migrant students in supportive programs based on student needs (e.g., general health, nutrition, medical services).

In order to receive MEP funds, a local school district must implement programs, activities, and procedures that effectively involve migrant parents. The Kansas MEP requires that a local school district receiving MEP funds consult with a Migrant Parent Advisory Council (MPAC) in an organized, ongoing, and timely way, in the planning, review, and improvement of the local MEP.

Parent involvement in the planning of the program enables parents to understand the program and have informed conversations with MEP and school staff about the student's education. Kansas offers information for parents to learn about the MEP, to understand the ID&R process to determine qualification for the program, and ideas on ensuring the child's success in school. Each local MEP sponsors parent development, family events for sharing information and resources, and culminating activities to which parents are invited to participate and bring their families. The Kansas MEP and local projects consult with the MPAC about CNA and the design of the comprehensive SDP by participation of MPAC representatives on the Kansas MEP CNA and SDP committees. The Kansas MEP Policy Guidance governs the MPAC.

The State MPAC goals and objectives are to:

- *have an active MPAC at every MEP project in the State of Kansas;*
- *train local MPAC representatives to become advocates and leaders of their communities;*
- *create a strong MPAC network throughout the State; and*
- *empower parents as primary educators of the children.*

Local MPACs are supported by the State MEP, but have autonomy to make decisions about parent involvement at the local and State levels. They must:

- *be comprised of a representative sample of parents or guardians of eligible migrant children and individuals who represent the interests of such parents;*
- *meet once per month during the regular school year;*
- *be provided by districts with a meeting location. With the assistance of the district, the MPACs plan the time, and agenda well in advance;*
- *schedule meetings convenient for parents to accommodate their work schedules;*
- *provide meeting agendas, minutes, and other materials in a language and format that parents understand; and*
- *establish meeting rules that support open discussion.*

The following criteria are used to determine Priority for Service:

- *Interruption of education during the regular school year including: a move during the previous performance period, a move during the current performance period, absent for two or more weeks and then returns due to migrant lifestyle, withdraws for two weeks and re-enrolls due to migrant lifestyle, or is an Out-of-School Youth.*
- *At Risk of Failing.*
- *Scored level 1 on Kansas English language arts or math assessment, scored level 1 or 2 on Kansas Science Assessment, Scored below proficient on another states assessment, scored below the 50th percentile on norm referenced math or English language arts test, is below grade level on K-3 English language arts diagnostic, is behind in accruing credits for graduation, in a class that is not age appropriate, grades indicating below average performance in any grade level, classified as non-English or limited English proficient, and has repeated a grade level or course.*

Districts, including school districts and service centers, that receive migrant allocations are responsible for making PFS determinations as soon as students enroll. A technical assistance provider visits each district at least twice per performance period to verify that PFS is being recorded.

OR

Every Kansas MEP is required to maintain a list of eligible migrant students as well as a listing of the students actually receiving migrant services. The eligibility list indicates whether a student is determined to have PFS. The Priority for Services Form is intended to serve as documentation for audit purposes and to assist the MEP in determining which migrant students should receive services as a priority. Completed forms are kept on file at the district and readily available upon request.

Whether or not an eligible migrant student meets the PFS criteria, it is important that every MEP enter into the Migrant System the student's "at-risk information" as it provides documentation if the student moves to another district or state. Further, the at-risk designation is data that is used in determining a district's MEP allocation. The

Priority for Services form is one method for collecting the information that is then entered into the migrant database.

All Kansas Migrant Education Programs (MEP) are to have the documentation below.

- *List of eligible migrant students*
- *List of students identified as Priority for Services students*
- *List of services available*
- *List of students receiving migrant services*

C. Title I, Part D: Prevention and Intervention Programs for Children and Youth who are Neglected, Delinquent, or At-Risk

1. Transitions Between Correctional Facilities and Local Programs *(ESEA section 1414(a)(1)(B))*: Provide a plan for assisting in the transition of children and youth between correctional facilities and locally operated programs.

   The Kansas State Board of Education, along with local education agencies and the Kansas Department of Corrections, strongly supports all students in the educational journey and communicates with all stakeholders to ensure a successful transition between programs and/or facilities. The Kansas State Board of Education will provide the following services and supports for children and youth entering, exiting, and transferring between correctional facilities and/or locally operated programs:

   - *Assignment of a Kansas Individual Data on Students (KIDS) identifier for each neglected, delinquent and/or at risk youth. The KIDS system assigns a unique, randomly generated state identification number for every student attending accredited public or private schools in Kansas. This ID number follows the student throughout his/her preK-12 education in Kansas schools. The KIDS identifier follows students between correctional facilities and locally operated programs as well; the KIDS identifier is essential in tracking records and data for students.*
   - *Adoption of graduation expectations that meet or exceed state standards.*
   - *Implementation of an Individual Plan of Study for all students in grades 8 through 12 and modification of the plans as often as needed as new student data becomes available. The Kansas State Board of Education strongly recommends that educational entities implement Individual Plans of Study (IPS) for every student. As students navigate through high school and into career and college, it is imperative that students set educational goals and create a roadmap for success in high school and beyond. This roadmap, or IPS, includes development of a flexible career focus and an education plan that improves the career and technical skills of the student. The IPS is clearly defined, rigorous, and relevant to assure a successful and efficient transition to postsecondary education and/or the workforce. In addition, the IPS will help develop areas of career interest, exploration of career pathways, and search for technical schools, colleges, and training related to areas of interest for each student.*
   - *Transfer and data share of student records, including student assessment data, between facilities/programs, including local education agencies to correctional facilities and/or locally operated programs, and from correctional facilities or locally operated programs to local education agencies, to ensure continuity between programs and facilities using student information systems.*
   - *Allowance for students to continue working on credits after exiting a correctional facility through a Kansas education service center or a local education agency.*
   - *Conducting individual student progress meetings as needed between facilities, to include social workers, counselors, transition mentors, and caseworkers, to evaluate student progress using student records, assessment data, and observations of social/emotional skills.*

2. Program Objectives and Outcomes (ESEA section 1414(a)(2)(A)): Describe the program objectives and outcomes established by the State that will be used to assess the effectiveness

of the Title I, Part D program in improving the academic, career, and technical skills of children in the program.

Kansas has established the following objectives and outcomes to assess the effectiveness of the Title I, Part D program in improving the academic, career, and technical skills of children in the program:

Objective 1: *Title I, Part D programs will provide for individualization of instructional experience beginning with an intake process that includes an identification of each student's academic strengths and weaknesses in English language arts and math.*

> ***Outcome:*** *Each Title I, Part D program will provide educational services for children and youth who are neglected or delinquent to ensure that they have the opportunity to meet challenging State academic content and achievement standards as well as accrue school credits that meet state requirements for grade promotion or secondary school graduation.*

Objective 2*: Title I, Part D programs will ensure that all neglected and delinquent students have the opportunity to transition to a regular community school or other education program operated by a district, complete secondary school, and/or obtain employment after leaving the facility.*

> ***Outcome****: Title I, Part D programs will annually report on the types of transitional services and the number of students that have transitioned from the facilities to the regular community schools or other education programs, completed secondary school, and/or obtained employment after leaving the facility.*

Objective 3*: Title I, Part D programs will ensure (when applicable) that neglected and delinquent students have the opportunity to participate in postsecondary education and job training programs.*

> ***Outcome****: The Kansas State Board of Education strongly recommends that educational entities implement Individual Plans of Study (IPS) for students in grades 8 through 12. As students navigate through high school and into career and college, it is imperative that students set educational goals and create a roadmap for success in high school and beyond. This roadmap, or IPS, includes development of a flexible career focus and an education plan that improves the career and technical skills of the student. The IPS is clearly defined, rigorous, and relevant to assure a successful and efficient transition to postsecondary education and/or the workforce. To assess the effectiveness of the IPS, Title I, Part D programs will annually report on the number of neglected and delinquent students who participate in postsecondary education, job-training programs, receive a recognized certification, or are successfully employed.*

D. Title II, Part A: Supporting Effective Instruction

1. Use of Funds *(ESEA section 2101(d)(2)(A) and (D))*: Describe how the State educational agency will use Title II, Part A funds received under Title II, Part A for State-level activities described in section 2101(c), including how the activities are expected to improve student achievement.

   The KSDE will use Title II Part A funds to support the following activities that are evidence-based and shown to improve and support student achievement for all schools, including comprehensive support and improvement schools:

   - *School leader evaluation and support systems, including induction and mentoring;*
   - *Teacher evaluation and support systems, including induction and mentoring;*
   - *Recruiting and retaining teachers and leaders;*
   - *Teacher and principal professional learning opportunities, including technology in the classroom;*
   - *KansaStar evidence-based indicators of effective practices as the school improvement system;*
   - *Training regarding how to recognize and prevent child abuse; and*
   - *Other supporting activities that meet the purpose of Title IIA.*

2. Use of Funds to Improve Equitable Access to Teachers in Title I, Part A Schools *(ESEA section 2101(d)(2)(E))*: If an SEA plans to use Title II, Part A funds to improve equitable access to effective teachers, consistent with ESEA section 1111(g)(1)(B), describe how such funds will be used for this purpose.

   Not applicable. Kansas does not intend to use Title II Part A funds to improve equitable access to effective teachers.

3. System of Certification and Licensing *(ESEA section 2101(d)(2)(B))*: Describe the State's system of certification and licensing of teachers, principals, or other school leaders

   The KSDE works closely with public and private institutes of higher education in order to graduate teacher and leader candidates who are prepared for a career in teaching and leading. The KSDE has a licensing system that involves multiple types of licenses and endorsements. Licenses include: Initial, Professional, Accomplished, Transitional, and Provisional. The KSDE has implemented alternative routes to the classroom including hard-to-fill positions in science, technology, engineering and math, for those that have a degree in the subject area but do not have a teaching degree, and those that have work and/or skill experience but do not have a teaching degree. This system of certification and licensing is outlined in the "Routes to the Classroom" tables and graphic to follow.

Routes to the Classroom

Background of Applicant	Credential Option(s)	Requirements	Examples or notes
Already licensed teacher	Add needed teaching endorsement by testing	• Complete Praxis content test with passing score • Submit Form 22 application	• Middle, secondary or all-level teaching subject endorsements can be added to any existing elementary, early childhood, middle level or secondary license • CANNOT add early childhood, elementary, SPED based only on testing *Examples: Elementary education adding middle level math; Biology adding physics; Speech/theatre adding all level music...*
	Plan of study: waiver/provisional sequence as complete coursework on plan	• Enrolled in coursework on plan of study for completing an approved program • Waiver/provisional pathway allows teaching full-time while completing program requirements • Maximum 3 years on waiver to move to provisional. Provisional=2 years, renewable	• Elementary education not available as a waiver/provisional • Leadership licenses not available as a waiver/provisional
Traditionally prepared teacher	Initial license One-year temporary nonrenewable (TN)	• Degree; Teacher preparation program completed • Testing (TN if testing not complete) • Recency means having teaching experience or credit hours in the last six years.	• Kansas program completers To access annual summary data choose the LPR Board presentation and/or LPR Summary document located at www.ksde.org/Default.aspx?tabid=812
Teacher with expired license	Transitional license	• Submit application to request • Valid for current school year • Allows full-time teaching	• Can complete the school year teaching full-time without meeting any requirements • Available for teaching, school specialist, leadership expired licenses • Provides time for the educator to complete professional development to renew their expired license if they wish to continue to teach *Examples: retired district administrator serving a school year while district conducts search; retired Family and Consumer Sciences (FACS) teacher returning for a semester/supervising student teacher who will then be hired by district*
		• Retired educators only need to complete 50% of the professional development points in order to renew expired license • 60 with advanced degree; 80 with bachelor's	• Retiree could teach for a school year under a transitional license while earning the reduced professional development requirement to renew the professional license if desired

Holds a degree in the needed subject *(First language speakers (i.e. Spanish, French, German…) for restricted license in the language)*	STEM license	• Degree
		  ○ Life, Physical or Earth Space Science
		  ○ Mathematics
		  ○ Engineering
		  ○ Computer Technology
		  ○ Finance or Accounting
		• Five years of professional work experience in the same subject
		• Employed and assigned by a district to teach only the subject specified based on the degree and experience
			• If individual does not have the required years of professional experience, they will qualify for a restricted teaching license, which does not require the experience.

Background of Applicant	Credential Option(s)	Requirements	Examples or notes
	Restricted Teaching License *Transition to Teaching program)*	• Pass appropriate content test • Teach full-time while completing pedagogy coursework during 1st two years • Collaborative effort between IHE, district, mentor	• Available for any middle level, secondary or all level teaching subject endorsement
Out-of-State Licensed Teacher	Traditionally Prepared: Initial license; Professional license; Accomplished license; TN; Exchange license, or Transitional license	• Type and level of license determined by the amount of experience or comparable testing, and if recency is met	To access annual summary data choose the LPR Board presentation and/or LPR Summary document located at www.ksde.org/Default.aspx?tabid=812
	Alternative Route prepared: Professional license OR Licensure Review Process (LRC)	Professional License • Five or more years of accredited experience, three of which are consecutive in the same district LRC process • Interim alternative license issues-allows full-time teaching while going through LRC process • LRC reviews file/in person appearance before LRC follows	• Definition of Alternative route: teacher preparation delivered through a means other than a university program (such as a company or school district) and/or university program does not address both content and pedagogy (such as an online university program that only delivers pedagogy. • New out-of-state regulations were implemented summer of 2014 for alternative route completers and for secondary licensed teachers.
	Secondary teacher Issued Kansas license for same subject(s) 8-12	• Valid out-of-state license at the secondary level • Offer for hire by a Kansas district • Preparation program not required to be verified • Type of license determined by testing history and/or exemptions from testing based on experience	
Occupational experience and skill/expertise in the needed subject field	Career and Technical Education (CTE) Specialized Certificate (employment in CTE pathways)	Full-time assignment • Five years of experience plus industry recognized credential .5 Full-time Equivalent (FTE) or less assignment Verify occupational competency via one of multiple ways: two years of experience OR License OR trade competency OR industry credential	• Requested by hiring district • Three years, renewable upon request • Grades 8-12 • Teachers licensed in academic subject area can apply for a CTE Specialized by verifying their occupational competency
	CTE Restricted/Full Certificate *(employment in CTE pathways)*	• Restricted issued based on verifying occupational experience/competency • Teach full-time while competing pedagogy • Parallel to restricted license but based on occupational skills rather than educational background	• Grades 8-12 • Restricted=two years, renewable. Full certificate is for five years. • This certificate has been available for many years • Updated to align with pathways language and to increase the number of pathways where a technical certificate is appropriate • Can add additional subject by trade competency only

Background of Applicant	Credential Option(s)	Requirements	Examples or notes
Individual with distinction in their field through a combination of: • experience • advanced studies • talent	Visiting Scholar License	Must meet 2 of the following criteria: • Advanced degree in the subject • Significant related occupational experience • Outstanding talent or distinction in the field	• Average of **5-7** per year • Examples o Law and Public Safety o Foundations of Medicine/Medical Simulator o Business and Global Marketing o Arabic o Japanese o Symphonic band
Visiting International Teachers Program (VIT)	Foreign Exchange License	• Individual has completed teacher preparation and is credentialed in their country. (International Credential Evaluation Report is required as part of application) • MOU exists between the State Board and the Education authority in participating country • Districts place teacher in assignment teaching the language (Spanish or Chinese) OR the subject area they were prepared to teach (elementary, math, etc.)	• Intensive, collaborative interview process between the Kansas State Department of Education (KSDE) and sponsoring program • Districts pay KSDE $2000 fee per teacher (for a stay of 1-3 years) • KSDE/sponsoring program provide support, training, inservice prior to start of school and during the year including work VISA issuance

Routes to the Classroom

Teacher

Teacher Licensure and Accreditation
Kansas State Department of Education
Landon State Office Building

4. Improving Skills of Educators *(ESEA section 2101(d)(2)(J))*: Describe how the SEA will improve the skills of teachers, principals, or other school leaders in order to enable them to identify students with specific learning needs, particularly children with disabilities, English learners, students who are gifted and talented, and students with low literacy levels, and provide instruction based on the needs of such students.

   Every beginning administrator in Kansas must complete an induction and mentoring program as a condition of moving from the leadership license to the professional level leadership license. The KSDE partners with the Kansas Educational Leadership Institute (KELI) housed at Kansas State University, to operate a mentoring and induction support program for new superintendents and principals. The program matches mentors to mentees and provides ongoing supports on a monthly basis. Support includes face-to-face dialogues, ongoing telecommunication, cluster workshops, and other professional learning opportunities. Hallmarks of the program include mentor work focusing on the Professional Standards for Educational Leaders (formerly called ISSLC) and targeted to meet the individual needs of the mentee. The mentoring must minimally be a two-year program, with support continuing beyond as needed.

   Further, the Kansas Multi-Tier System of Supports (MTSS) framework is a system-level coherent continuum of evidence based, system-wide practices to support a rapid response to academic, behavioral, and social skill needs. The Kansas MTSS framework intentionally focuses on leadership, professional development, and an empowering culture. This focus builds the specific skills *of teachers, principals and other school leaders to recognize and address the needs of students with specific learning needs, particularly children with disabilities, English learners, students who are gifted and talented, and students with low literacy levels.*

   In addition to induction and mentoring programs and the Kansas MTSS, the KSDE offers professional learning opportunities to build the capacity of teachers and administrators across the state to affect change of systems in regard to proper identification and interventions of all students. Additional opportunities include:

   - *Kansas Summer Leadership Conference (Special Education and Title Services)*
   - *Kansas Impact Institutes*
   - *Kansas MTSS Symposium*
   - *KSDE Annual Conference*

5. Data and Consultation *(ESEA section 2101(d)(2)(K))*: Describe how the State will use data and ongoing consultation as described in ESEA section 2101(d)(3) to continually update and improve the activities supported under Title II, Part A.

   The KSDE will evaluate data around equitable access to excellent educators, student assessments, teacher retention, teacher evaluation and other KSDE data sources to inform decisions in order to improve activities supported under Title II, Part A.

   The KSDE will continue to seek ongoing consultation with its advising partners, including but not limited to, the ESEA Advisory Council, the Kansas Assessment Advisory Council, Kansas Technical Advisory Council, Kansas Association of School Boards, Kansas Association of Special Education Administrators, the Kansas Special Education Advisory Council, the Kansas Professional Learning Team, Kansas Educational Systems Accreditation

Advisory Council, the advisory team for Kansas Teacher and Leader Evaluation, the Kansas Parent Information Resource Center and Families Together. These councils consist of general education teachers, special education teachers, English Learner teachers, principals, directors of special education, other school leaders, paraprofessionals, specialized instructional support personnel such as private and charter school representatives, students, community partners and parents.

6. Teacher Preparation *(ESEA section 2101(d)(2)(M))*: Describe the actions the State may take to improve preparation programs and strengthen support for teachers, principals, or other school leaders based on the needs of the State, as identified by the SEA.

The Kansas State Board of Education has adopted a set of educator program standards. These standards provide guidance to institutes of higher education as well as providing standards for professional learning at the state and district levels. The standards cover a wide range of topics, including learner development, learning differences, learning environment, content knowledge, application of content, assessment, planning for instruction, instructional strategies, professional learning, ethical practices, leadership and collaboration.

Kansas Educator Preparation Program Standards for Professional Education

Definitions:
Learner(s) is defined as children including those with disabilities or exceptionalities, who are gifted, and students who represent diversity based on ethnicity, race, socioeconomic status, gender, language (single and/or multi), religion, and geographic origin.

Learning environments are defined as the diverse physical locations, face-to-face and virtual environments, contexts, and cultures in which students learn.

Standard 1: Learner Development. The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate, relevant, and rigorous learning experiences.

Standard 2: Learning Differences. The teacher uses understanding of differences in individuals, languages, cultures, and communities to ensure inclusive learning environments that enable each learner to meet rigorous standards.

Standard 3: Learning Environment. The teacher works with others to create learning environments that support individual and collaborative learning, includes teacher and student use of technology, and encourages positive social interaction, active engagement in learning, and self-motivation.

Standard 4: Content Knowledge. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates content-specific learning and literacy experiences that make the discipline accessible and relevant to assure mastery of the content.

Standard 5: Application of Content. The teacher understands how to engage learners through interdisciplinary lessons that utilize concept based teaching and authentic learning

experiences to engage students in effective communication and collaboration, and in critical and creative thinking.

Standard 6: Assessment. The teacher understands how to use multiple measures to monitor and assess individual student learning, engage learners in self-assessment, and use data to make decisions.

Standard 7: Planning for Instruction. The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, technology, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

Standard 8: Instructional Strategies. The teacher understands and uses a variety of appropriate instructional strategies and resources to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in relevant ways.

Standard 9: Professional Learning and Ethical Practice. The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

Standard 10: Leadership and Collaboration. The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, support staff, and community members to ensure learner growth, and to advance the profession.

E. Title III, Part A, Subpart 1: English Language Acquisition and Language Enhancement

1. Entrance and Exit Procedures *(ESEA section 3113(b)(2)):* Describe how the SEA will establish and implement, with timely and meaningful consultation with LEAs representing the geographic diversity of the State, standardized, statewide entrance and exit procedures, including an assurance that all students who may be English learners are assessed for such status within 30 days of enrollment in a school in the State.

   The KSDE has worked with its partners, including all EL program directors, the ESEA Advisory Council, and federal program directors, to establish entrance and exit procedures for English learners. The KSDE requires LEAs to assess and identify English learners within 30 days of enrollment in a school in Kansas.

   Students are identified as English learners based on the home language survey and the score on a state-approved English language proficiency screener. Currently, Kansas has a list of approved screeners that will be replaced with the KELPA2 screener when it is available in 2018. No other measures are used to determine eligibility.

   The KSDE will transition to the Kansas English Language Proficiency screener in the 2017-18 school year with full implementation in the 2018-19 school year. Fluent English scores for Kansas's English Language Proficiency screener will be available after piloting in spring 2018.

   English learners are tested annually on the state-approved English language proficiency assessments, KELPA2. The KELPA2 is based on the state English language proficiency standards and addresses the language demands needed to reach college and career readiness. KELPA2 assesses the language domains of reading, writing, listening, and speaking. The student's results on the annual assessment is the single criterion used to measure a student's proficiency in English and exit the student from English language development services.

   Kansas will be using Former English learners as an additional subgroup for reporting purposes. Former English learners are those students that have scored an overall "proficient" score on the Kansas English Language Proficiency Assessment 2 (KELPA2) and is no longer receiving direct EL services. The student's assessment scores on the Kansas English language arts and mathematics assessments will be reported for four years following exiting the EL program.

2. SEA Support for English Learner Progress *(ESEA section 3113(b)(6))*: Describe how the SEA will assist eligible entities in meeting:
   i. The State-designed long-term goals established under ESEA section 1111(c)(4)(A)(ii), including measurements of interim progress toward meeting such goals, based on the State's English language proficiency assessments under ESEA section 1111(b)(2)(G); and
   ii. The challenging State academic standards.

   Kansas has established long-term goals and measurements of interim progress under Title I, Part A. The long-term goal for ELs is based on "speed-to-proficiency." The KSDE will collect data and conduct analyses to set the long-term goal in 2021 and measures of interim progress to 2030.

In the interim, Kansas will use a long-term goal and measures of interim progress around "progress toward proficiency." The progress toward proficiency goals and interim measures will be set using 2017 KELPAs data, and measured and reported following the 2018 -2021 KELPA2 administration.

The KSDE will support English learners by providing schools and districts technical assistance and professional learning, including face-to-face trainings, webinars, and individual communications to meet the long-term goal and measurements of interim progress and challenging State academic standards.

3. Monitoring and Technical Assistance *(ESEA section 3113(b)(8))*: Describe:
   i. How the SEA will monitor the progress of each eligible entity receiving a Title III, Part A subgrant in helping English learners achieve English proficiency; and

   The KSDE monitors all districts' that receive Title III funds through the Kansas Integrated Accountability System (KIAS). The KIAS is the statewide accountability system for state and federal programs. The KIAS looks at many qualitative and quantitative risk factors around compliance and performance. The KIAS process holds buildings and districts accountable for each of these risk factors. Each risk factor is assigned a weight. The number of findings and the weight of such findings informs the corrective action process. Not meeting Title III program requirements would trigger the implementation of a corrective action plan supported by the KSDE, the Technical Assistance Support Network, Kansas Education Service Centers, and other technical assistant partners. The KSDE will provide ongoing technical assistance to the district and the building in support of meeting all Title III program requirements.

   The KIAS includes monitoring districts' Local Consolidated Plans (LCP) to ensure that Title III funds are spent on allowable activities under Title III.

   Additionally, the KIAS, analyzes data and risk factors for all districts receiving Title III funds to determine if additional support and professional learning is needed. The KSDE and partners will provide differentiated technical assistance to ensure progress toward proficiency for all language learners in Kansas.

   ii. The steps the SEA will take to further assist eligible entities if the strategies funded under Title III, Part A are not effective, such as providing technical assistance and modifying such strategies.

   Districts will be identified for further technical assistance based on needs and achievement outcomes. Multiple indicators are used to establish English Learner language acquisition and academic progress. Additionally, the identification process looks at the needs the districts have for professional learning, including instructional materials, increasing parent engagement and district communication with parents, student academic support, and potentially coaches provided to districts. Individualized support is available to districts based upon district root cause analysis and needs assessment.

F. Title IV, Part A: Student Support and Academic Enrichment Grants

1. Use of Funds *(ESEA section 4103(c)(2)(A)):* Describe how the SEA will use funds received under Title IV, Part A, Subpart 1 for State-level activities.

   The Kansas State Department of Education (KSDE) has been working with stakeholders groups including the Kansas ESEA Advisory Council to determine the best use of Title IV funds at the state level. The goal is to discuss and recommend promising evidenced-based practices for Kansas districts to consider.

   The KSDE also has a Technical Assistance System Network (TASN) providing many of the evidence-based professional learning opportunities authorized under Title IV, Part A of the Every Student Succeeds Act (ESSA). The KSDE hopes to be able to expand the work that is being done by TASN as well as be able to involve more local districts in the evidence-based activities that are already in place. One example of the programs that are already in place under TASN that work very well under Title IV, Part A includes, but is not limited to, the School Mental Health Initiative. This initiative includes evidenced based interventions around mindfulness and self-care, restorative practices, resiliency, mental health disorders of childhood and adolescence, and trauma informed schools.

   Based on feedback from school districts, schools, businesses, communities, and other state agencies in ways in which the Title IV, Part A funds, may be used, the KSDE will use state activity funds to help support districts, schools and students access college and career competency activities.

2. Awarding Subgrants *(ESEA section 4103(c)(2)(B))*: Describe how the SEA will ensure that awards made to LEAs under Title IV, Part A, Subpart 1 are in amounts that are consistent with ESEA section 4105(a)(2).

   The KSDE will distribute Title IV, Part A, Subpart 1 allocations using a formula grant. The KSDE will ensure that allocations are used for activities consistent with Title IV.

   The KSDE will not award grants of less than $10,000. The KSDE will comply with the ratable reduction requirement 4015(b).

   Districts and consortiums with over $10,000 will apply for the funding through our Local Consolidated Application (LCP), which will require a budget and how the funds are expected to be used by the districts based on the needs assessments that have been done at the local level. The use of the funding will be divided into the three appropriate sections (Well-Rounded Education {Section 4107}, Safe and Healthy Students {Section 4108}, and Supporting the Effective Use of Technology {Section 4109}. The Early Childhood, Special Education and Title Services (ECSETS) financial team is working with the Information Technology team to update the LCP to be in line with ESEA section 4105(a)(2). Districts that are retaining the funds to transfer to another allowable program under Title IV, Part A will be able to do this through the LCP application process as well.

G. Title IV, Part B: 21st Century Community Learning Centers

1. Use of Funds *(ESEA section 4203(a)(2))*: Describe how the SEA will use funds received under the 21st Century Community Learning Centers program, including funds reserved for State-level activities.

The Kansas 21st Century Community Learning Centers program supplements, during non-school hours, instruction that took place during the regular school day. The purpose of the grant program is to provide academic enrichment opportunities for children, particularly in grades Pre-K – 12, who attend high poverty and low-performing schools, to meet state and local academic standards in core subjects.

The Kansas 21st CCLC program collaborates with other state and federal programs and grants to provide services and activities to support the whole child regardless of status and/or background. Collaborations between 21st CCLC and other programs include:

- *Partnering with Title I after school programs, sharing transportation costs and expanding what currently takes place;*
- *Providing services to families of students who attend the program to help them support students (i.e. language classes, literacy classes, translation, etc.);*
- *The program ensures that all eligible students are served no matter the financial status (foster, homeless, free and reduce priced meals, etc.);*
- *Migrant funding provides staffing and/or transportation for migrant students participating in the 21st CCLC program;*
- *The program does not prohibit any student from attending. If accommodations are needed, the 21st CCLC program works with the school to determine the best supports for the student; Homeless funds provide transportation for students in a homeless situation to attend out of school programming;*
- *Program partners with the USDA snack program;*
- *Kansas Reading Roadmap partners with the 21st CCLC program providing academic, physical activity and family engagement curriculum for K-3 students; and*
- *Transportation allowance is available for programs serving students that attend a program in a district eligible for REAP (Rural Education Achievement Program). This allowance provides the opportunity for students in small rural communities to attend the out of school program.*

In addition to funds that are awarded directly to sub-grantees, 21st CCLC funds reserved for State-level activities are used to contract with an external organization to provide capacity building, training and technical assistant to sub-grantees. The contracted organization holds two state conferences for 21st CCLC sub-grantees during each grant year. Regional meetings are held throughout the state to address programming and provide professional development to better equip program directors and staff to provide quality services and activities to students being served with 21st CCLC grant funds. Two site visits are conducted per year for each sub-grantee. Site visits or specific requests indicate the need for technical assistance, which is provided on an as-needed basis. In addition, KSDE contracts with an external organization to conduct a State-level evaluation to determine success of the Kansas 21st CCLC program, as well as identify areas where improvement is needed.

- *KSDE requests external organizations interested in partnering with or providing services to 21st CCLC grant programs, to complete a provider registration form. Completed provider registrations are included on the KSDE website.*

2. Awarding Subgrants *(ESEA section 4203(a)(4)):* Describe the procedures and criteria the SEA will use for reviewing applications and awarding 21st Century Community Learning Centers funds to eligible entities on a competitive basis, which shall include procedures and criteria that take into consideration the likelihood that a proposed community learning center will help participating students meet the challenging State academic standards and any local academic standards.

The KSDE utilizes a competitive grant award process to award 21st Century Community Learning Center Funds, starting with an RFA for the 21st CCLC Grant that follows the U. S. Department of Education format and includes:

Statement of need – Needs to be presented include academic achievement status; poverty, drug and alcohol use; violence; Title I status, demographics, including free- and reduced-lunch percentages; and others.

Quality of proposed program design – Applicants will be required not only to show need but also to provide evidence that the proposed program will address and meet the documented needs. Successful applications will explain how the program offers high quality, evidence-based academic content using appropriate methods of teaching and learning. Furthermore, applicants must describe how the programs will attract and attain the students that the program targets. The collaboration among the school, community partners, and local advisory board needs to be shown to be genuine, with responsibilities of each clearly defined. Transportation issues must be clearly explained. This section should include a description of specific goals, objectives, and measurable outcomes.

Adequacy of resources – Evidence must include committed support from the school board, superintendent, principal(s), teachers, and appropriate leaders of the community-based organization or faith-based partner. Such "committed support" will include formal assurances of collaboration in the areas of curriculum planning and delivery, objectives, and data gathering. The applications should explain the space to be used and assure its accessibility. This section will explain the availability and collaborative use of various funds, the role of the advisory board in securing these and additional funds, and how the 21st CCLC funds fit into the overall project. Applications must assure that the applicant partners have the fiscal capacity to carry out the program.

Management plan – In the experience of Kansas 21st CCLC programs, it has been found that the most successful programs have been developed and led by Project Directors with school and management experience. While the Kansas program will not require such experience, teacher or administrator certification is preferred. In any case, the applications need to explain how the experience of the project director and other leaders of the program will support the program. Charts and timetables are particularly helpful in describing the program's structure, especially with regard to teachers, tutors, volunteers, and students served.

Evaluation design – The applications will explain the extent to which the methods of evaluation include the use of performance targets and measures that are clearly related to the intended outcomes of the project and will produce quantitative and qualitative data to the extent possible. The evaluation will show how participating students meet the challenging State academic standards and any local academic standards. The evaluation should reference every Performance Goal, Indicator, and Target included in the project design and describe how those components will be measured.

Sustainability plan – This section will include a clearly explained, proposed plan for sustaining the program.

Budget – Budgets for each grant year should appear in chart format, following the federal design, which will be included in the RFA. A budget narrative may be included as well.

In order to ensure the quality of the application, Kansas developed an RFA with precise instructions, as described briefly above. The RFA includes guidelines for Principles of Effectiveness and uses the Sixteen Characteristics that Lead to Comprehensive Program Planning for the Integration of 21st CCLC with Regular-Day Programs and Community Partners. Those principles include: climate for inclusion; community partnerships; coordination with regular school-day learning program; culturally sensitive climate; evaluation design; facilities management; family literacy; focus on at-risk students; funding; leadership and governance; linkages between out of school and regular school personnel; family engagement; engaging the public; recreational programming; safe and healthy environment; staffing, staff qualifications and training; and volunteers.

Applications are reviewed by a judging panel. Regardless of the size of the grant proposed, applicants must convince the judging panel that costs are reasonable and necessary to carry out the program's purposes and objectives. The KSDE then makes awards for selected programs for a period of not less than three years and not more than five years. Local applicants are required to submit a plan describing how the program will continue after funding ends.

H. Title V, Part B, Subpart 2: Rural and Low-Income School Program

1. Outcomes and Objectives *(ESEA section 5223(b)(1))*: Provide information on program objectives and outcomes for activities under Title V, Part B, Subpart 2, including how the SEA will use funds to help all students meet the challenging State academic standards.

   By 2029-2030 75 percent of students will reach college and career ready benchmarks in English language arts and math.

   By 2029-2030 95 percent of students in the four-year adjusted cohort will graduate high school. This includes all subgroups.

   All English learners will be proficient in English and reach high academic standards, at a minimum showing growth to reach proficiency or better in English language arts and math.

   The Kansas State Department of Education (KSDE) has been working with stakeholders groups and the Kansas ESEA Advisory Council to determine the best use of Title V funds for the large amount of rural schools across the state. The KSDE plans to receive feedback from school districts, schools, businesses, communities, and other state agencies in ways in which the Title V funds can be most helpful in helping the children of Kansas become more successful. Once final allocations are determined and the KSDE has a final amount of how much funding will be available, the KSDE will work with these groups to determine the best use of these funds. Some possible examples of how the use of funds may be used include, but are not limited to, programs for English Learners, well-rounded education, safe and healthy students, professional development in technology, expanding broadband access, increase educator access to evidence-based professional development.

2. Technical Assistance *(ESEA section 5223(b)(3))*: Describe how the SEA will provide technical assistance to eligible LEAs to help such agencies implement the activities described in ESEA section 5222.

   The Kansas State Department of Education (KSDE) provides technical assistance to Kansas school districts in a variety of ways. The Early Childhood, Special Education, and Title Services (ECSETS) team has consultants that work with each district on how the district plans to use federal funding to develop and implement programs at the local level. These consultants are part of the Kansas Integrated Accountability System (KIAS) which is the statewide accountability system for state and federal programs. The KIAS looks at many qualitative and quantitative risk factors around compliance and performance. The KIAS process holds buildings and districts accountable for each of these risk factors. Each risk factor is assigned a weight. The number of findings and the weight of those findings inform the corrective action process. Not meeting the program requirements of Title V would trigger the implementation of a corrective action plan supported by the KSDE, the Technical Assistance Support Network, Kansas Education Service Centers, and other technical assistant partners. The KSDE will provide ongoing technical assistance to the district and the building in support of meeting all Title V program requirements.

process for districts to apply for Small Rural Schools Achievement (SRSA) grants This team also has a program specialist and a finance specialist that work directly with districts and as liaisons to the USDoE on the programs such as these. Both specialists attend the same webinars provided by the USDoE that districts are expected to attend, including the webinars on the new application.

I. Education for Homeless Children and Youth program, McKinney-Vento Homeless Assistance Act, Title VII, Subtitle B

1. Student Identification *(722(g)(1)(B) of the McKinney-Vento Act)*: Describe the procedures the SEA will use to identify homeless children and youth in the State and to assess their needs.

   The Kansas State Department of Education (KSDE) has a state coordinator who is responsible for ensuring that districts identify a homeless liaison as required by federal law. The state coordinator will inform the district's homeless liaisons of duties, including the identification of homeless children and youth, as described in the McKinney-Vento Homeless Assistance Act. The state coordinator will also direct the liaisons to briefs and the Local Homeless Education Liaison toolkit provided by the National Center for Homeless Education (NCHE).

   The state coordinator will require identification of the numbers of homeless children within each district to be included on the End of Year Accountability (EOYA) report through the Kansas Individual Data on Students (KIDS) report. The state coordinator will continue to require McKinney-Vento sub grantees to provide an annual evaluation that includes the number of children and youth identified and served and a district specific identification of the needs and services provided, or required, including barriers to the education of homeless children and youth.

   School districts are able to individually identify the homeless students, and during the interview/verification process the needs of the student are assessed and the families with whom they are working. Many districts have started to add a needs assessment to the residency questionnaire, others wait until the formal verification has been confirmed to assess the needs of the student and family.

2. Dispute Resolution *(722(g)(1)(C) of the McKinney-Vento Act)*: Describe procedures for the prompt resolution of disputes regarding the educational placement of homeless children and youth.

   Disagreements and disputes are to be settled as close to the point of conflict as possible. Each local homeless education liaison shall assist the family and school to ensure compliance with federal and state legislation and policy governing the education of children and youth experiencing homelessness. The liaison shall work with the appropriate school division representatives to address any policies or procedures that are identified as barriers in the access to and success within a free appropriate public education.

   The Office of the State Coordinator of Homeless Education may be consulted at any time for technical assistance. Disagreements and disputes are to be settled as close to the point of conflict as possible. Each local homeless education liaison shall assist the family and school

to ensure compliance with federal and state legislation and policy governing the education of children and youth experiencing homelessness. The liaison shall work with the appropriate school division representatives to address any policies or procedures that are identified as barriers in the access to and success within a free appropriate public education.

If a school chooses to send a child or youth to a school other than the school of origin or the school of residency selected by the family or unaccompanied youth, the school shall consult with the local homeless liaison prior to making a final placement determination.

If the school's denial of enrollment is supported by a review of feasibility and best interest, the school shall provide the parent or guardian of the child or youth with a written explanation of the school's decision regarding school selection or enrollment, including the rights to the parent, guardian, or unaccompanied youth to appeal the decision. The local homeless education liaison shall maintain a copy of such written notification. If an appeal is requested either in writing or verbally, the school shall: immediately admit the student to the school in which enrollment is sought and provide all services for which the student is eligible, pending resolution of the dispute; and, refer the child, unaccompanied youth, parent, or guardian to the designated local homeless education liaison who should carry out the dispute resolution process as expeditiously as possible after receiving notice of the dispute.

When the liaison is notified of an enrollment dispute by the State Coordinator, a school district staff member, a family, or unaccompanied youth experiencing homelessness, or another entity, the liaison shall:

- *Initiate the documentation on the Enrollment Dispute Resolution form;*
- *Ensure the child or unaccompanied youth is immediately admitted to the school in which enrollment is sought and provided with all services for which the student is eligible, pending resolution of the dispute. Transportation must be arranged while the dispute is being resolved;*
- *Review feasibility and best interest guidance documents with the school and appropriate district office personnel.*
- *Contact any associated district's local homeless education liaison to participate in the decision making process if another school district is involved;*
- *Consult with the State Coordinator for additional technical assistance, as needed; and*
- *Provide the family or unaccompanied youth with a written determination of the district's placement decision, including the ability to appeal the decision at the state level by contacting the Kansas State Homeless Coordinator within 10 business days.*

A parent, guardian, or unaccompanied youth appeal of a school district's decision must be submitted to The Kansas State Homeless Coordinator within 10 business days of receiving the school district's notice. When an appeal is made to the state level, the State Coordinator or designee shall:

- *Review school district records and information provided by the appealing family or unaccompanied youth to ensure proper procedures were followed; and*
- *Forward a recommendation to the Director of Early Childhood Special Education and Title Services (ECSETS) regarding the appropriate placement for the student within five working days of receiving the appeal based on the review of school district records, any supplemental information provided when appropriate.*

The Director of ECSETS or designee will make the final determination. The family or unaccompanied youth and the school district(s) will be informed of the final disposition within 10 business days of receiving the case and recommendation from the State

Coordinator for Homeless Education. Upon notification by the Director of ECSETS, or designee, the State Coordinator will:

- *Provide technical assistance to the school district, as needed, to comply with the final determination.*
- *Contact the school district within 30 business days from the final disposition by the Director of ECSETS, or designee, to determine the status of the child or youth's enrollment.*

3. Support for School Personnel *(722(g)(1)(D) of the McKinney-Vento Act)*: Describe programs for school personnel (including the LEA liaisons for homeless children and youth, principals and other school leaders, attendance officers, teachers, enrollment personnel, and specialized instructional support personnel) to heighten the awareness of such school personnel of the specific needs of homeless children and youth, including runaway and homeless children and youth.

   The state coordinator will provide on the Kansas State Department of Education (KSDE) Education of Homeless Children and Youth (EHCY) website to allow for access to program information and links to other resources for districts. The state coordinator will develop and disseminate, via the KSDE homeless website, a database of contact information for all local school districts' homeless liaisons that includes the district name and number, liaison's name, position, addresses, phone numbers, and e-mail addresses. This will be updated annually and as necessary during the school year as changes occur.

   The state coordinator will provide assistance to school personnel to address the needs of runaway and homeless children and youth through phone calls, e-mails, and in-person trainings to educational staff across the state of Kansas. These trainings include in-person trainings, live webinars, and archived webinars. Currently, the webinars provided are from the National Center for Homeless Education (NCHE) and the National Association for the Education of Homeless Children and Youth (NAEHCY). The KSDE will be providing webinars produced by the Kansas State Coordinator starting with the 2017-2018 school year. All trainings are open to all district level staff and community agency personnel.

   The KSDE strongly encourages liaisons to do specific trainings for staff to provide awareness for school leaders, attendance officers/registrars, attendance/truancy officers, teachers, paraprofessionals, custodial staff, transportation staff including bus drivers, and nutrition services staff. Some districts choose to bring these support staff with them to local and national trainings as well as having them participate in state and national level webinars.

4. Access to Services *(722(g)(1)(F) of the McKinney-Vento Act)*: Describe procedures that ensure that:
   i. Homeless children have access to public preschool programs, administered by the SEA or LEA, as provided to other children in the State;
   ii. Homeless youth and youth separated from public schools are identified and accorded equal access to appropriate secondary education and support

services, including by identifying and removing barriers that prevent youth described in this clause from receiving appropriate credit for full or partial coursework satisfactorily completed while attending a prior school, in accordance with State, local, and school policies; and

iii. Homeless children and youth who meet the relevant eligibility criteria do not face barriers to accessing academic and extracurricular activities, including magnet school, summer school, career and technical education, advanced placement, online learning, and charter school programs, if such programs are available at the State and local levels.

The state coordinator, who is part of the Early Childhood, Special Education, and Title Services team, will coordinate with early childhood programs through the KSDE, Kansas Department of Health and Environment (KDHE), and the Kansas Department of Children and Families (DCF) to ensure that homeless preschool students have access to relevant programs to meet the needs of the preschool students. The KSDE works with these organizations and district staff to ensure that children of preschool age have access to and are prioritized for placement in public preschool programs. Districts are expected to work with private providers if there are no preschool openings available for homeless students when identified.

The state coordinator will work with the Kansas State High School Athletics Association (KSHSAA), local homeless liaisons, and local activities and athletics directors to provide information to make sure that all homeless students have the same access to extracurricular activities as non-homeless students. The state coordinator will routinely work with the KSDE Nutrition and Wellness staff and local nutrition staff to make sure that all homeless students immediately qualify for the free breakfast, lunch, and snack programs that are available.

The KSDE works with local districts and the Kansas Association of School Boards (KASB) to help districts develop locally driven policies and procedures to identify homeless youths separated from public schools and support children and youth experiencing homelessness and ensure that barriers are removed that may prevent the homeless children from receiving appropriate credit for full and partial coursework satisfactorily completed while attending a prior school. The KSDE is working with local liaisons to develop more formal processes for students to receive the credit they have earned, either partial or full credit. The KSDE is using successful plans from other states and local school districts in order to make sure credit is received for all successful coursework that is completed. The KSDE also encourages students to apply to their district for graduation when they have met the 21 credit state requirement for graduation.

Trainings provided for liaisons include best practices on how athletic directors and coaches work with homeless children and youth while respecting their privacy. The professional learning trainings also address how homeless children and youth should have the same access as non-homeless students to career and technical education programs, summer school, Advanced Placement classes, International Baccalaureate classes, online learning/virtual learning opportunities and the removal of all barriers that will allow homeless children and youth access to these programs. In Kansas, magnet schools and charter schools fall directly under the authority of the school districts. Therefore, homeless children and youth have the same access to these programs as non-homeless children and youth.

5. Strategies to Address Other Problems *(722(g)(1)(H) of the McKinney-Vento Act)*: Provide strategies to address other problems with respect to the education of homeless children and youth, including problems resulting from enrollment delays that are caused by—
    i. requirements of immunization and other required health records;
    ii. residency requirements;
    iii. lack of birth certificates, school records, or other documentation;
    iv. guardianship issues; or
    v. uniform or dress code requirements.

    The state coordinator has reviewed with the KSDE attorney current laws, regulations, practices and policies that may act as barriers to the enrollment, attendance and academic success of homeless children and youth. The state coordinator has consulted with appropriate KSDE staff to identify potential revisions to the state's enrollment dispute resolution process to align with the McKinney- Vento Act. The state coordinator has worked with local school districts to ensure that homeless children and youth are not stigmatized or isolated from peers. Homeless students and families will have at least 30 to 90 days to work with local liaisons to retrieve records and or receive the required immunizations. Students are to be allowed to attend class during this timeframe unless there is an outbreak. Districts may not keep students out of class for lack of any other medical records, a lack of birth certificates, school records, guardianship issues/clarifications or any other documentation required for enrollment and attendance. These records need to be obtained by the district and family working together to retrieve the records or attending doctors' appointments where new records may be obtained. Local residency requirements may not be a barrier to the enrollment and attendance of homeless students. If there is a cost that the family cannot afford, these activities should be paid by the district.

    If a family is determined to be homeless, they automatically qualify as a resident of the district based on Kansas state statute. If a district or school requires a uniform for school attendance or specific classes, the uniforms need to be provided for any homeless student.

6. Policies to Remove Barriers (*722(g)(1)(I) of the McKinney-Vento Act)*: Demonstrate that the SEA and LEAs in the State have developed, and shall review and revise, policies to remove barriers to the identification of homeless children and youth, and the enrollment and retention of homeless children and youth in schools in the State, including barriers to enrollment and retention due to outstanding fees or fines, or absences.

    The state coordinator has reviewed with the KSDE attorney current laws, regulations, practices and policies that may act as barriers to the identification, enrollment, attendance and academic success of homeless children and youth and will revise as necessary. The state coordinator has consulted with appropriate KSDE staff to identify potential revisions to the state's enrollment dispute resolution process to align with the McKinney- Vento Act. The state coordinator will work with local educational agencies to ensure that homeless children and youth are not stigmatized or isolated from their peers. Outstanding fees and fines for homeless families/students must be removed and not be a barrier to the education of these students. Student absences should not cause any barriers to the enrollment or attendance in school.

    All districts in Kansas are required to have in place a homeless children education policy. The policy is monitored for compliance through the Kansas Integrated Accountability System. The Kansas Association of School Boards (KASB) provides support to districts in developing

these policies. The KSDE and KASB work with local education agencies (LEA) and their homeless liaisons to review current laws, regulations, practices and policies that may act as barriers to the identification, enrollment, attendance and academic success of homeless children and youth and the LEAs will revise as necessary.

7. Assistance from Counselors *(722(g)(1)(K))*: A description of how youths described in section 725(2) will receive assistance from counselors to advise such youths, and prepare and improve the readiness of such youths for college.

Counselors in Kansas will provide resources and will advise homeless youth in preparation for going to post-secondary institutions. Counselors will provide resources from the American School Counselor Association (ASCA), the National Center on Homeless Education (NCHE), the National Association for the Education of Homeless Children and Youth (NAEHCY), the Free Application for Federal Student Aid (FAFSA), along with other local resources such as specific contacts in financial aid and registrar offices at post-secondary institutions. Counselors will also make sure the students continue to work and update Individual Plans of Study (IPS) that provides a suitable vision for the student's path toward college and career readiness. This is the student's individualized plan to assist and guide the student to prepare for success after high school graduation.

Appendix A: Measurements of interim progress

Instructions: Each SEA must include the measurements of interim progress toward meeting the long-term goals for academic achievement, graduation rates, and English language proficiency, set forth in the State's response to Title I, Part A question 4.iii, for all students and separately for each subgroup of students, including those listed in response to question 4.i.a. of this document. For academic achievement and graduation rates, the State's measurements of interim progress must take into account the improvement necessary on such measures to make significant progress in closing statewide proficiency and graduation rate gaps.

A. Academic Achievement – Academic achievement long-term goal and interim measures of progress will be provided and reported for each district and school in Kansas.

State-Level Data

Subgroups	Reading/ Language Arts: Baseline Data (% scoring in Level 3 & Level 4) 2017	Reading/Language Arts: Interim Measures of Progress. (Yearly rate of gain to reach Goal) 2017-2030	Reading/ Language Arts: Long-term Goal (% scoring in Level 3 & Level 4) 2030	Math: Baseline Data (% scoring in Level 3 & Level 4) 2017	Math: Interim Measures of Progress. (Yearly rate of gain to reach Goal) 2017-2030	Math: Long-term Goal (% scoring in Level 3 & Level 4) 2030
All students	**42.0**	**2.53**	**75.0**	**33.0**	**3.23**	**75.0**
Economically disadvantaged students	**27.7**	**3.63**	**75.0**	**19.8**	**4.24**	**75.0**
Children with disabilities	**15.4**	**4.58**	**75.0**	**10.9**	**4.93**	**75.0**
English learners	**19.7**	**4.25**	**75.0**	**15.4**	**4.58**	**75.0**
African-American students	**21.0**	**4.15**	**75.0**	**13.2**	**4.75**	**75.0**
Hispanic students	**26.1**	**3.76**	**75.0**	**18.7**	**4.33**	**75.0**
White students	**48.4**	**2.04**	**75.0**	**38.7**	**2.79**	**75.0**
Asian students	**55.7**	**1.48**	**75.0**	**54.6**	**1.56**	**75.0**
American Indian or Alaska Native students	**31.5**	**3.34**	**75.0**	**21.8**	**4.09**	**75.0**

B. Graduation Rate – Graduation rate long-term goal and interim measures of progress will be provided and reported for each district and school in Kansas.

State-Level Data

Subgroups	Graduation (Interim Measure of Progress) 2016	Graduation: Interim Measures of Progress. (Yearly rate of gain to reach Goal) 2017-2030	Graduation: Long-term Goal (End Measure of Progress) 2030
All students	**86.1**	**0.68**	**95.0**
Economically disadvantaged students	**77.7**	**1.33**	**95.0**
Children with disabilities	**77.4**	**1.35**	**95.0**
English learners	**77.7**	**1.33**	**95.0**
African-American students	**77.1**	**1.38**	**95.0**
Native Hawaiian/Pacific Islander	**82.6**	**0.95**	**95.0**
Hispanic students	**79.9**	**1.16**	**95.0**
White students	**88.8**	**0.48**	**95.0**
Asian students	**93.1**	**0.15**	**95.0**
American Indian or Alaska Native students	**72.5**	**1.73**	**95.0**
Multi-Racial	**81.9**	**1.01**	**95.0**

Appendix C. Progress Toward English Language Proficiency – English language proficiency long-term goal and interim measures of progress will be provided and reported for each district and school in Kansas.

State/District/ School	Baseline Data (% of students making progress toward proficiency) 2017	Interim Measures of Progress. (Yearly rate of gain to reach Goal) 2018-2030	Long-term Goal (% of students making progress) 2030	
English Learners State of Kansas	**27.5%**	**3.45%**	**95**	
English Learners District A	**15.0%**	**6.33%**	**95**	
English Learners School A	**9.8%**	**9.69%**	**95**	

Appendix D: General Education Provisions Act (GEPA) Section 427

All applicants for new awards must include information in their applications to address GEPA, Section 427 in order to receive funding under this program. GEPA 427 requires a description of the steps the applicant proposes to take to ensure equitable access to, and participation in, its federally-assisted programs for students, teachers, and other program beneficiaries with special needs. For a State-formula grant program, a State needs to provide this description only for projects or activities that it carries out with funds reserved for State-level uses. In addition, local school districts or other eligible applicants that apply to the State for funding need to provide this description in their applications to the State for funding. The State would be responsible for ensuring that the school district or other local entity has submitted a sufficient section 427 to the State.

The Kansas State Department of Education takes numerous steps to ensure equitable access to, and participation in, its federally assisted programs for students, teachers, and other beneficiaries with students with disabilities and English learners. The first step is to include the requirement that an EEO statement must be on all applications. As KSDE staff review applications, provide technical assistance, and monitor programs, consideration is given to equitable access to federal programs. In addition, KSDE has a complaint procedure an individual uses when a complaint regarding discrimination is made. On occasion, KSDE staff are included in Office of Civil Rights (OCR) visits as a result of a complaint.

The KSDE arranges for special accommodations upon request for any participant with special needs. For example, interpreters are available for signing to the deaf participants at workshops and meetings.

KSDE requires all LEAs and education service centers who receive federal funds to update GEPA information. This information is kept on file at KSDE.

Appendix 3:
2016-2017 Annual Report

The Annual Report is publicly available at http://www.kslegislature.org/li/b2017_18/committees/ctte_h_k12_education_budget_1/documents/testimony/20180118_02.pdf. It was provided to the Legislature on January 18, 2018. It is appropriate for this Court to take judicial notice of the Report, which is publicly available and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

2016 - 2017 ANNUAL REPORT

EXPLORATION

KANSAS STATE DEPARTMENT OF EDUCATION

Nov. 15, 2017

Randy Watson Testimony to House K-12 Education Budget Committee January 18, 2018
www.kslegislature.org/li/b2017_18/committees/ctte_h_k12_education_budget_1/documents/testimony/20180118_02.pdf

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Kansas State Board of Education

JANET WAUGH

Kansas City

District 1

STEVE ROBERTS

Overland Park

District 2

JOHN W. BACON

Olathe

District 3

ANN E. MAH

Topeka

District 4

SALLY CAUBLE

Dodge City

District 5

DEENA HORST

Salina

District 6

KENNETH WILLARD

Hutchinson

District 7

KATHY BUSCH, VICE CHAIR

Wichita

District 8

JIM PORTER, CHAIRMAN

Fredonia

District 9

JIM MCNIECE

Wichita

District 10

KSDE Leadership

DR. RANDY WATSON

Kansas Commissioner of Education

DALE M. DENNIS

Deputy Commissioner

Division of Fiscal and Administrative Services

BRAD NEUENSWANDER

Deputy Commissioner

Division of Learning Services

Two years ago, we started with a vision of leading the world in the success of each student. We have likened this journey to President John F. Kennedy's moonshot of putting a man on the moon.

While we haven't set foot on the moon, yet, our work is moving us closer every day.

The past 12 months can best be described as nothing short of a whirlwind, punctuated by the implementation of several major initiatives and legislative actions not only at the Kansas State Department of Education (KSDE), but across the state and the nation.

The implementation process for the Kansas Education Systems Accreditation (KESA) model, marking a major shift in the state's accreditation process, started in 2016-2017, and the Kansas State Board of Education will begin accrediting districts under the new model in the summer of 2018.

In June 2017, the Kansas Legislature approved a new school funding formula, and it took effect on July 1.

During the August 2017 State Board of Education meeting, KSDE announced its Kansans Can School Redesign Project. The agency received 29 applications for the project, and on Aug. 8, 2017, the seven selected districts, each representing one of the Mercury 7 astronauts, were announced.

The districts had to designate one elementary school and one secondary school that will be redesigned around the five outcomes established by the State Board of Education.

Those outcomes are Social-Emotional Growth, Kindergarten Readiness, Individual Plan of Study, High School Graduation and Postsecondary Success. The new school designs are slated for launch in the 2018-2019 school year.

Nationally, states began submitting their plans to comply with the Every Student Succeeds Act (ESSA). ESSA, which was signed into law in December 2015, reauthorized the Elementary and Secondary Education Act of 1965 (ESEA). KSDE submitted its Kansas Consolidated State Plan to the U.S. Department of Education in September 2017.

There are so many other exciting things happening within the agency, and we hope this Annual Report gives you a glimpse into many of them.

> "Just like Kennedy's moonshot of putting a man on the moon, **our vision for education** in this great state **will take perseverance, dedication** and **hard work**, but together, **Kansans Can!**"

Dr. Randy Watson
Kansas Commissioner of Education

YEAR IN REVIEW
QUARTER ONE
2016

2017 2016- KANSAS ANNUAL REPORT EXPLORATION

OCTOBER

KANSANS CAN ANNIVERSARY
October marks the first anniversary of the official announcement launching the Kansans Can vision for Kansas education.

KANSAS MILKEN AWARD WINNER ANNOUNCED

Stephanie Conklin, principal at Brougham Elementary School in Olathe USD 233, received the 2016 Milken Educator Award.

NATIONAL PTA SCHOOLS OF EXCELLENCE
The State Board of Education recognized Shawnee Mission North High School and Shawnee Mission North High PTA (USD 512), and Wyandotte High School and Wyandotte High School PTSA (USD 500) for being named 2016-2018 National PTA Schools of Excellence.

"YOU ARE NOT ALONE" CAMPAIGN LAUNCHED
Anti-bullying Awareness Week was observed Oct. 3-9. KSDE launched the video campaign "You are Not Alone. You Can Talk to Me."

COMMISSIONER VISITS
Completed 23 district visits.

NOVEMBER

NATIONAL TITLE I DISTINGUISHED SCHOOLS
Sterling Grade School, USD 376, and West Elk School, USD 282, were recognized as National Title I Distinguished Schools for their work to close the achievement gap and for continuous high achievement.

SUICIDE AWARENESS AND PREVENTION TRAINING
The State Board of Education approved a change to K.A.R. 91-31-32, requiring for all accredited schools to provide suicide awareness and prevention training to all staff.

NATIONAL STUDENT CLEARINGHOUSE
KSDE contracted with National Student Clearinghouse to provide core postsecondary data to Kansas schools.

EDUCATIONSUPERHIGHWAY
Entered into an agreement with EducationSuperHighway, Department of Administration and the governor's office to develop and implement a statewide plan to upgrade school districts to affordable high-speed broadband access.

2017 TEACHER OF THE YEAR ANNOUNCED

Jason Sickel, a vocal music teacher at Blue Valley North High School (USD 229), named 2017 Kansas Teacher of the Year. Team members include Crystal May, a fourth-grade teacher at Pray-Woodman Elementary in Maize (USD 266); Jonathan Ferrell, a sixth-grade teacher at Briarwood Elementary in Overland Park (USD 512); Lori Stratton, an English teacher at Wamego High School (USD 320); Brent Wolf, a sixth-grade teacher at Derby North Middle School (USD 260); Maret Schrader, a language arts teacher at Seaman High School (USD 345); Kristi Bruce, a fourth-grade teacher at Auburn Elementary School (USD 437); and Jennifer Farr, a fifth-grade teacher at Lincoln Elementary in Junction City (USD 475).

COMMISSIONER VISITS
Completed 22 district visits.

DECEMBER

ANNUAL REPORT
The 2015-16 KSDE Annual Report was released.

KSDE PURPOSE STATEMENT REDEFINED
As part of its work to develop a new agency-wide strategic plan, KSDE unveiled its new agency purpose statement: We are an agency of Kansans serving Kansans by inspiring, coaching and leading to create the conditions for each student's success.

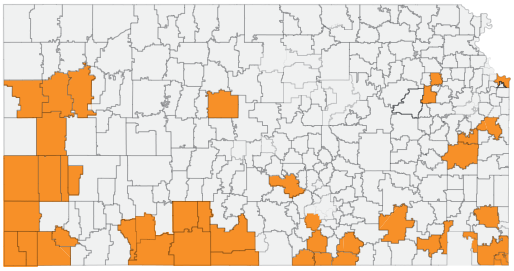
IPS IMPLEMENTATION
Nearly 75 percent of all school districts report having implemented an Individual Plan of Study process within their schools.

NATIONAL SCHOOLS OF CHARACTER
Three Kansas schools were honored as National Schools of Character for 2016 by the National Forum on Character Education and Character.org: Lincoln Elementary (Clay Center USD 379); Valley Center Intermediate (Valley Center USD 262); and Kiowa County Elementary and Junior High School (Greensburg USD 422).

ASSESSMENT ENHANCEMENT
The Center for Educational Testing and Evaluation conducted a study designed to correlate a student's performance on math and English language arts state assessments with a likely range of ACT scores. This predictive range will be included on student assessment performance results starting with the 2016-2017 assessment.

DATA CENTRAL DEBUT
KSDE debuted its new Data Central system on its public website. The system includes directory information, the Kansas Building Report Card, Kansas K-12 Reports, Nutrition Reports, Special Education Reports, GIS information and more.

COMMISSIONER VISITS QUARTER ONE



QUARTER TWO

2017

JANUARY

STATE BOARD ELECTIONS
Ann Mah was elected to the Kansas State Board of Education. Deena Horst (District 6), Kathy Busch (District 8), Jim McNiece (District 10) and Steve Roberts (District 2) each won re-election.

Jim Porter was selected board chairman and Kathy Busch was selected board vice chair.

KANSAS CURRICULAR STANDARDS FOR LIBRARY/INFORMATION AND TECHNOLOGY EDUCATION
State Board of Education approved revised curricular standards for Library/Information and Technology Education.

2016 KANSAS BLUE RIBBON SCHOOLS
Four schools were named 2016 Kansas Blue Ribbon Schools: Challenger Intermediate School, USD 265 Goddard; Chanute Elementary, USD 413 Chanute; McKinley Intermediate Elementary, USD 435 Abilene; and Wheatridge Middle School, USD 231 Gardner Edgerton.

EDUCATORS RISING
Educators Rising was announced as the newest Career Tech Student Organization.

COMMISSIONER VISITS
Completed seven district visits.

FEBRUARY

COALITION OF INNOVATIVE SCHOOL DISTRICTS
The State Board of Education approved five Specialized Certificates for Coalition of Innovative School Districts member Kansas City, Kansas, USD 500.

STATE BOARD WORK SESSION CONVENED
The State Board of Education conducted a one-day work session to review current work being done to advance the Individual Plan of Study outcome.

EDUCATOR PREPARATION PROGRAM STANDARDS: ELEMENTARY EDUCATION
The State Board of Education approved the new educator preparation program standards for Elementary Education Unified K-6, which serve as a direct-entry special education program for teacher candidates.

HARD-TO-FILL POSITIONS IDENTIFIED
The State Board of Education approved the following positions as hard-to-fill for the 2016-17 school year: elementary classroom teacher, mathematics (5-12), life and physical sciences (5-12), English language arts (5-12), and fine and performing arts (prek-12).

SECURITY BENEFIT RECOGNIZED
Security Benefit, Topeka, was recognized by the State Board of Education for its longtime partnership with KSDE 's Kansas Teacher of the Year program.

DISTRICTS IMPLEMENT CAREER CRUISING
As of February, 180 school districts were using the state's preferred vendor Career Cruising to develop Individual Plans of Study for students

COMMISSIONER VISIT
Completed eight district visits.

MARCH

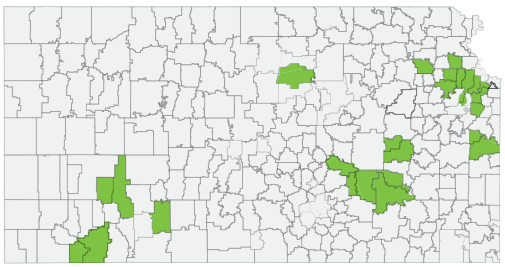
EDUCATOR PREPARATION PROGRAM STANDARDS: CHEMISTRY, PHYSICS, FOREIGN LANGUAGE
The State Board of Education approved new educator preparation program standards for chemistry (6-12), physics (6-12), and foreign language (Prek-12).

SCHOOLS ACCREDITED
The State Board of Education voted to retain each school's accreditation rating until that status is superseded by the first system-level status granted under KESA to the education system to which the school belongs or to the school itself in the case of an independent private school and unless that status is changed by official action of the board.

NEW TEACHER MENTORING GUIDELINES AND REQUIREMENTS PILOTED
The State Board of Education voted to authorize implementation of proposed mentoring guidelines and requirements for new teachers as a pilot program for the 2017-2018 and 2018-2019 school years. The mentoring program was developed by the Teacher Vacancy and Supply Committee.

COMMISSIONER VISITS
Completed 15 district visits.

COMMISSIONER VISITS QUARTER TWO



QUARTER THREE

APRIL

KANSAS CTE SCHOLAR PROGRAM LAUNCHED

The Kansas CTE Scholar program was launched. The program focuses on students' technical skills attainment, coursework, demonstrated leadership, work experience and career vision summary statements. More than 50 students were named CTE Scholars.

"KANSANS CAN, AND I AM" VIDEO CAMPAIGN ANNOUNCED

KSDE started seeking submissions for the "Kansans Can, and I Am" video campaign honoring Class of 2017 high school graduates. Schools submitted short videos of graduates discussing their postsecondary plans. The videos were shared via social media.

KANSAS CURRICULAR STANDARDS FOR DANCE AND CREATIVE MOVEMENT

The State Board of Education approved revisions to Kansas Curricular Standards for Dance and Creative Movement.

EDUCATOR PREPARATION PROGRAM STANDARDS: ESOL

The State Board of Education approved new educator preparation program standards for English for Speakers of Other Languages (ESOL) K-6, 5-8, 6-12, PreK-12.

EARLY LEARNING ROAD SHOWS

Six Early Learning Road Shows were conducted to help school districts work through questions about early learning opportunities in their communities. These meetings focused on the Board's goal of Kindergarten Readiness.

EDUCATE KANSAS TEACHER RECRUITMENT CAMPAIGN ANNOUNCED

KSDE, in partnership with the Professional Standards Board and the Teacher Vacancy and Supply Committee, announced the launch of the Educate Kansas teacher recruitment campaign. The campaign includes the creation of a new website, www.educatekansas.org.

KANSAS SENATE YOUTH PROGRAM DELEGATES

Tel Wittmer, of Holton High School, USD 336, and Jack Campbell, of Mill Valley High School, USD 232, named 2017 Kansas Senate Youth Program delegates.

COMMISSIONER VISITS

Completed 18 district visits.

MAY

"KANSANS CAN, AND I AM" VIDEO CAMPAIGN LAUNCHED

Launched "Kansans Can, And I Am" social media campaign recognizing Class of 2017 high school graduates across the state.

EMERGENCY SAFETY INTERVENTION REGULATION AMENDMENTS

The State Board of Education voted to adopt proposed amendments to Emergency Safety Intervention regulations K.A.R. 91-42-1, 91-42-2, 91-42-4 and 91-42-7; School Bus Safety regulations K.A.R. 91-38-1, 91-38-2, 91-38-3, 91-38-4, 91-38-5, 91-38-6, 91-38-7 and 91-38-8; and amendments to Higher Education Accreditation regulations 91-1-70a, 91-1-208, 91-1-221 and 91-1-235.

COMMISSIONER VISITS

Completed two district visits.

JUNE

KANSAS STATE SCHOOLS FOR THE DEAF AND BLIND SUPERINTENDENT SEARCH

Kansas State Schools for the Deaf and Blind Superintendent Madeleine Burkindine retired on June 30. Jon Harding, of the Kansas State School for the Blind, and Luanne Barron, of the Kansas State School for the Deaf, were named interim superintendents.

KANSAS SCHOOL ADMINISTRATORS HONORED

Sue Givens, superintendent at El Dorado USD 490, was named the 2017 Kansas Superintendent of the Year by the Kansas School Superintendents Association; Britton Hart, principal of Emporia High School (Emporia USD 253), was named the 2016-2017 Kansas High School Principal of the Year by the Kansas Association of Secondary School Principals; Terrell Davis, principal of Truesdell Middle School (Wichita USD 259) and Tony Helfrich, principal of Liberty Middle School (Pratt USD 382) were named the 2016-2017 Kansas Middle School Principals of the Year by the Kansas Association of Middle School Administrators; and Dana Sprinkle, principal of Ell-Saline Elementary School (Ell-Saline USD 307), was named the 2017 National Distinguished Principal of the Year by the Kansas Association of Elementary School Principals.

SPECIALIZED CERTIFICATES APPROVED

The State Board of Education approved 16 applications for Specialized Certificates for Kansas City, Kansas, USD 500.

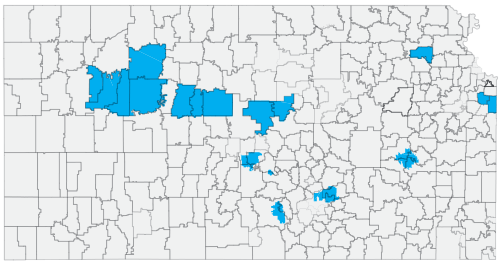
STATE ASSESSMENT CONTRACT APPROVED

The State Board of Education voted to approve a 2017-18 assessment contract with the Center for Educational Testing and Evaluation for an amount not to exceed $6 million.

STATE BOARD WORK SESSION CONVENED

The State Board of Education conducted a one-day work session to review current work being done to advance the Social-Emotional Growth outcome.

COMMISSIONER VISITS QUARTER THREE



QUARTER FOUR

JULY

NEW SCHOOL FUNDING FORMULA
The Kansas Legislature's newly developed school funding formula took effect on July 1.

KSDE HIRES SCHOOL REDESIGN SPECIALISTS

KSDE announced the hiring of one elementary and one secondary redesign specialist to lead the Kansans Can School Redesign Project.

CURRICULAR STANDARDS AND EDUCATOR PREPARATION PROGRAM STANDARDS
The State Board of Education approved the Kansas Curricular Standards for World Language and new educator preparation program standards for Elementary Education K-6.

KANSAS STATE BOARD OF EDUCATION SCHOOL MENTAL HEALTH ADVISORY COUNCIL
KSDE established the State Board of Education School Mental Health Advisory Council to inform the board of current issues and unmet needs regarding school mental health. Board member Kathy Busch was appointed to head up this council.

KANSAS SCHOOLS RECEIVE POSTSECONDARY PROGRESS REPORTS
Through KSDE's agreement with National Student Clearinghouse, Kansas schools began receiving postsecondary progress reports tracking students in postsecondary programs. The data, related to the accreditation model and the Rose Capacities, will help measure if enough students are gaining postsecondary education to meet predicted needs of the Kansas workforce.

ESSA PLAN
Kansas Consolidated State Plan posted for 30-day public comment period.

COMMISSIONER VISITS
Completed one district visit.

AUGUST

KANSAS EDUCATION SYSTEMS ACCREDITATION
Kansas school districts officially transitioned to the Kansas Education Systems Accreditation (KESA) model.

KANSANS CAN SCHOOL REDESIGN PROJECT ANNOUNCED
KSDE announced the seven Kansas school districts selected to participate in the Kansans Can School Redesign Project, called Mercury 7. Twenty-nine Kansas school districts applied to take part in the project. Twenty-one districts agreed to participate in a modified version of the redesign project, called the Gemini Project.

CIVIC ADVOCACY NETWORK PILOT PROGRAM LAUNCHED
KSDE launched its Civic Advocacy Network (CAN) pilot program. The program is designed to promote civic engagement and award schools that intentionally create civic engagement learning opportunities for their students.

SCIENCE ASSESSMENT PERFORMANCE LEVELS APPROVED
The State Board of Education approved the performance levels and cut scores for the Kansas College and Career Ready and Dynamic Learning Maps assessments in Science.

KANSAS CURRICULAR STANDARDS FOR MATHEMATICS
The State Board of Education approved the Kansas Curricular Standards for Mathematics.

KSDE CHILD NUTRITION AND WELLNESS KANSANS CAN BEST PRACTICE AWARDS
KSDE Child Nutrition and Wellness team announced the recipients of its newly created Kansans CAN Best Practice Awards, recognizing outstanding practices in food service programs that support the Kansans Can vision. Recipients were Shawnee Mission USD 512 and Blue Valley USD 229 (Innovative Meal Pattern Strategies); Kansas City, Kansas, USD 500, and Seaman USD 345 (Increased Participation); Rose Hill USD 394 (Managing Finances); Iola USD 257 and Quality Care Services in El Dorado (Customer Service); and Labette Health in Parsons (Impacting Wellness).

COMMISSIONER VISITS
Completed six district visits.

SEPTEMBER

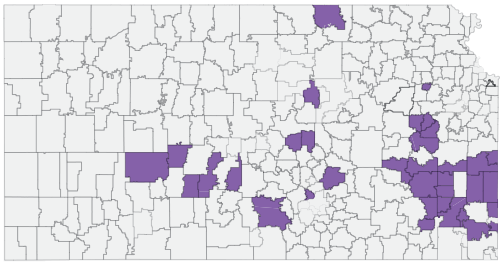
VISION VIDEO TRAINING SERIES RELEASED

KSDE released a seven-module video training series to help Kansas school districts facilitate staff discussions around Kansas' vision for education.

KANSAS ESSA PLAN SUBMITTED
KSDE submitted the Kansas Consolidated State Plan to meet the requirements for the Every Student Succeeds Act (ESSA) under the Elementary and Secondary Education Act (ESEA).

COMMISSIONER VISITS
Completed 29 district visits.

COMMISSIONER VISITS QUARTER FOUR



KANSANS CAN SCHOOL REDESIGN PROJECT








Seven Kansas school districts — each representing one of the Mercury 7 astronauts — were announced in August as taking part in a project that will help shape what education will look like in the future.

The Kansans Can School Redesign project launched Aug. 8, 2017, when the following districts and schools, along with the astronaut they represent, were introduced to the State Board of Education as participants in the project:

Coffeyville USD 445 — John Glenn
- Community Elementary School
- Field Kindley Memorial High (*with Roosevelt Middle School staff involved*)

Liberal USD 480 — Alan Shepard
- Meadowlark Elementary School
- Liberal High School

McPherson USD 418 — Wally Schirra
- Eisenhower Elementary School
- McPherson Middle School

Olathe USD 233 — Gordon Cooper
- Westview Elementary School
- Santa Fe Trail Middle School

Stockton USD 271 — Deke Slayton
- Stockton Grade School
- Stockton High School

Twin Valley USD 240 — Gus Grissom
- Tescott Elementary School
- Bennington Junior-Senior High School

Wellington USD 353 — Scott Carpenter
- Kennedy Elementary School
- Wellington High School

Twenty-nine school districts applied for the project. Out of those applications, seven were selected. Each of the seven districts had to designate one elementary and one secondary school to be redesigned around the five outcomes established by the State Board of Education, the five elements identified as defining a success high school graduate, and what Kansans said they want schools to provide students.

When applying for the project, districts also had to have approval by their local school board with a public vote, faculty support with a vote of 80 percent, and support from the Kansas National Education Association (KNEA) or other professional organization.

Applications for the project were due by Aug. 1, and Kansas State Department of Education (KSDE) staff members and representatives from the Kansas Association of School Boards and the United School Administrators of Kansas served on the selection committee. Two KSDE staff members were named to lead the project. Jay Scott is leading the secondary school redesign, and Tammy Mitchell is leading the elementary school redesign. The two are traveling across the state throughout the 2017-2018 school year to work with the districts and schools.

Twenty-one of the districts that applied for the Kansans Can School Redesign project accepted the challenge of becoming a Gemini district.

While the Gemini districts aren't receiving onsite coaching from KSDE staff members like the Mercury 7 districts, they are participating in video Professional Learning Community (PLC) sessions together and video meetings with Scott and Mitchell. Like the Mercury 7 districts, the 21 districts had to select one elementary and one secondary school to redesign. These districts also had to develop and share a project timeline with KSDE staff members and set a project launch date that occurs no later than the spring of 2020.

Representatives from agencies partnering with KSDE and the State Board of Education, along with interim Kansas Commerce Secretary Nick Jordan, attended the Mercury 7 August announcement. A news conference took place, and each superintendent from the seven districts was allowed to share their thoughts about the project.

The districts have to launch a new school redesign in the 2018-2019 school year and serve as demonstration sites for the remaining 279 school districts.

"What we are saying is that **each child is important. Each child is critical to the success of our state**. And with Individual Plans of Study and with redesigns, I think we have the opportunity to make sure we meet the needs of each student. We can't afford to miss a student."

- Jim Porter, Chairman of the Kansas State Board of Education

VISION

Kansas leads the world in the success of each student.

MISSION

To prepare Kansas students for lifelong success through rigorous, quality academic instruction, career training and character development according to each student's gifts and talents.

MOTTO

Kansans CAN.

SUCCESSFUL KANSAS HIGH SCHOOL GRADUATE

A successful Kansas high school graduate has the

- Academic preparation,
- Cognitive preparation,
- Technical skills,
- Employability skills and
- Civic engagement

to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation.

OUTCOMES FOR MEASURING PROGRESS

- Social-Emotional Growth, measured locally
- Kindergarten Readiness
- Individual Plan of Study, focused on career interest
- High School Graduation
- Postsecondary Success

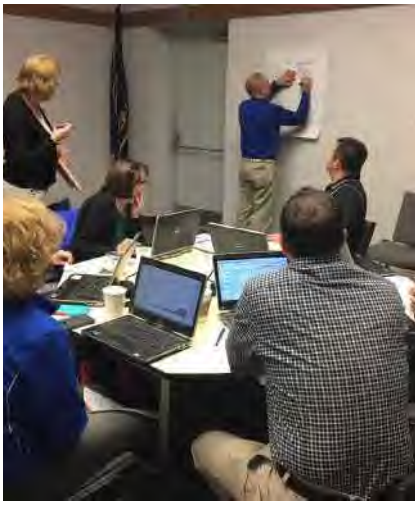
KESA

The Kansas State Department of Education in 2016 announced a new accreditation model for the state, and the 2016-2017 school year served as "Zero Year" of the Kansas Education Systems Accreditation (KESA) process.

KESA aligns with the Kansas State Board of Education's vision for education in Kansas, which is Kansas leads the world in the success of each student.

"I'm **tremendously excited** about what we have the **opportunity** to do."

- Fred Van Ranken, Superintendent, Twin Valley USD 240, speaking about the Kansans Can School Redesign Project



This new five-year model accredits systems, such as school districts. The old system, Quality Performance Accreditation (QPA), accredited buildings. The systems approach to accreditation began with the 2017-2018 school year.

The five-year cycle of improvement efforts uses an educational framework called "The Five Rs." Those 5 Rs are Relationships, Relevance, Responsive Culture, Rigor and Results.

Under the KESA model, each school within a district starts the process by conducting a needs assessment to identify key areas they think should be a focus of their work. The district then collects and analyzes those needs assessments and identifies the two biggest areas — or Rs — that need work. The district then develops strategies to strengthen those areas. In the final phase, the district and others review data to see if improvements were made.

KSDE staff members conducted 10 regional professional learning activities in each of the four quarters of the year. These activities informed attendees about the process, the KESA rubrics and various expectations for systems as they move closer to the time they will apply for accreditation status.

During the 2016-2017 school year, the 38-member Accreditation Council met and provided input on the development of KESA. Council members also provided feedback on KESA that they received from colleagues and others throughout the state.

Each system seeking accreditation is required to have an Outside Visitation Team (OVT) in place to assist with the accreditation process. OVTs are groups of educational professionals charged with coaching, mentoring and supporting the system they are serving for the duration of the five-year cycle.

KSDE staff members spent many hours developing a comprehensive OVT Workbook, which is a primary information resource for all systems and OVT members.

OVT training, as well as training for visitation team chairs, was provided multiple times at each of the educational service centers throughout the state. Potential OVT members and chairs are required to attend these KSDE facilitated trainings prior to serving on teams. The Kansas Educational Leadership Institute provides the training to team chairs.

Also during the past several months, new accreditation regulations were written to replace the old version that supported QPA, and an Accreditation Review Council (ARC) met for the first time in September to begin the journey of accrediting systems. ARC is the group that will review work submitted by systems seeking accreditation and make a final accreditation level recommendation to the Kansas State Board of Education. There are three levels — accredited, accredited-conditional and not accredited.

The State Board of Education could begin accrediting schools as early as the summer of 2018.

SOCIAL-EMOTIONAL GROWTH

The Kansas State Department of Education has developed several key initiatives and collaborated on others to achieve meaningful results toward the goal of each student developing the social, emotional and character competencies that promote learning and success in life.

Social-Emotional learning is the process through which students and adults acquire the knowledge, attitudes and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others and establish and maintain positive relationships.

Kansas in 2012 became the first state to implement Social-Emotional Character Development (SECD) standards. Every seven years, KSDE reviews and revises the standards. That process will begin in 2017-2018. A critical consideration for the revision of the standards will be how to best incorporate prevention measures into the standards framework.

Throughout the 2016-2017 school year, KSDE and its partners supplied the following items to the field:

- Measuring SECD Toolkit: This toolkit includes an overview of what SECD is; common outcomes measures for SECD; a document that is a primer for collecting and using data; articles; examples of surveys; curricular examples; an overview of the College and Career Competencies (CCC) framework; CCC formative questionnaires; fact sheets; and other professional resources.
- SECD and Kansas Education Systems Accreditation (KESA) crosswalk: This tool provides ideas and examples of how to align the SECD standards with the KESA accreditation 5Rs, which are Results, Relationships, Responsive Culture, Relevance and Rigor. KESA is Kansas' new model for accrediting systems (districts).
- Kansas School Mental Health Resource Guide: This guide, developed by the Kansas Technical Assistance System Network (TASN) helps school communities in building and strengthening school mental health systems, supports, services and practices.

KSDE and TASN worked together to develop a school mental health framework to promote and ensure interconnected systems of care across school, business and community services. This framework outlines a tiered-sytem approach to supporting mental health in Kansas schools.

The State Board of Education then authorized initiation of a new advisory group — the Kansas School Mental Health Advisory Council. The council, chaired by the State Board of Education member Kathy Busch, first met in August 2017. The council is tasked with improving services and support policies that will enhance and ensure adequate interconnected school mental health services across the state.

Throughout the 2016-2017 school year, KSDE integrated SECD into content standards and curriculum and made them available to schools. As standards are brought up for review, SECD is being integrated into them.

Agency staff members also completed a six-month long study of Adverse Childhood Experiences (ACES) and trauma-informed schools. The staff members produced a 25-page report of recommendations for the Kansas Commissioner of Education and the State Board of Education. Several of the recommendations were implemented or are in the process of being implemented.

KSDE launched a pilot of the Kansans Can Competencies Framework. The College and Career Competency Framework, which was developed by the Research Collaboration team at the University of Kansas, outlines teachable intrapersonal, interpersonal and cognitive competencies. For example, educators learn how to teach perseverance, goal setting, self-regulation and self-efficacy under the intrapersonal domain.

McClure Elementary School, Topeka USD 501, was named a National School of Character.

In March 2017, eight high schools and four middle schools across seven Kansas school districts participated in intrapersonal competency training and provided instruction in self-regulation embedded into academic course content.

In June 2017, seven high schools and three middle schools analyzed the impact of the intrapersonal competency instruction on student success. All schools identified positive impacts on motivation, academic performance and personal responsibility. That same month, teams from Abilene High School (Abilene USD 435) and Emporia High School (Emporia USD 253) presented to the State Board of Education on the implementation and impact of their intrapersonal competency instruction.

KSDE also:

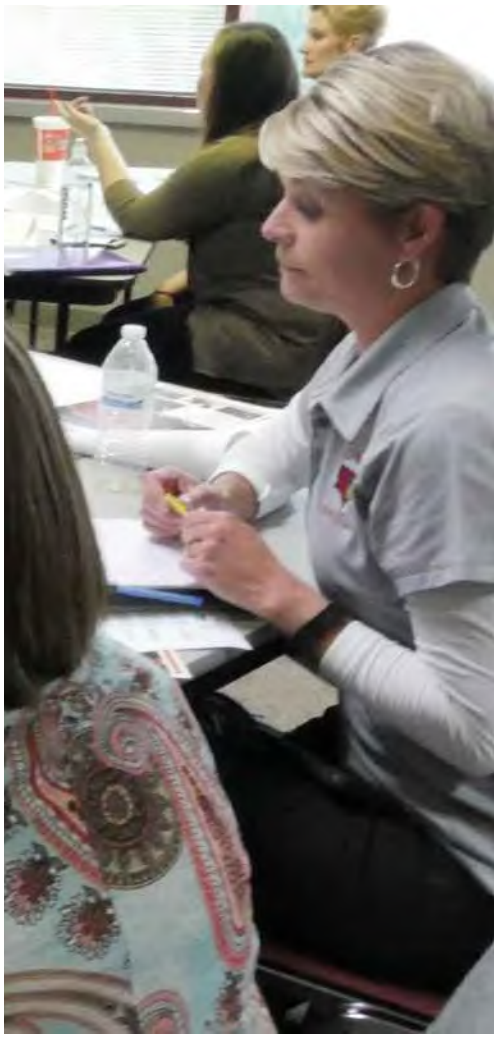
- Provided technical assistance, resources, a theme-based video and reproducible posters for the Anti-Bullying Awareness week, which takes place the first week in October.
- Partnered with other state agencies in the implementation of the Juvenile Justice Reform Act, which changes juvenile justice to a community corrections model. The act requires that all Unified School Districts submit a Memorandum of Understanding between the district and community partners, such as law enforcement, courts and county attorneys, to KSDE. It also requires that each superintendent or designee of the district attend a juvenile corrections training set up by the Kansas Law Enforcement Center.
- Partnered with Character.org to facilitate the Kansas School of Character Recognition Program. At an annual event, selected schools are recognized as Kansas Schools of Character. In 2017, McClure Elementary School (Topeka USD 501) was named a National School of Character.
- Continued to provide resources and increased knowledge of the importance of effective social-emotional learning and school mental health at statewide events, such as Summer Impact Institutes, symposiums and other conferences.

> “There’s **no more important work** than the work we’re doing in this project.”
>
> *- Gordon Mohn, Superintendent, McPherson USD 418, speaking about the Kansans Can School Redesign Project*

KINDERGARTEN READINESS

The success of each student begins with high-quality, early childhood care and education, and a snapshot tool called Ages and Stages Questionnaires (ASQ) will help teachers know where each student is academically and socially upon entering kindergarten.

A workgroup comprised of representatives from the Children's Cabinet and Trust Fund, Head Start Collaboration Office, Department for Children and Families, Parents as Teachers, Kansas Multi-Tier System of Supports (MTSS), KSDE, Kansas City, Kansas, USD 500, Canton-Galva USD 419 and educational service centers collaborated to find a tool that could measure Kindergarten Readiness.



The group came up with three key ideas for Kindergarten Readiness:

- Measuring Kindergarten Readiness should provide a snapshot of where children are upon entry to kindergarten.
- Screening should include communication, language and literacy, problem-solving, motor and social emotional areas of development.
- Families and caregivers should be engaged in gathering information about their child's development and early childhood experiences prior to kindergarten.

After these key ideas were established, the group decided to pilot ASQ: 3 and ASQ: Social Emotional (ASQ: SE-2) to get feedback from the field.

From September through December 2016, KSDE piloted the ASQ tools at 37 Kansas school districts. There were 189 teachers in 89 schools who took part, and 2,222 questionnaires were completed. More than 2,600 caregivers/parents participated in the pilot.

The feedback from the pilot was favorable, and in September 2017, KSDE announced it signed a contract to officially offer ASQ as the snapshot tool.

The ASQ: 3 measures communication skills, gross and fine motor skills, problem-solving and personal-social skills. The ASQ: SE-2 measures social-emotional skills, how a child regulates emotions and how a child interacts positively with others.

Data collection for 37,000 children will begin in the fall of 2018.

The Kansas Full-Day Kindergarten Guide is another initiative created by KSDE and kindergarten teachers, instructional coaches and elementary administrators from across the state with support from the Washington State Office of the Superintendent of Public Instruction.

The guide outlines evidence-based practices regarding child development; learning environment; classroom management; curriculum and instruction; and instructional practices to ensure a positive and engaging learning environment.

KSDE also sponsored Early Learning Roadshows in March, April and May 2017. These roadshows supported districts with Kindergarten Readiness efforts. KSDE's Early Childhood, Special Education and Title Services team led this effort with help from other KSDE teams and partners from the Department for Children and Families, the Children's Cabinet, Head Start, TASN, MTSS, Kansas Parent Information Resource Center, school districts and service centers.

The roadshows had 144 districts participating and more than 550 participants in eight locations across the state. Those locations were Oakley, Girard, Hutchinson (twice), Eudora, Topeka, Garden City and Clearwater. At each roadshow, a district was showcased for their early learning work and time was given for district-led collaborative planning.

"The **staff** is really **committing** to a dream and a little bit of a process not knowing what's really behind it. And they stepped up to do it because I think they know we have **to look differently at education** as we move forward."

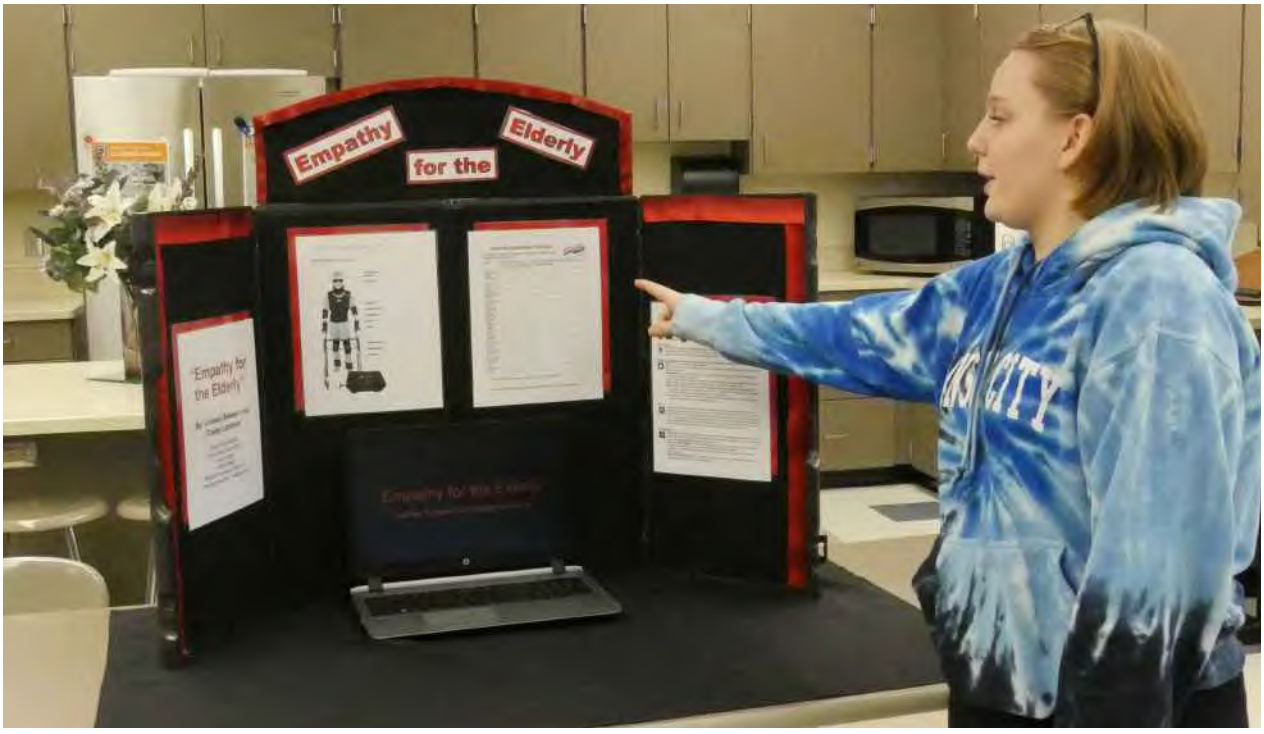
- John Allison, Superintendent, Olathe USD 233, speaking about the Kansans Can School Redesign Project

INDIVIDUAL PLAN OF STUDY

KSDE has been collaborating with other organizations to help support districts as they implement Individual Plans of Study processes starting in middle school.

For example, KSDE worked with service centers to offer nine training sessions. The sessions were open to middle and high school staff members who are leading the IPS implementation process. The training sessions helped participants map a framework, create a plan and navigate resources. The trainings, which started Sept. 8, 2017, in Salina, reached more than 500 people.

An IPS can help a student explore their future plans as early as middle school. Helping more students complete a postsecondary credential is crucial because jobs in Kansas are increasingly requiring higher educational levels. Kansas students, beginning in middle school, will develop an IPS based on their career interests. Each Kansas middle school and high school is expected to have an IPS process in place by the spring of 2018.



Randy Watson Testimony to House K-12 Education Budget Committee January 18, 2018
www.kslegislature.org/li/b2017_18/committees/ctte_h_k12_education_budget_1/documents/testimony/20180118_02.pdf

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An external IPS work group was created with representation from 17 districts and one service center. The group, comprised of middle and high school counselors and administrators, met three times and created an IPS Implementation Rubric to help schools with the implementation process.

A one-page rubric offers a brief overview of the IPS implementation process, and a detailed version provides a deep review of the process.

The detailed version is useful for reflection on practices and can help districts designate areas that need improvement. The rubric is intended to be used to self-evaluate progress during the implementation process.

KSDE surveyed districts and discovered that most schools are still in the early stages of implementation. While some are still working out what the process will be, most have defined the product they plan to use.

The deadline to subscribe to Career Cruising, which was identified as the state-preferred IPS vendor, was extended from Sept. 1, 2017, to Oct. 1, 2017.

Kansas State University recently began offering an IPS Advisor Micro-Credential to all counselors and teachers. A micro-credential is a certificate in a specific content area.

The course kicked off at the June 2017 School Counseling Camp. The credential will prepare educators to become career advisors who can effectively create CCR Individual Plans of Study for students in grades eight to 12.

“For us, it means **individualized education for every student.**”

- Renae Hickert, Superintendent, Liberal USD 480, speaking about the Kansans Can School Redesign Project

HIGH SCHOOL GRADUATION

From the first time a student enters kindergarten, every educator, kindergarten through grade 12, shares in the responsibility of preparing that student for success.

While Kansas has always enjoyed a robust high school graduation rate, it's critical to enhance focus on ensuring that every student not only graduates, but graduates with the skills needed to be successful in postsecondary programs or the workforce.

KSDE is focusing on several initiatives, such as kindergarten readiness, family engagement, civic engagement and social-emotional growth, to help improve graduation rates in the state.

The Kansas State Board of Education defines a successful high school graduate as someone who has the academic preparation, cognitive preparation, technical skills, employability skills and civic engagement to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remeditation.

For example, KSDE has placed a special focus on chronic absenteeism. The agency is encouraging districts to support students with attendance issues.

The agency also is putting an emphasis on personalized learning to help retain students so they will become successful graduates.

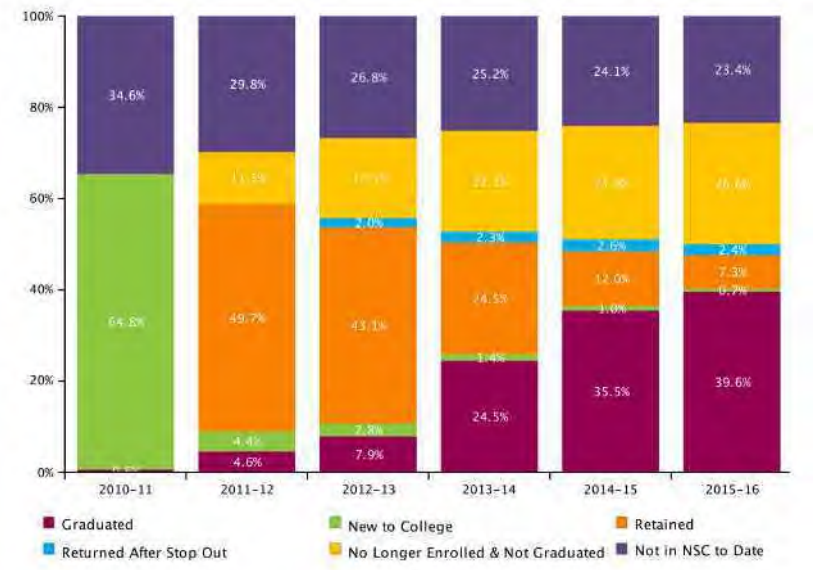
"The **opportunity** to **reach out** and **step into** the great beyond, into **the unknown**, and **do something** that is rooted in our traditions but **not limited by boundaries** is incredibly exciting for us. Educators are phenomenal creatures. We love passionately everything we do. We love passionately those kids who walk through our classrooms."

- Shelly Swayne, Superintendent, Stockton USD 271, speaking about the Kansans Can School Redesign Project

POSTSECONDARY SUCCESS

By 2020, at least 70 percent of all Kansas students must attain some level of postsecondary education in order to meet the state's predicted workforce education demands, according to a study produced by the Georgetown University Center on Education and the Workforce.

Kansas Class of 2010 Postsecondary Enrollment and Progress



In order to measure progress toward this goal, KSDE contracted with National Student Clearinghouse (NSC) to provide all districts with data that tracks the postsecondary movement of high school graduates. Using this data, schools are able to determine if students are pursuing and succeeding in postsecondary education.

The data includes a complete NSC student report, NSC building-level aggregate reports, as well as a postsecondary progress report for buildings and districts.

KSDE uses the NSC data, along with graduation data, to determine postsecondary success and effectiveness for each district.

There also is a chart that provides districts with a five-year average of their graduation rates, postsecondary success rates, postsecondary effective rates and a predicted effectiveness rate.

The state goal for postsecondary success is 70 to 75 percent.

The graduation rate is the four-year adjusted cohort, which is the number of students who graduated in four years with a regular high school diploma divided by the number of students who entered high school as a ninth-grade student four years earlier. It adjusts for transfers in and out.

The postsecondary success rate is the percent of high school graduates who have met one of the following outcomes within two years after high school graduation:

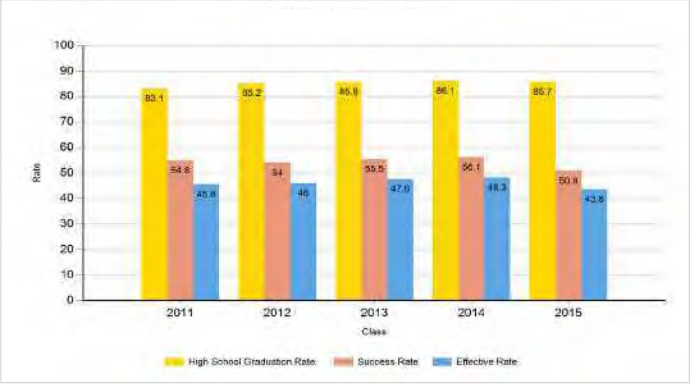
- Earned an industry-recognized certification while in high school.
- Earned a postsecondary certification.
- Earned a postsecondary degree.
- Or is enrolled in a postsecondary program in both the first and second year following high school graduation.

The postsecondary effective rate is the calculated graduation rate multiplied by the calculated success rate. The effective rate factors in all students — those who did and didn't graduate high school — whereas the success rate only factors in students who graduated high school.

"Each program will look a little difference because I think our community is going to drive this. Our parents, our students. We are going to be talking extensively with our students about **how do you learn? What do you want to learn?** Because if we're going to **design** a system around the kids, we'd better **talk to** the **kids** instead of us just telling them how it's going to be. I think **our community**, our **business leaders**, our **parents** and our **kids** are going to **help us design** this."

- Dr. Mark Whitener, Superintendent, Wellington USD 353, speaking about the Kansans Can School Redesign Project

Kansas Postsecondary Progress



Kansans Can Lead the World!
Graduation: 95%
Effective Rate: 70-75%

Five -Year Graduation Average
85%

Five -Year Success Average
52%

Five -Year Effective Average
44%

The numerator and denominator in the Five -Year Averages contain total student counts over five years (2011-2015)

Graduation Rate: The four-year adjusted cohort graduation rate is the number of students who graduate in four years with a regular high school diploma divided by the number of students who entered high school as ninth graders four years earlier (adjusting for transfers in and out).

Success Rate: A student must meet one of the four following outcomes within two years of high school graduation.

1. Student earned an industry recognized certification while in high school .
2. Student earned a postsecondary certification .
3. Student earned a postsecondary degree .
4. Student enrolled in postsecondary in both the first and second year following high school graduation .

Effective Rate: The calculated graduation rate multiplied by the calculated success rate.

Kansans CAN

Randy Watson Testimony to House K-12 Education Budget Committee January 18, 2018
www.kslegislature.org/li/b2017_18/committees/ctte_h_k12_education_budget_1/documents/testimony/20180118_02.pdf

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CIVIC ENGAGEMENT

KSDE created the Civic Advocacy Network (CAN) and has implemented an awards program that recognizes schools that actively involve students in civic engagement activities.

It is important that schools initiate engagement for students and provide adequate support to sustain that engagement over time.

Civic engagement is necessary so that students can become active members of vibrant communities. Students can't be civically engaged by learning lessons in the classroom about civic engagement, they must themselves be civically engaged.

John Paul Campbell, of Shawnee, left, standing, and Tel Jacob Wittmer, of Holton, right, standing were selected as delegates to the 55th annual United States Senate Youth Program.

CIVIC ADVOCACY NETWORK

CAN was created with the purpose of recognizing schools that actively involve students in civic engagement activities. However, it also provides exemplary practices from these schools to share with schools across the state. The ultimate goal is to promote civic engagement as part of all preK-12 students' experiences.

The CAN awards program, which kicked off in the fall of 2017, is determined by student engagement around the "Six Proven Practices for Effective Civic Learning." The six practices are:

1. Instruction in government, history, law and democracy.
2. Incorporation of discussion of current local, national and international issues and events in the classroom, particularly those that young people view as important to their lives.
3. Design and implement programs that provide students with opportunities to apply what they learn through performing community service that is linked to the formal curriculum and classroom instruction.
4. Offer extracurricular activities that provide opportunities for young people to get involved in their schools or communities.
5. Encourage student participation in school governance.
6. Encourage students' participation in simulations of democratic processes and procedures.

Schools will be evaluated on evidence they provide that one or more of the following takes place around each of the six practices: professional learning; implementation of a curriculum; school participation in national, regional, state or corporate competitions and/or programs that address civic engagement or a particular practice; student performance and recognition; and school recognition.

The application process will begin in the spring of 2018, with a June 1, 2018, application deadline. The winners will be notified in the fall of 2018 and will be invited to attend a celebration in Topeka.

"One way that Coffeyville is working on that is by **involving the community** in all aspects of our education. We're **growing** our site councils. We are **creating** advisory panels to **bring** the community in and **find out** what our local business and industry leaders need out of our students."

- Dr. Craig Correll, Superintendent, Coffeyville USD 445, speaking about the Kansans Can School Redesign Project

2017 ACADEMIC AND COGNITIVE PREPARATION

Student performance was scored using four levels.

Level 1:

A student at Level 1 shows a limited ability to understand and use the skills and knowledge needed for college and career readiness.

Level 2:

A student at Level 2 shows a basic ability to understand and use the skills and knowledge needed for college and career readiness.

Level 3:

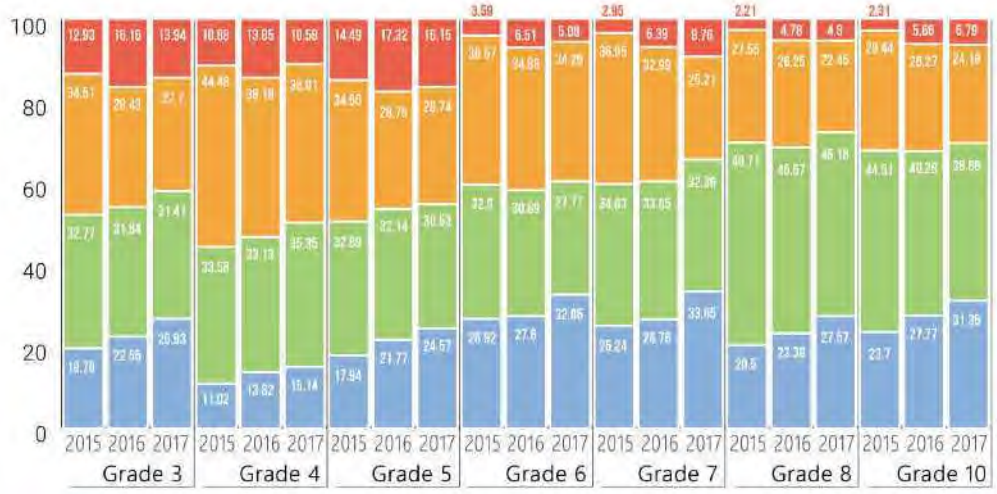
A student at Level 3 shows an effective ability to understand and use the skills and knowledge needed for college and career readiness.

Level 4:

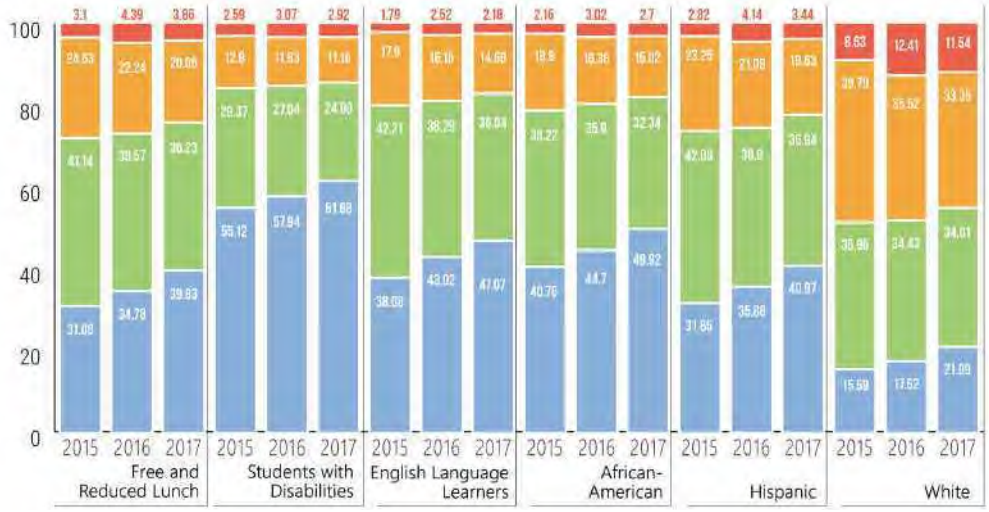
A student at Level 4 shows an excellent ability to understand and use the skills and knowledge needed for college and career readiness.

ENGLISH LANGUAGE ARTS

BY GRADE

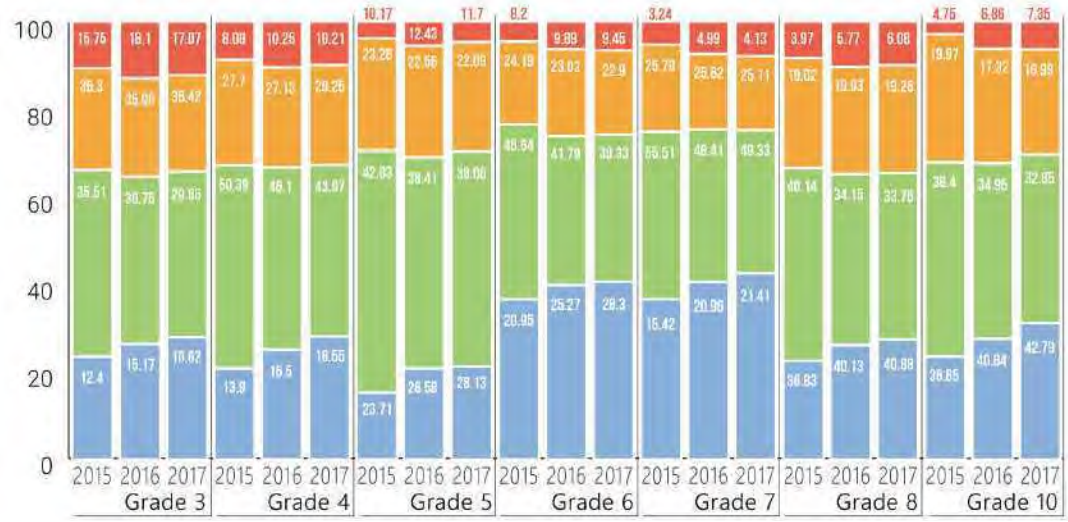


BY SUBGROUP

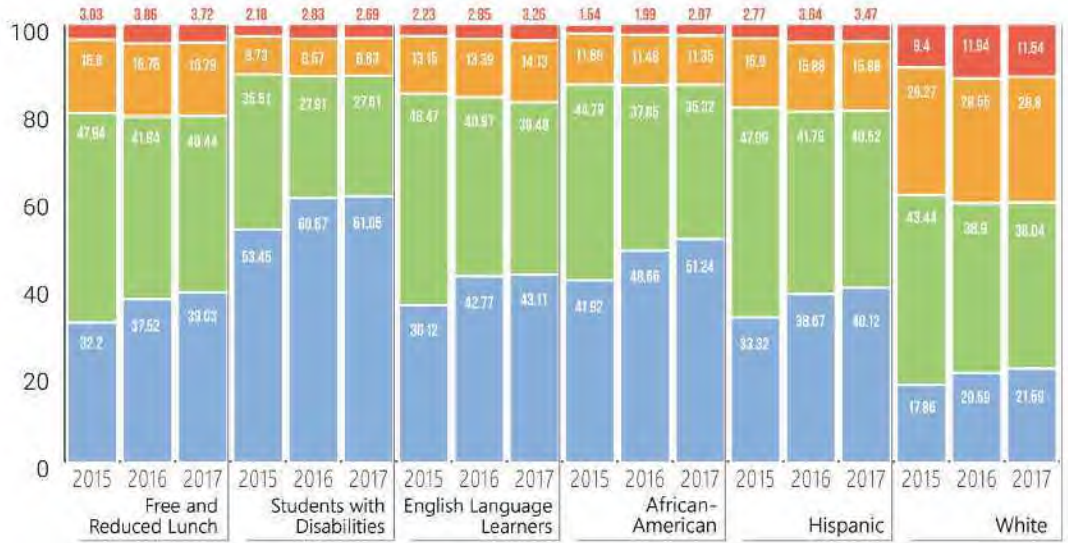


MATHEMATICS

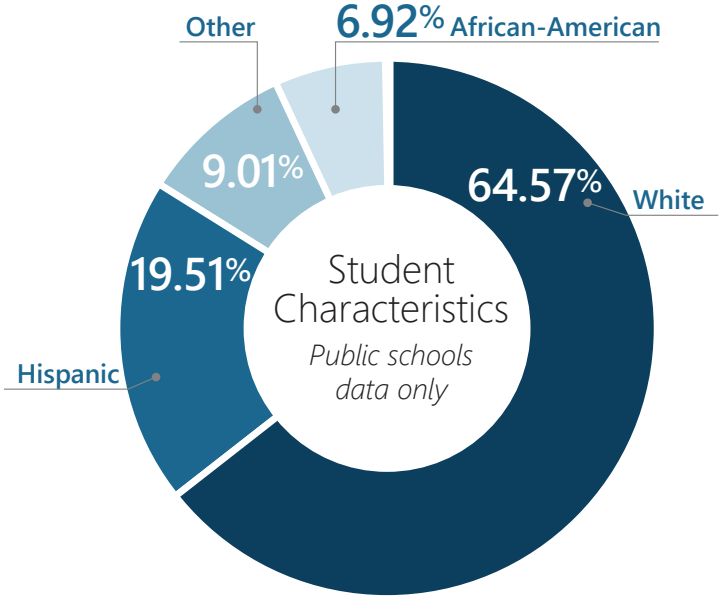
BY GRADE



BY SUBGROUP



EDUCATION SUMMARY



Public School Characteristics

Number enrolled*	489,795
Number of Title 1 Schools	667

**Headcount enrollment*

School District Characteristics

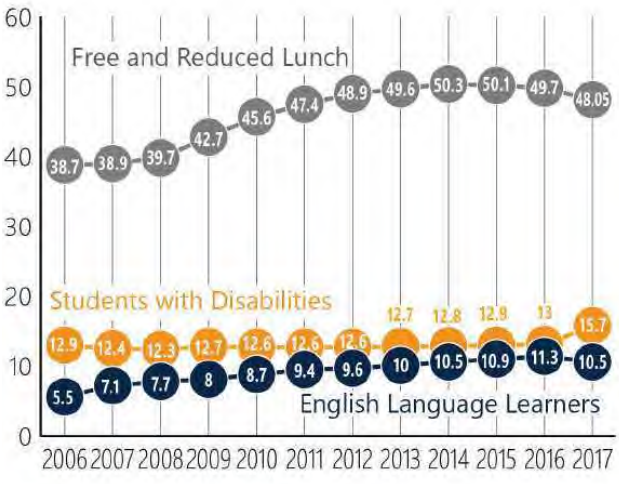
Number of School Districts	286
Number of Schools	1,307

Teachers

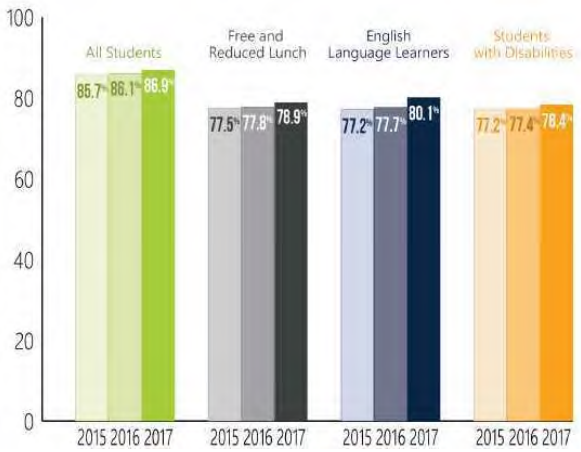
Average Age	43
Average Years of Experience	13
Number of Full-Time Equivalent (FTE) Teachers	31,476.1
Teachers' Average Salary**	$ 54,120.50
Teacher/Pupil Ratio	14.9

** *Includes supplemental and summer school salaries and fringe benefits*

Student Population Subgroups



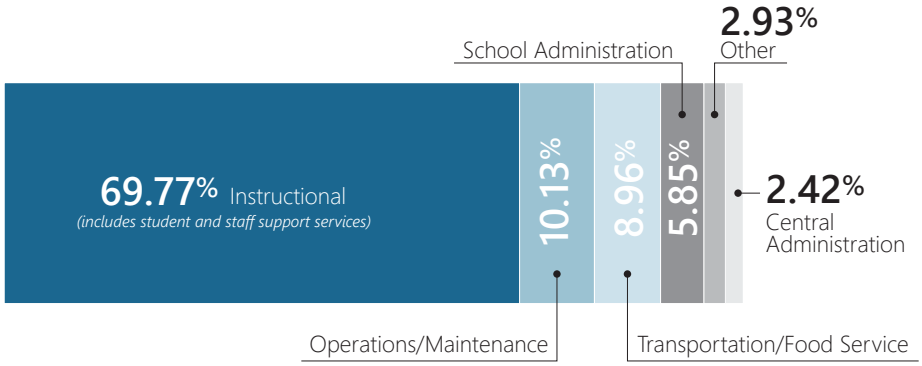
Graduation Rates



** All students in public and private schools in Kansas.*

District Fiscal Summary

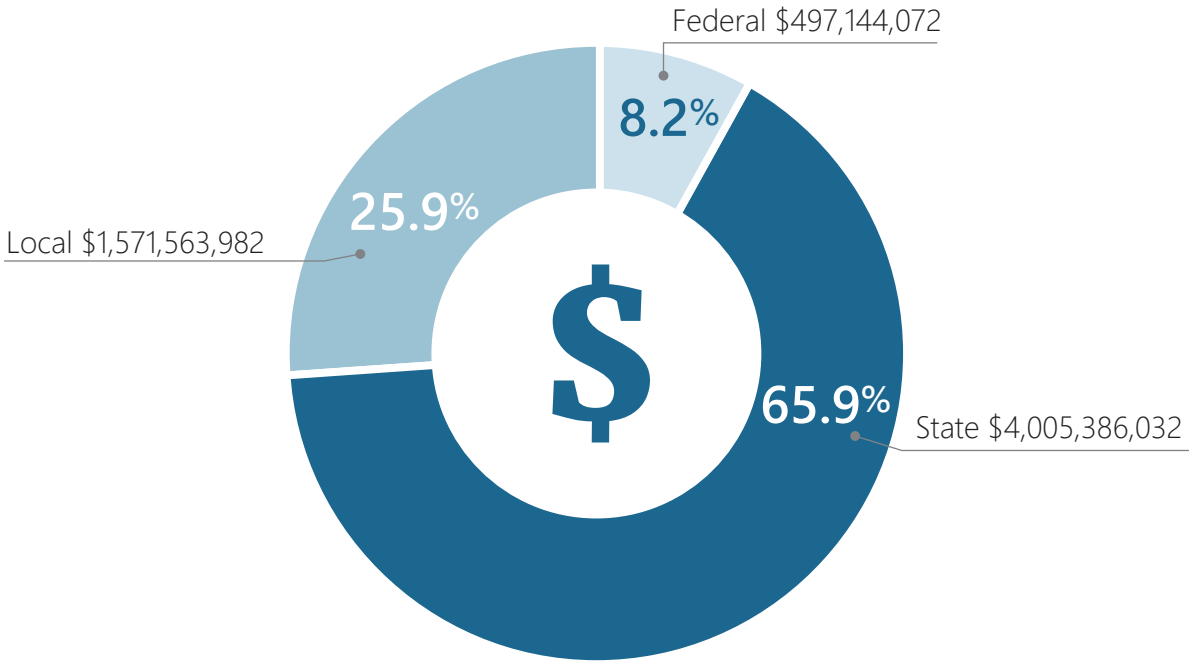
EXPENDITURES



Total Operating Expenditures	$	5,033,646,123
Total Operating Expenditures Per Pupil ‡	$	10,951
Total Nonoperating Expenditures §	$	1,040,447,963
Total Expenditures	$	6,074,094,086
Total Expenditures Per Pupil	$	13,215

‡ Based on FTE of 459,650.1
§ Bond, Interest, Capital Outlay

REVENUE



Kansas State Department of Education
Landon State Office Building
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Appendix 4:
Constitutional Protest of Sen. Hensley

S. Journal, 2018 Sess., at 1990-2006 (Kan. daily ed. Apr. 5, 2018) (statement of Sen. Hensley). The constitutional protest is publicly available at: http://www.kslegislature.org/li/b2017_18/chamber/documents/daily_journal_senate_20180405171140.pdf. It is appropriate for this Court to take judicial notice of the testimony, all of which is publicly available and part of the legislative history of S.B. 423, and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

Journal of the Senate

FIFTY-NINTH DAY

SENATE CHAMBER, TOPEKA, KANSAS
Thursday, April 5, 2018, 10:00 a.m.

The Senate was called to order by President Susan Wagle.
The roll was called with 40 senators present.
Invocation by Reverend Cecil T. Washington:

Heavenly Father, I thank You for daily inspiration. I thank You for giving us direction. You've given us these positions…extremely responsible positions. Along with the power of the position, give us the inner power to achieve.

Earlier today, Lord, You inspired a 19 year old young man to text me with the question, "Do you have to read the Bible every morning to have spiritual power?" Lord, I decided to let You answer that for him. And You've led me to also let You answer that for those of us in these chambers.

As Joshua was given the charge…the responsibility of leading Your people, You told him in chapter 1, verse 8, that the key to being successful and prospering in all his endeavors was directly connected to gaining wisdom from Your Word every day and every night.

You reaffirmed that in the very first Psalm, letting us know that consistent diligent time in Your Word empowers us to consistently and successfully be wise leaders.

So, Lord, give us a hunger and a thirst for the wisdom that comes from You. Like a thirsty plant that thrives when it's watered, water us with the wisdom that pours from Your Word. In Jesus' Name, I pray, Amen.

The Pledge of Allegiance was led by President Wagle.

INTRODUCTION OF BILLS AND CONCURRENT RESOLUTIONS

The following bill was introduced and read by title:

SB 459, AN ACT concerning taxation; establishing the property and sales tax review study commission; providing for membership and duties, by Committee on Assessment and Taxation.

INTRODUCTION OF ORIGINAL MOTIONS AND SENATE RESOLUTIONS

Senator V. Schmidt introduced the following Senate resolution, which was read:

SENATE RESOLUTION No. **SR 1786—**

A RESOLUTION congratulating and commending Harold N. Godwin for his lifetime commitment to excellence in pharmacy, for his career of leadership in pharmacy in Kansas, and for his recent recognition as the winner of the 2018 Remington Honor Medal in pharmacy.

WHEREAS, Harold N. Godwin, BSPharm, MS, RPh, FASHF, FAPhA, of Overland Park, Kansas, was selected as the recipient of the 2018 Remington Honor Medal, the highest honor bestowed by the American Pharmacy Association (APhA) for his nearly half-century-long pharmacy career; and

WHEREAS, Godwin has led and advocated for the pharmacy profession on the national, state and local levels. He serves as professor emeritus at the University of Kansas School of Pharmacy and recently retired from his previous role as professor of pharmacy practice and associate dean for clinical and medical center affairs at the University of Kansas Health Systems. He also served as director of pharmacy at the University of Kansas Hospital from 1969 to 2004; and

WHEREAS, Godwin has presented more than 800 times, nationally and internationally, on aspects of health system pharmacy practice to pharmacists and other health care professionals, and many of his publications, abstracts and posters were developed based on his work in the health system pharmacy practice arena; and

WHEREAS, The Remington Honor Medal, named for eminent community pharmacist, manufacturer and educator Joseph P. Remington, was established in 1918 to recognize distinguished service on behalf of American pharmacy during the preceding years culminating in the past year or during a long period of outstanding activity or fruitful achievement. Godwin will be officially recognized during the APhA Annual Meeting and Exposition in Nashville, Tennessee, from March 16 to 19, 2019, as part of the awards and honors program that is the most comprehensive recognition program in the profession of pharmacy; and

WHEREAS, One nominator referred to Godwin as a "Diplomat for Pharmacy," and noted that his passion for pharmacy has led him through nearly every aspect of pharmacy and he "commonly connects people in different arenas, because he can see the possibility of synergy, is encouraging them to grow, or because he thinks they might just become great friends"; and

WHEREAS, Godwin's leadership, through his volunteer roles and residency training programs, has developed many pharmacy leaders. For his efforts, the Harold N. Godwin Leadership Legacy Award was established in 2004 by alumni and friends of the residency training programs he started to recognize outstanding leadership and contributions to the profession of pharmacy; and

WHEREAS, Godwin has served as a leader and a member of numerous medical boards for national, state and local organizations including two terms on the Board of Directors for the Board of Pharmacy Specialties, where he served as chair in 2017. Godwin has also served as a board member on the Kansas Pharmacists Association, Kansas Pharmacy Foundation, Society of Hospital Pharmacists of Greater Kansas City, Central Ohio Society of Hospital Pharmacists and Ohio Society of Hospital Pharmacists; and

WHEREAS, Godwin has also been recognized as a Fellow of APhA in 2010 and the American Pharmacists Association Academy of Pharmacy Practice and Management

Distinguished Achievement Award winner in Hospital and Institutional Practice. In 1991 he also received the highest honor from the American Society of Health-System Pharmacists, the Harvey A.K. Whitney Award, and was named the Pharmacist of the Year in 1982 and 2010 by the Kansas Pharmacists Association. Godwin received his pharmacy degree from the University of Kansas and his Master of Science in Hospital Pharmacy degree from the Ohio State University: Now, therefore,

Be it resolved by the Senate of the State of Kansas: That we congratulate and commend Harold N. Godwin for his lifetime commitment to excellence in pharmacy, for his career of leadership in pharmacy in Kansas, and for his recent recognition as the winner of the 2018 Remington Honor Medal in pharmacy; and

Be it further resolved: That the Secretary of the Senate shall send five enrolled copies of this resolution to Senator Schmidt and one enrolled copy to Harold N. Godwin.

On emergency motion of Senator V. Schmidt **SR 1786** was adopted unanimously.

Senator Hilderbrand introduced the following Senate resolution, which was read:

SENATE RESOLUTION No. 1787—

A RESOLUTION congratulating and commending
the Pittsburg State University men's indoor track and field team
on their 2018 NCAA Division II national championship.

WHEREAS, The Pittsburg State University captured the 2018 NCAA Division II men's indoor track and field championship on March 10, 2018, at the Robert W. Plaster Center in Pittsburg, Kansas, the program's first ever Division II national title; and

WHEREAS, The team also captured the 2018 MIAA men's indoor track and field championship on February 25, 2018; and

WHEREAS, Twelve Pittsburg State Gorillas earned all-MIAA honors and seven earned NCAA Division II All-American recognition, including a national champion in senior Bo Farrow, for shot put, and three national runners-up in senior Justice Burks, for 60m hurdles, senior Ian Duncan, for high jump and senior Tanner McNutt, for the heptathlon; and

WHEREAS, Assistant coach Kyle Rutledge was selected as the NCAA Division II Assistant Coach of the Year; and

WHEREAS, Head coach Russ Jewett was selected as the MIAA, Central Region and NCAA Division II Coach of the Year: Now, therefore,

Be it resolved by the Senate of the State of Kansas: That we congratulate and commend the Pittsburg State University men's indoor track and field team for their 2018 NCAA Division II national championship and also recognize head coach Russ Jewett, assistant coach Kyle Rutledge, athletic director Jim Johnson, Pittsburg State president Steve Scott and every athlete and member of the team for a successful 2018 season; and

Be it further resolved: That the Secretary of the Senate shall send five enrolled copies of this resolution to Senator Hilderbrand.

On emergency motion of Senator Hilderbrand **SR 1787** was adopted unanimously.

Senators Pettey, Alley, Baumgardner, Berger, Billinger, Bollier, Bowers, Denning, Doll, Estes, Faust-Goudeau, Fitzgerald, Francisco, Givens, Goddard, Haley, Hardy, Hawk, Hensley, Hilderbrand, Holland, Kelly, Kerschen, Longbine, Lynn, Masterson, McGinn, Petersen, Pilcher-Cook, Rogers, V. Schmidt, Skubal, Suellentrop, Sykes,

Taylor, Tyson, Wagle and Wilborn introduced the following Senate resolution, which was read:

SENATE RESOLUTION No. 1788—

A RESOLUTION recognizing the month of April as Child Abuse Prevention Month.

WHEREAS, Children are key to the state's future success, prosperity and quality of life and, while children are our most valuable resource, they are also our most vulnerable; and

WHEREAS, Children have a right to be safe and to be provided an opportunity to thrive, learn and grow; and

WHEREAS, Child abuse and neglect can be prevented by supporting and strengthening Kansas' families, which can help provide children the opportunity to develop healthy, trusting family bonds, and, consequently, prevent the far-reaching effects of maltreatment and build the foundations of communities; and

WHEREAS, Since it is our duty as a community to extend a helping hand to children and families in need, we must come together as partners to make the voices of our children heard by all; and

WHEREAS, By providing safe, stable and nurturing relationships for our children, free of violence, abuse and neglect, we can ensure that Kansas' children will grow to their full potential as the next generation of leaders, and thus help to secure the future of this state and nation: Now, therefore,

Be it resolved by the Senate of the State of Kansas: That we recognize the month of April as Child Abuse Prevention Month; and

Be it further resolved: That the Secretary of the Senate shall send five enrolled copies of this resolution to Senator Pettey.

On emergency motion of Senator Pettey **SR 1788** was adopted unanimously.

Introduced was Dona Booe, CEO of the Kansas Childrens' Service League.

The senate honored Dona with a standing ovation.

MESSAGES FROM THE GOVERNOR

SB 311 approved on April 04, 2018

On motion of Senator Denning, the Senate recessed until the sound of the gavel.

The Senate met pursuant to recess with President Wagle in the chair.

MESSAGE FROM THE HOUSE

The House adopts the Conference Committee report on **HB 2606**.

The House adopts the Conference Committee report on **Sub SB 272**.

The House not adopts the Conference Committee report on **SB 375**, requests a conference and appoints Representatives Proehl, Francis and Lusker as second conferees on the part of the House.

The House not adopts the Conference Committee report on **HB 2470**, requests a conference and appoints Representatives Barker, Highland and Ruiz as second conferees on the part of the House.

The House concurs in Senate amendments to **HB 2145**, and requests return of the bill.

The House concurs in Senate amendments to **HB 2454**, and requests return of the bill.

ORIGINAL MOTION

On motion of Senator Petersen, the Senate acceded to the request of the House for a conference on **SB 375**.

The President appointed Senators Petersen, Goddard and Pettey as second conferees on the part of the Senate.

On motion of Senator Estes, the Senate acceded to the request of the House for a conference on **HB 2470**.

The President appointed Senators Estes, Olson and Faust-Goudeau as second conferees on the part of the Senate.

REPORTS OF STANDING COMMITTEES

Committee on **Federal and State Affairs** recommends **HB 2438** be passed.

COMMITTEE OF THE WHOLE

On motion of Senator Denning, the Senate resolved itself into Committee of the Whole, for consideration of a bill on the calendar under the heading of General Orders with Senator Petersen in the chair.

On motion of Senator Petersen the following report was adopted:

The committee report on **SB 423** recommending **Sub SB 423** be adopted..

Sub SB 423 be amended by motion of Senator Baumgardner; on page 3, in line 4, by striking "Non-tiered course credit hour grant" and inserting "Concurrent enrollment pilot program"; in line 5, by striking "non-"; in line 6, by striking all before "account" and inserting "concurrent enrollment pilot program"

Sub SB 423 be further amended by motion of Senator Francisco; on page 9, in line 7, by striking "and" and inserting "or",

And and **Sub SB 423** be passed as amended.

FINAL ACTION ON BILLS AND CONCURRENT RESOLUTIONS

On motion of Senator Denning an emergency was declared by a 2/3 constitutional majority, and **Sub SB 423** was advanced to Final Action and roll call.

Sub SB 423, AN ACT concerning education; relating to the instruction and financing thereof; Kansas school equity and enhancement act; BASE aid amount; enrollment weighting; preschool-aged at-risk students; consolidated school district total foundation aid; local option budget alternative calculation; funding reports; performance audits; bond authority; making and concerning appropriations for the fiscal years ending June 30, 2019, June 30, 2020, and June 30, 2021, for the department of education; making and concerning appropriations for the fiscal year ending June 30, 2019, for the state board of regents; amending K.S.A. 2017 Supp. 72-5132, 72-5141, 72-5144, 72-5149, 72-5155, 72-5171, 72-5173 and 72-5461 and repealing the existing sections.

Upon the showing of five hands a Call of the Senate was requested.

On roll call, the vote was: Yeas 21; Nays 18; Present and Passing 0; Absent or Not Voting 1.

Yeas: Alley, Baumgardner, Billinger, Bollier, Bowers, Denning, Estes, Fitzgerald, Givens, Goddard, Hardy, Hilderbrand, Kerschen, Longbine, Lynn, Masterson, McGinn, Petersen, Suellentrop, Wagle, Wilborn.

Nays: Berger, Doll, Faust-Goudeau, Francisco, Haley, Hawk, Hensley, Holland, Kelly, Pettey, Pilcher-Cook, Pyle, Rogers, V. Schmidt, Skubal, Sykes, Taylor, Tyson.

Absent or Not Voting: Olson.

The Call of the Senate was lifted.

The substitute bill passed, as amended.

EXPLANATION OF VOTE

Madam President: I vote "YES" on **SB 423**. For over 30 years Senate District 7 has asked to change the school funding formula. Last year we had the opportunity to make changes, but the political will was not there. When the Supreme Court found **SB 19** to be unconstitutional, they asked for the legislature to both perform a new study and to understand that a resolution would not be reached with just adding in money. The Senate Education Committee along with the Senate Education Funding Special Committee, both of which I am a member of, has worked diligently to bring forward policy that targets money to address those students who are underperforming. Using Dr. Lori Taylor's graduated funding plan over five years with graduation rates of 91% and significantly raising ELA and Math assessment performance numbers, a total additional $280 million was added above the approximately $95 million increase this past year. Now we will enter Conference Committee with an expectation of increasing the amount of funding to close the gap with the House position on Education funding. While no bill is perfect, and not everything that I wanted is in the bill, it is a good start.—BARBARA BOLLIER

Madam President: I vote "NO" on **Substitute for Senate Bill 423**. I understand that investing in early education is one of the best things we can do to give students a good start in school and in life. The earlier we provide such opportunities, the better for those students. This bill does expand opportunities for at-risk three-year-old children to participate in early education, but only if they do not take the place of a four-year-old student and only if they would be filling an available opening. The legislature should be providing suitable opportunities for all the three and four-year-old children who qualify. The limitations on the participation of three-year-olds should not be necessary and only serves to demonstrate that the funding in this bill is woefully inadequate to provide a suitable education for Kansas students.—MARCI FRANCISCO

Madam President: As we move the process forward to deal with addressing the courts, I would like to submit the summary table below to reflect the amount of money that is spent in the budget and not counted by the courts. These dollars are spent on wraparound programs that help to address the needs of the at-risk students that the court has ordered the legislature to focus additional resources on. Every one of these programs are integrated with our schools to help improve student outcomes.—CAROLYN MCGINN

ATTACHMENT A

State of Kansas Education-Related Expenditures (Excluding K-12 School Finance)

	FY 2018 Governor's Recommendation		FY 2019 Governor's Recommendation	
	State General Fund	All Funds	State General Fund	All Funds
General Government				
Attorney General				
DARE Program	-	25,000	-	25,000
Total--General Government	**$ -**	**$ 25,000**	**$ -**	**$ 25,000**
Human Services				
Department for Children & Families				
Child Care Assistance	10,429,859	39,428,376	10,429,859	36,491,520
Child Care Quality	-	5,083,046	-	5,083,046
Independent Living & Life Skills Svcs.	393,977	1,969,886	393,977	1,969,886
KS Early Head Start	-	9,238,642	-	9,238,642
Vocational Rehabilitation Case Svcs.	1,043,906	4,900,967	1,217,749	5,717,131
Smartmoves	-	219,435	-	219,435
EPIC Skillz	-	188,583	-	188,583
Urban Scholastic Center	-	109,253	-	109,253
Project Impact	-	-	-	189,317
Kansas Reading Roadmap	-	9,790,950	-	9,790,950
Kidzlit	-	877,725	-	877,725
Jobs for America's Graduates	-	4,400,000	-	5,750,000
Communities in Schools	-	1,453,467	-	1,489,520
Subtotal--Children & Families	*$ 11,867,742*	*$ 77,660,330*	*$ 12,041,585*	*$ 77,115,008*
Parsons St. Hospital & Training Ctr.				
Special Purpose School	350,000	350,000	350,000	350,000
Health & Environment--Health				
School Health	375,376	891,907	353,061	891,907
Infant & Toddler Services	-	10,153,186	-	10,151,104
Newborn Hearing Aid Loaner Prog.	-	41,346	-	40,602
Newborn Screening Metabolic/Hearing	16,700	766,200	16,700	773,868
Subtotal--KDHE--Health	*$ 392,076*	*$ 11,652,639*	*$ 369,761*	*$ 11,657,481*
Total--Human Services	**$ 12,609,818**	**$ 89,662,969**	**$ 12,761,346**	**$ 89,122,489**
Education				
Department of Education				
Parent Education Program	-	7,237,635	-	8,237,635
Pre-K Program	-	4,132,317	-	4,132,317
Kansas Reading Success	2,100,000	2,100,000	2,100,000	2,100,000
Communities in Schools	-	50,000	-	50,000
Children's Cabinet Programs	-	15,807,840	-	18,018,476
Subtotal--Department of Education	*$ 2,100,000*	*$ 29,127,792*	*$ 2,100,000*	*$ 32,538,428*
School for the Blind				
Education of Blind Children	5,368,299	7,043,445	5,435,726	8,767,521
School for the Deaf				
Education of Deaf Children	8,831,258	11,044,447	8,899,869	10,798,266
Kansas Board of Regents				
Excel in Career Tech. Ed. (SB 155)	28,050,000	28,050,000	28,050,000	28,050,000
Emporia State University				

ATTACHMENT A

Ctr. for Early Childhood Ed.	12,023	480,489	12,023	480,489
Reading Related Services	26,450	26,450	26,450	26,450
Enhancing Your Future	12,890	16,790	12,890	16,790
Sonia Kovalevsky Math Day	-	1,500	-	1,500
MASTER-IT	16,721	20,721	16,721	20,721
Family Literacy Program	360	30,458	372	30,470
Yes, I Can Do Science & Mathematics	-	5,750	-	5,750
Subtotal--Emporia State University	$ *68,244*	$ *582,158*	$ *68,256*	$ *582,170*
Fort Hays State University				
Herndon Clinic	586,319	777,523	586,319	777,523
Tigers Tots Nursery Center	-	103,452	-	103,452
Subotal--Ft. Hays State University	$ *586,319*	$ *880,975*	$ *586,319*	$ *880,975*
Kansas State University				
Hoefin Stone House	65,000	395,869	65,000	475,000
Early Childhood Laboratory	65,000	110,160	65,000	125,000
KSDE Food Program	-	7,000	-	7,000
Speech & Hearing Center	168,474	343,579	168,474	345,000
Subtotal--Kansas State University	$ *298,474*	$ *856,608*	$ *298,474*	$ *952,000*
Kansas State University--ESARP				
4-H Program	417,167	1,098,416	417,167	1,098,416
Youth Leadership Program	94,620	255,109	94,620	255,109
Army Youth & Teen Center	20,914	115,295	20,914	115,295
Community Youth Dev. & Training	26,998	114,745	26,998	114,745
Learning & Social Readiness	12,450	43,423	12,450	43,423
Improve Parenting Skills	707,299	1,371,609	707,299	1,371,609
Subtotal--KSU--ESARP	$ *1,279,448*	$ *2,998,597*	$ *1,279,448*	$ *2,998,597*
Pittsburg State University				
Pre-school Lab	17,587	34,694	17,587	34,694
Yes Program	17,636	35,350	17,636	35,350
America Reads Challenge	834	35,350	834	35,350
Science Day	-	984	-	984
Career Exploration	-	2,727	-	2,727
Subotal--Pittsburg State University	$ *36,057*	$ *109,105*	$ *36,057*	$ *109,105*
University of Kansas				
Hilltop Child Dev. Center	-	2,509,000	-	2,552,000
E.A. Hill Child Dev. Center	-	495,000	-	503,000
School Performance Series	-	52,000	-	60,500
Architecture Design Camp	-	27,000	-	27,000
Media Workshop	-	55,000	-	57,000
Institute for Young Musicians	-	74,617	-	74,617
Museum of Art Programming	48,000	146,825	45,100	113,850
Subtotal--University of Kansas	$ *48,000*	$ *3,359,442*	$ *45,100*	$ *3,387,967*
Wichita State University				
Speech Language-Hearing Clinic	94,300	503,300	94,300	503,300
Nursing Health Screenings	9,300	9,300	9,300	9,300
Nursing Students Services	17,250	17,250	17,250	17,250
PA Health Sciences Program	-	9,500	-	9,500
Upward Bound	-	391,255	-	391,255
Regional Math/Science Program	-	320,124	-	320,124

ATTACHMENT A

Upward Bound--Communications	-	245,723	-	245,723
TRIO Talent Search--Proj. Disc.	-	559,200	-	559,200
GEAR UP	-	3,500,000	-	3,500,000
Teacher Education Majors	-	23,758	-	23,758
Child Development Center	-	690,041	-	690,041
America Reads Challenge	-	85,850	-	85,850
Communities in Schools	-	16,681	-	16,681
Subtotal--Wichita State University	*$ 120,850*	*$ 6,371,982*	*$ 120,850*	*$ 6,371,982*
Historical Society				
Educational Programming	16,584	26,200	16,584	26,200
State Library				
Summer Reading Program	-	40,500	-	40,500
KS Reads to Preschoolers	-	3,800	-	3,800
Children's Ebook Collections	-	47,000	-	50,000
Learning Foreign Language	-	-	-	-
Subtotal--State Library	*$ -*	*$ 91,300*	*$ -*	*$ 94,300*
Total--Education	**$ 46,803,533**	**$ 90,542,051**	**$ 46,936,683**	**$ 93,557,511**
Public Safety				
Department of Corrections				
Lawrence Gardner High School	2,451,425	2,528,374	2,407,805	2,528,374
Adjutant General				
Starbase	-	1,586,000	-	1,650,000
Total--Public Safety	**$ 2,451,425**	**$ 4,114,374**	**$ 2,407,805**	**$ 4,178,374**
Transportation				
Kansas Department of Transportation				
Safe Routes to Schools	-	855,496	-	855,496
Total--Transportation	**$ -**	**$ 1,795,496**	**$ -**	**$ 1,795,496**
TOTAL--Excluding K-12 School Finance	**$ 61,864,776**	**$ 186,139,890**	**$ 62,105,834**	**$ 188,678,870**
TOTAL--K-12 School Finance	**$ 3,300,196,713**	**$ 4,762,177,654**	**$ 3,374,300,225**	**$ 4,891,622,272**
GRAND TOTAL	**$ 3,362,061,489**	**$ 4,948,317,544**	**$ 3,436,406,059**	**$ 5,080,301,142**

PROTEST

PROTEST OF SENATOR HENSLEY AGAINST SUB SB 423
APRIL 5, 2018

Madam President: I hereby exercise my right under Article 2, Section 10, of the Kansas Constitution to protest **Substitute for Senate Bill 423 ("Sub SB 423")**.

Article 6, Section 6, subsection (b) of the Kansas Constitution requires the Legislature to "make suitable provision for the finance of the educational interest of the state." The Kansas Supreme Court reaffirmed in *Gannon I* that Article 6 requires the Legislature's suitable provision for K-12 finance to be both equitable and adequate. This means any school finance plan passed by the Legislature must be "reasonably calculated to have all Kansas public education students meet or exceed the [*Rose* standards]" and ensure that school districts "have reasonably equal access to substantially similar educational opportunity through similar tax effort."

The Legislative Coordinating Council ("LCC") commissioned a cost-function study by Dr. Lori Taylor to be completed and delivered by March 15, 2018. Dr. Taylor states in her findings that "a one percentage point increase in academic performance is associated with a 5-percent increase in cost." *See Taylor Cost Function Approach*, pg. 61. Additionally, Dr. Taylor found that "a one percentage point increase in the graduation rate is associated with a 1.2-percent increase in cost at lower grades and a 1.9-percent increase in cost at the high school level. *Id*.

Her finding mirrors the finding of the 2006 Legislative Post Audit ("LPA") that found "a strong association between he amounts districts spend and the outcomes they achieve. In the cost function results, a 1.0% increase in district performance outcomes was associated with a 0.83% increase in spending – almost a one-to-one relationship. This means that, all other things being equal, districts that spend more had better student performance. The results were statistically significant beyond the 0.01 level, which means we can be more than 99% confident there is a relationship between spending and outcomes." *See 2006 LPA Study*, pg. 40.

Money matters in a statistically significant way. This, of course, means that the lack of money has also made a difference. The link between educational spending and performance has been extensively researched by Professor Emily Rauscher of Kansas University. Her research confirms that the prior cuts to schools have negatively affected student performance. Professor Rauscher's research ultimately determined that more funding is associated with both higher achievement – as measured by various assessments – and higher graduation rates. This research provides a strong indication that providing a suitable education is vital to the success of all Kansas students and key to reducing the disparate impact among students of color and impoverished students. Attached to this protest is a PowerPoint presentation prepared by Professor Rauscher regarding her research.

Sub for SB 423 fails to satisfy both the adequacy and equity requirements of the Kansas Constitution in several significant ways.

1. **Adequate funding**. Sub for SB 423 is woefully inadequate when it comes to additional funding for K-12 education. First, and foremost, while there is being an argument made that the state foundation aid is adequate, it is inflated due to the taking of $68 million from high and low enrollment and shifting it into foundation state aid. This is not new money for schools. It simply takes from small rural schools – creating

an equity violation – and shifts that money into state foundation aid. Second, Sub for SB 423 provides only an additional $275 million to attempt to meet constitutional compliance. Under this plan, we would not surpass our high-water mark from *Montoy* of $4,400 per student until fiscal year 2021. This amount of funding is no where near sufficient to meet constitutional adequacy. Especially when phased in over five years.

2. **High and Low Enrollment Weighting**. The elimination of the high enrollment weighting and renaming the low enrollment weighting "enrollment weighting" creates an equity violation. Small school districts get more enrollment weighting because of size, not wealth. Large schools get less because of size, not wealth. Taking the money from these districts and shifting it into state foundation aid to inflate the state foundation aid without putting in any new funding does not achieve adequacy and reverses course on ensuring school districts of different sizes and wealth have reasonably equal access to substantially similar educational opportunity through similar tax efforts.

3. **Local Option Budget**. Regardless of what changes are made to the local option budget, as long as the districts that are not already at 33% are subject to protest petitions, there will be an equity violation. The districts subject to the protest petition will have a much more difficult time utilizing the local option budget changes due to this provision. This is an equity violation. Especially in light of the changes to high and low enrollment weightings.

4. **ABC Pilot Program**. The Kansas Supreme Court has declared that "[t]he adoption by the people of this state of the 1966 amendment to [A]rticle 6 of the Kansas Constitution vested broad powers of supervision in the state board of education." *State, ex rel., v. Board of Education*, 212 Kan. 482, Syl. ¶ 1, 511 P.2d 705 (1973). The Court further held that the portion of Article 6, Section 2, subsection (a), which granted "the state board of education authority to exercise general supervision of the public schools, educational institutions and educational interests of the state, is self-executing in effect." *Id* at ¶ 6. "Where a constitutional provision is self-executing, the legislature may enact legislation to facilitate or assist in its operation, but whatever legislation is adopted must be in harmony with and not in derogation of the provisions of the constitution." *Id* at ¶ 7. The ABC Pilot Program does not belong in a school finance bill. It should be taken to the Kansas Department of Education for consideration and adoption. To do otherwise is to legislate in discord with the Kansas Constitution.

For those reasons, it is clear that Sub for SB 423 does not meet the constitutional requirements of the *Gannon* decision. This is in no way constitutional or acceptable for the school children of Kansas.—ANTHONY HENSLEY

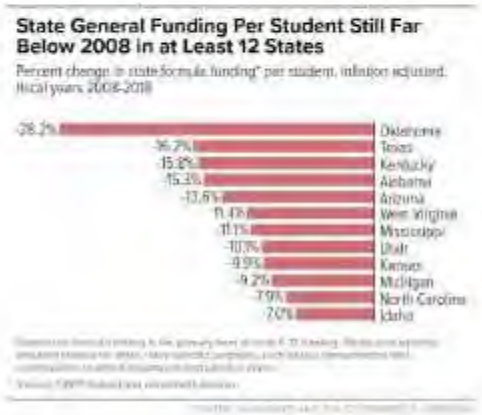
Senators Hawk, Holland, Kelly, Pettey and Rogers request the record to show they concur with the "Protest" offered by Senator Hensley on **Substitute SB 423**.

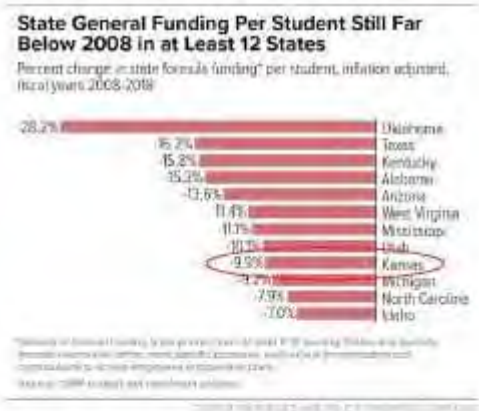
Education Funding and Inequality in Kansas, 2009-2015

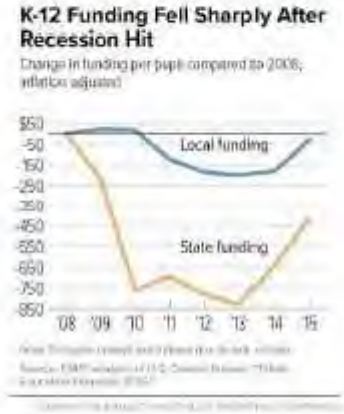
Emily Rauscher
Department of Sociology
University of Kansas
February 16, 2018

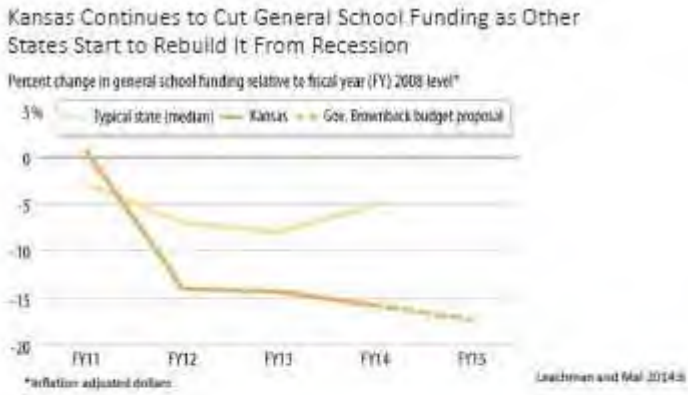
This research was supported by the National Academy of Education Spencer Foundation and the William T. Grant Foundation.

Kansas



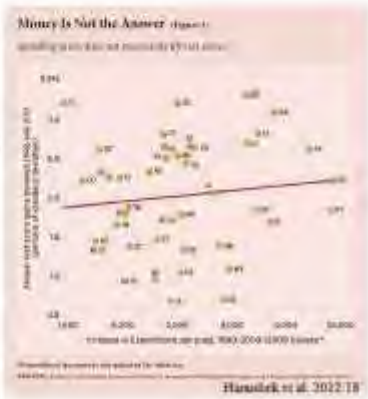

State General Funding Per Student Still Far Below 2008 in at Least 12 States
Percent change in state formula funding* per student, inflation adjusted, fiscal years 2008-2018
-28.2%
Oklahoma
-16.2%
Texas
-15.3%
Kentucky
-15.2%
Alabama
-13.6%
Arizona
West Virginia
Mississippi
Utah
-9.5%
Kansas
Michigan
-7.9%
North Carolina
-7.0%
Idaho


K-12 Funding Fell Sharply After Recession Hit
Change in funding per pupil compared to 2008, inflation adjusted
$50
-50
-150
-250
-350
-450
-550
-650
-750
-850
Local funding
State funding
'08
'09
'10
'11
'12
'13
'14
'15



Money Doesn't Matter

- Coleman Report (1966)
- Hanushek (1989, 1996, 2001, 2003)
- Morgan and Jung (2016)



But…

- Focus on average achievement in context of funding increases (Hanushek 1989, 1996; Burtless 1996; Greenwald et al. 1996; Biddle and Berliner 2002; Baker 2016)
- Funding equality narrows SAT score gaps by parental education (Card and Payne 2002) and increases student test scores in low-income districts (Lafortune et al. 2016; Roy 2011; Guryan 2001; Papke 2005; Downes et al. 2009)
- School effects differ by race and income (Jennings et al. 2015; Heyk and Driscoll 1988)
- Funding more important for educational attainment – such as HS graduation rates – than achievement (Jennings et al. 2015; Jackson et al. 2017; Card and Krueger 1996)

- Need work examining potential heterogeneous effects [i.e. disparate impacts] on both achievement and attainment by race and ethnicity in context of cuts

Research Questions

1) What is the relationship between state education funding and student achievement and graduation rates in Kansas?
2) Does this relationship differ by student characteristics, including race, ethnicity, and poverty?

Data

Achievement

Stanford Education Data Archive 2.0 – ELA (and Math) in grade units

District-level panel data 2009-2013 – weighted mean grades 3-8 (and grade-specific measures)

Suppressed if <20 students per cell/group – low observation rates in KS

White – 87%, Hispanic – 19%, Black – 8%

Gaps = White-Black, White-Hispanic achievement

Linked to: Census Finance Survey (F-33) 2009-2013

Instructional expenditures/pupil (Instruct. wage expenditures/pupil)

in 2016 $

Data

HS Graduation Rates

Kansas State Department of Education 2010-2015

5-year adjusted cohort formula among public high schools

Gaps = White-Black, White-Hispanic, Pay Lunch–Free Lunch

Linked to: KSDE finance data 2008-2015

State aid/pupil, General fund budget/pupil

in 2016 $

4-year moving averages (3-year in 2010)

Data

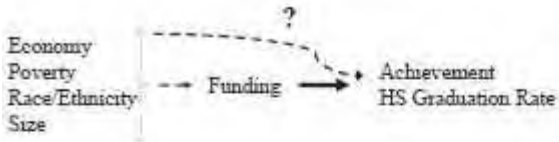
Control Variables
% Eligible for free or reduced price lunch
% English Language Learner
% Hispanic
% Black
Enrollment
Number of schools

SEDA – compiled from Common Core of Data
(4-year moving averages when predicting graduation rates)

Methods

Funding ⟶ Achievement
HS Graduation Rate

Methods



Methods

- District-level fixed effects
  - Account for time-constant district differences
- Year fixed effects
  - Account for state-level changes over time
- Controls for time-varying district characteristics
  - % free/reduced lunch, ELL, Black, Hispanic,
  - Enrollment (log), Number of schools

$$\text{HS Grade Rate}_{ij} = \alpha + \beta_1 \text{State Revenue/Pupil}_{ij} + \beta_2 X_{ij} + \text{District}_i + \text{Year}_j + \varepsilon_{ij}$$

i = district
j = year

Methods

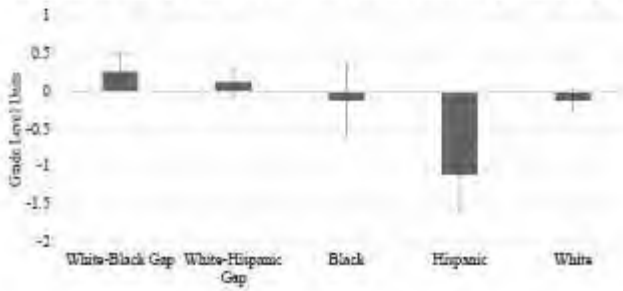
- Difference-in-differences
  - Before and after transition to block grant funding
  - Funding/pupil decreased in growing districts; increased in shrinking districts

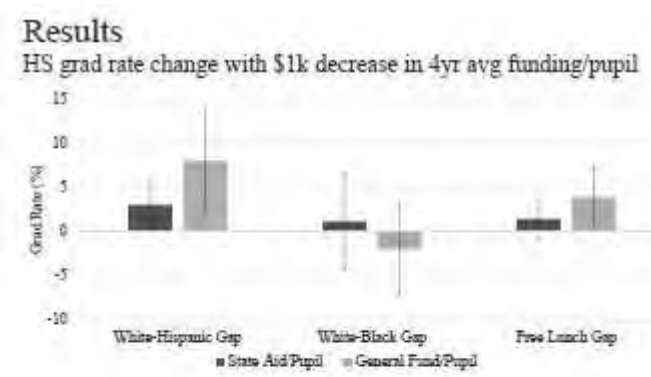
Achievement/HS Grad Rate

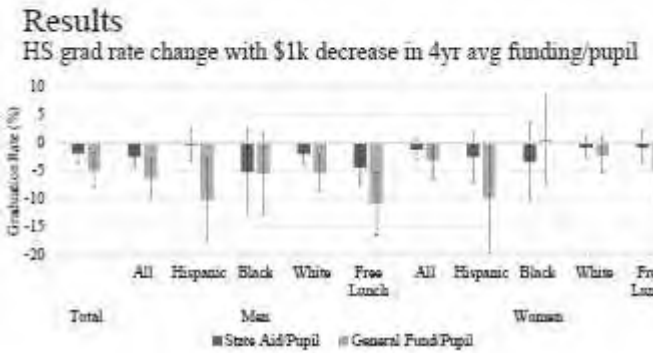
	Pre-Block Grant	Post-Block Grant	Difference
Enrollment Decreased ($/pupil increased)			A shrinking districts
Enrollment Increased ($/pupil decreased)			A growing district
Difference			DID Estimate

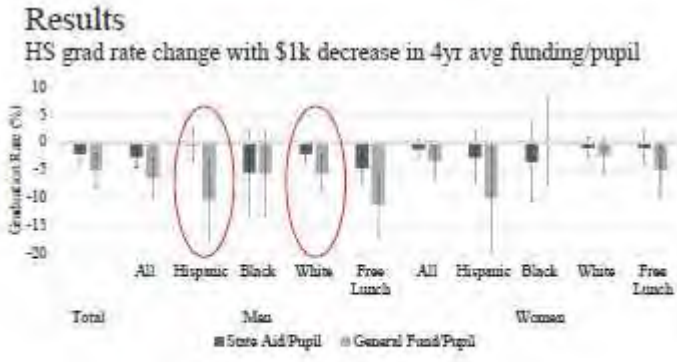
Results

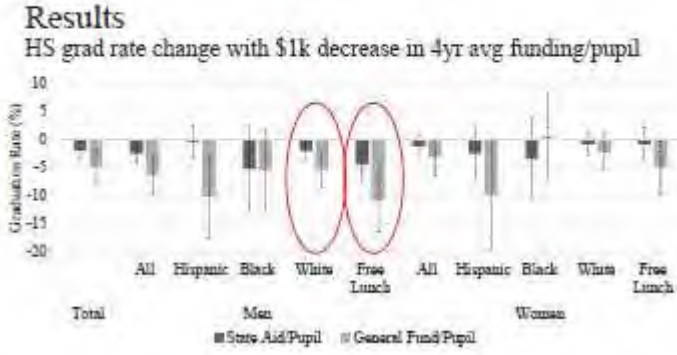
Achievement change with $1k decrease in instructional spending/pupil

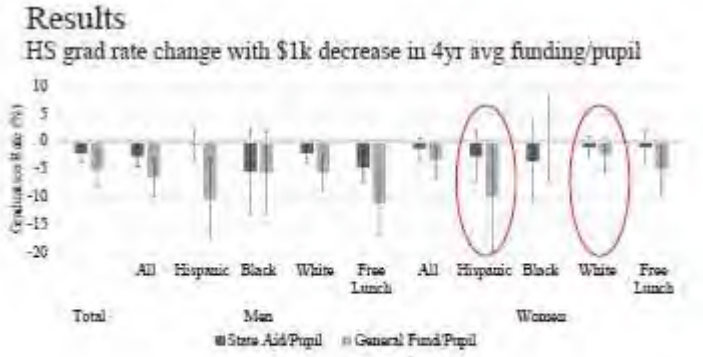


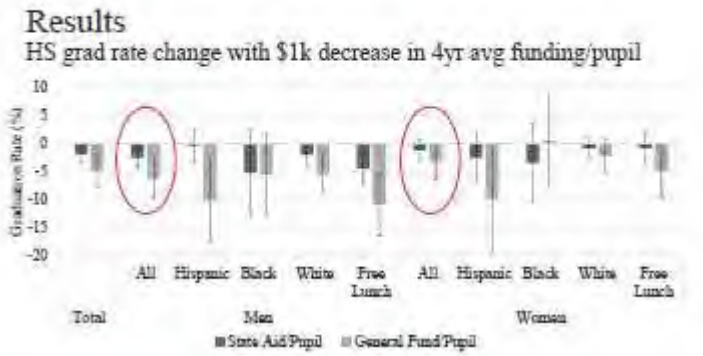


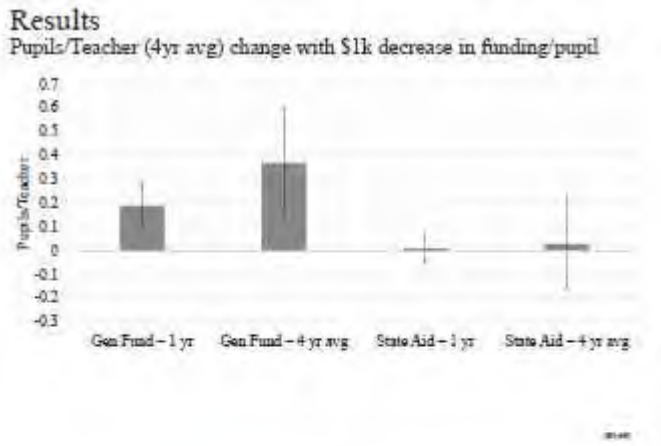


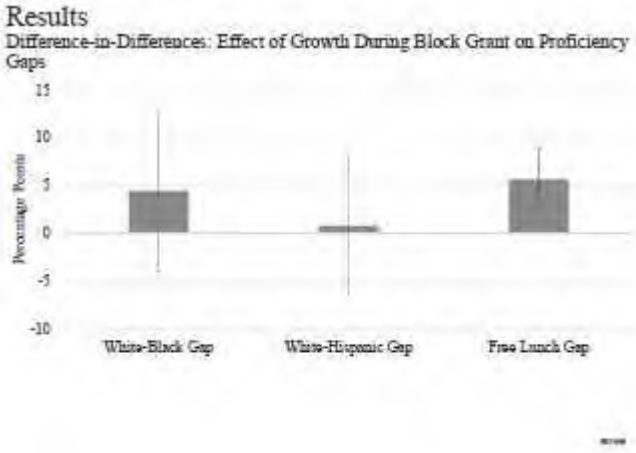

Results
HS grad rate change with $1k decrease in 4yr avg funding/pupil
10
5
0
-5
-10
-15
-20
All
Hispanic
Black
White
Free Lunch
All
Hispanic
Black
White
Free Lunch
Total
Men
Women
State Aid/Pupil
General Fund/Pupil

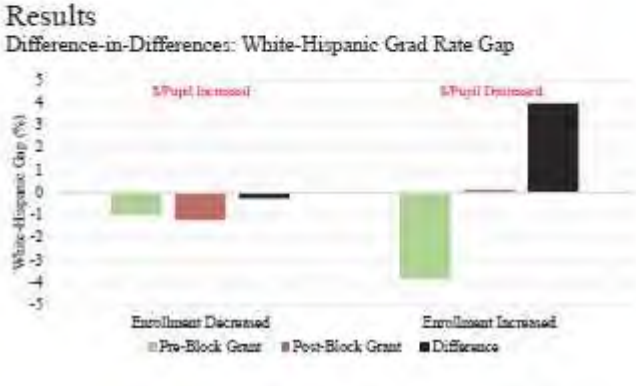

Results
HS grad rate change with $1k decrease in 4yr avg funding/pupil
10
5
0
-5
-10
-15
-20
All
Hispanic
Black
White
Free Lunch
All
Hispanic
Black
White
Free Lunch
Total
Men
Women
State Aid/Pupil
General Fund/Pupil





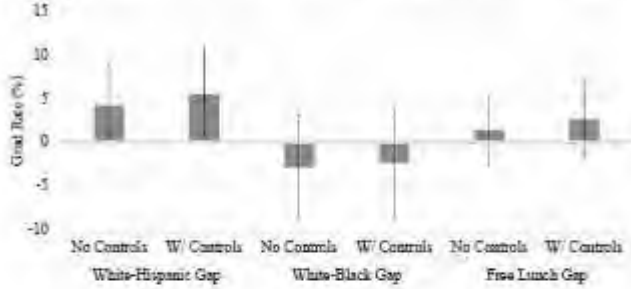






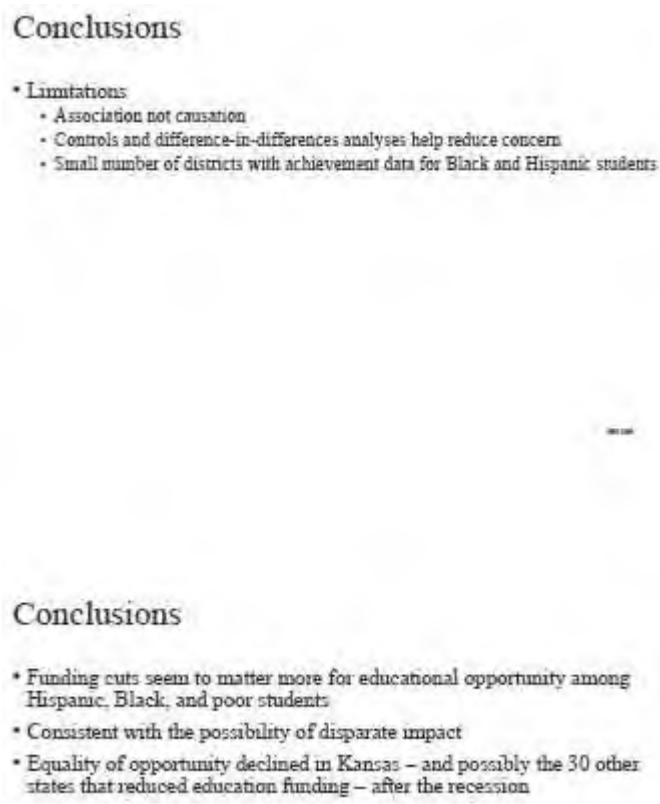
Results

Difference-in-Differences: Effect of Growth During Block Grant on Graduation Rate Gaps



Conclusions

- Instructional spending cuts are associated with:
  - Higher inequality of achievement by race and ethnicity
  - Lower achievement among all students
  - Decrease is 4x larger among Black students compared to White
  - Decrease is nearly 8x larger among Hispanic students compared to White
- General fund budget cuts are associated with:
  - Lower HS grad rates for all students
  - Decrease is 1.5x larger among poor students
  - Decrease is nearly 2x larger among Hispanic men compared to White men
  - Decrease is over 4x larger among Hispanic women compared to White women
  - Higher pupil:teacher ratios – potential mechanism



On motion of Senator Denning, the Senate adjourned until 10:00 a.m., Friday, April 6, 2018.

CHARLENE BAILEY, CINDY SHEPARD, *Journal Clerks.*

COREY CARNAHAN, *Secretary of the Senate.*

□

Appendix 5:
Contract Between WestEd and Legislative Coordinating Council

Appendix 5 is the Contract entered into between WestEd and LCC to commission the 2018 Kansas Cost study performed by WestEd and LCC. It is appropriate for this Court to take judicial notice of the Contract and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

WestEd

excellence in research, development, and service

Contract Number: C-00015373

CONTRACT

This Contract is entered into between WestEd and the Funder named in Section A. below

SECTION A: CONTACTS

FUNDER

Legislative Coordinating Council
Ron Ryckman, Jr.
Chairman
300 SW 10th Ave., Ste.370-W
Topeka, KS 66612-1504
P. 785-296-2302
Technical Contact email:
jason.long@rs.ks.gov

WestEd

WestEd Technical:
Jason Willis
Director Strategic Development
730 Harrison Street
San Francisco, CA 94107-1242
P: 415.615.3234
jwillis@wested.org

WestEd Contracts:
Contracts Management
Department
730 Harrison Street
San Francisco, CA 94107
P: 415.615.3136
contracts@wested.org

WestEd Billing:
Tulinh Wu
A/R Manager
4665 Lampson Avenue
Los Alamitos, CA 90720
P: 562.799.5188
twu@wested.org

SECTION B: WORK OR SERVICES

1. Contract Term
   Start Date: 12/15/2017 **End Date: 06/01/2018**
2. Work or Services to be completed by WestEd (brief description):
   Please see the attached Scope of Work, Exhibit 1.
3. Maximum Fees and expenses: **$245,000.00**
4. Attachments
   The parties agree to comply with the terms and conditions of the following attachments which are by this reference made a part of this Contract.
   See Attached:

X	WestEd Terms and Conditions
X	Scope of Work, Exhibit 1
	Budget Detail
X	Additional Attachments: Contractual Provisions (Form DA-146a, Rev 06-12), Exhibit 2; Certification, Exhibit 3; Amended Terms & Conditions, Exhibit 4

SECTION C: PAYMENT

Payment Schedule:
This is a cost-reimbursement contract.
WestEd shall submit monthly invoices for the number of days worked as specified in Exhibit 1.

Checks Made Payable to:
WestEd Accounts Receivable
4665 Lampson Avenue
Los Alamitos, CA 90720

Electronic Fund Transfers (EFT):
Wells Fargo Bank
[redacted]

All payments must include a reference to Contract Number: C-00015373

SECTION D: AUTHORIZED SIGNATORIES

IN WITNESS WHEREOF, this Contract has been executed by the parties hereto.

WestEd
Agreed and accepted:

Virgilio F. Tinio, Jr.
Virgilio F. Tinio, Jr. (Jan 25, 2018)

Authorized Signature

Name: Virgilio F. Tinio, Jr.

Title: Contracts Manager

Date: Jan 25, 2018

Legislative Coordinating Council (LCC) ("Funder")
Agreed and accepted:

Authorized Signature

Name: Ron Ryckman, Jr.

Title: Chairman

Date: 1-31-18

1.0 Key Personnel: At all times during the term of this Contract, WestEd's performance shall be under the personal supervision and direction of the WestEd Technical Contact provided in Section A of the Contract cover page.

2.0 Independent WestEd Status and Responsibilities: In performing its services, WestEd shall be an independent contractor with authority and responsibility to control and direct the performance of the services required under this Contract, subject to Funder's general right to inspect work in progress to determine whether the services are being performed in accordance with this Contract. All persons hired and/or contracted by WestEd shall be WestEd's employees and/or subcontractors. WestEd shall be responsible for the accuracy, completeness, and adequacy of all services performed by WestEd's employees and/or subcontractors and shall ensure that all applicable Federal, State and County licensing and operating requirements and all applicable accreditation and other standards of quality generally accepted in the field of WestEd's activities are complied with and satisfactorily met. WestEd voluntarily and knowingly assumes the entire liability (if any such liability is determined to exist) to its employees and/or subcontractors or to other persons for all loss, damage, or injury caused by WestEd's employees and/or subcontractors in the course of their employment and/or contract. WestEd shall be responsible for payment of applicable income, social security, and other Federal, State or County taxes and fees, and all statutory benefits including, without limitation, Workers' Compensation, Unemployment Insurance and Temporary Disability Insurance

3.0 Non-Discrimination in Employment: No person shall on the ground of race, religion, citizenship, color, disabilities, national origin, sex, age, political affiliation, service in the uniformed services, genetic information or genetic characteristics, ancestry, marital status, sexual orientation, gender identity, pregnancy, physical or mental disability, medical condition or beliefs be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded or otherwise financially assisted, in whole or in part with funds made available hereunder.

4.0 Termination: It is mutually agreed that either party may terminate this Contract by giving thirty (30) calendar days advance, written notice. Should Funder choose to exercise this termination clause, WestEd shall be paid for all work completed up to and including the date of termination and any non-cancelable obligations. WestEd agrees to submit all final invoices with respect to this Section 4.0 within ninety (90) days of termination of this Contract. See Section 11.0 for specifics regarding notice.

5.0 Intellectual Property Ownership: WestEd is the sole and exclusive owner of any newly created work developed by WestEd under this Contract. WestEd hereby grants to Funder a nonexclusive, non-transferable, royalty-free license to use the newly created work for non commercial purposes.

All pre-existing WestEd data and materials provided to Funder by WestEd to assist in the performance of this Contract shall remain WestEd's property. Upon expiration or termination of the Contract for any reason, Funder shall request instructions from WestEd regarding whether Funder should: **(i)** Erase or destroy any WestEd data and/or materials maintained by Funder; or **(ii)** Return the data and/or materials to WestEd. This provision shall survive termination of this Contract.

6.0 Indemnification: Funder agrees to indemnify and hold harmless WestEd, its officers, employees and agents from all claims, liabilities and losses by whomever asserted arising out of acts or omissions by Funder, its officers, employees and agents in the performance of this Contract, except those arising by reason of the sole negligence of WestEd, its officers, employees and agents. This provision shall survive termination of this Contract.

7.0 No Alteration of Contract: No alteration, addendum, modification, or waiver of the terms of this Contract shall be valid unless made in writing and signed by both parties, and no oral understanding or agreement not incorporated herein shall be binding on either of the parties. No inline delineation or alteration shall be accepted or bind WestEd.

8.0 Authority to Sign: Both parties executing this Contract acknowledge and warrant that they possess the authority to enter into this Contract on behalf of their respective companies.

9.0 Conflict of Interest: Funder and WestEd agree that, to the best of each party's knowledge and belief, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest, as defined as, activities or relationships with other persons, organizations or any other third party which would cause either party to be unable or potentially unable to render impartial assistance or advice to the other party or the other party's objectivity in performing the work might be otherwise impaired, or resulting in an unfair competitive advantage, or that Funder or WestEd has disclosed all such relevant information to the other party. Funder and WestEd agree that if an actual or potential organizational conflict of interest is discovered after this Contract is executed, each party will make a full disclosure in writing to the other party. This disclosure shall include a description of actions which the party has taken or proposes to take, after consultation with other party, to avoid, mitigate, or neutralize the actual or potential conflict. WestEd or Funder may terminate for convenience this Contract, in whole or in part, if it deems such termination necessary to avoid an organizational conflict of interest. If Funder or WestEd was aware of a potential organizational conflict of interest prior to the execution of this Contract or discovered an actual or potential conflict after award and did not disclose or misrepresented relevant information to the other party, the Contract may be terminated for default, or the parties may pursue such other remedies as may be permitted by law or this Contract.

10.0 Confidential Information: "Confidential Information" shall mean with respect to a party hereto (the "Disclosing Party"), collectively, all technical, financial and business information of any kind whatsoever, including, where appropriate and without limitation, all data, specifications, research projections, processes, techniques, technology, ideas, know-how, improvements, inventions (whether or not patentable or copyrightable), trade secrets, formulae, information concerning research or development by or for the Disclosing Party, information which is or has been generated or received in confidence by or for the Disclosing Party by or from any person, and any other information as well as any and all tangible and intangible embodiments thereof of any kind whatsoever; in each case disclosed by the Disclosing Party to the other party hereto (the "Receiving Party"), or obtained by the Receiving Party through observation or examination of the foregoing, regardless of whether such information or embodiment has been marked as confidential. Confidential Information shall include disclosures in any form, whether in writing, in an electronic format (including without limitation emails, tapes, diskettes, compact disks, or other similar media), and orally (in the case of oral disclosures, only if such disclosure is identified as confidential prior to disclosure). Each party agrees: (a) to hold the other party's Confidential Information in strict confidence in accordance with this Section 10.0; (b) to exercise at least the same care in protecting the other Party's Confidential Information from disclosure as the party uses with regard to its own Confidential Information; (c) to restrict dissemination of Confidential Information within its organization to employees/personnel having a need to know in connection with the stated or defined purpose herein; (d) not to disclose such Confidential Information to third parties without the prior, written consent of the disclosing party; and (e) not to use any Confidential Information for any purpose except for the stated or defined purpose herein without the prior written consent of the disclosing party.

11.0 Notices: Any notice or other communication shall be in writing, and will be considered to have been given if delivered by hand or sent by certified United States mail, return receipt requested, or by commercial courier service to the other party at the address stated above or to such other address as may be specified by either party in a notice to the other. Notice is effective upon receipt.

12.0 Force Majeure: WestEd will not be liable for any failure to perform as required by this Contract, if the failure to perform is caused by circumstances reasonably beyond WestEd's control, such as labor disturbances or labor disputes of any kind, accidents, failure of governmental approval required for full performance, civil disorders or commotions, acts of aggression, acts of God, energy or other conservation measures, explosions, failure of utilities, mechanical breakdowns, material shortages, disease, theft, or other such occurrences.

13.0 Governing Law: This Contract shall be governed by the internal substantive laws, but not the choice of law rules, of the State of California.

14.0 Entire Agreement: This Contract, together with Exhibits hereto, is the entire agreement of the parties and supersedes any prior agreements between them, whether written or oral, with respect to the subject matter hereof.

15.0 Severability: If any provision of this Contract is found by a court to be void, invalid or unenforceable, this Contract will either be reformed to comply with applicable law or the provision in question will be stricken so as not to affect the validity or enforceability of the remainder of this Contract.

16.0 Counterparts: This Contract may be executed in two or more counterparts, each of which together shall be deemed an original, but all of which together shall constitute one and the same instrument. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

17.0 Order of Precedence: In the event of a discrepancy between these terms and conditions and any additional exhibits or attachments, the language of these terms and conditions will prevail.

WestEd

excellence in research, development, and service

Scope of Work

Kansas State Senate:
Cost Function Analysis to Support Addressing Gannon V

BACKGROUND

In its *Gannon IV* opinion in March 2017 the Kansas Supreme Court directed the Kansas State Legislature to show that "the evidence in the record demonstrates that the funding levels and other resources produce an education system reasonably calculated to achieving those Rose standards." In a subsequent ruling in October 2017 (*Gannon V*) the Court found that the changes in school funding passed by the Legislature in 2017 failed to meet this standard.

The Legislature was given until June 30, 2018 to come into compliance, and until April 30, 2018 to submit to the Court any briefs addressing legislative remedies. The Court will rule on these remedies on June 30, 2018.

PURPOSE

WestEd, in an effort led by Dr. Lori Taylor at Texas A&M, propose to undertake a study to be completed by March 15, 2018 to provide evidence of overall funding amounts and allocation of resources between districts that would "produce an education system reasonably calculated to achieving those Rose standards."

This scope of work would take place between December 15, 2017 and June 1, 2018 and completion of said scope of work would be contingent upon providing the requested, completed information by January 10, 2018.

Services and Deliverables

TASK I: DATA IDENTIFICATION, COLLECTION, AND PREPARATION

Objectives

The primary objective of Task I would be to provide the Kansas State Senate, and any other relevant state entity, with a comprehensive data request and sufficient detail to satisfy the request in a timely manner. To ensure completion of the study all data must be received no later than January 10th, 2018.

Deliverables

- Comprehensive Data Request: This formal request would include, *but is not limited to*, the following data elements:
    1. **Student-level files**: For each student, we need a unique student identifier so that we can conduct longitudinal analyses. Then for each student, each year, we need current scores (preferably raw scores) in reading/ELA and mathematics, grade-level, student

demographics (sex, race, school lunch status, special education status, English Learner, etc.) and school attended. For high school students, we would also like SAT, ACT, and AP scores.

2. **Teacher-level files:** For each teacher we need a unique teacher identifier (that is not a social security number) so that we can conduct longitudinal analyses. Then for each teacher, each year, we need everything available from the personnel database. In particular, we need data on annual salary, number of days worked and average number of hours worked per day (so that we can calculate full-time-equivalent salaries), percent time teaching, location (i.e. school assignment), and any information about salary supplements (for coaching, stipends or the like). We also need any available teacher demographics (sex, race, years of experience, educational attainment, etc.).
3. **School-level files:** For each campus we need a unique school identifier (not the name) so that we can match the student-level and teacher-level files to the school characteristics as well as to the district that they reside in. This should be the same campus identifier that is used in other, publicly available databases maintained by the Kansas Department of Education. Then for each school each year, we need data on FTE personnel headcounts (numbers of beginning teachers, experienced teachers, aides, administrators and support staff at the finest level of disaggregation possible), student enrollment, all available student demographics (e.g. percent free and reduced price lunch, by grade level, percent LEP by grade level, percent special education (by type if possible), etc.), all available data on the capital stock (building age, square footage etc.) and grade span served. We would also like all data on campus-level expenditures available, ideally at the fund, function and object levels. We would also like the complete directory file (e.g. street address, zip code, latitude and longitude) for each campus.
4. **District-level files:** For each district we need a unique district identifier (not the name) so that we can match the student, teacher and school level data to the district characteristics. This should be the same campus identifier that is used in other, publicly available databases maintained by the Kansas Department of Education. Then for each district, each year, we need data on FTE personnel headcounts (numbers of beginning teachers, experienced teachers, aides, administrators and support staff at the finest level of disaggregation possible), total enrollment, student demographics and actual expenditures. The actual expenditures data should detail all spending at the fund, function and object levels. NOTE: if there are additional expenditure data available beyond the fund, function and object level please note that and we can indicate if that should be included in the transfer of data.

Delivery Date

This task of the SOW will be completed no later than January 10, 2018. Fulfillment of data request no. 1 is subject to the execution of a data sharing agreement between WestEd and the Kansas State Department of Education. The data requested under data request no. 1 will be specified in such data sharing agreement.

TASK II: STUDY ANALYSES

Objective

In Task II the research team will conduct the analyses set forth in the analysis plan and sufficient to meet the specifications outlined below.

1. Explain why the option or options set forth by the study "produce an education system reasonably calculated to achieving those Rose standards."

2. Focus on the structure of the Kansas school finance formula as well as overall K-12 spending levels. This study should also consider all forms of funding (local, state and federal) available to Kansas K-12 schools.

Deliverables

- Study Analyses: The research team will conduct a cost function analysis designed to estimate the minimum spending required to produce a given outcome within a given educational environment. Subject to the availability of school-level data, this analysis would also identify school staffing configurations that are currently and frugally meeting the standards in Kansas

Estimated Time and Delivery Date

This task of the SOW will be completed no later than February 28, 2018.

TASK III: PANEL REVIEW AND FINAL REPORT

Objective

In Task III, the research team will prepare a final report that summarizes the results of the econometric work under Task II having undergone examination by other research and practitioners experts.

Deliverables

- Final Report: In addition to reporting the results of the Task II analyses, the final report will also be reviewed by a panel of research and practitioner experts to incorporate their perspective and expertise. Dr. Lori Taylor will be the lead author and endorse the conclusions of the final report. Dr. Lori Taylor will personally appear before the Kansas State Legislature to produce the findings of this Project.

Estimated Time and Delivery Date

This task of the SOW will be completed by March 15, 2018.

Project Team

The project team is comprised of experts from WestEd and Texas A&M. If necessary, additional expertise will be secured to complete the deliverables identified above.

Project Cost

Project team proposes providing support from December 15, 2017 – June 1, 2018 for a cost-reimbursement contract not to exceed $245,000 (which includes a daily rate of $2,459 for a total of 100 days) consisting of consulting services, materials, and travel. This support includes a minimum of one trip to Topeka, Kansas from March 16-22, 2018 by Dr. Lori Taylor for a sufficient length of time for her to testify before the relevant House and Senate committees about this Project.

WestEd
Jason Willis
Director, Strategy & Performance
510-847-5894
jwillis@wested.org

State of Kansas
Department of Administration
DA-146a (Rev. 06-12)

CONTRACTUAL PROVISIONS ATTACHMENT

Important: This form contains mandatory contract provisions and must be attached to or incorporated in all copies of any contractual agreement. If it is attached to the vendor/contractor's standard contract form, then that form must be altered to contain the following provision:

"The Provisions found in Contractual Provisions Attachment (Form DA-146a, Rev. 06-12), which is attached hereto, are hereby incorporated in this contract and made a part thereof."

The parties agree that the following provisions are hereby incorporated into the contract to which it is attached and made a part thereof, said contract being the 15th day of December 2017.

1. **Kansas Law and Venue**: This contract shall be subject to, governed by, and construed according to the laws of the State of Kansas, and jurisdiction and venue of any suit in connection with this contract shall reside only in courts located in the State of Kansas.

2. **Termination Due To Lack Of Funding Appropriation**: If, in the judgment of the Director of Accounts and Reports, Department of Administration, sufficient funds are not appropriated to continue the function performed in this agreement and for the payment of the charges hereunder, State may terminate this agreement at the end of its current fiscal year. State agrees to give written notice of termination to contractor at least 30 days prior to the end of its current fiscal year, and shall give such notice for a greater period prior to the end of such fiscal year as may be provided in this contract, except that such notice shall not be required prior to 90 days before the end of such fiscal year. Contractor shall have the right, at the end of such fiscal year, to take possession of any equipment provided State under the contract. State will pay to the contractor all regular contractual payments incurred through the end of such fiscal year, plus contractual charges incidental to the return of any such equipment. Upon termination of the agreement by State, title to any such equipment shall revert to contractor at the end of the State's current fiscal year. The termination of the contract pursuant to this paragraph shall not cause any penalty to be charged to the agency or the contractor.

3. **Disclaimer Of Liability**: No provision of this contract will be given effect that attempts to require the State of Kansas or its agencies to defend, hold harmless, or indemnify any contractor or third party for any acts or omissions. The liability of the State of Kansas is defined under the Kansas Tort Claims Act (K.S.A. 75-6101 et seq.).

4. **Anti-Discrimination Clause**: The contractor agrees: (a) to comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 et seq.) and the Kansas Age Discrimination in Employment Act (K.S.A. 44-1111 et seq.) and the applicable provisions of the Americans With Disabilities Act (42 U.S.C. 12101 et seq.) (ADA) and to not discriminate against any person because of race, religion, color, sex, disability, national origin or ancestry, or age in the admission or access to, or treatment or employment in, its programs or activities; (b) to include in all solicitations or advertisements for employees, the phrase "equal opportunity employer"; (c) to comply with the reporting requirements set out at K.S.A. 44-1031 and K.S.A. 44-1116; (d) to include those provisions in every subcontract or purchase order so that they are binding upon such subcontractor or vendor; (e) that a failure to comply with the reporting requirements of (c) above or if the contractor is found guilty of any violation of such acts by the Kansas Human Rights Commission, such violation shall constitute a breach of contract and the contract may be cancelled, terminated or suspended, in whole or in part, by the contracting state agency or the Kansas Department of Administration; (f) if it is determined that the contractor has violated applicable provisions of ADA, such violation shall constitute a breach of contract and the contract may be cancelled, terminated or suspended, in whole or in part, by the contracting state agency or the Kansas Department of Administration.

Contractor agrees to comply with all applicable state and federal anti-discrimination laws.

The provisions of this paragraph number 5 (with the exception of those provisions relating to the ADA) are not applicable to a contractor who employs fewer than four employees during the term of such contract or whose contracts with the contracting State agency cumulatively total $5,000 or less during the fiscal year of such agency.

5. **Acceptance Of Contract**: This contract shall not be considered accepted, approved or otherwise effective until the statutorily required approvals and certifications have been given.

6. **Arbitration, Damages, Warranties**: Notwithstanding any language to the contrary, no interpretation of this contract shall find that the State or its agencies have agreed to binding arbitration, or the payment of damages or penalties. Further, the State of Kansas and its agencies do not agree to pay attorney fees, costs, or late payment charges beyond those available under the Kansas Prompt Payment Act (K.S.A. 75-6403), and no provision will be given effect that attempts to exclude, modify, disclaim or otherwise attempt to limit any damages available to the State of Kansas or its agencies at law, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

7. **Representative's Authority To Contract**: By signing this contract, the representative of the contractor thereby represents that such person is duly authorized by the contractor to execute this contract on behalf of the contractor and that the contractor agrees to be bound by the provisions thereof.

8. **Responsibility For Taxes**: The State of Kansas and its agencies shall not be responsible for, nor indemnify a contractor for, any federal, state or local taxes which may be imposed or levied upon the subject matter of this contract.

9. **Insurance**: The State of Kansas and its agencies shall not be required to purchase any insurance against loss or damage to property or any other subject matter relating to this contract, nor shall this contract require them to establish a "self-insurance" fund to protect against any such loss or damage. Subject to the provisions of the Kansas Tort Claims Act (K.S.A. 75-6101 et seq.), the contractor shall bear the risk of any loss or damage to any property in which the contractor holds title.

10. **Information**: **No provision of this contract shall be construed as limiting the Legislative Division of Post Audit from having access to information pursuant to K.S.A. 46-1101 et seq.**

11. **The Eleventh Amendment**: "The Eleventh Amendment is an inherent and incumbent protection with the State of Kansas and need not be reserved, but prudence requires the State to reiterate that nothing related to this contract shall be deemed a waiver of the Eleventh Amendment."

12. **Campaign Contributions / Lobbying:** Funds provided through a grant award or contract shall not be given or received in exchange for the making of a campaign contribution. No part of the funds provided through this contract shall be used to influence or attempt to influence an officer or employee of any State of Kansas agency or a member of the Legislature regarding any pending legislation or the awarding, extension, continuation, renewal, amendment or modification of any government contract, grant, loan, or cooperative agreement.

CERTIFICATION INDIVIDUAL OR COMPANY NOT CURRENTLY ENGAGED IN A BOYCOTT OF ISRAEL

In accordance with HB 2409, 2017 Legislative Session, the State of Kansas shall not enter into a contract with any Individual or Company to acquire or dispose of services, supplies, information technology or construction, unless such Individual or Company submits a written certification that such Individual or Company is not currently engaged in a boycott of Israel.

As an Individual or Contractor entering into a contract with the State of Kansas, it is hereby certified that the Individual or Company listed below is not currently engaged in a boycott of Israel.

Virgilio F. Tinio, Jr.
Virgilio F. Tinio, Jr. (Jan 25, 2018)

Signature, Title of Contractor Contracts Manager

Jan 25, 2018
Date

Virgilio F. Tinio, Jr.
Printed

WestEd
Name of Company

ADDITIONAL CONTRACTUAL REQUIREMENTS

WestEd Terms and Conditions shall be amended as follows:

Section 1.0 Key Personnel
Section 1.0 Key Personnel, shall be deleted in its entirety and replaced with the following:

> "**1.0 Key Personnel:** At all times during the term of this Contract, WestEd's performance shall be under the personal supervision and direction of the WestEd Technical Contact as provided in Section A of the Contract cover page, and conducted by WestEd Subcontractor Dr. Lori Taylor. Funder will be notified of any changes or substitutions in key personnel identified hereunder."

Section 2.0 Independent WesTEd Status and Responsibilities
Section 2.0 Independent WesTEd Status and Responsibilities, shall be deleted in its entirety and replaced with the following:

> "**2.0 Independent WestEd Status and Responsibilities:** In performing its services, WestEd shall be an independent contractor with authority and responsibility to control and direct the performance of the services required under this Contract, subject to Funder's general right to inspect work in progress to determine whether the services are being performed in accordance with this Contract. All persons hired and/or contracted by WestEd shall be WestEd's employees and/or subcontractors. WestEd Subcontractor, Dr. Lori Taylor,, shall assist in the work commissioned to WestEd under the terms of this Contract. WestEd and it's subcontractor shall be responsible for the accuracy, completeness, and adequacy of all services performed by WestEd's employees and/or subcontractors and shall ensure that all applicable Federal, State and County licensing and operating requirements and all applicable accreditation and other standards of quality generally accepted in the field of WestEd's activities are complied with and satisfactorily met. WestEd voluntarily and knowingly assumes the entire liability (if any such liability is determined to exist) to its employees and/or subcontractors or to other persons for all loss, damage, or injury caused by WestEd's employees and/or subcontractors in the course of their employment and/or contract. WestEd shall be responsible for payment of applicable income, social security, and other Federal, State or County taxes and fees, and all statutory benefits including, without limitation, Workers' Compensation, Unemployment Insurance and Temporary Disability Insurance."

Section 5.0 Intellectual Property Ownership
Section 5.0 Intellectual Property Ownership, shall be deleted in its entirety and replaced with the following:

> "**5.0 Intellectual Property Ownership:** WestEd is the sole and exclusive owner of any newly created work developed by WestEd under this Contract. WestEd hereby grants to Funder and the State of Kansas a nonexclusive, non-transferable, royalty-free license to use the newly created work for non-commercial purposes.
>
> All pre-existing WestEd data and materials provided to Funder by WestEd to assist in the performance of this Contract shall remain WestEd's property. Upon expiration or termination of the Contract for any reason, Funder shall request instructions from WestEd regarding whether Funder should: **(i)** Erase

or destroy any WestEd data and/or materials maintained by Funder; or **(ii)** Return the data and/or materials to WestEd. This provision shall survive termination of this Contract."

Section 6.0 Indemnification
Section 6.0 Indemnification, shall be deleted in its entirety and replaced with the following:

"**6.0 Indemnification**: Each party agrees that it will be responsible for its own acts and the results thereof and shall not be responsible for the acts of the other party and the results thereof. Each party therefore agrees that it will assume all risk and liability to itself, its agents or employees for any injury to persons or property resulting in any manner from the conduct of its own operations and the operations of its agents or employees under this Agreement, and for any loss, cost, or damage caused thereby during the performance of this Agreement."

Section 10.0 Confidential Information
Section 10.0 Confidential Information, shall be deleted in its entirety and replaced with the following:

"10.0 Confidential Information: "Confidential Information" shall mean with respect to a party hereto (the "Disclosing Party"), collectively, all technical, financial, business, student, parent and/or staff information of any kind whatsoever, including, where appropriate and without limitation, all data, specifications, research projections, processes, techniques, technology, ideas, know-how, improvements, inventions (whether or not patentable or copyrightable), trade secrets, formulae, information concerning research or development by or for the Disclosing Party, information which is or has been generated or received in confidence by or for the Disclosing Party by or from any person, and any other information as well as any and all tangible and intangible embodiments thereof of any kind whatsoever; in each case disclosed by the Disclosing Party to the other party hereto (the "Receiving Party"), or obtained by the Receiving Party through observation or examination of the foregoing, regardless of whether such information or embodiment has been marked as confidential. Confidential Information shall include disclosures in any form, whether in writing, in an electronic format (including without limitation emails, tapes, diskettes, compact disks, or other similar media), and orally (in the case of oral disclosures, only if such disclosure is identified as confidential prior to disclosure). Each party agrees: (a) to hold the other party's Confidential Information in strict confidence in accordance with this Section 10.0; (b) to exercise at least the same care in protecting the other Party's Confidential Information from disclosure as the party uses with regard to its own Confidential Information; (c) to restrict dissemination of Confidential Information within its organization to employees/personnel having a need to know in connection with the stated or defined purpose herein; (d) not to disclose such Confidential Information to third parties without the prior, written consent of the disclosing party; and (e) not to use any Confidential Information for any purpose except for the stated or defined purpose herein without the prior written consent of the disclosing party."

Section 13.0 Governing Law
Section 13.0 Governing Law, shall be deleted in its entirety and replaced with the following:

"**13.0 Governing Law:** This Contract shall be governed by the internal substantive laws, but not the choice of law rules, of the State of Kansas."

The following paragraph shall be added to WestEd's Terms and Conditions:

Section 18.0 Contractual Provisions Attachment
Section 18.0 Contractual Provisions Attachment, shall be added with the following language:

"**18.0 Contractual Provisions Attachment**: The provisions found in Contractual Provisions Attachment (Form DA-146a, Rev 06-12), which is attached hereto as Exhibit 2, are incorporated in this Contract and made a part hereof. Whenever the term "State" or "Agency" or words of like affect are used in the Contractual Provisions Attachment, such reference shall be deemed to apply to Funder or the LCC. Whenever the term "Contractor" or words of like affect are used in the Contractual Provisions Attachment, such reference shall be deemed to apply to WestEd."

Appendix 6:
"Estimating the Costs Associated with Reaching Student Achievement Expectations for Kansas Public Education Students," Prepared by WestEd, dated March 15, 2018

The WestEd Report is publicly available at:https://www.dropbox.com/sh/v24n392eg9ikgiu/AAAIISMNJwzWIE8uK9K_Y-qLa?dl=0&preview=Kansas_Adequacy+Study_Cost+Function+Approach_20180315+FINAL.pdf.[1] It is appropriate for this Court to take judicial notice of the testimony, all of which is publicly available and part of the legislative history of S.B. 423, and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

[1] All dropbox links are provided by the Kansas Legislature Select Committee on Education and provide Committee Documents presented to the committee.

Estimating the Costs Associated with Reaching Student Achievement Expectations for Kansas Public Education Students

A Cost Function Approach

Prepared by WestEd:

Dr. Lori L. Taylor, Consultant to WestEd
Jason Willis, Alex Berg-Jacobson,
Karina Jaquet, Ruthie Caparas

March 15, 2018

Prepared for The Kansas Legislature

Suggested citation: Taylor, L.L., Willis, J., Berg-Jacobson, A., Jaquet, K., Caparas, R. (2018). *Estimating the Costs Associated with Reaching Student Achievement Expectations for Kansas Public Education Students: A Cost Function Approach*. San Francisco, CA: WestEd.

WestEd is a nonpartisan, nonprofit research, development, and service agency that works with education and other communities throughout the United States and abroad to promote excellence, achieve equity, and improve learning for children, youth, and adults. WestEd has more than a dozen offices nationwide, from Massachusetts, Vermont, and Georgia to Illinois, Arizona, and California, with headquarters in San Francisco.

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Chapter 1: Introduction

Over the past five decades, the Kansas Legislature has made efforts to address concerns of inadequacy and inequity of the state's school finance system. The Kansas Supreme Court has ruled the current finance system to be unconstitutional, prompting the Legislature to investigate options for education finance reform. This chapter provides background on the relevant legislation that has shaped the landscape of Kansas's public education finance system and sets the stage for this study.

The 1970s: The School District Equalization Act

The current context of school finance in Kansas can be traced to the early 1970s, when the Johnson County District Court ruled in *Caldwell v. State* that the School Foundation Act of 1965 violated the Equal Protection Clause. Having identified at least three major deficiencies with the state's school finance formula, the court determined that the formula made "the educational system of the child essentially the function of, and dependent on, the wealth of the district in which the child resides."[i] The court ruled that by requiring school districts to rely heavily on local tax revenue, this financing system led to inequity.

To address this, the Kansas Legislature adopted the first iteration of the School District Equalization Act (SDEA) in 1973. However, *Mock v. State*, filed in 1990 in Shawnee County, challenged the SDEA formula. As presiding judge Terry Bullock wrote, "In addition to equality of educational opportunity, there is another constitutional requirement and that relates to the duty of the legislature to furnish enough total dollars so that the educational opportunities afforded every child are also suitable."[ii] Bullock refers to Section 6, Article 6(b) of the Kansas state constitution, an amendment added by voters in 1966, which states: "the Legislature shall make suitable provision for finance of the educational interests of the state." Bullock thus highlights the constitutional requirement not only for equity, but for adequacy, in the state's school funding levels.

The 1990s: The School District Finance and Quality Performance Act (SDFQPA)

These two requirements, equity and adequacy, became the recurring crux of litigation challenging the constitutionality of Kansas's funding formulas. In 1992, the Legislature replaced SDEA with a new school finance formula, the School District Finance and Quality Performance Act (SDFQPA). SDFQPA aimed to ensure equal spending power for school districts, regardless of local tax capacity, and shifted more of the school funding responsibility to the state level.[iii]

The SDFQPA was challenged on constitutional grounds, but the Kansas Supreme Court upheld it as constitutional in 1994.[iv] After this decision, however, the Legislature amended SDFQPA several times, leading to a new legal challenge filed in 1999 in Shawnee County District Court.[v] The district court dismissed the lawsuit, but upon appeal, the Kansas Supreme Court determined that the plaintiffs brought valid claims. The Court noted that "the issue of suitability is not stagnant," and school finance requires monitoring and re-evaluation to determine

whether or not it remains adequate.[vi] The district court revisited the matter and concluded that SDFQPA did not provide suitable funding, noting demographic shifts among public school students, higher admission standards at postsecondary institutions, and modifications to SDFQPA that had occurred since the 1994 decision.[vii]

In May 2004, the court issued an injunction to block expenditures to public schools, thereby closing the school system, until the defects in the funding system were corrected.[viii] The district's order was stayed pending appeal, and the Kansas Supreme Court issued its second decision in January 2005 (*Montoy II*). The Court affirmed that SDFQPA was neither equitable not adequate, particularly for "middle- and large-sized districts with a high proportion of minority and/or at-risk and special education students."[ix] Addressing adequacy, it ruled that "the financing formula was not based upon actual costs to educate children but was instead based on former spending levels and political compromise," and that "[t]he equity with which the funds are distributed and the actual costs of education… are critical factors for the legislature to consider in achieving a suitable formula for financing education."[x]

The court set a deadline of April 12, 2005 to correct the school finance formula, and the Legislature responded with House Bill No. 2247 (HB 2247) and Senate Bill No. 43 (SB 43), which provided an increase of approximately $142 million for the 2005–2006 school year and modified several components of the formula.[xi] The Legislature also ordered a cost study to be performed by the Division of Legislative Post Audit (LPA). In June 2005, the Court held that this was not sufficient (*Montoy III*), prompting the Legislature to hold a special July session and pass SB 3, providing an additional funding increase of $147 million. Once the Legislature received the results of the LPA cost study, it passed 2006 SB 549, which significantly changed the school finance formula. The changes included a three-year plan that would provide a total of $466 million in additional funding.

The 2000s: *Gannon v. State*

The SDFQPA and its finance formula held until the recession, when fiscal year 2010 saw a reduction in the base state aid per pupil (BSAPP), capital outlay state aid, and supplemental general state aid. In *Gannon v. State (Gannon I)*, first filed in November 2010, various plaintiffs again argued that the State violated Section 6, Article 6(b) by failing to provide a suitable education to all Kansas students. The Kansas Supreme Court issued its ruling in March 2014 and reaffirmed that Article 6 contains both an equity and an adequacy component.[xii]

The Court defined that the adequacy component is met "when the public education financing system provided by the Legislature for grades K–12 — through structure and implementation — is reasonably calculated to have all Kansas public education students meet or exceed the [Rose standards]."[xiii] The Rose standards consist of seven educational goals which will be discussed in-depth in Chapter 3 of this report. Explaining its selection of the Rose standards, the Court cited the decision of courts in several other states, including Massachusetts, New Hampshire, North Carolina, and South Carolina, to adopt this same "adequacy rationale and definition."[xiv] The Court also noted the district court's observation that the Rose definition of adequacy "bear[s] striking resemblance to the 10 statements or goals enunciated by the Kansas legislature in defining the outcomes for Kansas schools, which includes the goal of preparing learners to live, learn and work in a global society. K.S.A. 72-6439."[xv]

In *Gannon I*, the Court provided a definition for the equity component as well. For the equity component to be met, "School districts must have reasonably equal access to substantially similar educational opportunity through similar tax effort."[xvi] The Court noted an analogous issue faced by the Texas Supreme Court in *Edgewood Indep. School Dis. v. Kirby* (*Edgewood I*), in which it found that "The lower expenditures [per each student] in the property-poor districts are not the result of lack of tax effort. Generally, the property rich districts can tax low and spend high, while the property poor districts must tax high merely to spend low. 777 S.W. 2d at 393."[xvii] The Court found that under this equity test, both the capital outlay state aid and supplemental general state aid levels were unconstitutional. The case was then passed back to the Shawnee District Court panel.

The panel found the SDFQPA to be unconstitutional under the new test for adequacy.[xviii] The Legislature responded by repealing the SDFQPA and replacing it with a new finance formula, the Classroom Learning Assuring Student Success Act (CLASS Act). The CLASS Act was established as a two-year block grant of state aid for school districts, based on the amounts of state aid from SDFQPA but with some modifications.[xix] But in 2015, the panel found that the CLASS Act's funding was inadequate and, through its supplemental general state aid and capital outlay state aid equalization formulas, inequitable.[xx] The Panel's decisions were appealed to the Kansas Supreme Court, which determined that the equity and adequacy components were at different stages of resolution and expressed a need for "an expedited decision on the equity portion of the case."[xxi] The Court bifurcated the issues of equity and adequacy, with *Gannon II* and *Gannon III* ruling on equity and *Gannon IV* ruling on adequacy.

In February 2016 with *Gannon II*, the Court held that the State failed to show that it had rectified the constitutional inequities described in *Gannon I*.[xxii] The Court gave the Legislature until June 30, 2016 to solve these inequities, or else it would block all expenditures by the school finance system for fiscal year 2017,[xxiii] similar to the potential consequences named in *Montoy I*.

The Legislature responded by enacting 2016 Senate Substitute for House Bill No. 2655 (HB 2655). In *Gannon III*, the Court held that HB 2655 rectified the wealth-based disparities of the capital outlay state aid, but not those of the supplemental general state aid.[xxiv] The Legislature then passed Substitute for House Bill 2001 (HB 2001). In June 2016, the Court found that HB 2001 rectified the supplemental general state aid inequities, solving the equity portion of the case.[xxv]

In March 2017 with *Gannon IV*, the Court ruled on the adequacy component of the case. It concluded that the CLASS Act failed to meet both the structure and implementation requirements of the adequacy test.[xxvi] With respect to structure, the Court noted that the CLASS Act's block grants are merely a "funding stopgap" rather than a finance formula, and that its funding levels remains static from fiscal year 2015 through 2017, rather than responding to changing conditions such as increased enrollment.[xxvii] With respect to implementation, the Court examined the inputs to the K-12 educational system (the costs and funding sources of providing an adequate system) and the outputs (student achievement measures), and concluded that the funding levels and outcomes were both inadequate. It noted, for example, that the State was failing to provide nearly one-fourth of all public school students with basic skills in both reading and math, and that achievement gaps existed between student subgroups. The ruling relied heavily on the Rose standards, referring to it sixty-eight times.

The Court stayed all orders to give the Legislature the opportunity to enact a new, improved finance system by June 30, 2017, when the CLASS Act was set to expire.[xxviii] On June 5, 2017, the Legislature passed Senate Bill 19

(SB 19), which included the establishment of a new finance formula, the Kansas School Equity and Enhancement. Act (KSEEA). The Rose standards played a central part in its accountability measure, as KSEEA required the Kansas State Board of Education to design and adopt a school district accreditation system based on meeting or exceeding those standards.[xxix] The base funding per pupil was set to increase annually, and formula provided weightings for additional funds based on at-risk populations, special education, low enrollment, and other areas of concern. Furthermore, to address *Gannon IV*'s concern about stagnant funding failing to meet the needs of a dynamic environment with ever-shifting populations, KSEEA required LPA to perform regular audits to monitor whether the funding and weightings remain adequate.

Gannon V and Directed Court Action

In October 2017, the Kansas Supreme Court issued its fifth ruling on the Gannon case (*Gannon V*). The Court acknowledged that SB 19 "arguably makes positive strides" but ultimately concluded that KSEEA failed to satisfy both the equity and the adequacy requirements of Section 6, Article 6.[xxx] The ruling repeatedly noted that as mentioned in previous Gannon rulings, "the party asserting compliance with court decision ordering remedial action bears burden of establishing that compliance." That is, the State still carries the responsibility of clearly demonstrating how its remedial legislation brings the finance formula into constitutional compliance.

With regard to equity, the Court concluded that SB 19 included four major equity violations: (1) expanding the uses of capital outlay, (2) reinstating a procedure for districts to increase their Local Option Budget (LOB) funds, subject to protest-petition, (3) basing LOB equalization state aid on the preceding school year, and (4) setting a 10% floor for at-risk funding.

The use of capital outlay funds had previously been limited to certain property-related expenses, but SB 19 had expanded that to include property and casualty insurance, as well as utility expenses.[xxxi] Previously, a district would have had to pay these expenses from its general fund, LOB fund, or both. Because the use of these latter funds is generally unrestricted, this provided increased flexibility for school spending decisions. However, wealthier districts had a greater ability to shift these expenses to their capital outlay fund, and thus could benefit more from this flexibility than other districts.[xxxii] Additionally, the Legislature's equalization point for the capital outlay fund is lower than for the LOB fund, due to the former' historically limited uses, so if districts relied more on the capital outlay fund, the State would not have to provide as much equalization aid.[xxxiii]

As for the new procedure to raise local taxes for LOB funds, the Court noted that "a correlation exists between a district's wealth and its ability to gain voter approval of a board resolution that is certain to raise mill levies," and so wealthier districts would more likely succeed in increasing their tax effort to generate higher LOB revenue.[xxxiv] SB 19's third equity violation, basing LOB equalization state aid, is tied to the issue of increasing LOB funds as well. If a district qualifies for LOB equalization aid and does manage to raise its LOB level, its equalization aid would still be based on the previous year's aid, rather than on the new LOB level.[xxxv] Finally, the Court's fourth identified equity violation dealt not with local funds, but with state aid for at-risk students. Under SB 19, if fewer than 10% of a district's students qualify for free meals (i.e., the at-risk measure), the district would nevertheless receive the at-risk weighting as if 10% of its students qualified. According to projections, this would benefit only

two districts, and the Court felt that the Legislature did not provide justification for determining this 10% cutoff.[xxxvi]

When considering the adequacy component under KSEEA, the Court again discussed both its structure and its implementation. The plaintiffs argued that both structure and implementation were inadequate, but the Court held that the structure was adequate, as the plaintiffs' claims "involve too many contingencies and require us to make too many assumptions."[xxxvii] However, the Court determined that the funding's implementation was inadequate. To demonstrate adequacy, the State primarily used a "successful schools" model based on an analysis by the Kansas Legislative Research Department (KLRD). The analysis identified forty-one Kansas school districts that exceeded KLRD's performance expectations and calculating the average of their per weighted pupil base amounts. However, the Court sided with the plaintiffs, who argued that while these districts "outperform[ed] expectations," they did not meet constitutional standards for student performance outcomes, and many had high rates of students not performing at grade level for either reading or math.[xxxviii] In other words, they argued that the chosen districts "are perhaps merely the best, or the most efficient, of the constitutionally inadequate."[xxxix] The Court affirmed that the State's model was deeply flawed in defining success as exceeding expectations, rather than high test performance.[xl]

Furthermore, the Court determined that not only were the chosen schools' performance below constitutional adequacy, but the State's methodology of proving compliance was dubious. Deficiencies identified by the Court included "KLRD's virtually undisclosed review of the school districts," as well as "the brevity of its resultant memo and attachments" and "the timeliness of the presentation of those materials to a legislative body."[xli] The Court contrasted KLRD's quick, four-page report to previous, more comprehensive cost studies, particularly the LPA cost study, whose report and attachments totaled 344 pages. The Court also doubted the State's choice to employ a successful schools model, given that the LPA cost study had specifically rejected this model in favor of the more sophisticated cost function approach, and given that the State's own expert witness had previously testified that the successful schools model was "not reliable."[xlii]

The Court chose to continue what it identified in *Gannon IV* as its "general practice" to retain jurisdiction and stay its mandate, providing the Legislature with an opportunity to remedy the constitutional deficiencies in its school finance formula. The Court justified this practice by citing the Legislature's previous success in remedying these deficiencies, namely in *Montoy IV*, as well as the equity component following *Gannon III*.[xliii] However, the Court emphasized the need for urgency, stating that "the education financing system has been judicially declared to be inadequately funded for at least 12 of the last 15 years." The Court would stay its mandate until June 30, 2018,[xliv] but stated that after that, "the demands of the Constitution cannot be further postponed."[xlv]

Study Orientation

The Kansas Supreme Court's October 2, 2018 ruling (*Gannon V*) provides the Legislature until June 30, 2018, to bring the KSEEA into constitutional compliance. The Court has set a briefing schedule for arguing the merits of any school finance legislation passed in the 2018 legislative session that is enacted to rectify any constitutional infirmities with the KSEEA that begins on April 30, 2018.[xlvi] In responding to the Court's mandate, the Kansas Legislature retained this research team to conduct an adequacy cost study that is designed to "estimate the

minimum spending required to produce a given outcome within a given educational environment." In doing so, the research team investigated the following dimensions of the Kansas public education system:

1. Investigate the linkage between the Rose standards and implications for Kansas K-12 spending, which is discussed further in Chapter 3.
2. Explain why the option or options set forth by the study "produce an education system reasonably calculated to achieving those Rose standards," which is discussed in Chapters 2, 4, and 5.
3. Focus on the structure of the Kansas school finance formula as well as overall K-12 spending levels including forms of funding (local, state, and federal) available to Kansas K-12 schools, which is discussed in Chapter 5.

Importantly, this analysis is framed in large part by the extent to which educational data would be available to conduct such analyses. This, and other contributing factors for the analysis, are described in detail in Chapter 4.

Chapter 2: Literature Review

In conducting an adequacy cost study, it is important to review the research and evidence base supporting methodologies for these types of school finance investigations. As such, this section of the report investigates several of these topics, including: (1) explaining spending differences across school districts, (2) costing out study methods, (3) costing out study method suitability to Kansas, (4) improvements over previous Kansas costing out studies, (5) school district consolidation, and (6) ensuring the effective and efficient use of resources.

Spending Differences Across School Districts

The cost of education in Kansas varies by district for reasons outside of school district control. Put simply, some districts must spend more to provide similar educational services. There are three factors that account for this variation:

- Differences in the resource levels required to provide educational services to different student populations ("needs") will drive differences in educational costs. For example, disadvantaged, gifted, or vocational students may require additional services or resources relative to other students, and thus costs for districts with large numbers of these students will likely be higher.
- Differences in the prices districts must pay for educational resources, the most important of which is labor ("prices") will drive differences in educational costs. For example, districts operating in locations where the cost of living is high must naturally pay more to hire the same quality of teachers available to districts in other locations at lower cost.
- Differences in economies of scale will drive differences in educational costs. Small districts and schools may be unable to take advantage of the economies of scale available to larger ones, and therefore will likely need to spend more per-pupil than larger districts and schools to achieve similar results.

These three cost factors frame this study and provide an opportunity to explain why some school systems in Kansas must spend more in order to achieve similar student outcomes. In other words, addressing adequacy of the Kansas system of funding requires attention to both the level of funding and structure whereby it is allocated to individual districts.

Difference in Needs

While the precise amounts depend on numerous factors, it has been well established that different student populations require additional resources in order to achieve the same educational outcomes. In particular, policies at the state and federal levels acknowledge that additional resources are required to serve students who are (1) from low-income backgrounds, as indicated through qualification for free lunch through the National School Lunch Program, (2) English Language Learners, and (3) those receiving special education services.

There is near consensus that it costs more to educate students from low-income backgrounds to support equitable achievement of outcomes. Prompted by the Civil Rights Act of 1964, the federal government released a comprehensive national study on this issue in 1966, paving the way for federal policy supporting low-income students. Titled "Equality of Educational Opportunity" but often known as simply "The Coleman Report" after its principal author, the national study identified poverty and its related problems, including unstable housing, poor nutrition, and lack of healthcare, as causes for lower student outcomes. However, a wide variety of factors impact the cost of educating low-income students. For instance, one must consider that the federal poverty level of income is the same in New York City as in Salina, Kansas, or any other United States city. But these cities have very different costs of living levels, so being identified as economically disadvantaged has a different meaning in each context. The LPA's 2005 Kansas adequacy cost study calculated the poverty weighting as 0.70 in the median district, but it ranged from 0.65 in rural districts to 1.15 in urban districts (Duncombe, W., & Yinger, J. (2005). A more recent survey of the literature by Golebiewski (2011) found widely divergent estimates of the extent to which being economically disadvantaged contributed to the cost of education. As a general rule, the highest estimates of the differential costs associated with student poverty came from analyses of New York and the lowest cost estimates came from analyses of more rural states such as Arkansas, Arizona, Kansas and Texas.

Educating English Language Learner (ELL) students also requires additional funding, though research has shown that these costs vary by context as well. Factors influencing ELL's learning outcomes include socioeconomic status, parent education level, age entering the United States, and level of formal schooling obtained in the student's country of origin (Capps, et al., 2005). These additional challenges require additional supports, and thus, additional costs. Another cost factor is the number and proportion of ELL students who share a common language. Districts where most ELL students share a common language may have a cost advantage, as they can leverage the same materials, instructors, and other supports for many of their ELL students. Meanwhile, districts that lack this economy of scale will tend to have greater costs. Augenblick, Palaich and Associates (APA)'s 2005 statewide adequacy cost study for Pennsylvania calculated an ELL weighting ranging from 1.48 to 2.43, with smaller districts having the highest weights. Recent reviews of the literature — including Jimenez-Castellanos and Topper (2012), Golebiewski (2011) and Rumberger and Gandara (2008) — all found that the estimated range of costs is even wider for ELL students than for economically disadvantage students. For example, Duncombe and Yinger (2005) estimated that the cost of serving an ELL student in Kansas was a statistically significant, but tiny, 0.14 percent higher than the cost of serving a student who was not ELL. At the other end of the spectrum, Duncombe and Yinger (1997) estimated that the cost of serving an ELL student in New York was four times the cost of serving a student who was not ELL.

Similarly, there is no consensus on how much additional funding special education requires, as this too varies widely by context. Data from the nationwide Special Education Expenditure Project (SEEP) indicate that on average, in 1999–2000, the spending ratio for a student with special needs compared to a student with no special needs was 1.90. The data also indicate lower weights for larger districts, again presumably due to economies of scale. However, a comparison of several special education adequacy studies across the country highlighted additional major factors in cost variation: differing categories of student disabilities (e.g., deafness, visual impairment, autism, emotional disturbance, etc.), severity of disability,

and districts' varying approaches to assigning students to categories and severity levels. Diagnoses of disability can vary widely across physical, emotional, and behavioral bounds, each of which requires different combinations of resources to support the student.

Difference in Prices

Variation in the price of labor is a particularly significant driver of educational cost differentials in Kansas because salaries and benefits make up such a large share (approximately 81%) of elementary and secondary education expenditures in Kansas.[1] While there are other educational inputs with prices that also vary across the state (such as casualty insurance or electricity), these costs each make up a relatively small proportion of current operating expenditures, so incorporating those additional sources of price variation would likely have a very modest impact on the overall cost.

The costs of education investigate how districts are able to hire the same quality of teachers, administrators, and support staff despite regional differences in the prices they must pay for them (i.e., differences in the wage level). Districts of all sizes and with varying student populations must offer wages sufficient to staff their schools with qualified teachers, and districts in high-labor-cost locations must pay more than other school districts just to be able to hire comparable personnel.

As described in Taylor (2011), there are three basic reasons why public school teacher wages differ across individuals: the person, the job, and the location.

- **Person.** All else equal, people with stronger qualifications are paid higher wages. For teachers in Florida, as in most of the country, the key qualifications are experience and higher educational attainment. However, other qualifications may also be relevant such as verbal communication skills, certification to teach English learners or special education students, possessing a multi-subject teaching credential, or classroom effectiveness.
- **Job.** Differences in working conditions can also impact wages. A position with less desirable characteristics may need to offer a higher wage to compensate workers for this, or will be forced to hire less qualified individuals — or both.
- **Location.** Finally, differences in location can impact wages substantially. The same individual applying for comparable jobs in Kansas City compared to Topeka demand a very different salary for these positions. Moreover, many of the factors that influence these differences are outside of the control of districts (e.g., housing costs, local economy, crime rate, etc.).

The first two reasons are largely within school district control. A school district can choose the qualifications of the teachers it hires and can influence working conditions within the district. In contrast, the characteristics of the location are largely outside of school district control. As discussed in Taylor (2015), "only factors outside of school district control represent cost differences that should be accounted for in funding formulas and equity calculations."

[1] Calculation based on the ratio of salaries and benefits to total current expenditures. Data is from the National Public Education Financial Survey for the 2013–2014 school year at: https://nces.ed.gov/ccd/stfis.asp

There are generally two reasons why wages vary by location, all else being equal. The first of these is simply the cost of living. The prices for the same goods and services vary across the state, and thus one district must pay teachers more than another for the teacher to have the same "standard of living." In sum, the higher the cost of living, the more a district must pay teachers. The second is the relative attractiveness of a community. While attractiveness may be harder to measure precisely, it is no less significant than variation in the price of goods and services in determining wage levels. A location that has a high crime rate, little or no infrastructure (e.g., public transportation, reliable public services, etc.), and is isolated from recreational activities (e.g., movie theaters, beaches, restaurants, etc.) will be relatively less attractive than one with these amenities. As a consequence, districts in such locations would have to pay teachers more to recruit and retain them. In other words, the less attractive the community, the more a district must pay teachers.

As is evident from the description above, locational variation in teacher salaries is largely outside of district control. If this variation is not accounted for in a state's funding mechanism, those more expensive and/or less attractive districts would not be able to pay for a similarly high-quality workforce compared with less expensive or more attractive neighbors.

Economies of Scale

Economies of Scale is the third factor that explains the differences in costs across public schools and school districts. That is, some school systems like any other organization can provide a large volume of service — defined as instruction in the classroom, transporting students, feeding students, etc. — for a lower marginal cost. This cost of education has been well-documented and observed. For example, the per-pupil cost of operating a small district and/or school is much higher than the per-pupil cost of operating a larger one (Taylor, Gronberg, & Jansen 2017). Yet, in public education researchers have observed a U-shaped curve to economies of scale meaning that once the school district gets significantly larger we can observe some diseconomies of scale (Robertson 2007). There are a variety of explanations for school systems experiencing a diseconomies of scale. Relative to the circumstances of Kansas, research on economies of scale in education have found that geography forces the education system to have smaller school districts and schools which naturally creates some diseconomies of scale. Kansas has had various experiences in attempting to address such diseconomies of scale including various school district consolidation studies (Augenblick, Myers, & Silverstein, 2001; Augenblick, Myers, Silverstein, & Barkis, 2002; Legislative Divison of the Post Audit, 1992). Yet, recent research has shown that most cost savings through such consolidations are achieved at the school-level (Gronberg, Jansen, Karakaplan, & Taylor, 2015).

Costing Out Study Methods

Adequacy or costing out studies have been performed in at least 30 states as a method to estimate the cost associated with ensuring that all students have the opportunity to reach a particular level of performance based on standards set out by the state. There are two common approaches for these costing out studies, the input-based and output-based approach.

Table 1. Various methodologies for costing out studies

Input-based (resource-oriented) methods	Output-based (performance-oriented) methods
Professional judgement: *Based on current spending by a set of high-performing schools*	**Successful schools:** *Based on current spending by a set of high-performing schools*
Evidence-based: *Based on calculations linking performance outcomes with spending and other variables*	**Education cost function:** *Based on calculations linking performance outcomes with spending and other variables*

Each of these methods are explored in further detail below including a description of each method and then the strengths and weaknesses.

Input-based Method

Both of the approaches that are classified as bottom-up approaches rely on orienting their analysis from the lowest level of the system, e.g., classroom or school, to identify the necessary resources. There are two approaches. The first is the professional judgment method, and the second is the evidence-based method.

Professional Judgment approach

The professional judgment method involves convening focus groups of local educators and policymakers to design prototype schools that meet performance goals. Designing these prototype schools includes determining the resources (staff, equipment, etc.) required. Researchers then calculate cost estimates for these prototype schools in various settings, such as urban, suburban, rural, low-need, and high-need communities. Augenblick & Myers used this method as one of two approaches that it published in a study on costing out an adequate education in Kansas for 2000-2001 (Augenblick, Myers, Silverstein, & Barkis, 2002).

Evidence-Based

In the evidence-based method, a team of consultants' design prototype schools that meet performance goals. The consultants draw upon a wide body of education practices and strategies that have proven effective. While the professional judgment approach draws primarily upon practitioners' experience, the evidence-based approach relies more heavily on research.

Advantages and Disadvantages

A major advantage of both types of bottom-up approaches is that their methodology and results are relatively simple, transparent, and easily understood. Their practices are grounded in on-the-ground expertise from active practitioners, and they present not only *how much* should be spent, but *how* it should be spent. Furthermore, these approaches don't require that an "adequate" level of performance be defined or measured; both of these approaches are resource-oriented, rather than performance-oriented. While the practitioners and researchers keep a goal performance level in mind when determining resources, these methods typically do not estimate specific outcomes from prototyes.

This simplicity can be an advantage when conducting the cost study, but when evaluating the cost study, this tends to be a major limitation. For instance, the outcomes that an evidence-based model's strategies are "proven" to achieve may be different than the outcome goals set by policymakers. Another disadvantage is that neither method focuses on the cost-effectiveness of their recommended resource allocation. In evidence-based studies, cost estimates tend be based on the averages among districts, and while they do address the need for additional resources for certain demographics, they still may not accurately estimate the costs for actual districts that differ from the "typical" prototype, especially when multiple regional variables are at play. Professional judgment analyses carry this same weakness and may be vulnerable to blind spots and biases of individual experts on the panel. Crucially, this method produce specific recommendations that realistically reflect the needs of only a handful of prototypical districts.

Output-based Approach

While bottom-up approaches are resource-oriented, top-down approaches are performance-oriented. Such analyses are based on observed relationships between (a) school spending, (b) student performance, and (c) other school characteristics. There are two main approaches in this category — the successful schools method and cost function method.

Successful Schools

The successful schools method begins by identifying a set of schools with high performance outcomes in relation to the state's performance goals. Estimates of providing a quality education are then based on the lowest level of per-student spending among these actual, high-performing schools. Augenblick & Myers used this method as one of two approaches that it published in a 2002 study on costing out an adequate education in Kansas (Augenblick, Myers, Silverstein, & Barkis, 2002).

Education Cost Function

In the cost function method, cost and performance data are used to estimate the relationship between expenditures and other dependent and independent variables, including: school outcomes, resource prices, student needs, district size, and other relevant characteristics of districts. Once cost estimates for these relationships have been calculated, analysts can use these calculations to predict the cost of achieving a designated set of outcomes, taking into account the aforementioned factors. Duncombe & Yinger (2005) used this approach for the costing out study conducted in 2005 and subsequently published with complementary material from the Kansas Legislative Post Audit (LPA) division in 2006. The cost

function methodology has been refined over several decades of empirical application, and cost function studies have been undertaken for New York (Duncombe and Yinger, 1996, 1998, 2000, 2005; Duncombe, Lukemeyer, and Yinger, 2003), Arizona (Downes and Pogue, 1994), Illinois (Imazeki, 2001), Texas (Imazeki and Reschovsky, 2004a, 2004b; Gronberg, et al., 2004), and Wisconsin (Reschovsky and Imazeki, 1998).

Since that time, additional education cost function analyses have been conducted in California (Duncombe & Yinger, 2011b; Imazeki, 2008), Indiana (Zimmer, DeBoer, & Hirth 2009), Kansas (Chakraborty & Poggio, 2008; Duncombe, Lukemeyer, and Yinger, 2008), Kentucky and Maine (Lee, 2010), Massachusetts (Nguyen-Hoan & Yinger, 2014), Missouri (Baker, 2011; Duncombe et al., 2008; Duncombe & Yinger, 2011a), New York (Duncombe & Yinger, 2005); and Texas (Gronberg, Jansen, Karakaplan and Taylor, 2015; Gronberg, Jansen, & Taylor, 2011, 2017; Imazeki & Reschovsky, 2006).

Advantages and Disadvantages

A major advantage of top-down approaches is their grounding in a demonstrated standard of student achievement and actual per-pupil costs. Estimates are based on the actual experiences of students in the region, and cost function analyses can provide a strong empirical foundation for their estimates of cost differentials. The direct link between education costs and desired outcomes is particularly valuable from a policymaking perspective, as one can use these methods to estimate costs tied to a specific performance goal.

One disadvantage of the successful schools method, compared with other methods, is that while it directly links costs to outcomes, it generally does not describe in detail how funds ought to be used. Another disadvantage is that because its estimates are based upon only a sampling of schools, as with estimates based on prototypes, other variables may prevent these estimates from accurately reflecting the needs of schools in other contexts. While the successful schools method adds additional funding for certain student populations, such as those with special needs, limited English proficiency, and low-income backgrounds, it focuses primarily on identifying the "base cost" for per-pupil spending in a general education context.

The cost function approach avoids many of these disadvantages. Because it establishes a cost relationship with a wide variety of variables that could potentially affect student outcomes, drawing from a larger set of schools — potentially the entire state's — it can more easily control for variables within different school contexts. However, the estimates of cost function studies still have limitations. By design, statistical models describe relationships between current data, so extrapolating to performance standards outside current experience is problematic. For example, resources may provide diminishing returns at a certain level of high performance, and so if unprecedented goals are set, the projected estimates for required resources may still be inadequate.

Because cost function studies are grounded in data, another potential disadvantage is that they require high quality measures of current performance and expenditures. Similarly, for a cost function study to inform policy, policymakers must set goals based around *measurable* performance outcomes. With its higher level of complexity and economic modeling techniques, a cost function study tends to be more difficult to explain in non-academic settings. Statistical models are not readily transparent, and they require analysts to make judgment calls that inevitably affect the results.

Cost Study Method Suitability to Kansas

The education cost function approach is, among the four methods, the best suited to the circumstances of Kansas. This is not only because the approach is the most precise, but because it controls for the presence of certain circumstances and contexts. Augenblick & Myers (2002) explained this in the first cost study conducted for Kansas, when they said:

> *"The statistical approach [the education cost function approach] is based on understanding those factors that statistically explain differences in spending across school districts while 'controlling' for performance. In some sense, the statistical approach is the most powerful of the alternatives and is subject to the least manipulation. However, it has proven difficult to explain how the approach works in situations other than academic forums. The approach requires the availability of lots of data, much of which needs to be at the school or student level in order to be most useful."*

In other words, the education cost function approach can be the most robust method to estimate the costs associated with providing an adequate education. In the circumstance of Kansas, there are several supporting points to this fact, including: (a) ability to consider the entire student and school population, (b) presence of strong student- and school-level data enabling better estimation and alignment to the Rose standards and (c) improved statistical techniques over 12 years after the Duncombe & Yinger (2005) analysis was conducted.

Ability to Consider the Entire Student and School Population

The first major advantage of the education cost function approach is that it accounts for the wide diversity across Kansas's 286 public school districts and over 1200 schools. Enrollment ranges from 57 students in Healy Public Schools to 50,416 students in Wichita Public Schools. Some districts serve ELL students from a wide variety of backgrounds, with 119 languages represented in Wichita,[2] while other districts, like Labette County, Osawatomie, and Kaw Valley school districts have no ELL students at all.

[2] Wichita Public Schools. 2017-2018 District Snapshot. Retrieved from https://www.usd259.org/domain/954

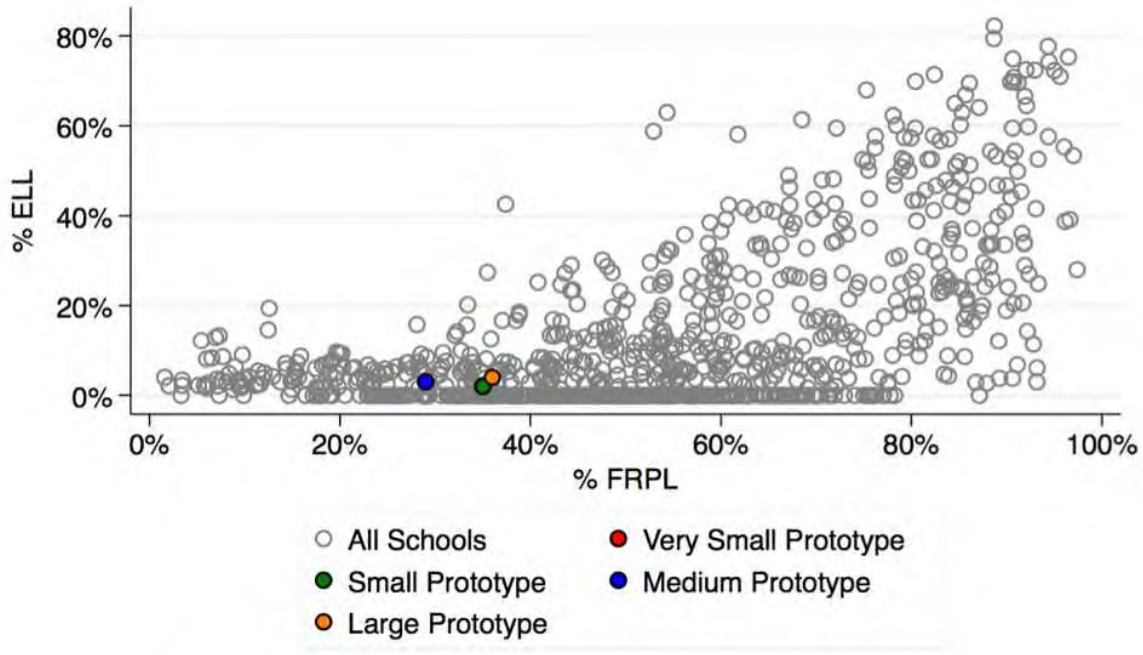
Augenblick & Myers (2002) attempted to simplify school districts' diversity by grouping them into four size categories (quartiles), so that each quartile contained an equal number of school districts and an equal number of students. When the quartiles reflected an equal number of districts, the districts in the largest quartile of districts enrolled 75.3 percent of all students, with about 4,429 students per district and 10.2 schools per district. Meanwhile, districts in the smallest quartile enrolled 3.5 percent of all students, with about 208 students per district and 2.3 schools per district. Then the quartiles reflected an equal number of students, there were four districts in the largest quartile and 230 schools in the smallest. The researchers used this information to construct four prototype districts representing each size category, which they then used for their cost estimates. The characteristics of these four prototype districts are shown in the table below.

Table 2. Characteristics of Prototypes Used in Professional Judgment Model (Augenblick & Myers, 2002)

Prototype School and District Characteristics	Very Small	Small	Moderate	Large
Range in Enrollment	#324	325–555	556–3,600	#3,600
Size of Prototype District	200	430	1,300	11,200
Size of Prototype School				
Elementary	140	150	200	430
Middle	-	-	300	430
High School	60	130	400	1,150
Number of Prototype School				
Elementary	1	2	3	12
Middle	-	-	1	6
High School	1	1	1	3
Proportion of Students in Special Education (%)	14	14	13	14
Proportion of Students Eligible Free/Reduced Lunch (%)	35	35	29	36
Proportion of Bilingual Students (%)	2	2	3	4

By contrast, our current study considers the variations associated with the entire range of schools and school districts in Kansas. A comparison with the chart below illustrates the more expansive view afforded by this methodology.

Figure 1. Percentage of English Learners by Free Lunch Schools, Identified A&M Prototypes



Note: The % ELL and % FRPL is the same for Very Small and Small Prototypes.

Figure 1 shows the number of schools (observations) that compared to the four prototype school used in the professional judgment method used by Augenblick & Myers in the 2001 cost study. We can observe that the cost function method will enable the observation of significantly more variation and types of schools as compared to the professional judgment model used in the Augenblick & Myers study.

Presence of Strong Student- and School-level Data

The comprehensive data calculations used in an education cost function study are not feasible to generate in every circumstance, as one needs to have data available for this broad range of factors. Fortunately, in the case of Kansas for our current study, this was not a problem. Kansas has been nationally recognized for the quality of its education data collection, use, and reporting. In the 2014 report by the Data Quality Campaign, an education data survey in which 46 states and the District of Columbia participated, Kansas was recognized among the top states. A key component of the survey is the Data Quality Campaign's "10

State Actions to Ensure Effective Data Use," and Kansas was one of only ten states implementing nine or more of the recommended actions.

Kansas's diligent data collection allowed for our current analysis to incorporate considerably more factors than most previous cost studies. Most studies concentrate on district-level data and basic measures of student performance, such as standardized assessments. Duncombe & Yinger (2005) and Augenblick & Myers (2002) both acknowledged this as limitations of their own studies. However, the availability of student-level and teacher-level data, as well as postsecondary data and regional characteristics, allows our analysis to incorporate many more factors at work. This also enables us to view variables' relationships in greater detail; for example, the ability to assign costs of educating students to the building level allows us to create a stronger relationship between costs and outcomes for students.

Additionally, now that significant efforts have been made to align the Kansas public education system to the Rose standards, this analysis can more accurately assess the costs of an "adequate" education, as defined by achievement of the Rose standards, than had previously been possible. As we discuss in Chapter 3, Kansas's state education agencies have oriented their Multi-Tiered System of Support (MTSS), school district accreditation standards, and the Kansas College and Career Ready Standards toward achievement of the Rose standards. School districts have configured their resources accordingly, and so by using data that reflects the current landscape of Kansas's public education system, we can get closer to calculating the cost of achieving the Rose standards statewide than had ever been possible before.

Ensuring the Effective and Efficient Use of Resources

To encourage districts to use resources efficiently — that is, cost-effectively — federal and state agencies have implemented a number of accountability systems over the decades. Some accountability systems, like the federal No Child Left Behind (NCLB), have been criticized for pressuring schools to focus their curriculum toward standardized test achievement or for the counterproductivity of their sanctions (Nichols, Glass, & Berliner, 2005). However, the concept of an accountability system still holds tremendous value, particularly in advancing educational equity. Both through rewards and sanctions and through the public reporting of school progress, accountability systems can be a powerful tool in focusing resource allocation toward improving outcomes for disadvantaged students. Furthermore, after years of practitioners' vocal dissatisfaction with previous accountability measures, the landscape of federal and many states' policy has been shifting toward more flexible accountability systems. For example, many states have reformed their accountability systems to measure success indicators beyond standardized test scores, such as graduation rates and other college and career indicators, and to offer comprehensive support systems to low-performing schools, rather than merely rewards and sanctions (Center for American Progress and the Council of Chief State School Officers, 2014).

It is important to keep in mind that while adequate funding is necessary for achieving desired student outcomes, funding alone is not sufficient; the funds must also be put to effective use. After all, schools with similar student populations, receiving similar funding, can have vastly different student outcomes due to differences in local policies and practices (Williams, Kirst, Haertel, et al., 2005). Thus, if one fails to consider *how well* resources are used, then increasing *how much* resources are provided may have a

limited effect on student outcomes. This section will discuss evidence-based strategies and practices for maximizing the effect of provided resources.

Effectiveness vs. Efficiency

First, we must clarify the distinction between *effectiveness* and *efficiency*. Effective is defined as "producing or capable of producing a desired result."[3] In an education context, effectiveness is then measured by program evaluation: i.e., whether a program produces desired student outcomes. Meanwhile, efficiency refers to cost-effectiveness: achieving the desired outcomes while minimizing resources used. While attempts to improve efficiency sometimes lead to cost-cutting, it is crucial to remember that efficiency still requires the achievement of desired outcomes. Consequently, minimizing resources at the expense of desired outcomes does not improve efficiency, but simply reduces effectiveness.

Effective Decision-Making

The power to affect how effectively and efficiently resources are used fundamentally rests with the decision-makers — i.e., local education leaders at the district and school level — who direct how available funds will be spent. Organizational behavior research suggests that while institutions may be tempted to try to hire individuals who possess an inherent "effective decision-making" capability, attempts to do so have limited success, as this skill is not strongly correlated with intelligence or experience (Dalal & Bolunmez, 2016). Indeed, intelligence can lead decision-makers to rely on cognitive shortcuts rather than engaging in a deeper analytical process (Stanovich, 2009), and experience can lead decision-makers to be overconfident and fail to weigh all possibilities (Russo & Schoemaker, 1992) Rather, research indicates that effective decision-making is a skill that can be developed and which strongly benefits from utilizing proven strategies.

Three such strategies include: (1) "consider the opposite," (2) taking an outside view, and (3) constructing a linear decision model. Each of these can be routinized in an organization, helping build leaders' decision-making capacities and limiting the likelihood that a decision-maker will default to common biases.

In the "consider the opposite" strategy, decision-makers are tasked with generating reasons why their initial decision may be the wrong choice (Larrick, 2004). This approach prompts decision-makers to consider information that they otherwise may not have thought about and prompts them to plan for a greater range of possible scenarios. Numerous studies have shown that the "consider the opposite" strategy increases decision-makers' accuracy when estimating the probability of a given result occurring (Lord, Lepper, & Preston, 1984; Hoch, 1985; Soll & Klayman, 2004). When making decisions, the ability to make the best choice largely hinges upon the ability to accurately gauge the likelihood of various outcomes. By improving this gauge — specifically by reducing overconfidence and expanding the information base — this strategy can thus lead to better and more well-informed decision-making.

[3] *effective*. Retrieved March 9, 2018, from https://www.merriam-webster.com/dictionary/effective.

One possible limitation of the above strategy is if the decision-maker's biases hinder his or her ability to think of the true "opposite." For example, research has shown that when tasked with thinking of a worst-case scenario that could result from a decision, a decision-maker often thinks of only a mildly undesirable scenario, rather than the true worst case (Kahneman & Lovallo, 1993). Bringing in outside parties can help this, such as in the "Devil's Advocate" form of this strategy, in which another person is enlisted to argue against the decision-maker's initial choice. However, a more effective way to combat this limitation may be through the addition of the next strategy: taking an outside view.

In the "outside view" strategy, a decision-maker must research several previous decisions, made by others, that share similarities with the current favored decision. The decision-maker can then examine these similar decisions through the lens of an outsider. In order to reduce an optimistic bias, these examples must include some similar decisions that could be seen as failures. Some researchers suggest that the decision-maker should seek out at least six similar decisions for comparison (Lovallo & Sibony, 2010). The decision-maker can then study the various properties of these previous decisions and use this data to inform the current one. For example, this might inform the decision-maker's estimates as to: how likely the decision is to produce the desired outcome(s), how long it will take to implement the decision, and possible pitfalls.

As decision-makers begin to carefully examine data, this leads to the third, and more advanced, strategy: constructing a linear decision model. Also known as a "weighted additive" model or an "actuarial" model, this decision-making process requires the decision-maker to: (1) determine the available options, (2) determine the factors involved in each option, (3) assign importance ratings or "weights" to each factor, (4) rate each option on each factor, (5) use these cumulative ratings to calculate the overall "score" for each option, and (6) choose the option with the highest score. This model is frequently used, for example, when admissions committees consider various applicants. To reduce admissions committee members' biases and more accurately compare applicants on all of their respective assets, the committee might assign a weighted value to applicants' essays, test scores, etc. Once each of these factors is graded, the applicant can receive a total score, which can more easily be judged against other applicants' scores. Linear models have been shown to consistently improve decision-making in terms of both accuracy and transparency (Rolf, 2005).

Realistically, however, it would likely not be feasible to construct a linear decision model for every decision that one must make throughout the workday. In some cases, decisions must be made more quickly and with less effort. Stanovich and West (2000) coined these two categories of decision-making as System 1 and System 2. The System 1 thought process is fast, automatic, and effortless, while System 2 is slower, more deliberate, and effortful. All three of the aforementioned strategies, with their careful consideration of non-intuitive information, fall into System 2.

Recognizing that System 2 strategies are not appropriate for every context, institutions can instead put policies in place that encourage the best possible results from System 1 decision-making. For example, research has established the existence of a "status quo" bias, meaning that decision-makers are more inclined to stay with the current or default option than to opt for a change (Ritov & Baron, 1992). This known bias can then be leveraged to encourage positive outcomes. For instance, research has shown that by making enrollment in a retirement savings account (Benartzi & Thaler, 2007) or an organ donation

program (Davidai, Gilovich, & Ross, 2012) the default status, rather than an "opt in" choice, a much higher proportion of people will participate. Another strategy to improve System 1 decision-making is to ensure that multiple options are considered, rather than just the status quo and one alternative. An analysis of businesses, nonprofits, and government entities showed that 70 percent of the time, when leadership teams are faced with important strategic decisions, they only consider the status quo and one alternative. Yet adding multiple options has been shown to improve the quality of the decision (Lovallo & Sibony, 2013). Thus, even when time and resource constraints may limit opportunities to engage in a deep, analytical decision-making process, policymakers at any level can routinize policies that encourage more effective decision-making.

Data-driven Decision-Making

Whenever possible, leaders and practitioners should approach decision-making with an analytical, data-driven process. Effective data use enables decision-makers to learn more about the educational system's processes and outcomes, identify successes and challenges, discover specific areas of improvement, and evaluate the effectiveness of programs and practices (Mason, 2002). Many studies also suggest that data-driven decision-making carries strong potential to improve student performance (Alwin, 2002; Doyle, 2003; Johnson 1999; Johnson, 2000; Lafee, 2002; McIntire, 2002).

However, to institutionalize data-driven decision-making across the system, leaders must clarify expectations, define a structure, and provide guidance on effective data use. Conceptions of what constitutes valid evidence and effective evidence use varies across school and district staff roles. For instance, research suggests that top-level district administrators may have more faith in research as a guide to policy and practice, compared with principals and teachers, and they may have stronger conceptions of what constitutes high-quality research. Meanwhile, bringing a student-level, on-the-ground perspective, teachers may strongly value evidence that reveals insight into student thinking and reasoning (Coburn & Talbert, 2006). A consistent finding is that many school administrators and teachers lack formal training or experience in analyzing data or using assessment results to inform instruction or program improvement (Lachat & Smith, 2005).

Schools systems that have successfully implemented data-driven school improvement processes show many similarities, so these may provide a helpful framework (Halverson, Grigg, Pritchett, & Thomas, 2007). First, the typical school improvement cycle begins with collecting, organizing, and storing data. This includes inputs, such as student demographics, budget information, and master schedules, as well as outputs, i.e., student outcomes. Second, school leaders provide time to collaboratively reflect on local data. This includes breaking down state assessment data to the student level. Teachers then have the opportunity to connect student performance to social and behavioral data, providing deeper context for the results. Third, school leaders and educators consider program alignment. Together, they examine current programs, compare outcome data to collective goals, and identify gaps in meetings the needs of students. Fourth, the group works on program design, keeping the focus on perceived instructional needs. Curricula, pedagogies, and student service programs may be created, adapted, or removed. Fifth, educators study student progress through "formative feedback": local, continuous, two-way communication between teacher and student that reflects student learning. Examples might include student questions, quiz results, and teacher comments on student work. Finally, when incorporating

standardized test preparation into the school curriculum, these data-driven schools make efforts to authentically integrate the content and test-taking skills into the regular curriculum, rather than diverting students toward temporary, test-focused lessons and drills. Together, these steps form a cycle, and through consistent iterations of this cycle, school leaders can collaboratively make careful, gradual improvements to the system.

Before implementing strategies for data-driven decision-making, school systems find the most success when they lay the necessary foundation. This includes (1) establishing specific, measurable goals at the system, school, classroom, and student levels, along with an aligned curriculum; (2) setting norms and expectations for data use, to be reinforced throughout the process; (3) investing in a user-friendly data management system with appropriate access for staff at varying levels; (4) determining which types of data will be collected; and (5) build staff capacity to utilize data (Datnow & Park, 2010). This last, but highly critical piece, may include professional development, modeling of data use, time for teacher collaboration, and opportunities to connect and share strategies with educators at other schools.

While much of the conversation around supporting effective data use focuses on the school level, central district offices also play a critical role in this improvement process. At the vision-setting stage, district offices can influence the goals and expectations around data use (Honig & Venkateswaran, 2012). In terms of capacity-building, districts can be a main provider of professional development and external resources (Park & Datnow, 2009). Perhaps the most unique role of district staff in this process is in the collecting, sifting through, and distribution of important information to school staff. For example, district staff may guide school staff in improvement efforts by selectively providing information on evidence-based programs that seem relevant to the particular school's context, and they frequently serve as schools' main source for district-wide and state-wide assessment data (Honig & Venkateswaran, 2012). Even for school-level and classroom-level decisions, district offices thus serve as a key partner in promoting and supporting the use of data-driven decision-making.

Use of Networks to Improve at Scale

While some schools and districts have uncovered effective practices for improving student outcomes, this poses the question of how to transfer this knowledge to others and, when possible, how to scale it to other school systems. One concept to keep in mind is that effective programs and practices do not exist on their own; they rely on full integration with the larger system. If a program is adopted blindly, without a complementary framework supporting it, the program may collapse or fail to achieve its intended outcomes.

One study examined 60 years of school-community partnership programs at troubled, urban high school in Boston. Among these programs was a wildly successful small learning community (SLC) piloted by the school during the 1988 recession (Leonard, 2011). The SLC consisted of a public service-oriented academic track for 90 students, with teachers and a community partner working closely together to promote student development and keep students motivated toward the goal of attending college. This partnership included the involvement of a career specialist who would speak with parents about potential conflicts between students' school and work schedules, with teachers about students' academic priorities, and with employers about matching students' interests with job requirements. Within four years, 95 percent

of this program's students were enrolling in college, and the program sustained its success through 2003. By comparison, the school's overall high school graduation rate ranged from 27 percent in the 1980s to 41 percent in the late 1990s.

Yet in this same school, the study found a similar example of a community partnership that failed to integrate itself with the rest of the school site's system, and consequently failed to achieve similar outcomes. This second partnership, launched in 1999, had a similar goal: to support and motivate a cohort of 60 students to graduate and attend college. Two full-time tutors were placed inside the school to implement this program, and students enjoyed the services provided. However, in contrast with the earlier SLC program's instructors, these tutors operated independently and did not communicate with parents, teachers, administrators, or other adults in the students' support network. As a result, the program came into conflict with the school's regular operations, students received mixed messages, and the program was unable to create a focused, cohesive culture of achievement like that seen in the previous SLC. The dropout rate for students in this program resembled that of the school at large, and so the program was quickly discontinued.

One way to examine the structures in place, and the crucial interaction between them, is to use the ecological theory developed by child psychologist Urie Bronfenbrenner. Bronfenbrenner introduces the idea that a developing child is surrounded by several layers of relationships (Bronfenbrenner, 1979). The inner layer, or *microsystem*, consists of the environment in which the child has a direct, personal relationships, such as with parents, teachers, or friends. Beyond this is the *exosystem,* an outer circle of people who indirectly influence the child's development; in an education context, this could include central school administrators, school committee members, state policymakers, foundations, and community partners. Finally, the largest circle, or *macrosystem*, consists of the cultural or economic conditions in the child's society at large, e.g., racism, poverty, and cultural expectations. To have a positive effect on a child's development, one should be mindful of the different systems at play and should aim for changes in the microsystem and exosystem to work harmoniously together. Creating a system for effective change thus requires communication and collaboration between, for example, those in the exosystem who decide policy and launch initiatives, and those on the ground who interact every day with students.

Once there is a shared understanding between all parties involved in the change effort, an attempt can be made to scale education best practices across larger systems. To maximize chances of successful implementation within new environments, it is important to consider the conditions in which these best practices were initially implemented, and be open to adjusting implementation as necessary to fit the new circumstances (Klinger, Boardman, & McMaster, 2013). One of the most widely-scaled best practices is Schoolwide Positive Behavior Supports (SWPBS), with over 14,000 public schools having adopted the practice (Debnam, Pas, & Bradshaw, 2012). SWPBS aims to both reduce student behavioral problems and promote a positive school climate. Researchers have examined what led to successful, sustainable adoption of this practice, as well as less successful attempts. Four components identified were identified as significant in ensuring sustainability: (1) priority, (2) effectiveness, (3) efficiency, and (4) continuous regeneration (McIntosh, Horner, & Sugai, 2009). First, the change effort must be supported as a *priority* at all levels, including through sufficient funding. Second, the change should be evidence-based, so that

school personnel will recognize its proven potential for positive outcomes, and it should be implemented with as much fidelity as possible for the given context, in order to maximize *effectiveness*. Third, leaders should pay attention to local capacity and do what they can to assist with the *efficiency* of implementing the new practice, e.g., through professional development. Finally, through *continuous regeneration*, data should be used to monitor, adjust, and improve implementation, based upon outcomes and issues observed within the current system.

A recurring thread throughout much of the research is that authentic educator buy-in and engagement, along with sufficient supports for educators, are critical for the success and sustainability of change efforts. A leading strategy to actively involve educators, develop their capacity, and create a supportive peer group has been the establishment of Professional Learning Communities (PLCs) within schools and districts. PLCs aim to empower teachers as active agents of change, rather than passive recipients of new practices that they're instructed to implement. For example, in 2013, eight school districts in Rhode Island formed the East Bay Professional Learning Community (PLC), a three-year project focusing on rethinking effective student assessment practices (Dillon, Erkens, Sanna, & Savastano, 2015). Each participating district formed a handful of small teacher teams, with teachers representing all subject areas and grade levels. Teams then launched research action plans, guided by an external consultant, to build more balanced, comprehensive assessment systems focused on rigor, relevance, and relationships. The consultant provided inspiration through evidence-based ideas, as well as personalized coaching, feedback, and guidance regarding system integration. However, the teachers took ownership of the decision-making, research, data collection, and implementation of their action plans. Furthermore, teachers who participated in the three-year project were then responsible for carrying on the work and coaching other teachers in the future.

The PLC model thus emphasizes district-level, school-level, and teacher-level ownership, as well as authentic learning from and collaboration with colleagues. All of this leads to genuine educator capacity-building and sustained engagement in the improvement process. An analysis of ten empirical studies of PLCs in the U.S. and one multisite study in England found that in all eleven studies, PLCs had demonstrably shifted each school's professional culture toward one more focused on collaboration and improvement (Vescio, Ross, & Adams, 2008). Evidence of these shifts included new collaborative structures such as sharing lesson plans, observing in one another's classrooms, and participating in "critical friends" peer evaluation groups. While many PLC studies focus on educator outcomes, some studies have also demonstrated a positive relationship between PLCs and improved student outcomes, including classroom grades, performance on state achievement tests, and graduation rates (Lomos, Hofman, & Bosker, 2011; Jackl & Lougée, 2012).

Yet the value of a PLC rests not only in its ability to build educator capacity, but also in its grounding in *improvement science*. Improvement science is a disciplined approach to educational innovation, integrating problem analysis, research, solution development, measurement of processes and outcomes, and refinement of the change idea through repeated testing. Not all PLCs have an improvement science basis, but as the Carnegie Foundation for the Advancement of Teaching (2015) reports, a growing number of education professionals are recognizing that by leveraging these analytic thinking and systematic testing methods developed by the scientific community, they can achieve better outcomes more reliably

(Bryk, 2015). To do so, improvement science-based networks, also known as networked improvement communities (NICs), draw on the expertise of practitioners, researchers, designers, technologists, and others.

An external consultant typically provides guidance and coaching in improvement science methodology, while the education professionals participating in the network apply the methodology to their school or district's problem of practice. Once they've developed a solution, practitioners apply the change idea to their system and participate in plan-do-study-act (PDSA) cycles, akin to mini experiments, in which they rapidly refine and retest the change idea (Park, Hironaka, Carver, & Nordstrum, 2013). The improvement science methods utilized by NICs are valuable for scaling change for several reasons. First, this methodology requires that practitioners examine the school or district system that's already in place, and examine the many factors at play, before developing solutions. As a result, they can strategically craft solutions customized for their particular system. By developing measures of processes and outcomes, practitioners can more reliably measure the results of their testing. By refining and retesting the change idea, practitioners can further increase the likelihood of finding a solution that achieves the desired outcomes within their system. Finally, by developing this knowledge and expertise in improvement science — particularly with a cohort of colleagues from the same school or district — practitioners can apply these same principles to other problems within their system and, ideally, shift their institution's professional culture toward one of continuous improvement.

The shift toward data-driven decision-making, as well as empowering local leaders and educations to actively participate in driving system-wide improvement, offers unprecedented potential for effective resource allocation in public education systems nationwide. By leveraging practitioners' on-the-ground experience and local knowledge along with evidence-based, systematic improvement processes, decision-makers can optimize targeted alignment between resource allocation and student educational needs.

Assessing Resource Allocation

When assessing the effectiveness and efficiency of resource allocation, viewing the full timeline of resource flow can provide a fuller picture. In 2013, the Organisation for Economic Co-operation and Development (OECD) issued its *Review of Policies to Improve the Effectiveness of Resource Use in Schools*, which provides a helpful map of how resources flow and are implemented across all levels (primarily from district level to student level.) The OECD framework conceptualizes this resource flow into four stages: *resource governance*, *resource distribution*, *resource utilization*, and *resource management*. At each level within the system, the processes involved in each of these four stages can be assessed for effectiveness and efficiency.

Resource governance is where the resource flow originates, and this extends beyond the district level. Governance decisions include: the level of funding that will be available for education, the sources of revenue, the distribution of decision-making power across the school system, the definition of priorities and targets, and the implementation of policies. Naturally, much of this responsibility rests at the state level, with reverberating impacts throughout other levels.

Resource distribution occurs next. These decisions include: the distribution of school facilities and physical resources across the region; the distribution of resources among school levels (e.g., primary, secondary);

the distribution of teachers, administrators, leaders, and professional development programs between various schools; and the distribution of resources targeted toward specific student groups (e.g., special education, ELL.)

Resource utilization then refers to the organization and specific application of resources to meet the identified needs. This includes the allocation of teacher resources (e.g., class size, use of teacher time), the structuring of school schedules, and selection of programs to meet student needs.

Finally, resource management involves the ongoing monitoring of resource use, auditing systems, staff management, reporting requirements, and program evaluation.

Each of these stages supports the next, and so deficiencies in any stage, or between levels, can hinder the effectiveness or efficiency of those parts of the system that depend on it. For example, if resource governance provides too little decision-making power in the hands of local school leaders, this may restrict schools' ability to distribute resources in a way that effectively targets their specific student populations' needs. If resource distribution provides too few instructors for high-need schools, then when it comes to program utilization, classroom instruction will suffer. Thus, resource allocation requires coordination and communication between each stage and between each level. Moreover, resource allocation decisions can be assessed for effectiveness within each stage and level.

When it comes to assessing the effectiveness of resource allocation, there are several methods to utilize. If evaluating for both effectiveness and efficiency, it is important to consider both inputs, i.e., resources, and outputs, i.e., educational outcomes. Three methods that consider both inputs and outputs include *cost-effectiveness analysis*, *cost benefit analysis*, and *cost-utility analysis* (Hollands & Levin, 2017).

Cost-effectiveness directly compares the investment cost with its impact on outcomes. For example, if a supplementary reading program costs $4,000 per student and leads to an average increase of 5 points in ELA scores, the program's cost would be $800/point per student. This can be useful when comparing potential options with different costs and outcomes. For example, another reading program might cost $6,000 but leads to an increase of 10 points in ELA scores ($600/point per student.) The second program has a higher cost but is more cost-effective, and so if the district can afford both, the second program may be the more worthwhile investment.

A cost-benefit analysis is similar, although cost-benefit analyses assign a monetary value to the outcome measure. For example, if the $4,000 supplementary reading program raises student performance to grade level, it might avoid the necessity of providing an $8,000 intensive reading intervention for each student later on. From a purely financial standpoint, the cost-benefit analysis then determines that the program is worth the investment.

A cost-utility analysis resembles a cost-effectiveness analysis, except that the cost-utility analysis considers external factors which may not be quantifiable. For instance, along with assessing costs and student outcomes, this analysis might consider teacher concerns, parent preferences, and compatibility with the current curriculum. If a more cost-effective program presents major conflicts in these areas, then decision-makers may opt for a less cost-effective, but overall more compatible choice.

Bringing it All Together: A Framework for States

For school and district leaders to make effective spending decisions, the state must lead the way. We propose a four-part framework outlining how state leadership can enable districts to maximize effectiveness and efficiency throughout their school systems.

- **Flexibility:** For resource allocation to become more effective, changes to investment decisions must be possible at various levels of the system, including local levels. For example, California's accountability system, the Local Control Funding Formula (LCFF), allows substantial flexibility for districts to determine how best to allocate resources in order to meet the needs of underperforming student groups (California Department of Education, 2018).
- **Accountability**: Effective and efficient spending requires clear, system-wide expectations. While accountability systems should allow some flexibility, they should also set expectations that the *inputs*, *outcomes*, and *processes* are aligned with the state's standards for achievement and equity. For example, while inputs, i.e., funding, and outcomes, i.e., student performance goals, may already be outlined by the state, an optimal accountability system would also require evidence that districts are engaging in strategic, equity-focused continuous improvement processes.
- **Support:** Research strongly suggests that effective decision-making is a skill that must be developed and improved. It indicates, too, that local capacity to use data for school improvement efforts is still lacking. Support is needed at every level to guide schools and districts in planning strategically, utilizing data, participating in continuous improvement cycles, and focusing their financial flexibility where it will be most effective.
- **Transparency**: Public education spending affects a variety of stakeholders, and ultimately, decision-makers are responsible for allocating resources to effectively serve the educational needs of students in their community. It is therefore critical that these decisions be made transparent to key stakeholders. However, state-mandated transparency measures, such as required data collection and financial reporting, should focus on data that meaningfully informs strategic decision-making and resource use. Otherwise, districts may waste time and effort capturing specific data purely for compliance reasons, distracting them from the important work of strategic improvement.

Chapter 3: Translate Rose Standards to Measurable Outcomes in Kansas

One of the central themes present throughout the court documents in the *Gannon v. Kansas* adequacy case are references to the Rose standards. This section of the report aims to deconstruct the Rose standards to understand their alignment to the current state of the Kansas K-12 public education system including accompanying measures and thresholds of performance. In order to do this, this section recounts a brief history, summarizes actions by various Kansas state governmental bodies to respond to the court's references to the standards, reviews other states' experiences with the Rose standards, articulates a potential pathway from the standards to measurable outcomes, and discusses the importance of the proportion or cut points associated with these measurable outcomes.

History of the Rose Standards

The Rose standards were originally evoked in the 1989 Kentucky state supreme court ruling in *Rose v. Council of Better Education.* Among legal scholars, this was noted as one of several landmark cases that signaled a shift away from a focus on the inputs to education, e.g., resources, teachers, etc., and rather a focus on the outputs of education, e.g., students achieving a desired outcome. The lawsuit claimed, and the state supreme court agreed, that the standard upon which funding for schools should be determined is on the basis of students meeting minimum standards (adequacy theory and outcome-based) rather than students receiving just an amount of funding based on their need (equity argument and input-based) (Clinger & Hail, 2013).

Since then, various states, including Alabama, Arkansas, Idaho, Massachusetts, New Hampshire, North Carolina, South Carolina, and Texas,[xlvii] alongside Kansas, have referenced the Rose standards (referred to as Rose capacities in Kansas) as a means to set the benchmark for the outcomes of the state's public education students. In the Kansas Supreme Court's ruling on *Gannon v. Kansas (Gannon I),* the court specifically cited the Rose standards as a necessary element in determining the cost associated with funding the education system in Kansas. Specifically, the court wrote in their March 2014 decision: "More specifically the adequacy requirement is met when the public education financing system provided by the legislature for grades K-12 — through structure and implementation — is reasonably calculated to have all Kansas public education students meet or exceed the standards set out in Rose."[xlviii]

The Rose standards are a list of skills that were cited as necessary to allow all students in Kentucky to achieve an adequate education. These skills include:

- Sufficient oral and written communication skills to enable them to function in a complex and rapidly changing civilization.
- Sufficient knowledge of economic, social and political systems to enable them to make informed choices.

- Sufficient understanding of governmental processes to enable them to understand the issues that affect their community, state and nation.
- Sufficient self-knowledge and knowledge of their own mental and physical wellness.
- Sufficient grounding in the arts to enable them to appreciate their cultural and historical heritage.
- Sufficient training or preparation for advanced training in academic or vocational fields, to enable them to choose and pursue life work intelligently.
- Sufficient academic or vocational skills to enable them to compete favorably with their counterparts in surrounding states, in academics or in the job market.

Breaking down the Rose standards further, it is important to understand a bit more about the elements of the statements. The standards contain references to:

- **content**, e.g., economic, social and political systems
- **skill(s)**, e.g., oral and written communications, and
- **aspiration** of a standard.

In the table below, each of the standards are broken out into these various elements to discern a bit more about their aims:

Table 3. Rose Standards by Skill, Content, and Aspiration

#	Skill(s)	Content	Aspiration
1	**Oral and written communication skills**		To enable them to function in a complex and rapidly changing civilization
2	**Knowledge of**	economic, social and political systems	To enable them to make informed choices
3	**Understanding of**	governmental processes	To enable them to understand the issues that affect their community, state, and nation
4	**Self-knowledge and knowledge of**	their own mental and physical wellness	
5		Grounding in the arts	To enable them to appreciate their cultural and historical heritage
6	**Training or preparation**	for advanced training in academic or vocational fields,	To enable them to choose and pursue life work intelligently

#	Skill(s)	Content	Aspiration
7	**Academic or vocational skills**		To enable them to compete favorably with their counterparts in surrounding states, in academics or in the job market

The meaningfulness of understanding the elements that are content, skill, or aspiration is to understand how the Kansas K-12 education system can be structured and resourced to support those outcomes for students. Interestingly, the term of "enable" is present in six of the seven Rose standards. Merriam Webster's first listed definition of "enable" is: "to provide with the means or opportunity."[4] Most commonly, one encounters these words — "means" and "opportunity" — in the context of economic self-sufficiency. Meanwhile, the Cambridge dictionary's definition of enable is "to make someone or something able to do something by providing whatever is necessary to achieve that aim." In either instance, the word "enable" has two components: one party *providing*, and the other party, consequently, going on to *achieve*. One may interpret the Rose standards' language as thus alluding to public school funding as an *investment*, with upfront costs paying dividends in the form of productive citizens.

Other States' Experiences with the Rose Standards

Kentucky

The Rose standards originated from Kentucky's 1989 case, *Rose v. Council for Better Education*, which led to a full overhaul of Kentucky's school finance system, curriculum, and assessment procedures. The state had maintained a long history of keeping property taxes low, resulting in low levels of school funding (Day & Ewalt, 2013). By the 1980s, Kentucky's education outcomes were among the lowest in the United States and included: the highest percentage of illiterate citizens, lowest percentage of adults with a high school diploma, and ranking of forty-ninth in the nation for college attainment.[xlix]

In 1985, a veteran school administrator who had previously worked for the Kentucky Department of Education, Arnold Guess, organized a group of superintendents under the name Council for Better Education, and the council lobbied the General Assembly for increased funding and education reform. Alongside inadequate funding, the council identified major inequity across the state's school system. For example, the Kentucky Office of Education Accountability (OEA) reported 1989-90 disparities that included per-pupil expenditures for instruction ranging from $1,499 to $3,709, and the number of classroom teachers per 1,000 students ranging from 49.5 to 84.7 (Adams, 1993). The council then sued Governor Martha Layne Collins and the legislature in *Council for Better Education, et al. v. Martha Layne Collins, Governor, et al.* (Civil Action No. 85-CI-1759). In May 1988, Judge Raymond Corns of the Franklin

[4] *enable*. Retrieved February 26, 2018, from https://www.merriam-webster.com/dictionary/enable.

County Circuit declared the state's school funding system unconstitutional. The defendants then appealed and brought it to the Kentucky Supreme Court as *Rose v. Council for Better Education*.

In 1989, the Kentucky Supreme Court, led by Justice Robert F. Stephens, issued its ruling, which affirmed and expanded the lower court's opinion. While the lower court's ruling focused specifically on school finance and equity issues, the 1989 *Rose* ruling broadened its scope to include the school system's organization and curricula as well. The ruling drew upon Section 183 of the state constitution, which simply declares that the General Assembly shall "provide for an efficient system of common schools throughout the State."[l] The Court affirmed Judge Corns' definition of an "efficient" system as a "tax supported, coordinated organization, which provides a free, adequate education to all students throughout the state, regardless of geographical location or local fiscal resources."[li]

The Court added that an efficient school system is one "with no waste, no duplication, no mismanagement, and with no political influence" and must be continuously monitored.[lii] The Court emphasized that an "efficient" system also requires equal educational opportunities, and it determined that this is a "fundamental right" under the state constitution. The Court noted wide-ranging disparities between poorer and wealthier districts, including in student test scores, student-teacher ratios, and curricula offered, "particularly in the areas of foreign language, science, mathematics, music and art."[liii]

The Court cited a similar case, *Pauley v. Kelly* (1979) of West Virginia, in which the West Virginia Supreme Court not only addressed the plaintiffs' concerns about inadequate school funding, but also took the opportunity to outline the management, resources, and wide-ranging curricular goals for an adequate education system. *Pauley*'s eight curricular goals included government knowledge, self-knowledge, creative pursuits, and academic or vocational skills.[liv] The Kentucky Supreme Court then listed their own seven curricular goals, now known as the *Rose* standards. While some of these goals mirror those listed in *Pauley*, the Kentucky Supreme Court added detail to its standards, including justification for six out of the seven — that is, what each standard will "enable" its student citizenry to do.

In its conclusion, the Court reiterated that it found the "*entire system* of common schools is unconstitutional," with this decision applying to "the entire sweep of the system — all its parts and parcels."[lv] It declared that this required the General Assembly "to re-create, re-establish a new system of common schools" that would meet the financial, organizational, and educational requirements outlined in the ruling.[lvi]

In response, the General Assembly passed HB 940, the Kentucky Education Reform Act (KERA), in 1990. As required by the Court, KERA reformed not only the state's school finance system, but also its curriculum, assessment and accountability, district employment, and school governance (Day & Ewalt, 2013). With regard to finance, KERA implemented a new funding formula, the Support Education Excellence in Kentucky (SEEK) fund, which set out to equalize per-pupil expenditures. It set a base level of per-pupil funding and included additional funding for at-risk students, students with disabilities, and districts with higher transportation costs. While districts could raise additional funds through local tax effort, the state offered extra financial incentives for poorer districts to participate. The state also provided a guaranteed annual minimum increase in state funds (Hoyt, Jepsen, & Troske, 2008).

With regard to the Rose standards, KERA launched a major curricular reform, coupled with a high-stakes school accountability system. KERA translated the seven *Rose* standards into six "learning goals," which the Kentucky Department of Education (KDE) and Kentucky Board of Education (KBE) then elaborated upon, creating seventy-five "valued outcomes" that served as the state's educational standards. A few years later, KBE reduced these to fifty-seven outcomes, condensing some and determining that others, such as self-sufficiency, were too difficult to assess (Whitford & Jones, 2000). KERA and its learning goals emphasized new instructional approaches that focused on problem-solving, critical reasoning, and communication skills. Recognizing that this required many educators to radically revise their teaching methods, the state provided additional funding and school requirements for professional development programs.

Naturally, assessment of these outcomes required a more "performance based" form of testing. The state convened a committee with strong teacher representation, and the committee designed a new assessment system consisting of less conventional assessment methods, including group problem-solving tasks, open-response questions, and student portfolios showcasing writing and mathematics work.[lvii]

As required by the Court, the new assessment system, the Kentucky Instructional Results Information System (KIRIS), also included a strong accountability component. Assessment results were combined with noncognitive outcomes (e.g. attendance and graduation rates) to produce an accountability index for each school and district. The state defined the expected rate of improvement by prescribing a target or "threshold" score for each school, based on a two-year cycle. Every two years, the school would either be rewarded for meeting its threshold score or sanctioned for failing to do so. Rewards came in the form of financial bonuses for full-time, certified staff. Sanctions included state-mandated improvement plans and the assignment of a "distinguished educator" to coach or help manage the school, or, if the school continued to struggle, sanctions could include dismissal of tenured teachers and state takeover of the school (Hopkins, 2008).

While KERA has undeniably reshaped the state's education system, various components have been more well-received than others. The accountability system, in particular, received immediate criticism from practitioners, with educators citing a more stressful climate due to the fear of sanctions and noting that extrinsic rewards are not major motivators within their profession (Kannapel, Coe, Aagaard, & Moore, 1996). Teachers also felt that the time required to put together portfolios detracted from time to teach basic skills, which were not emphasized in the assessments.[lviii] There were also concerns, including among state officials and external evaluators, about the reliability and validity of the assessment, given the non-traditional format of the portfolios and group tasks (Kannapel, Aagaard, Coe, & Reeves, 2000).

In response, the General Assembly passed HB 53 in 1998, replacing KIRIS with the new Commonwealth Accountability Testing System (CATS), which continued to undergo periodic revisions. While still substantially similar to KIRIS, the new accountability system addressed many of the aforementioned concerns. The performance-based tasks and portfolios were de-emphasized, for example, and the new reward structure acknowledges schools that made progress, even if they fell short of their threshold goals.[lix] Outside of the accountability system, in 1996, the state also adopted the nationally normed Comprehensive Test of Basic Skills (CTBS), so Kentucky students' scores could be compared to those in other states, though these scores were not used for accountability purposes.[lx]

Regardless of the criticism, studies consistently showed that a majority of education stakeholders believed that KERA improved the state's education system. A statewide survey for the Kentucky Institute on Education Research (KIER) in 1996 found that the majority of school board members, school administrators, teachers, and parents who have served on school councils agreed that schools have changed for the better as a result of KERA, and fewer than 20% wanted to return to pre-KERA assessment practices (Wilkerson & Associates, Ltd., 1997). In another 1996 study, many principals, teachers, and parents praised the assessment system's strong emphasis on writing, and educators reported that KERA prompted improvement in instructional practice as well as students' writing, creative thinking, and critical reasoning skills (Kannapel, Aagaard, & Coe, 1997).

Within the first five years, KERA's new school finance system also resulted in both higher and more equitable school funding. According to the state's Office of Education Accountability, average per-pupil revenue from state and local sources increased from $3,049 in 1989-1990 to $4,628 in 1994–1995. Furthermore, the difference in average per-pupil revenue between school districts in the lowest wealth quintile compared to the highest quintile decreased from $1,380 in 1989–1990 to $764 in 1993–1994 (Office of Education Accountability, 1996).

KERA and then its successor, CATS, remained in place until 2009, when the General Assembly passed SB 1, implementing its new accountability system, called Unbridled Learning, in the 2011-12 school year. But in the two decades following the passage of KERA, national rankings already reflected tremendous improvement in Kentucky's educational outcomes. In October 2007, the Kentucky Long-Term Policy Research Center found that based on its interpretation of various national rankings, Kentucky's overall national ranking rose from 43rd in 1992 to 34th in 2005 (Watts, 2007). Similarly, *Education Week*'s Quality Counts 2007 Achievement Index ranked Kentucky 34th (Education Week Research Center, 2007) and a 2011 study by the University of Kentucky's Center for Business and Economic Research found that the state's ranking on the Index of Educational Progress moved up to 33rd from 48th in 1990 (Prichard Committee for Academic Excellence, 2016). The index included the percentage of Kentucky residents with high school diplomas or college degrees, ACT scores, high school dropout rates, AP scores, and national scores in reading, math, and science. According to this index, Kentucky's ranking rose more than nearly any other state during these two decades.

Arkansas

While the Rose standards officially came to Arkansas in 2002 with the ruling of *Lake View School District No. 25 v. Huckabee (Lake View III)*, an important precedent was set in 1983 with the Arkansas Supreme Court's ruling of *DuPree v. Alma School District No. 30*. In the *Dupree* case, the Court concluded that the inequality in funding among school districts violated the equal protection clause of the Arkansas Constitution and that the State failed in its constitutional duty to provide a "general, suitable, and efficient education."[lxi] In doing so, the Court indicated a constitutional requirement for both equity and adequacy. At that time, it did not outline a specific definition for what a "suitable" or "adequate" education involved, though it did provide the opportunity for then-Governor Bill Clinton to push a wave of education reforms, including higher taxes, though the Arkansas General Assembly and State Board of Education.[lxii]

The *Lake View* case began in 1992 in trial court and eventually rose to the Arkansas Supreme Court in 2000, arguing that the state's school system was again neither adequate nor equitable. The State contended that the school funding system should not fall under the judicial branch's purview, but the Court disagreed, citing the precedent set by *DuPree* and adding that the Arkansas Constitution specifically charges the entire state government, not just the General Assembly, with maintaining a suitable and efficient school system.[lxiii] The State also argued that "adequacy is impossible to define."[lxiv] The Court responded by noting that the Equitable School Finance System Act of 1995, one of the bills passed in response to *Lake View*'s initial trial court case, had directed the State Board of Education to review minimum standards and "seek public guidance in defining an adequate education," but the Board of Education had failed to do so.[lxv]

The Court then took it upon itself to define an adequate or "efficient" education. The *Lake View* trial courts had cited the *Rose* standards as a definition, and the Arkansas Supreme Court affirmed this definition. The Court noted that these standards were already "adopted by our General Assembly with Act 1108 and Act 1307 in 1997."[lxvi] Act 1108 indeed included an adaptation of the Rose standards, including requirements for language arts, mathematics, science, social studies, practical and vocational skills, physical education and health, and visual and performing arts.[lxvii]

The Court stayed its order until January 1, 2004, pending legislation to resolve the adequacy and equity issues.[lxviii] The General Assembly first passed Act 1467 of 2003, the Quality Education Act or "Omnibus Act," which established accreditation standards and authorized the State to monitor, audit, and sanction districts that failed to maintain its standards. However, this legislation focused primarily on the district level and on implementing the federal requirements of *No Child Left Behind.* To focus specifically on the Lake View concerns, the General Assembly convened a special session starting December 8, 2003 (McKenzie & Ritter, 2005).

The key issues discussed during the Special Session included school consolidation, student assessment and accountability, teacher salaries, the revised school funding formula, and plans to generate the revenue required for the adopted education reforms. A new school funding formula came out of the Special Session, guaranteeing $5,400 in per-pupil base funding from the state for the 2004-05 fiscal year, with additional funding for at-risk students, students with disabilities, and English Language Learners, as well as professional development and various other programs.[lxix]

To address *Lake View*'s adequacy requirements, the General Assembly passed Act 35, Arkansas Student Assessment and Educational Accountability Act. The legislation required the State Board of Education to establish specific academic content standards and include "periodic review and revision" by various public stakeholders including outside content standard experts, higher education and workforce education professionals, community members, and teacher committees.[lxx] The legislation also required the establishment of a five-level school rating system based on student assessment scores, and any school failing to meet acceptable levels of performance would have to participate in a school improvement plan. The improvement plan must specifically examine whether achievement gaps exist between student groups, and if so, how to address them. Additionally, the legislation enacted requirements for student-level accountability, as any student failing to achieve acceptable levels of individual performance would

be required to participate in an academic improvement plan developed by the student's parents and teachers.

Furthermore, while the General Assembly ordered an adequacy study in 2003, the legislature also acknowledged that the requirements for an adequate and equitable education may shift over time.[lxxi] To address this, it passed Act 57 of 2004, the Continuing Education Adequacy Evaluation Act. This act set up a system to evaluate and monitor "the entire spectrum of public education" and provide an annual report assessing whether it offered an adequate and equitable education. This included reviewing and evaluating teacher salaries, adequacy costs, per-pupil expenditures, the effectiveness of individual programs, and "what constitutes an adequate education."[lxxii] Mirroring the Kansas courts' concerns about stagnation in both the *Montoy* and *Gannon IV* cases, the Arkansas General Assembly recognized that demographics, student needs, and requirements to succeed in a twenty-first century workforce are subject to change, and so the education system must adapt accordingly.

Efforts by Kansas to Incorporate the Rose Standards

Following the March 2014 ruling by the Kansas Supreme Court, the Legislature passed HB 2506, adopting the Rose standards into law.[lxxiii] Specifically, the legislation directed the State Board of Education to "design subjects and areas of instruction to achieve the goal established by" each of the Rose standards.

The Kansas State Department of Education (KSDE) and Kansas State Board of Education (KSBE) sought to link this new law to the practical elements that construct the sequence of learning for students by grade and subject. The primary vehicle is the set of Common Core-aligned standards adopted by KSBE, known as the Kansas College and Career Ready Standards (Common Core in Kansas, 2013). According to KSBE, "College and Career Ready means an individual has the academic preparation, cognitive preparation, technical skills, and employability skills to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation." Such a definition mirrors many of the skills referenced in the Rose standards. As the Kansas Association of School Boards noted, the Rose standards "broaden student expectations in the areas of citizenship, the arts, and health" compared with Kansas's previous requirements.

For example, in addition to typical academic standards, the Kansas College and Career Ready Standards include curricular standards in non-assessed areas, including Counseling; Social, Emotional, and Character Development; Health; Physical Education; Library, Media, and Technology; and the Arts. These standards directly address Rose standards 4 (physical and mental health), 1 (communication for a rapidly changing civilization), 5 (academic/vocational training), 6 (academic/vocational skills), and 4 (arts and cultural appreciation).

Some of these curricular areas closely resemble those implemented by Kentucky in its wide-sweeping curricular reform through KERA. For example, Kansas's Social, Emotional, and Character Development standards provide a detailed framework for schools to "learn, practice and model essential personal life habits that contribute to academic, vocational, and personal success," including problem-solving, healthy decision-making, empathy, and interpersonal skills (Kansas State Board of Education, 2012). Similarly,

KSDE developed a detailed framework for Civic Engagement education, coupled with a Civic Advocacy Network. The Civic Advocacy Network was launched after KSDE hosted over 287 focus groups in twenty communities across the states, asking, "What are the characteristics, qualities, abilities and skills of a successful 24-year old Kansans?" Results indicated that among education professionals and non-education professionals alike, soft skills — i.e., interpersonal skills, like teamwork, and intrapersonal skills, like perseverance — were overwhelmingly listed as the top priorities. The Civic Advocacy Network aims to promote civic engagement opportunities for Kansas students in all grades, particularly through sharing exemplary practices from schools across the state (Kansas State Department of Education, 2017).

This curricular emphasis on interpersonal communication, teamwork skills, and applied problem-solving mirrors Kentucky's curricular reform's focus on soft skills and critical reasoning, which had been praised by educators, the public, and the courts alike. Furthermore, Kansas has arguably learned from Kentucky's mistakes, as Kansas has chosen to forgo the controversial, non-traditional assessment methods initially instituted by KERA. For skills that are not already evaluated by standardized assessments, Kansas has included the relevant subjects as graduation requirements, rather instituting additional annual assessments.

Along with requiring the incorporation of the Rose standards into the state's education system goals, HB 2506 issued several other important directives to state and local education agencies. These largely focused on specific efforts to support the implementation of the new and existing academic standards, as well as to support educational equity.

First, the legislation directed that, "every accredited school in the state of Kansas shall teach the subjects and areas of instruction adopted by the state board of education," including these new areas. In practice, the implementation of such curricula requires hiring and placing appropriately credentialed and able teachers in each Kansas classroom. Indeed, research has shown that teacher quality is the most important in-school factor influencing student achievement. In particular, teacher characteristics shown to have a positive effect on student learning include: content knowledge, pedagogical knowledge, verbal ability, at least a few years of teaching experience, and degrees in science or mathematics (when teaching those subjects) (Rice, 2003). Further research has revealed that the effectiveness of a teacher, as defined by his or her previous students' performance, is a strong indicator of the academic outcomes for the teacher's future students (Sanders & Rivers, 1996). Longitudinal evidence also indicates that having either a very high-performing or low-performing teacher for one year can affect a student's performance for several years afterward (Jordan, Mendro, & Weerasinghe, 1997). Thus, effective teachers are undoubtedly a crucial resource for all Kansas classrooms to fulfill this requirement.

Second, the legislation directed that "every accredited high school in the state of Kansas also shall teach the subjects and areas of instruction necessary to meet the graduation requirements adopted by the state board of education." This requirement assumes that each Kansas high school will develop a master schedule that both allows students to complete a course of study that fulfills graduation requirements and also offers the necessary support to students who need additional assistance. Third and finally, the Legislature noted that, "nothing in this section shall be construed as relieving the state or school districts from other duties and requirements imposed by state or federal law including, but not limited to, at-risk programs for pupils needing intervention, programs concerning special education and related services

and bilingual education."[lxxiv] In particular, this ensures that local education agencies should ensure that there is an expressed and clear need to continue to serve students from disadvantaged backgrounds that require additional time, attention, and resources in order to succeed in the Kansas school system.

Responding to these latter two directives, KSDE has fully aligned their Multi-Tier System of Support (MTSS) toward achievement of the Kansas College and Career Ready Standards. The Kansas MTSS provides a framework for how to implement research-based curricula to help Kansas students achieve each of the standards, including for students who require supplementary (Tier 2) or intensive (Tier 3) support. The MTSS recommends this additional support take the form of small group instruction in addition to the core classroom instruction. Interventions are based on individual students' needs, as determined by diagnostic assessment, and are designed to complement and reinforce core classroom instruction (Kansas State Department of Education, Division of Learning Services, 2013). KSDE has outlined required components for a school's Tiered System of Supports, including family engagement; a master schedule providing for assessment, core, intervention, and collaborative team time; and regular evaluation of the system (Kansas State Department of Education, 2016).

Finally, SB 19 was notable for its requirement that the state continue to monitor its education finance system for adequacy and equity throughout years to come. Specifically, the legislation requires the Division of Legislative Post Audit to perform several statewide performance audits from 2019 through 2026. This includes evaluations every three years to determine the current costs required for meeting KSDE's student performance outcomes, with additional cost studies focusing on at-risk education, bilingual education, transportation, and best practices of successful schools.[lxxv] This mirrors Arkansas's passing of the Continuing Education Adequacy Evaluation Act, a significant effort to ensure not only that the state's public education system will meet the needs of today's students, but that it will continue to meet the needs of students in years to come.

Rose Standards Crosswalk to Measures of Student Outcomes

The following is a crosswalk, created by the Kansas State Department of Education, matching the seven Rose standards to the corresponding curricular standards and measures that Kansas has in place to address them. These include the Kansas College and Career Ready Employability Skills (though these have recently been replaced with the very similar Kansas College and Career Ready Standards), as well as the statewide, standardized measures of student outcomes. There have been several other published documents that attempt to convey this alignment in policy, regulation, and implementation of the Kansas public education system with the Rose standards.[lxxvi]

This crosswalk goes further in identifying the applicable measures of standard, statewide measures of student outcomes to each of the Rose standards. Of note, those listed measures are just those that were used in this study. The researchers recognize that other standard, statewide measures of student outcomes are available and aligned to the Rose standards. However, for either methodological or other reasons they were not included in the study. For a further discussion on this please see Chapter 4.

Table 4. Rose Standards Crosswalk to Standard, Statewide Measures of Student Outcomes

Rose Standards	Applicable Kansas College and Career Ready Employability Skills (KCCRES)[lxxvii] and the 21st Century Accreditation (Accreditation)[lxxviii]	Applicable Minimum Standards for Schools to Teach or Graduation Requirements	Applicable Measures of Standard, Statewide Measures of Student Outcomes
Communication and Basic Skills			
Standard 1: Sufficient oral and written communication skills to enable them to function in a complex and rapidly changing civilization.	**KCCRES:** These basic skills encompass reading, listening, speaking, and performing math computations. **Accreditation**: The Relevance Rubric defines the criteria for Technology in a school district. Those criteria include having a vision for 21st Century learning and being able to apply digital learning through the use of technology. Districts much have the infrastructure necessary to support technology needs in the district, provide the professional learning essential to addressing the needs of learners, use technology for systemic improvement, plan strategically for the district's needs and gather data through the use of surveys to all stakeholders about technology and its use.	**Elementary schools must teach:**[lxxix] reading, writing, spelling, English grammar and composition, arithmetic (and) such other subjects as the state board may determine. **Elementary and secondary schools must provide:** language arts; library services; computer literacy; counseling services; mathematics; science; services for students with special learning needs. **For graduation:**[lxxx] English language arts (4 units), including reading, writing, literature, communication, and grammar; Science (3 units), including physical, biological, and earth and space science concepts and at least 1 unit as a lab course; and Math (3 units) including algebraic and geometric concepts.	**State assessments** (as required by the federal Every Student Succeeds Act (ESSA) reauthorizing the Elementary and Secondary Act of 1965) [5][lxxxi] **English Language Arts and Mathematics (and alternate)** Grades: 3-8, 11 **Science (and alternate)** Grades: 4, 7, 11 (to 2015) Grades: 5, 8, 11 (2016 on)
Civic and Social Engagement			

[5] TARGETS: At the state, district, school and subgroup level, 75% of students score in performance levels 3 and 4 combined on the Kansas state assessments in English language arts and math by 2030.

Standard 2: Sufficient knowledge of economic, social and political systems to enable them to make informed choices.	**KCCRES:** Subset of Critical Thinking Skills, Interpersonal Qualities and Career Interest Development. These sets of skills address critical thinking through development of decision-making skills; thinking creatively about ideas and solutions, making decisions and using a problem-solving process; developing interpersonal qualities such as social and self-awareness; and, exploring and planning for career interest. **Accreditation:** The Relevance Rubric defines the criteria for Curriculum and Instruction in a school district. Criteria include implementing the Kansas College and Career Ready Standards, using resources that reflect the culture and community of the district and providing professional learning about curriculum and instruction. Content area knowledge of teachers is evaluated in an ongoing manner in order to provide authentic learning experiences and personalized instruction for all students.	**Elementary schools must teach:**[lxxxii] geography, history of the United States and of the state of Kansas, civil government and the duties of citizenship, and instruction concerning the original intent, meaning, and importance of the declaration of independence and the United States constitution, including the bill of rights. **High schools must teach:** a course of instruction concerning the government and institutions of the United States, and particularly of the constitution of the United States. **For graduation:**[lxxxiii] History and government: 3 units, including world history; U.S. history; U.S. government, including the Constitution of the United States; concepts of economics and geography and, a course of instruction in Kansas history and government.	**State assessments**
Standard 3: Sufficient understanding of governmental processes to enable them to understand the issues that affect their community, state and nation.	**KCCRES:** Subset of Interpersonal Qualities. The Interpersonal Qualities addresses being self-aware through communication with others in a variety of settings, working well with others including those from diverse backgrounds and exercising leadership. Being aware of civics at many levels can promote success in post-secondary choices. **Accreditation:** The Relationships Rubric defines the criteria for students in a school district. Criteria include implementing policies and	**See above.**	**State assessments**

	practices that encourage and empower students as well as demonstrating student involvement with community.		
Physical and Mental Health			
Standard 4: Sufficient self-knowledge and knowledge of their own mental and physical well-ness.	**KCCRES:** Subset of Interpersonal Qualities. Skill specifically addresses students' abilities to self-manage their own thoughts, feelings and behaviors and promotes self-awareness to develop positive self-worth and self-confidence. **Accreditation:** Criteria include the Social, Emotional and Character Development Model Standards. Student survey target self-efficacy for empowerment and involvement and their relationships with peers, teachers, families and community. The Responsive Culture Rubric defines criteria for District Climate. Criteria include surveying stakeholders about the physical and emotional well-being of students, evaluating academic and social engagement and providing a safe and supportive environment for students, families and community.	**Elementary schools must teach:**[lxxxiv] health, hygiene **Elementary and secondary schools must teach:** physical education, shall include instruction in health and human sexuality. **For graduation:**[lxxxv] Physical education: 1 unit, including health and which may include safety, first aid, or physiology. (May be waived for health or religious reasons.)	**High school graduation**[6][lxxxvi]
Arts and Cultural Preparation			

[6] Targets: Long-term goal of 95% in the four-year adjusted cohort will be applied to each subgroup and, as a result, will require interim measures of progress.

Standard 5: Sufficient grounding in the arts to enable them to appreciate their cultural and historical heritage.	**KCCRES:** Subset of Critical Thinking Skills, specifically asking students to engage in creative thinking and being able to generate new ideas and find solutions to problems. Subset of Interpersonal Qualities also expect students will work with others from diverse backgrounds and experiences allowing for appreciation of their own in process. **Accreditation:** Students, Families, and Community include developing positive relationships w/ students and families, fostering systemic family engagement within the district and the school and investing in community partnerships. Relevance Rubric defines the criteria for Content Area Knowledge ensuring that teachers are able to advance student learning, creativity and innovation.	**Elementary and secondary schools must teach:** fine arts. **For graduation:**[lxxxvii]**:** Fine arts: 1 unit, which may include art, music, dance, theatre, forensics, and other similar studies selected by a local board of education.	High school graduation[lxxxviii]
Postsecondary and Career Preparation			
Standard 6: Sufficient training or preparation for advanced training in academic or vocational fields, to enable them to choose and pursue life work intelligently.	**KCCRES:** Subset of Interpersonal Qualities and Career Interest Development. Through access to information and building relationships, students explore and plan for their interests and career preferences in order to be successful in post-secondary settings. **Accreditation:** Criteria include integrating career and technical education with academics throughout the curriculum, forming partnerships with stakeholders for the purpose of career exploration and preparation and an established curriculum focused on careers. In	**Secondary schools must teach:** business; family and consumer science; foreign language; and industrial and technical education **For graduation:**[lxxxix] 1. English: 4 units of approved courses including reading, writing, and literature. 2. Mathematics: 3 units completed[xc] 3. Natural science: 3 units[xci] 4. Social science: 3 units[xcii]	**State assessments** **ACT College Readiness Test** **High school graduation**

	addition, an Individual Plan of Study is advocated for every student.	5. 6 units of elective courses for a total minimum of 21 units of credit.	
Standard 7: Sufficient academic or vocational skills to enable them to compete favorably with their counterparts in surrounding states, in academics or in the job market.	**KCCRES:** College and career ready advocates for academic and cognitive prep, technical and employability skills so that all Kansas students are well rounded and prepared for pathways to post-secondary education or careers. **Accreditation:** CTE and Technology in a school district. Criteria include long-term planning through the collection, analysis and use of data focused on economic and work force trends state-wide and nationally. Addressing students' individual academic and career goals while addressing education priorities with community state and national workforce needs is a priority.	**See above.**	**State assessments** **ACT College Readiness Test** **High school graduation**

Thresholds for Identified Measures Relative to the Rose Standards

One of the important considerations for each of the identified student assessments and graduation requirements aligned to the Rose standards above is the threshold — for both individual students and populations of students — by which a determination of having achieved the skill or knowledge is reached. The following section discusses each of the student outcome measures used in the cost function analysis and sets a determinate adequacy threshold by individual student and in aggregate for the student population. The following measures are discussed below: annual, statewide assessments in English language arts (ELA) and math; and high school graduation rates. Other student performance measures that were identified but not used are discussed in Chapter 4.

In setting thresholds for performance, it was important to consider several factors. First, the measures should capture the experience of existing schools within the system in their current state. To achieve these ends, the study team reviewed recent ELA and math assessment data, along with graduation rates, to identify current performance thresholds for those school districts at the 90th percentile.

Second, it was also important to capture the desired aspirations of the public education system. While it is important to consider the current, observable levels of performance in the system, it is also important to consider the motivation and aspiration of the state and its education system. The study team relies primarily on the state's approved plan under the federal Every Student Succeeds Act (ESSA) by the U.S. Department of Education.[xciii] This plan provides both the identification and commitment of the state to ensure students reach a defined level of performance. It outlines the performance goals for the Kansas Assessment Program (KAP) in ELA and math as well as graduation rates. This serves as the aspiration and a trajectory of growth in performance that the study team can match with the two other factors.

The third and final factor was to consider past performance of the state's education system and conditions under which that performance occurred. Most significantly, there was a period in which the courts had ruled that the state had met their constitutional obligation to adequately fund the education system. Observing the growth in student performance over that time period also contributed to setting the performance thresholds.

Annual, Statewide Assessments in ELA and Math

In assessing a threshold of performance on the annual, statewide assessments in ELA and math, it was important to acknowledge the evolution of the standards and assessments used throughout Kansas and most importantly, the significant shift that occurred starting in the 2010-11 school year with the move to more rigorous standards, followed by the rollout of aligned assessments beginning in the 2014-15 school year. The new assessments, included under the Kansas Assessment Program (KAP) administered the first statewide assessment that was publicly reported in the 2014-15 school year starting with English and math, followed closely by science.[xciv] In order to ensure that the student assessments were equated to the more rigorous academic standards, the assessment changed not only the content of the exam to test the new standards but also establishes scale scores that imply that certain higher levels of achievement

signal that the student is on track to be college ready. The new assessments administered in Kansas are validated not only through the construction of the test[xcv] but also by equating levels of performance to the ACT, a nationally administered standardized exam that is used by many colleges and universities for admission to a post-secondary institution.[xcvi]

When making these changes in the standard, assessment, and accountability system some states have cautioned against the comparison of individual, building, and school district level results as it would be inappropriate to equate scores from one assessment to another because they are fundamentally testing different knowledge and skills for students. However, it is important in this study to translate historically how Kansas has referenced the threshold of student performance as a measure of adequacy discussed in trial proceedings to the current standards and assessment system. As such, the study team considered the similarities and differences between these two standards and assessment systems to identify a threshold of performance under the new standards and assessment system that could be set to estimate the cost to achieve an adequate level of funding.

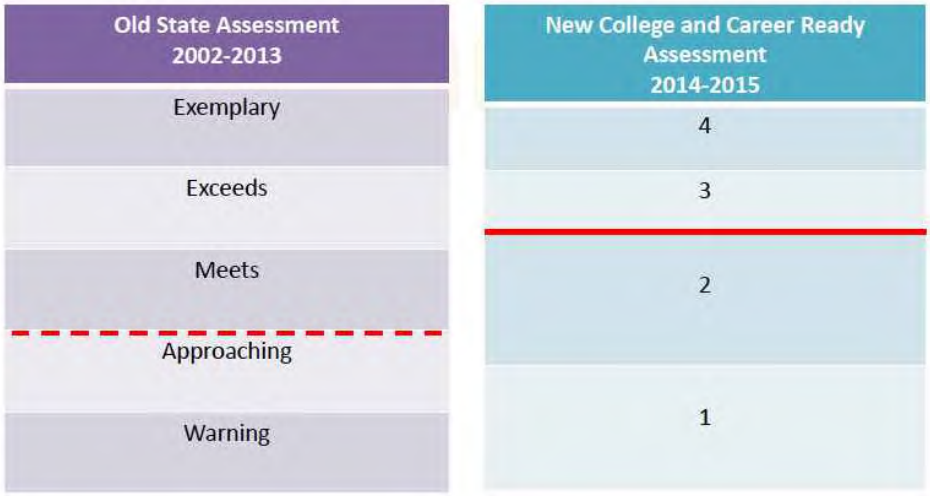
Under the previous standard and assessment system there were five, defined performance levels ranging from academic warning to exemplary. Under the KAP, there are now four performance levels. The table below offers some basic descriptions between these assessment systems.

Table 5. Description of performance levels for the assessment system under NCLB and KAP

State assessment system under No Child Left Behind (NCLB) Law	Kansas Assessment Program (KAP) and new College and Career Ready Assessment
Exemplary: student is performance beyond grade-level expectations. Exceeds Standard: student is performing above grade-level expectations. **Meets Standard: student is performing at grade-level and is considered proficient.** Approaching Standard: student is approaching the standard for grade-level performance. Academic Warning: student is in need of intervention to support getting back to grade level.	Level 4: indicates that the student is performing above expectations for that grade level and is on track to being college ready. **Level 3: indicates that the student is performing at academic expectations for that grade level and is on track to being college ready.** Level 2: indicates that the student is doing grade-level work found in the standards but not at the depth or level of rigor to be considered on-track for college readiness. Level 1: indicates that a student is not performing at grade level standards, and additional supports are needed.

The language used under the respective assessment systems alone point to measurement of a different level of standard for students with designations of college ready in the KAP. Also of noticeable difference is the minimum thresholds set out by the assessment systems. The table below offers a picture of this which was presented by KSDE to the Legislature in 2015 during testimony on assessment changes in Kansas.

Table 6. Identified, minimum level for proficient students for the assessment system under NCLB and KAP



It can be observed that under the old state assessment those students scoring in the meets, exceeds, or exemplary performance level were considered proficient. The new college and career ready assessment considers level 3 and 4 to be proficient or college ready which increases both the rigor of the standards, that is the content and skill demonstration by students. The new college and career ready assessment would reasonably be better aligned to the Rose standards in helping to gauge the progress and performance of students particularly for Rose standards six and seven (the two Rose standards addressing postsecondary and career preparation.) In order to bridge the change in the standards and assessment system as a measure of performance the cost estimates will include a threshold of performance equivalent to the old assessment system as well as the definition of proficiency under the current standards and assessment system.

Method for Threshold Identification

When considering how to set benchmark thresholds, the research team considered the overall threshold of achievable performance as well as the year-over-year anticipated growth. The importance of recognizing absolute performance as well as growth in performance reflects the necessity to hold the education system to a high standard of performance while acknowledging the practicalities of schools and school districts to make the appropriate investments to reach those levels of performance over time. That

is, it is not practical to make a one-time, significant investment in a statewide public education system and expect at the end of that school year to see dramatic movement from current performance to the aspiration targets. Alternatively, making ongoing investments in the system with established targets may be more realistic.

In this regard, the study team used various reference points to establish the overall threshold of performance and annual targets, included: (1) previous court documents discussing the overall threshold of performance, (2) the state's ESSA plan submission to the U.S. Department of Education, (3) previous performance of the Kansas school system during years in which the court regarded the system to have been fully funded (2006-07 to 2008-09), and (4) observed, actual performance of students currently in the system.

Overall Threshold of Performance

The study team looked at several sources in identifying the overall threshold of performance. The Kansas Every Student Succeeds Act (ESSA) approved state plan submission captures the state's commitment to the federal government for how it will hold itself accountable to achieve some set of student outcomes. Specifically, the plan cites the desired outcome for its students in English and math to ensure 75% of all students are proficient by the year 2030 based on the current assessments used in the KAP. Is it important to note that this definition of proficient references the summation of levels 3 and 4 of the English and math assessment.

Another reference point is to consider the discussion that occurred during the trial for *Gannon v. State* in which equivalent to the old assessment the absolute threshold for performance was 87%. This would be equivalent in the new assessment system to performance levels 3, 4, and a large proportion of 2. For the purposes of cost estimates, the thresholds of performance in levels 2, 3, and 4 were used for English and math. When looking at the total percentage of students proficient this would equate to approximately 90% of all students having met either levels 2, 3, or 4 under the new assessment.

Annual Targets of Performance

As was mentioned, achieving those absolute thresholds of performance over a one-year period is not possible and further acknowledged by the state in its ESSA plan as it sets out various targets between its baseline year, 2016-17 and its target year in 2030. As such, the research team used various other reference points to derive average annual growth that would be achieved on an annual basis. Specifically, the research team looked at three sources: (1) the average annual growth identified in the state's approved ESSA plan, (2) previous observable growth during the years in which the court regarded the Kansas education system to be adequately funded, and (3) current, observable performance in Kansas school districts. The research team chose a 5-year time period in which to estimate costs.

The approved ESSA state plan for the KAP assessment in ELA identifies a baseline of 42% of all Kansas students in the 2016-17 school year and in Appendix A identifies its projected measure of interim progress to be 2.53 percentage points growth annually until 2030 in which all students in Kansas would achieve a proficiency rate of 75%.[xcvii] The approved ESSA state plan for the KAP assessment in math identifies a baseline of 33% of all Kansas students in the 2016-17 school year and in Appendix A identifies its projected measure of interim progress to be 3.23 percentage points growth annually until 2030 in which all students

in Kansas would achieve a proficiency rate of 75%.[xcviii] Since the time period in which this cost study is looking out is 5 years, calculating the annual growth from a base of 42% would result in a proficiency rate in ELA of 54.65% and 49.15% for math by 2021-22.

Table 7. Proficiency targets by school year for ELA math; All students identified in ESSA state plan

School Year	Proficiency Target for ELA, All Students (%)	Proficiency Target for Math, All Students (%)
2016–2017 (baseline)	42.00	33.00
2017–2018	44.53	36.23
2018–2019	47.06	39.46
2019–2020	49.56	42.69
2020–2021	52.12	45.92
2021–2022	54.65	49.15

The study team also considered previous growth in the states ELA and math assessments. In particular, the team looked at student academic growth during school years in which the court regarded the system to have been adequately funded. The table below identifies the growth in ELA and math assessments for all students in Kansas. The 2005-06 school year is used as a baseline and the 2006-07 school year was the first of three years in which the Legislature had fundamentally reformed the school funding formula following a ruling by the court in July 2005 that the state had met its obligation under the constitution.[xcix] Table 8 presents the outcome results from the years between 2005-06 and 2008-09.

Table 8. Percent proficient by school year for ELA and math; All students (old state assessment)

School Year	ELA Percent Proficient (%)	Change in ELA Percent Proficient	Math Percent Proficient (%)	Change in Math Percent Proficient
2005–2006	78.0		72.5	

School Year	ELA Percent Proficient (%)	Change in ELA Percent Proficient	Math Percent Proficient (%)	Change in Math Percent Proficient
2006–2007	82.5	+ 4.5	80.1	+ 7.6
2007–2008	84.1	+ 1.6	81.0	+ 0.9
2008–2009	85.7	+ 1.6	82.8	+ 1.8
Total	**+ 8.3**	**+ 2.6 / annually**	**+ 9.4**	**+ 3.4 / annually**

Finally, the study team investigated the actual levels of student performance across school districts in Kansas. Among those higher performing school districts (performing at the 90th percentile) that they were achieving proficiency rates for all students in their system of 58.32% in ELA and 58.05% in math. These proficiency rates use the same scale score cut-offs as established under KAP.[c]

Annual Targets of Performance Under Different Thresholds

The study team decided to look at performance thresholds under a scenario of achieving college ready (levels 3 and 4) as well as under a scenario of levels 2, 3, and 4. Under the scenario of achieve college ready (levels 3 and 4) a target of 60% performance was set to be achieved at the end of the 2021-22 school year which would keep Kansas on track to hit the 75% performance threshold for ELA and math identified in the ESSA state plan. This means that students across all tested grades are achieving the threshold if they are reaching a scale score of at least 300 on the ELA and/or math assessments. This translates into applying a 3.6 percentage point growth trajectory for ELA and a 6.0 percentage point growth trajectory for math over that five-year period. Using the 2016-17 school year are the base year the resulting growth is reflected in the table below.

Table 9. Proficiency targets by school year for ELA, math; All students identified for cost study

School Year	Proficiency Target for ELA, All Students (%)	Proficiency Target for Math, All Students (%)
2016–2017 (baseline)	42.0	33.0
2017–2018	45.2	38.0
2018–2019	48.4	43.0

School Year	Proficiency Target for ELA, All Students (%)	Proficiency Target for Math, All Students (%)
2019–2020	51.6	48.0
2020–2021	54.8	53.0
2021–2022	60.0	60.0

Under the scenario of achieve levels 2, 3, and 4 a target of 90% performance was set to be achieved at the end of the 2021-22 school year. This means that students across tested grades are achieving the threshold if they are at or above a scale score of between 265 and 277 on the ELA assessment and at or above a scale score of between 266 and 276 on the math assessment depending on their grade level. For a list of scale score cut scores by grade see the Cut Scores for KAP Summative Assessments document.[ci] This translates into applying a 3.5 percentage point growth trajectory for ELA and a 6.0 percentage point growth trajectory for math over that five-year period. Using the 2016-17 school year are the base year the resulting growth is reflected in the table below.

Table 10. Proficiency targets by school year for ELA, math; All students identified for cost study

School Year	Proficiency Target for ELA, All Students (%)	Proficiency Target for Math, All Students (%)
2016–2017 (baseline)	72.6	72.4
2017–2018	76.1	75.9
2018–2019	79.6	79.4
2019–2020	83.1	82.9
2020–2021	86.6	86.4
2021–2022	90.0	90.0

High School Graduation

The study team took a similar approach in looking at high school graduation rates — another student outcome measures used in the cost analysis. The approved ESSA state plan for graduation rates identifies a baseline of 86.1% of all Kansas students in the 2016-17 school year and in Appendix A identifies its projected measure of interim progress to be 0.68 percentage points growth annually until 2030 in which all students in Kansas would achieve a high school graduation rate of 95%.[cii] Since the time period in which this cost study is looking out is 5 years, calculating the annual growth from a base of 86.1% would result in a graduation rate of 89.5% by 2021-22.

Table 11. High school graduation targets by school year, All students in Kansas ESSA state plan

School Year	High School Graduation Rate, All Students (%)
2016–2017 (baseline)	86.10
2017–2018	86.78
2018–2019	87.46
2019–2020	88.14
2020–2021	88.82
2021–2022	89.50

Finally, the study team investigated the actual levels of student performance across school districts in Kansas. Higher performing school districts, performing at the 90th percentile, have a graduation rate of 91%.

The study team set a target of 95% performance to be achieved at the end of the 2021-22 school year, which is consistent with the state goal to reach the 95% performance threshold for high school graduation identified in the ESSA state plan. Using the 2016-17 school year are the base year the resulting growth is reflected in the table below. Note that a 95% graduation rate for the state as a whole is a much easier standard to meet than a 95% graduation rate for each district. The research team evaluated the cost of meeting a 95% graduation rate in each district, recognizing that such an achievement would lead to a statewide graduation rate well in excess of 95%.

Chapter 4: Education Cost Function Variables and Methods

This section of the report provides a simple explanation of the education cost function method, the primary statistical technique used by the study team to conduct the costing out study for the state of Kansas. It also summarizes the variables, data and measures used in the education cost function analysis, and a discussion of measures that could not be incorporated into the analysis.

As discussed in prior sections, there are three reasons why spending differs across school districts including outcome, cost, and economies of scale. This study addresses those differences in cost along all three of these dimensions to advance an estimated cost to adequately fund Kansas public schools.

Education Cost Function Method

This analysis follows Taylor et al. (2017) and uses stochastic frontier analysis (SFA) to estimate an educational cost function for Kansas. A cost function specifies the minimum cost necessary to achieve certain outcomes with specified inputs and specified environmental factors. In the SFA, this cost function is regarded as a frontier, a minimum cost of attaining given outputs with given inputs including environmental factors. Spending may then deviate from this cost frontier, exceeding this minimum cost. Thus, the SFA starts with a basic cost function and adds the assumption that spending exceeds the cost frontier due to random errors or inefficiency. This approach accounts for the idea that schools or districts can at best be on the cost frontier, if they are fully efficient, and if they are inefficient this is captured in the model.

The per-pupil SFA is more commonly applied in education than a total cost function (e.g., Andrews, Duncombe and Yinger, 2002; Gronberg, Jansen, Karakaplan, & Taylor, 2015). The cost frontier estimates indicate the cost of achieving certain educational outcomes after controlling for cost and other environmental factors. The educational outcomes include a quantity dimension—the number of students served—and a quality dimension. The quality dimensions considered here are conditional normal curve equivalent scores (a measure of growth) and graduation rates.

An important feature of the decision-making environment facing school officials is the competitiveness of the district's relevant education market. Indeed, the literature finds that competition is one factor that can influence a school district's cost inefficiency.[7] The argument is that competition serves to discipline the tendency of districts to engage in excessive spending. This implies a negative relationship between the competitiveness of a district's education market and the magnitude of that district's cost inefficiency.

[7] For example, see Belfield & Levin (2002); Dee (1998); Gronberg et al. (2015); Grosskopf, Hayes, Taylor & Weber (2001); Kang & Greene (2002); or Millimet & Collier (2008).

The literature also suggests that voter monitoring can lead to increased school district efficiency (Grosskopf et al. 2001). Factors that influence the motivation or ability of citizens to monitor their local school district—such as the educational attainment of the population, the share of homeowners or the fraction of the population that is elderly—have also been linked to school district efficiency (Duncombe & Yinger 2005). The stochastic cost frontier framework can accommodate models of how these factors impact spending inefficiency.

For a more detailed description of the SFA used in this study see Appendix A.

Variables, Measures, and Data Sources

The data for this analysis come from administrative files and public records of the Kansas State Department of Education (KSDE), the National Center for Education Statistics (NCES), the U.S. Bureau of Labor Statistics (BLS), the U.S. Department of Housing and Urban Development (HUD) and the U.S Census Bureau. The analysis covers the two-year period from 2015–16 through 2016–17.

The study team requested data sets from Kansas that were important to include in the analysis in constructing cost variables and estimates. What follows is an explanation of the data that was incorporated into the analysis. These include the several components to the educational cost function analysis; the unit of analysis, expenditures, student outcomes, input prices, and environmental factors. These key components are summarized in Table 11 and described in the following sections. See Appendix A for a technical description of the cost function analysis.

Table 12. Key components of the educational cost function

Component	Measured by
Units of Analysis	All standard buildings in traditional public school districts in the State of Kansas Two most recent school years (2015–2016 through 2016–2017)
Expenditures	School-level operating expenditures excluding food, transportation, capital outlay for construction, community service, debt service, fund transfers and adult education.
Outcomes	Average conditional NCE score on state assessments (ELA and mathematics) School- and district-level graduation rates
Input Prices	Teacher Salary Index Rural Indicator

Component	Measured by
Environmental Factors	Number of students enrolled at the district level Building Percentage of Economically Disadvantaged Students Building Percentage of English Language Learner Students Building Percentage of Special Education Students Building Type Population Density
Controls for Inefficiency	Stochastic Frontier Analysis Methodology Efficiency factors: Educational competition Percent college educated Percent owner occupied housing Percent elderly households

The decision to use only the most recent data was made primarily due to the change in state assessments implemented after the 2013-14 school year. Representatives from the KSDE and other state governing bodies expressed strong reservations about the quality of the test data prior to this change, suggesting that the results of the analysis would be viewed as less accurate and reliable if these data were used. Given these concerns, the study team chose to use only test scores data after the 2013-14 school year.

The unit of analysis is the traditional public school building. Alternative schools, charter schools, virtual schools and special schools have been excluded because they may have different cost structures than other buildings. Buildings that lack reliable data on student performance (such as elementary schools that serve no students in tested grades, or very small schools) have also been excluded. A complete list of the included districts is provided in Appendix D.

Table 14 provides means and standard deviations for the variables use in this analysis. Enrollment, the teacher salary index, and population density enter the stochastic frontier regression in logs, while variables already in percentages and the indicator variables are not logged before entering the stochastic frontier regression.

Table 13. Descriptive statistics for buildings in Kansas, 2015-16 and 2016-17

	Mean	Std. Dev.	Minimum	Maximum
Per-pupil operating expenditure	$9,696	$1,961	$5,137	$20,844
Average Conditional NCE	0.50	0.05	0.30	0.76

	Mean	Std. Dev.	Minimum	Maximum
Graduation rate	0.89	0.07	0.60	1.00
Teacher salary index	1.41	0.11	1.00	1.59
Rural county indicator	0.27	0.45	0.00	1.00
District enrollment	7.70	1.58	4.26	9.90
% Economically disadvantaged	0.41	0.21	0.00	0.96
% English Language Learners	0.10	0.16	0.00	0.82
% Special education	0.15	0.06	0.00	0.63
Elementary grade indicator	0.75	0.44	0.00	1.00
High school grade indicator	0.26	0.44	0.00	1.00
Herfindahl Index	0.38	0.25	0.13	1.00
Share of spending unallocated	0.34	0.09	0.00	0.91
Potential employers in building zip code	327	388	0.00	1,646
County unemployment rate	4.26	0.97	2.00	7.50

Note: Virtual schools, alternative schools, charter schools, and special schools have been excluded, as have all buildings with fewer than 10 students for whom conditional normal curve equivalent (NCE) scores could not be calculated.

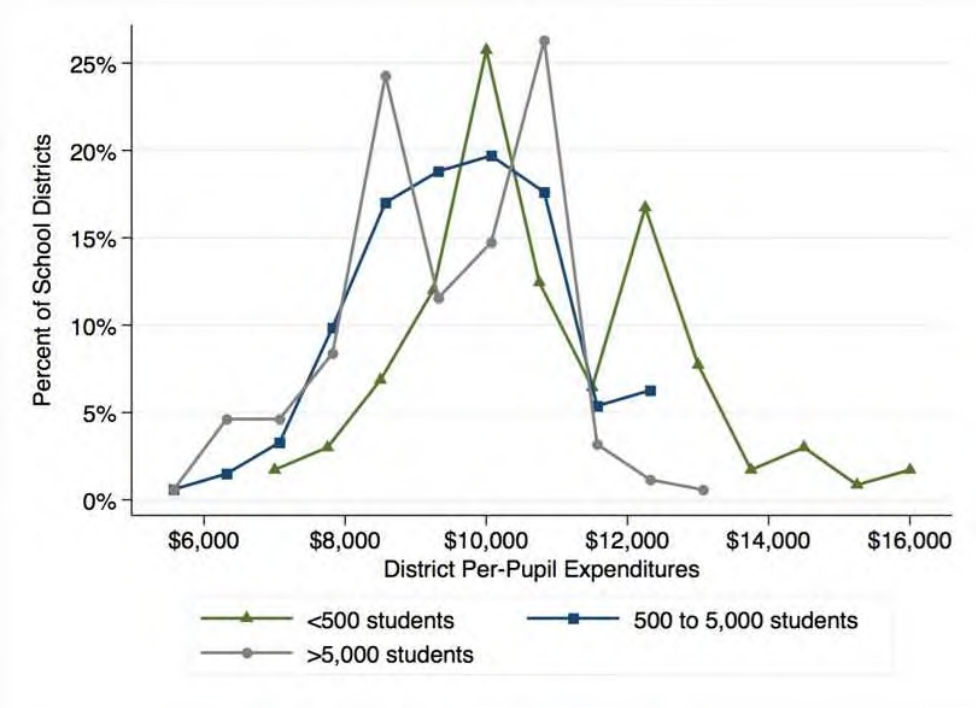
The Dependent Variable (Per-pupil expenditures)

For each district, the researchers identified total operating expenditures for food, student transportation and all other operating functions. As described in Appendix C, operating expenditures include the day-to-day expenses of school districts, such as salaries, benefits, purchased services, and supplies and materials. Debt service, construction expenditures and fund transfers are not considered operating expenditures. In turn, the category of all other operating functions includes the normal functions of school districts: instruction, student support services, administration, and the operation and maintenance of the district's facilities.

A complicating factor is that Kansas school districts regularly rely on special education co-operatives or inter-local agreements to provide special education services. With a special education co-operative, one district collects contributions from the other members of the co-operative, and hires teachers or purchases supplies on their collective behalf. To account for those expenditures, the researchers used the Kansas Education Directory to identify the members of each co-operative, and shared out the spending of each cooperative (i.e. the spending from fund 78) to the member districts according to each district's share of the special education students served by the co-operative. Payments to the inter-local (from funds 564 and 565) were the best available measure of spending by the members of an interlocal. However, we note that special education cooperatives and inter-locals can also receive revenues from other sources (such as the federal government); such revenues are accounted for in the expenditures of districts that do not participate in an inter-local agreement or special education cooperatives, and in the expenditures from fund 78 by special education cooperatives, but cannot be accounted for with the available data for the districts participating in inter-local agreements.

Figure 3 displays the distribution of 2016-17 average per-pupil district-level expenditures from the estimation sample. As can be seen below average per-pupil spending ranged from $5,935 to $17,083 in 2016-17.

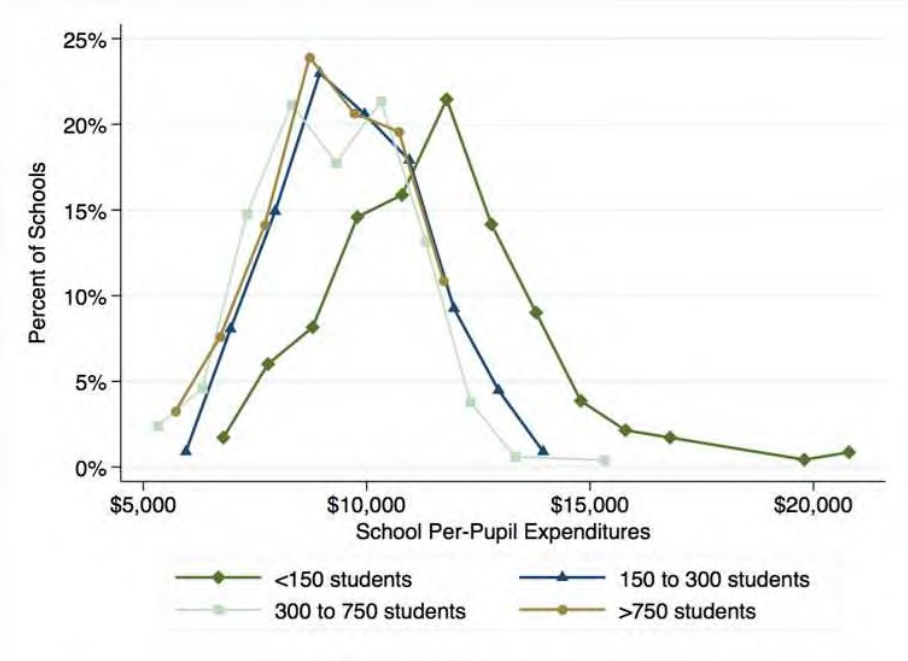
Figure 2. Distribution of per pupil spending in Kansas by district size, 2016-17



The study team then followed five steps to distribute the district-level current operating expenditures to the building level:

1. Using data on certified personnel assignments and earnings, calculate total assigned salaries for each building each year.
2. Calculate total payroll (salaries and benefits) for each building by adjusting the building-level salaries by the district-specific benefits ratio.
3. Assign the remaining payroll expenditures for the district to the buildings on a per-pupil basis.
4. Assign all non-payroll expenditures–excepting special education funds—for the district to the building on a per-pupil basis.
5. Assign all non-payroll special education expenditures for the districts to the building on a per-special education-student basis.

Figure 3. Distribution of per pupil spending in Kansas by school size, 2016-17

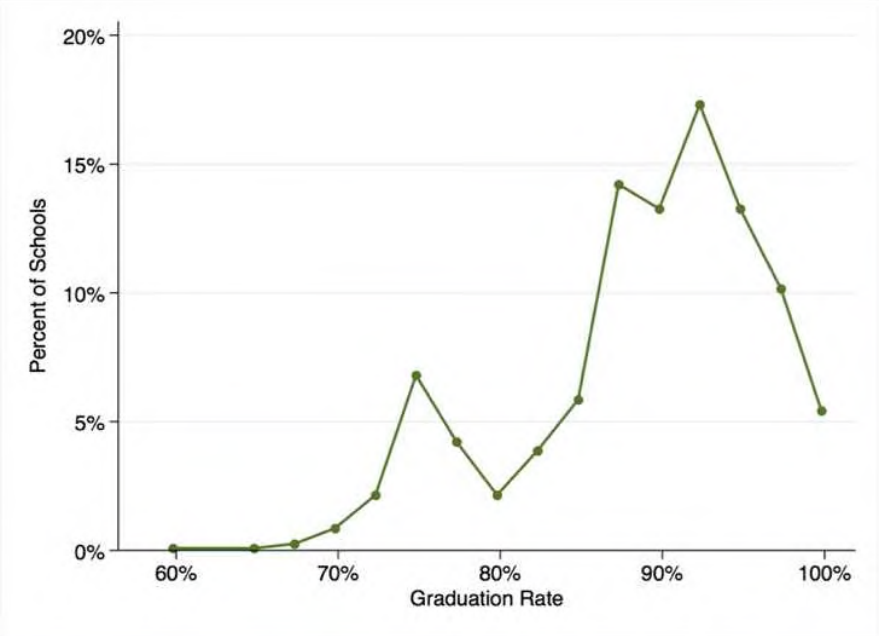


Outputs (Student Outcomes)

As noted above, the analysis uses two measures of quality—levels and growth. The levels measure is the ultimate, summative evaluation of high school achievement—graduation rates. We were provided with school-level graduation rates which represent the percentage of each longitudinal cohort that graduated within four years. We also received the variables used to calculate these rates including total number of graduates and the total number of students in the four-year cohort.

To calculate district-level graduation rates, we divided the sum of total graduates in a given year and district by the sum of students in the corresponding cohort. In some cases, the graduation rate data were suppressed due to concerns about student privacy. For buildings in which all or some of their graduation data was suppressed, we imputed values using school averages across years of available data or imputed district rates at the school-level. For a detailed description of our imputation method see Appendix A. As can be seen in Figure 4 below, in 2016-17 the average graduation rate in the estimation sample was 0.89, ranging from 0.59 to 1.00.

Figure 4. Distribution of school graduation rates in the estimation sample, 2016-17



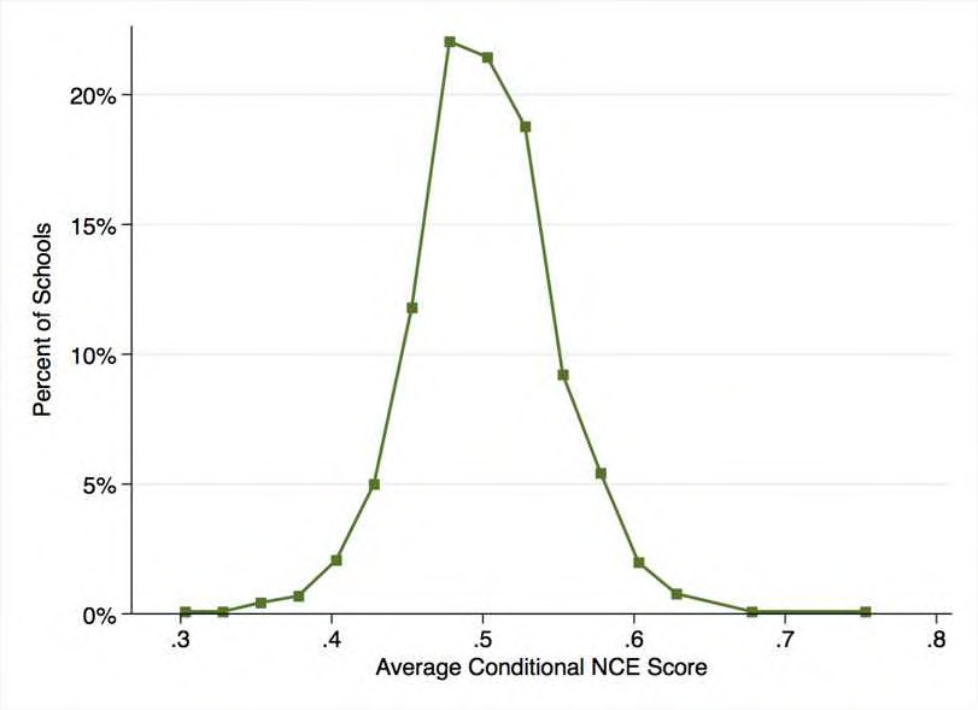
The growth measure is a normalized gain score indicator of student performance on the Kansas Assessment Program (KAP) summative evaluations in reading and mathematics in grades 3–8. Although schools clearly produce unmeasured outcomes that may be uncorrelated with mathematics and reading test scores, and standardized tests may not measure the acquisition of all important higher-order skills, these are performance measures for which districts are held accountable by the state, and the most common measures of school district output in the literature (e.g., Duncombe and Yinger, 2005; Gronberg, Jansen & Taylor, 2011a, 2011b, 2017 or Imazeki & Reschovsky, 2006). Therefore, they are reasonable output measures for cost analysis.

KAP scores can be difficult to compare across years, grade levels and test subjects. Therefore, this analysis relies on normalized (or equivalently, standardized) test scores. The normalization follows Reback (2008) and measures the extent to which individual students perform better (or worse) than would have been expected given their prior test scores. For ease of exposition and estimation, the normalized score were further transformed into Conditional Normal Curve Equivalent (NCE) scores (which are defined as 50+21.06*z-score). A student who performs exactly as expected — i.e., exhibits normal growth from one year to the next — would have a Conditional NCE score of 0.50; a student who performs one standard deviation above expectations would have a Conditional NCE score of 0.7106; and a student who performs one standard deviation below expectations would have a Conditional NCE score of 0.2894. The Conditional NCE scores can also be interpreted as percentile ranks, with an NCE of 0.50 representing the 50th percentile.

Conditional NCE scores are calculated at the student level in ELA and math. (Similar growth scores cannot be calculated for science because the test is not administered in consecutive grades, so annual growth in science cannot be calculated.) Averaging those Conditional NCE scores at the building or district level

yields the measures of performance used in this analysis. Figure 5 displays the distribution of average Conditional NCE scores for ELA and mathematics in 2016-17. The average Conditional NCE score had a mean of 0.50 with a minimum of 0.30 and a maximum of 0.76. As seen in the figure, the distribution for both subjects is bell-curved with most schools seeing average scores of between 0.40 and 0.60.

Figure 5. Distribution of Conditional NCE scores, 2016-17



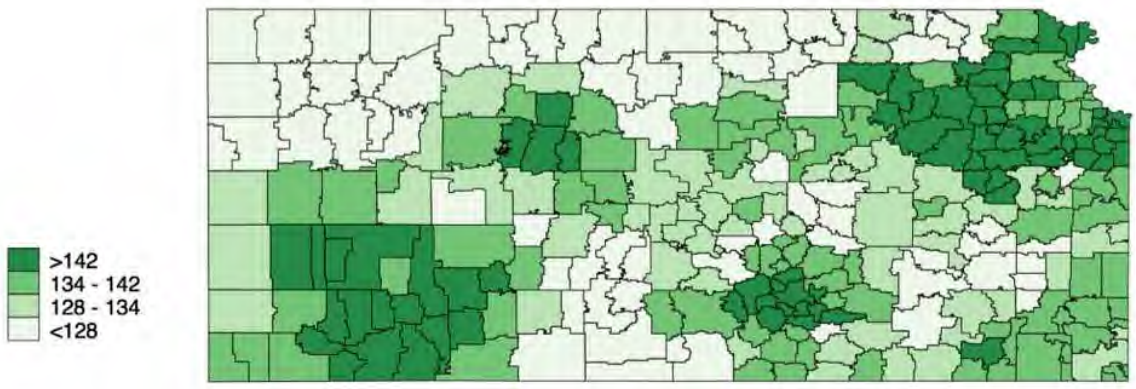
Input Prices

The most important education inputs are teachers, and the cost function model includes the required teacher wage variable. Public schools take differing approaches to hiring teachers. If there were a teacher type hired by all unified school districts — for example, a teacher with a bachelor's degree from a selective university and two years of experience — then arguably the model should use the wages paid to those teachers as the labor price measures. However, it is not possible to identify a teacher type that is hired by all the school districts under analysis, and any observed average wage — such as the average salary for beginning teachers — reflects school and district choices about the mix of teachers to hire and the salaries offered to teachers in the hiring process.

This issue can be dealt with using a wage index that is independent of school and district choices. Such an index is constructed here by estimating a hedonic wage model for teacher salaries and using that model to predict the wages each school would have to pay to hire a teacher with constant characteristics (see

Appendix B). The resulting teacher price index, which reflects the systematic variation in teacher salary that is related to cost factors outside of school district control, ranges from 1.00 to 1.59 and indicates that the cost of hiring teachers is more than 50% higher in some of parts of Kansas than it is in others.

Figure 6. Map of Kansas Teacher Salary Index, 2016-17



In an ideal situation, the estimated cost function would include direct measures of local prices for instructional equipment and classroom materials. Such data are, unfortunately, not available to researchers. However, prices for pencils, paper, computers, and other instructional materials are largely set in a competitive market (and therefore unlikely to vary across schools), and prices for nonprofessional labor or building rents are largely a function of school location. Therefore, the cost analysis includes an indicator for whether or not the district is located in a rural county. A rural county is one that is not part of either a metropolitan area or a micropolitan area as designated by the U.S. Office of Management and Budget.[8]

Other Environmental Factors

The cost model includes indicators for a variety of environmental factors that influence district cost but which are not purchased inputs. A major environmental factor in this study is district enrollment. In general, there are typically three ways to measure student enrollment. The first of these is simply a count of students enrolled on a particular day during the school year. The second is average daily membership (ADM), which is typically measured over the course of the school year. The third measure is average daily

[8] Miles to the center of the metropolitan area for each building was calculated as-the-crow-flies using latitude and longitude information. The latitude and longitude of metro centers come from the U.S. Census Bureau. Where available, latitude and longitude information for buildinges are taken from the NCES' Common Core Database. The remaining buildinges are assigned latitudes and longitudes according to the zip codes at their street address.

attendance (ADA) which is based on actual attendance rates, rather than number enrolled. These measures could also be used as head counts or represent a measure of full-time equivalence (i.e. half-time students would be counted as .5). For this study, we used state head count student enrollment taken on a single day at the start of the school year. This measure was used primarily because the assessment data required the use of head counts, and thus it was only measure consistently available. These data were provided by the Kansas State Department of Education. In the estimation sample district enrollment averaged 1,851 students, with a minimum of 110 and a maximum of 50,566.

Another key environmental factor is population density, measured as the population per square mile. School buildings are likely to be smaller (all else equal) in districts with larger geographic footprints, where the time costs of transporting students to scale-efficient buildings could be prohibitive.

To capture variations in costs that derive from variations in student needs, the cost function includes the percentages of students in each district who were identified as English Language Learners, special education, and economically disadvantaged. The English Language Learner and economically disadvantaged data were suppressed requiring imputation and a detailed description of the imputation methods used can be found in Appendix A.

To allow for the possibility that the education technology differs according to the grade level of the school, the cost model includes indicators for whether or not the school serves elementary grades (i.e., grades PK-6), and whether or not the school serves high school grades (i.e. grades 9-12).

Finally, fixed effects for year control for inflation and other time trends in Kansas education.

Efficiency Factors

Stochastic frontier analyses allow for the possibility that some schools spend their available resources more efficiently than others. School spending is therefore thought to depend on more than educational costs, but also on a number of factors that theory suggests may explain differences in school efficiency. Prior research has demonstrated that competition can reduce inefficiency in public education (e.g., Belfield & Levin, 2002; Millimet & Collier, 2008; Gronberg et al. 2015), and so can ease of voter monitoring (Grosskopf et al. 2001). Therefore, analysis includes a combination of five factors that might influence spending efficiency—the degree of educational competition in the metropolitan area or county; an indicator for whether or not the district is located in a metropolitan area that spans state lines (because the level of competition is imperfectly measured in those education markets using only Kansas data); the percentage of household that are owner-occupants, the percentage of the population with at least a bachelor's degree and the percentage of households wherein no residents are over 60 years of age. We note that the latter three variable were also treated as efficiency factors in Duncombe and Yinger (2005).[9] As is common in the literature, the degree of educational competition is measured with a Herfindahl index

[9] By assumption, the one-sided error term has a half-normal distribution. Jenson (2005) finds that specifying a half-normal distribution for the inefficiency term generates more reliable estimates of technical efficiency than other assumptions about the distribution of inefficiency.

of enrollment concentration. A detailed description of this measure, and how it was used in this analysis can be found in Appendix A.

Data Observed but Not Included

ACT College Readiness Assessment

Scores on the ACT college readiness assessment were considered as a possible student outcome measure. These scores are a reasonable proxy for college readiness, and thus may have served as an appropriate measure of student performance.

However, there was a concern among the study team, and evidence in the literature, that access to the ACT itself is not universal (citation). That in fact, scores may reflect the extent to which a student has access to the test rather than their performance due to this variation in access.

Advanced Placement Exam Results

Another measure of student performance considered were advanced placement (AP) exam results. However, it is even more likely that these results reflect access more than actual performance. Simply put, not all students even have access to the curriculum which would prepare them to take the test, let alone the ability to take the test through their school. For this reason, the study team decided not to include this measure.

Participation and Successful Completion of Post-secondary Degree and/or Certification

Postsecondary data was also made available at the district level including success rates and effective rates and their component parts. These data are aligned to the sixth and seventh Rose capacity and were thus considered as student outcome measures. However, ultimately these data could not be included for two reasons. First, during the initial years of data collection, data reported did not include students attending community colleges and thus under-reports those students that Kansas school districts successfully sent on to post-secondary pursuits. Second, the most current year of these data available, 2014-15, lags two school years behind 2016-17, the most current year available in other key data sources such as the enrollment data and assessment data. In order to conduct the analysis there needs to be parallel datasets (i.e., assessment scores and post-secondary rates in the same year). Moreover, the study team does not have a statistically reliable method to forecast these data two years forward (i.e. 2015-16 and 2016-17) that would have made it possible to include such data in the analysis.

Attendance Rate

Finally, the study team considered including attendance rates, as this is included in the state accountability system, and thus a relevant as a measure of school performance. However, as noted in Duncombe and Yinger (2005), attendance rate data have very little variation making it difficult to detect a relationship between these rates and school spending. Therefore, attendance rates were not included in the analysis.

Chapter 5: Education Cost Function Variables and Methods

This chapter reviews the results of the cost function analysis for Kansas that includes the coefficient estimates that inform the pupil weights and estimated, additional costs for Kansas to adequately fund its public education system.

Cost Function Estimates

Table 17 presents coefficient estimates and standard errors from the cost function analysis. As the table illustrates, the analysis finds a strong, positive relationship between educational outcomes and educational costs, once differences in scale, need and price are taken into account. Consider first the Conditional NCE scores. The estimation indicates that a one percentage point increase in academic performance is associated with a 5 percent increase in cost. Similarly, a one percentage point increase in the graduation rate is associated with an 1.2 percent increase in cost at lower grades and a 1.9 percent increase in cost at the high school level.

Table 14. Cost Model Coefficient Estimates

LABELS	Baseline
Normal Curve Equivalent	5.295*** (-0.607)
Graduation Rate	1.244*** (-0.262)
Graduation Rate * High School	0.696*** (-0.0995)
District Enrollment	-1.444*** (-0.0568)
District Enrollment squared	0.0991*** (-0.00378)
Salary index (log)	1.373*** (-0.279)
Rural indicator	0.0505*** (-0.0112)
% Economically Disadvantaged	0.886*** (-0.078)
% English Language Learner	0.226*** (-0.0667)
% Special Education	2.157*** (-0.226)
Population Density	0.166***

LABELS	Baseline
	(-0.018)
Elementary grades served	-0.129***
	(-0.016)
High school grades served	-0.508***
	(-0.0909)
% English Language Learner, sq	-0.623***
	(-0.109)
% Special Education, sq	-6.135***
	(-0.674)
Population density* Salary Index	-0.510***
	(-0.0414)
AYP Schoolyear = 2016	-0.0364***
	(-0.00591)
First stage Residuals, NCE	-5.102***
	(-0.609)
First stage residuals, Graduation	-1.454***
	(-0.271)
Herfindahl Index, log	0.797***
	(-0.249)
Border metro	2.320***
	(-0.372)
% Owner occupied	7.293***
	(-1.321)
% Over 60	-2.316
	(-1.496)
% College	-12.06***
	(-1.542)
Constant	9.644***
	(-0.357)
Usigma	-7.214***
	(-0.958)
Vsigma	-4.095***
	(-0.0418)
Observations	2,310

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

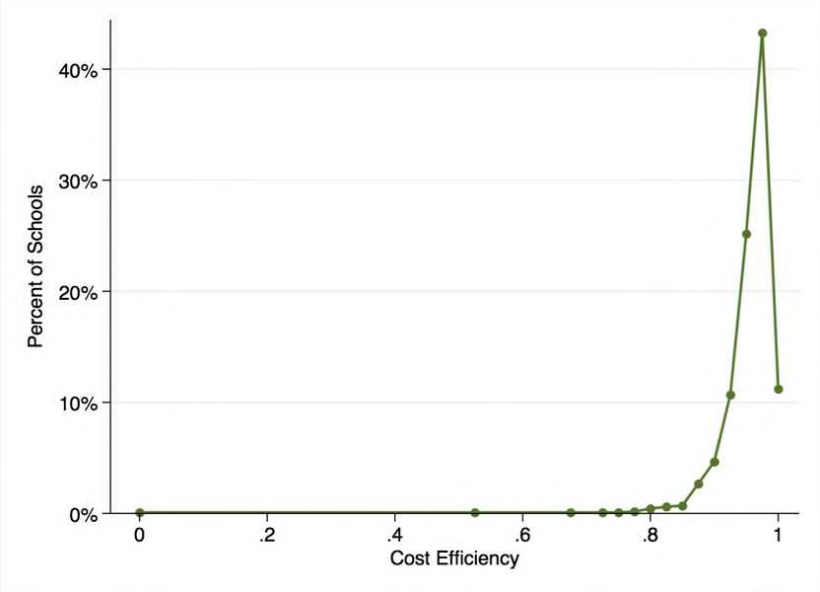
The remaining coeffiicents in the cost model align with reasonable expectations about the relationships among inputs, outcomes and environmental factors in education. Costs fall with district size, but only up to a point. Costs rise with district size for school districts with more than xx students. Costs rise as population density rises and as teacher salaries increase, but the interaction between wage levels and population density is negative, suggesting that the higher costs associated with sparsity trump the lower wage costs in sparsely populated areas. Rural schools have higher costs than otherwise equivalent

nonrural scools. Costs rise with student need, but the effects are generally non-linear, suggesting for example, that the additional cost associated with increasing the share of ELL students becomes smaller as the student population reaches a critical mass.[10]

Finding #1: Efficiency Results

An important part of this study was the estimation of cost efficiency, or inefficiency. Figure A8 graphs the distribution of cost efficiency for the baseline model.[11] In Model 1, the average cost efficiency score was 0.956, indicating that buildings were producing nearly 96% of their potential output, on average.

Figure 7. Distribution, cost efficiency for the cost model



Given that inefficiency in this context means unexplained expenditures, not necessarily waste, and that many buildings may have been producing outcomes that were not reflected in test scores, the average efficiency level was quite high. However, the minimum efficiency scores were below 50%, suggesting that some buildings spend much more than could be explained by measured outcomes, input prices or student need. The analysis demonstrates that enhancing school efficiency also enhance factors that enhance the ability of voters to monitor school and school district behavior. Inefficiency rises as the Herfindahl Index increases as the percent over 60+ college grads increase efficiency. The amount of unexplained spending

[10] Researchers examined a model in which the relationship between the percentage of free lunch students and cost was quadratic, but such a specification was rejected at any reasonable level of statistical significance. See Technical Appendix A.

[11] Cost efficiency was estimated following Battese and Coelli (1995).

rises as the percent owner occupied suggests that unexplained cost may represent unobservable outcomes.

Finding #2: Estimating the Base and Compensatory Cost Per Pupil

Using the coefficient estimates the study team can now predict the level of necessary spending for individual school district and the state overall will need to achieve the performance thresholds identified in Chapter 3 of this study. As a brief review, the table below recalls the performance thresholds across the ELA and math assessments as well as graduation rates for school districts under the "approaching on track for college readiness" and "on track for college readiness."

Table 15. Percentage of students meeting performance thresholds under two different scenarios

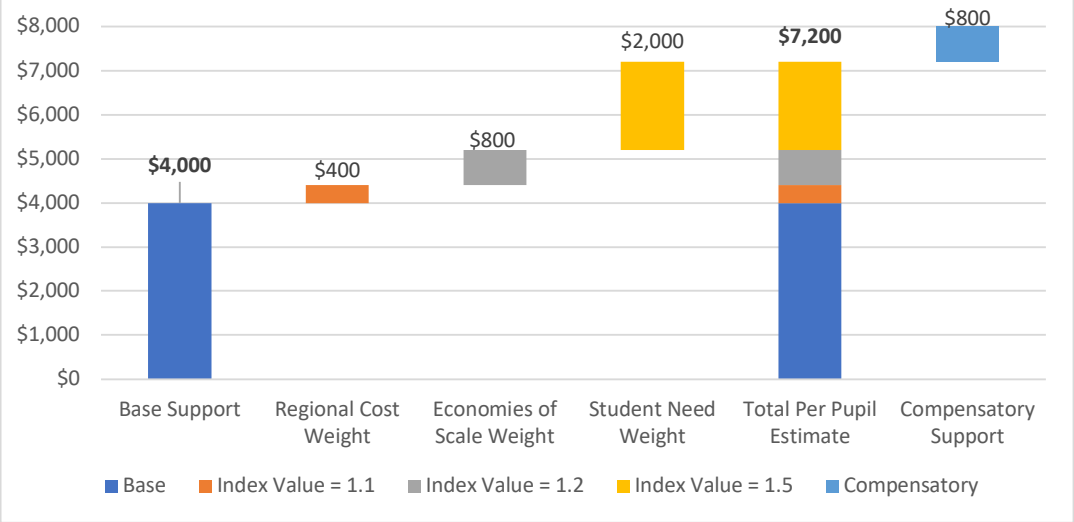
	ELA Assessment (Level 2+)	Math Assessment (Level 2+)	ELA Assessment (Level 3+)	Math Assessment (Level 3+)	Graduation Rate
Scenario A: Approaching on track	90%	90%			95%
Scenario B: On track			60%	60%	95%

Scenario A is approximately equivalent to the threshold of performance used in the former assessment under the No Child Left Behind (NCLB) law. Scenario B has re-benchmarked student readiness to identify those on-track for college and career readiness. This scenario reflects the updated Kansas standards and a more difficult performance threshold for students to achieve, hence the overall lower total percentage of students achieving that level or better. For further discussion of this rationale, see Chapter 3.

Estimated Cost to Reach Performance Thresholds

For each district in Kansas, the research team generated an estimate of the base costs associated with meeting the designated performance goals, plus appropriate adjustments for student demographics, regional differences in cost and economies of scale. The graphic below illustrates simply the cumulative nature of these calculations. For the purposes of this graph, the values listed below are for an example school district in Kansas.

Figure 8. Illustrative example to calculate cost estimates for maintenance funding



Attaining these thresholds of performance requires three initial calculations. The first calculation is generating a cost estimate for a Conditional NCE score of 0.50 (I.e. normal academic progress) and a graduation rate of 95% growth, assuming that the school had the least costly combination of regional cost, student demographics and scale. Consider this "base support" to ensure school districts and the students they serve continue to make progress year after year. This base support differs according to the grade configuration of the school, with the lowest base cost ($3,395) associated with elementary schools and the highest base cost ($4,500) associated with high schools. The estimated base cost for any given district is a pupil-weighted average of the base costs for the district's existing mix of school buildings.

The second calculation estimates the adjustments for demographics, regional costs and economies of scale. Each of these calculations yields an index describing the increasing cost associated with each of these cost factors.

The final calculation estimates the amount of necessary, additional resources for school districts and the state overall to close the gap between current and desired performance. Notably, this requires that school districts currently achieving at lower levels than others accelerate student growth at a faster pace (consider this "compensatory support"). Districts that are currently outperforming the thresholds and those growing faster than necessary to reach the targets within five years are held harmless in this calculation, so that the compensatory support estimate includes the funds required to at least maintain current levels of annual progress in all districts.

Finding #3: Student Need Weights

One of the advantages of the cost function method for costing out studies, as discussed earlier, is the ability to estimate the marginal costs (i.e., additional spending associated with factors such as student characteristics or school characteristics) for the school system. This can be particularly useful in the

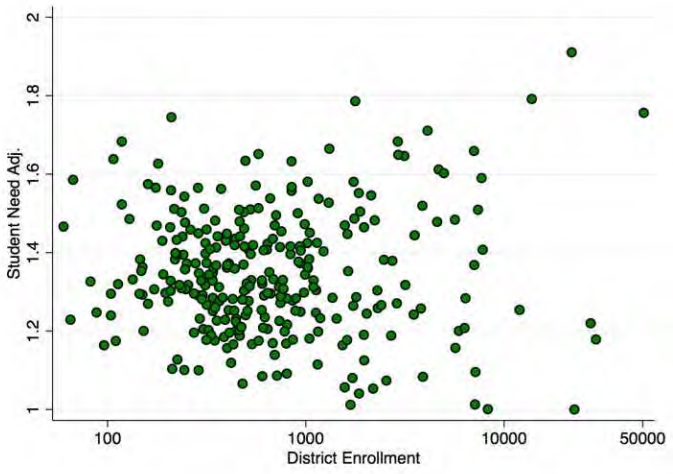
context of state funding formulas. Kansas, like many other states, assign funding that goes above and beyond the based spending to certain student groups either implicitly (e.g., double counting for more needy student populations or explicitly, creation of a categorical program which assigns a certain amount of funding directed to support a specific student population). In either case, Kansas has created a 'weight' or an additional amount of money that is directed to certain student populations. A simple illustration of this is, if the base allocation per pupil is $1,000 and the weight for a low-income student is 0.80 this would apply an additional 80% in allocation, or $1,800 for this student.

The utility to this study is that Kansas can compare its current allocation of resources to these other student populations in comparison to the estimated weights generated through the cost function. The cost function generates as one of its outputs coefficients. Coefficients are particularly useful in isolating variables and determining their impact on the dependent variable (spending) while holding all other factors constant. That is, the coefficients generated for student groups such as low-income, English learners, and students with disabilities are effectively the weights necessary to support those student groups to achieve the defined performance threshold. Kansas most recently modified their weights for several of these student need categories, including low-income students and English learner students.[ciii]

The student need weights are calculated using several steps. First, an estimated base cost for the general education student is selected as described in the table above. This estimated base cost is then multiplied by the aggregate weight for student need characteristics incorporating students that are low-income, English learners or special education. The weighting values range from 1.0 to 1.91 in which lower values represent an overall lower student need in that school district versus those with higher values reflect higher overall student need in the school district.

For each school district, the average student need weights vary dependent on the concentration of the student population served. The figure below illustrates this point where we see a much larger variation in the low-income weight as compared to the English learner or special education weight.

Figure 9. Distribution of student need weights by district enrollment



These student need weights are used in helping to generate the final cost estimates for Kansas by individually applying these weights to the base cost for each district multiplied by the number of students in each of those need categories.

The first of three student need weights are the most straight forward. The poverty weight is 0.89 which is a substantial increase from the current weight of 0.48. It is not quadradic in any way and increases with concentrations of poverty.

The second of three weights are for English learners. We can observe a substantial weight at the outset at 0.2 but will drop as the concentration of these students increases. This is logical because for those schools or school district with a small number of English learner students the associated cost is related as much to the cost as it is for economies of scale. The study team also identified that the weight for English learners is highly collinear with poverty. It is also worth noting that Duncombe & Yinger (2005) produced essentially a weighting of 0.00 for English learner students.

The third of three weights are for special education. In this case we see a negative weight. That is a decrease in cost associated with an increase in the proportion of the population at the school district. The study team believes the reason for this may be an interaction with interlocal special education co-operatives. That is, the model incorporates spending of special education but is unable to incorporate a substantial amount of resources made available to the interlocal thereby creating a potential effect of when school districts have larger proportions of special education students they access more interlocal services and those spending on behalf of those students were not captured in the analysis.

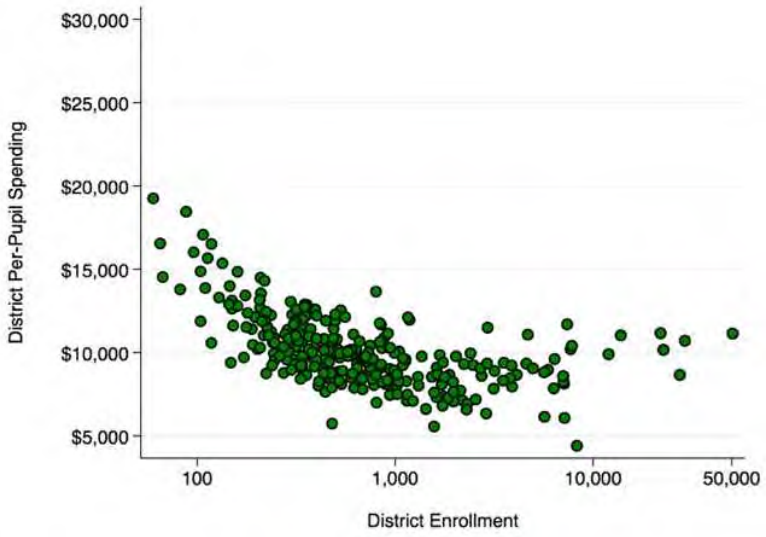
Finding #4: Regional Cost Index

Analysis from the study also showed the wide variation in prices associated with the cost of education. The factors that primarily drive this index include measures of sparsity such as population density and the rural indicator as well as the teacher cost index. As described in chapter 4 there are substantial differences in regional cost, some of which are quite significant over even a smaller geographic area. The regional cost index is composed of three variables which include the teacher salary index, and measures of sparsity including population density and the rural indicator. The index value, ranging from 1.05 to 1.94 identifies the amount that the base per pupil amount needs to be adjusted in order to account for the differences in prices and the costs associated with sparsity across communities in Kansas.

Finding #5: Economies of Scale Index

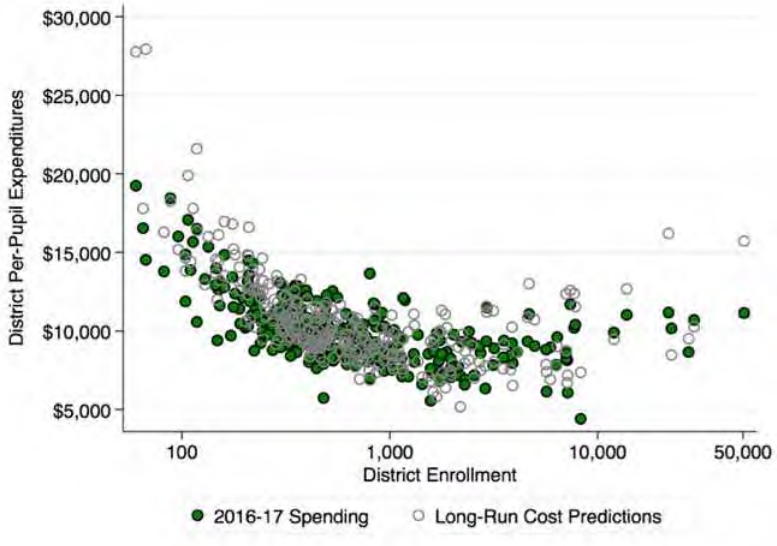
The impact of economies of scale is quite large on Kansas in large part due to the sparsity of its population across a larger geographic area compared to other states in the country. This implies that a larger amount of money is necessary for some schools and school districts at the tails of the distribution of enrollment. The figure below offers an example of this in which we can observe a U-shaped curve across the distribution implying much higher costs per pupil for smaller districts and a gradual increase as school district get significantly larger (i.e., larger than 10,000 students).

Figure 10. 2016-17 school district per pupil spending by enrollment



When comparing the actual 2016-17 spending per pupil as compared to the generated cost estimates we see a U-shape for the cost estimates the mimics a shape in which the tails of the U have a steeper slope than that of the actual 2016-17 spending. This can be observed in the figure below. This implies that the actual 2016-17 spending per pupil does not account as well for economies of scale as the generated cost estimates from this study.

Figure 11. 2016-17 school district per pupil spend by enrollment compared to cost estimates



The economies of scale index functions similarly to the previous index in how it is applied to adjust the base per pupil amount. Specifically, this index ranges from 1.0 to 2.75 and the index values recognize the higher or lower associated costs with the total overall enrollment of the school district.

The result is the total per pupil estimate to ensure maintenance of continuing to attain the thresholds of performance mentioned earlier in this section. In addition to these associated costs, the researchers also calculated the amount necessary to close the gaps on the ELA and math assessments in addition to maintaining one year's approximately growth, referred to as compensatory cost estimates. This amount is expressed as a per pupil allocation that would be added to the total per pupil estimate.

Based on data provided for this study, Kansas spent approximately $4.652 billion on its education system in the 2016-17 fiscal year serving 489,795 students (based upon headcount enrollment) or $9,313 in actual expenditures per student. The total spending figure was calculated according to the inclusion and exclusion criteria detailed in Appendix D. Of those students, the table below offers some descriptive statistics on the proportion of those students in various need categories.

Table 16. Kansas overall student and student need enrollment and percentages, 2016-17

	Enrollment Counts	Percentage of Total Enrollment
Total Enrollment	*489.795*	*n/a*
Low-income*	190.158	38.8%
English Learners	56.759	11.5%
Special Education	69.013	14.1%

* This count is reflective of the number of students eligible for free lunch under the National School Lunch Program.

Table 17. Overall investment for base and compensatory support under two scenarios

	Cost Estimate ($)	Percent Increase Over Current	Per Pupil Cost Estimate ($)
Current K-12 Spending	$4.652 billion	n/a	$9,313
No compensatory support	$5.103 billion	9.7%	$10,419
Compensatory support for Scenario A	$6.438 billion	38.4%	$13.144
Compensatory support for Scenario B	$6.719 billion	44.4%	$13,717

The cost estimates in the second column above are the investments each year, in total, for the K-12 education system for the next five years that would close the gap between current performance and the established thresholds of performance.

Finding #6: Phase-in funding increases over time with targets

The cost estimates noted above are also important to put in the context of how the education system is able to appropriately use those investments over time. That is, it is not practical to make a one-time, significant investment in a statewide public education system and expect at the end of that school year to see dramatic movement from current performance to the aspiration targets. Alternatively, making ongoing and incrementally larger investments in the system over time with established targets may be more practical for practitioners to plan and determine the appropriate ways to invest the funding.

One consideration is to consider these investments over a 5-year period of time.

Finding #7: Consider "how well" alongside "how much"

It is important to keep in mind that while adequate funding is necessary for achieving desired student outcomes, funding alone is not sufficient; the funds must also be put to effective use. After all, schools with similar student populations, receiving similar funding, can have vastly different student outcomes due to differences in local policies and practices (Williams, Kirst, Haertel, et al., 2005). Thus, if one fails to consider *how well* resources are used, then increasing *how much* resources are provided may have a limited effect on student outcomes.

As noted earlier in Chapter 2 there are various avenues in which a state education system and associated school district organizations can design, build and implement structures that encourage such investigations at the individual, team and even organization level. Yet, we must recognize that the complexity and scale increase exponentially moving along a continuum from an individual to an organization wide attempt to markedly improve 'how well' resources are being used to improve student outcomes.

This consideration is done in a manner that considers holistically the findings identified in this study that would bring together the additional, necessary resources along with the transformative structural changes in the school system that would allow for the most effective use of those additional dollars invested in public education.

Finding #8: Increase the transparency and availability of data

Kansas, among all states in the country, is recognized as a leading state in its data systems and availability as recognized by the Data Quality Campaign. And, the state can continue to improve and learn from how other states have continued to evolve educational data available to professionals and the general public at large. In particular, the availability of data can help to facilitate the investigation and improvement of the system on a wide variety of topics from increasing the efficiency of transportation routes to improving instruction in the classroom with a diverse group of learners.

The state hosts most of its publicly available data through a web portal named Data Central (http://datacentral.ksde.org). The portal offers a wide variety of reports and data including building report card information, school finance reports, educational directory reports, special education reports, and child nutrition information. Some of the data posted on the public portal is available in static formats such as Microsoft Word or PDF. Other datasets through the Kansas K-12 Reports offer more flexible datasets in formats such as Microsoft Excel that also draw from the entire school and school district population. And, some of the reports lack context necessary for education professionals or the general public to understand the context of the information or the source of information.

Data is a critical component to any improvement effort and provided with the right data to, at the least, ignite a conversation for change can be powerful. One example that Kansas may look to is Texas. The Texas Smart Schools project (http://txsmartschools.org) provides school and school district leaders the ability to benchmark themselves against similar matched peers that provide initial insight into how others are doing. Such a data system facilitates easier access to information that removes a significant barrier for practitioners to access information.

Finding #9: Pair support strategies with accountability measures

As discussed in Chapter 2, the state framework for increasing effective resource use relies on numerous tenants that are in tension with one another, e.g., accountability and support for example. To encourage districts to use resources efficiently – that is, cost-effectively – federal and state agencies have implemented a number of accountability systems over the decades. The concept of an accountability system still holds tremendous value, particularly in advancing educational equity. Both through rewards and sanctions and through the public reporting of school progress, accountability systems can be a powerful tool in focusing resource allocation toward improving outcomes for disadvantaged students. Furthermore, after years of practitioners' vocal dissatisfaction with previous accountability measures, the landscape of federal and many states' policy has been shifting toward more flexible accountability systems. For example, many states have reformed their accountability systems to measure success indicators beyond standardized test scores, such as graduation rates and other college and career

indicators, and to offer comprehensive support systems to low-performing schools, rather than merely rewards and sanctions (Center for American Progress and the Council of Chief State School Officers, 2014).

It is the consideration of these current shifts in the national landscape that afford a tremendous opportunity for Kansas to re-evaluate its orientation and function in relation to school districts. One potential point of leverage is the efficiency reviews authorized by the Legislature. The reports, comprehensive in their approach, develop a rich set of information that is valuable not only to the school district going through the review but also potential to other school districts based on what insights are surfaced. This value can be identified in a few key ways:

- The analytical and comparative techniques used by staff in the Legislative Post Audit have applicability in other environments and forums;
- The insights reached – although mostly oriented towards compliance with the law – surface matters of process, culture and performance important for any organization to consider; and
- The school district's response represents one way in which to engage in an exchange with an independent outside observer that may offer perspective valuable to the organization.

Further, that state may create an opportunity for support to the school district to either work with the state or their peers to identify pathways to implementing the recommendations outlined in the review. This is discussed in Chapter 2 with the development and implementation of networks. The orientation of the networks can shift around the topic, but their rigor and attentiveness to the learning of the professionals is paramount and can contribute to the school system experiencing even greater degree of effectiveness in the future.

Finding #10: Consider streamlining various funding programs

Kansas, like many other states, has developed school finance formulas over time in which elements have been added but not necessarily considered as a whole. Even as the school finance formula has been reformed throughout the school finance litigation history in Kansas, there remain numerous and complicated calculations to generate the funding amount for school districts. Two observations underlie this point. First, in calculating the amount of state aid, there exist at least fifteen enrollment and weighting categories. Second, there exist over thirty different funds – each with their own governing rules and regulations for how to spend those dollars. While the intention in developing any one of these programs was positive, seeking to best serve the purpose or students it aimed to impact, the cumulative effect for the school systems that have to manage these various funding streams is difficult.

Further, the ability to engage in effective and productive decision-making is limited by the boundaries that outline these various programs. This may prevent more thoughtful consideration of how resources can be used in combination and coordination with one another to target and positively impact the most vulnerable and underserved student populations. As was discussed in Chapter 2, effective decision-making is a skill that can be developed, and which strongly benefits from utilizing proven strategies. While

several of these strategies were discussed in earlier findings, the non-linear nature of the Kansas school finance formula can create a barrier for education professionals and the general public to understand the motivation and intent of the state and where it places its priorities for the public education system.

Technical Appendix A: Cost Model Methodology

This analysis follows Taylor et al. (2017) and uses stochastic frontier analysis (SFA) to estimate an educational cost function for Kansas. A cost function — a cost frontier — specifies the minimum cost necessary to achieve certain outcomes with specified inputs and specified environmental factors. A standard empirical cost function can be written as:

$$C = C(Z \mid \beta) \cdot e\exp(\varepsilon) \quad (1)$$

where C is cost, $C(Z \mid \beta)$ is the cost function or cost frontier, $Z = \{w_1, \dots, w_k;\ z_1, \dots, z_m; y\}$ is a vector of variables affecting the frontier level of cost, where, w_l are input prices, z_j are quasi-fixed inputs including environmental factors, y is a vector of outcomes, β is the cost parameter vector to be estimated, and ε is a random noise component representing exogenous random shocks (e.g., a rainy testing day). The error term, ε, indicates random deviations from the cost frontier due to measurement error and unforeseen random changes in cost due to factors not modeled in the cost function, $C(Z \mid \beta)$.

In the stochastic frontier approach, the cost function in (1) is regarded as a frontier, a minimum cost of attaining given outputs with given inputs including environmental factors. Spending may then deviate from this cost frontier, exceeding the minimum cost specified in the cost frontier. Thus the stochastic frontier approach starts with (1) and adds the assumption that spending exceeds the cost frontier due to random errors or inefficiency. The stochastic frontier approach basically takes equation (1) and assumes that the random error, ε, consists of two parts, a standard two-sided random error that can be positive or negative and on average is zero, and a one-sided error that is always positive (or at least not negative). The one-sided error captures the idea that schools or districts can at best be on the cost frontier, if they are fully efficient, and if they are inefficient this is captured or modelled by the one-sided error. The larger the one-sided error, the further a school/district is from the frontier, and hence the more inefficient it is.

To model this, equation (1) is altered to specify the error term, ε, as consisting of two components, *v* plus *u*. The two-sided error is *v*, and the one-sided error is *u*. Because inefficiency increases cost above the frontier (i.e., above the minimum possible cost), $u_i \geq 0$, where i is the specific decision-making unit.

The stochastic frontier cost function is given as:

$$E = C(Z \mid \beta) \cdot \exp(v + u), \quad (2)$$

where E is actual or observed spending and $C(Z \mid \beta)$ is the cost frontier as described above. Here v is a random noise component representing an exogenous random shock (e.g., a rainy testing day) and u is a one-sided error term that captures cost inefficiency. Cost efficiency defined as $CE_i = \exp(-u_i) \leq 1$.

The per-pupil stochastic frontier model is more commonly estimated in education than a total cost function (e.g., Andrews, Duncombe and Yinger, 2002 or Gronberg, Jansen, Karakaplan and Taylor 2015). It can be expressed as:

$$E^* \equiv \frac{E}{N} = \frac{C(w_1, \ldots, w_k;\ z_1, \ldots, z_m;\ S, N \mid \beta) \cdot \exp(v+u)}{N} \quad (3)$$

Taking natural logarithms of equation (3) gives

$$\ln E^* = \ln C(\cdot) - \ln N + v + u \quad (4)$$

The cost frontier estimates indicate the cost of achieving certain educational outcomes after controlling for cost and other environmental factors. The educational outcomes include a quantity dimension—the number of students served—and a quality dimension. The quality dimensions considered here are conditional normal curve equivalent scores (a measure of growth) and graduation rates.

An important feature of the decision-making environment facing school officials is the competitiveness of the district's relevant education market. Indeed, the literature finds that competition is one factor that can influence a school district's cost inefficiency.[12] The argument is that competition serves to discipline the tendency of districts to engage in excessive spending. This implies a negative relationship between the competitiveness of a district's education market and the magnitude of that district's cost inefficiency.

The literature also suggests that voter monitoring can lead to increased school district efficiency (Grosskopf et al. 2001). Factors that influence the motivation or ability of citizens to monitor their local school district—such as the educational attainment of the population, the share of homeowners or the fraction of the population that is elderly—have also been linked to school district efficiency (Duncombe and Yinger 2005).

The stochastic cost frontier framework can accommodate models of how factors impact the one-sided error term (u). In particular, suppose that

$$u = u(x, \delta), with\ u \geq 0 \quad (5)$$

where x includes factors impacting inefficiency, such as a measure of competition, and δ is a parameter vector. Substituting (5) into the per pupil expenditure equation (4) yields

$$\ln E^* = \ln C(\cdot) - \ln N + v + u(x, \delta) \quad (6)$$

Endogeneity Concerns

Because school quality is frequently thought of as a choice variable for school district administrators, the possible endogeneity, or correlation between explanatory variables and errors terms, of school quality

[12] For example, see Belfield & Levin (2002); Dee (1998); Gronberg et al. (2015); Gronberg, Jansen, Taylor & Karakaplan (2010); Grosskopf, Hayes, Taylor & Weber (2001); Kang & Greene (2002); or Millimet & Collier (2008).

indicators is a common concern for researchers estimating educational cost functions. (For example, see the discussion in Duncombe & Yinger (2005, 2011); Imazeki & Reschovsky (2004); or Gronberg et al. (2011a).) This analysis follows Gronberg et al. (2015) and Gronberg, Jansen and Taylor (2017) by adopting a control function approach to the potential endogeneity of the outcome measures.

Data

The data for this analysis come from administrative files and public records of the Kansas State Department of Education (KSDE), the National Center for Education Statistics (NCES), the U.S. Bureau of Labor Statistics (BLS), the U.S. Department of Housing and Urban Development (HUD) and the U.S Census Bureau. The analysis covers the two-year period from 2015–16 through 2016–17.

The unit of analysis is the traditional public school building. Alternative schools, charter schools, virtual schools and special schools have been excluded because they may have different cost structures than other buildings. Buildings that lack reliable data on student performance (such as elementary schools that serve no students in tested grades, or very small schools) have also been excluded.

Table 19 provides means and standard deviations for the variables use in this analysis. Enrollment, the teacher salary index, and population density enter the stochastic frontier regression in logs, while variables already in percentages and the indicator variables are not logged before entering the stochastic frontier regression.

Table 18. Descriptive statistics for buildings in Kansas, 2015-16 and 2016-17

	Mean	Std. Dev.	Minimum	Maximum
Per-pupil operating expenditure	$9,696	$1,961	$5,137	$20,844
Average Conditional NCE	0.50	0.05	0.30	0.76
Graduation rate	0.89	0.07	0.60	1.00
Teacher salary index	1.41	0.11	1.00	1.59
Rural county indicator	0.27	0.45	0.00	1.00
District enrollment	7.70	1.58	4.26	9.90
% Economically disadvantaged	0.41	0.21	0.00	0.96
% English Language Learners	0.10	0.16	0.00	0.82
% Special education	0.15	0.06	0.00	0.63
Elementary grade indicator	0.75	0.44	0.00	1.00
High school grade indicator	0.26	0.44	0.00	1.00
Herfindahl Index	0.38	0.25	0.13	1.00
Share of spending unallocated	0.34	0.09	0.00	0.91
Potential employers in building zip code	327	388	0.00	1,646
County unemployment rate	4.26	0.97	2.00	7.50

Note: Virtual schools, alternative schools, charter schools, and special schools have been excluded, as have all buildings with fewer than 10 students for whom conditional normal curve equivalent (NCE) scores could not be calculated.

The Dependent Variable

For each district, the researchers identified total operating expenditures for food, student transportation and all other operating functions. As described in Appendix C, operating expenditures include the day-to-day expenses of school districts, such as salaries, benefits, purchased services and supplies and materials. Debt service, construction expenditures and fund transfers are not considered operating expenditures. In turn, the category of all other operating functions includes the normal functions of school districts: instruction, student support services, administration, and the operation and maintenance of the district's facilities.

A complicating factor is that Kansas school districts regularly rely on special education co-operatives or inter-local agreements to provide special education services. With a special education co-operative, one district collects contributions from the other members of the co-operative, and hires teachers or purchases supplies on their collective behalf. To account for those expenditures, the researchers used the Kansas Education Directory to identify the members of each co-operative, and shared out the spending of each cooperative (i.e. the spending from fund 78) to the member districts according to each district's share of the special education students served by the co-operative. Payments to the inter-local (from funds 564 and 565) were the best available measure of spending by the members of an interlocal. However, we note that interlocals can also receive revenues from other sources (such as the federal government) that cannot be accounted for with the available data.

The following algorithm was used to calculate building-level expenditures for any given academic year:[13]

- Calculate total district expenditures using the certified personnel files, identify the buildings to which each educator was assigned, and attribute that educator's salary to that building. If educators were assigned to multiple buildings, share their salaries out across their assignments according to the shares of total FTE. Thus, if an educator worked 80% of an FTE in building A and 20% of an FTE in building B, then 80% of their salary would be assigned to building A and 20% of their salary would be assigned to building B.
- Cumulate the salaries for each building.
- Calculate total payroll (salaries and benefits) for each building by adjusting the building-level salaries by the district-specific benefits ratio. In other words, if the benefits paid by district A were 25% of salary, then adjust upward by 25% the building-level salaries in for all buildings in district A.
- Assign the remaining payroll expenditures for the district to the building on a per-pupil basis.
- Assign all non-payroll expenditures –excepting special education funds—for the district to the building on a per-pupil basis.
- Assigning all non-payroll special education expenditures for the districts to the building on a per-special education-student basis.

[13] Gronberg, Jansen & Taylor (2012) and Grosskopf, Hayes, Taylor & Weber (2013) used a similar approach.

Outputs

As noted above, the analysis uses two measures of quality — levels and growth. The levels measure is the ultimate, summative evaluation of high school achievement — graduation rates. We were provided with school-level graduation rates which represent the percentage of each longitudinal cohort that graduated within four years. We also received the variables used to calculate these rates including total number of graduates and the total number of students in the four-year cohort. To calculate district-level graduation rates, we divided the sum of total graduates in a given year and district by the sum of students in the corresponding cohort. As described in Chapter 4, schools with suppressed counts of graduates (i.e. less than 10) were filled in with imputed values. Our approach to imputing values for these suppressed schools was conducted in three steps.

- First, for those districts with suppressed data for some schools and not others, a weighted average district graduation rate weighted on the number of students in the graduation cohort was imputed as that district's graduation rate.
- Second, for a separate subset of districts, some schools had partial graduation data. Specifically, the total number of students in the graduation cohort was available but the number of graduates was not. In these cases, a weighted average school graduation rate across available years was calculated (weighted on the cohort total) and this average was used to estimate the number of graduates in schools missing this information and fill in the school-level graduation rate. The district graduation rate was then re-calculated for districts with these schools using the imputed data.
- Finally, district graduation rates were imputed as school graduation rates for those schools still missing this information.

The growth measure is a normalized gain score indicator of student performance on the Kansas Assessment Program (KAP) summative evaluations in reading and mathematics in grades 3–8. Although schools clearly produce unmeasured outcomes that may be uncorrelated with mathematics and reading test scores, and standardized tests may not measure the acquisition of all important higher-order skills, these are performance measures for which districts are held accountable by the state, and the most common measures of school district output in the literature (e.g., Gronberg, Jansen & Taylor, 2011a, 2011b, 2017 or Imazeki & Reschovsky, 2006). Therefore, they are reasonable output measures for cost analysis.

KAP scores can be difficult to compare across years, grade levels and test subjects. Therefore, this analysis relies on normalized (or equivalently, standardized) test scores. The normalization follows Reback (2008) and yields gain score measures of student performance that are not biased by typical patterns of reversion to the mean.[14]

[14] All students in the state, not just those in CBSAs were included in the calculation of standardized scores.

The calculation of normalized gain scores proceeds in three steps. First, transform the scores of individual students into conditional z-scores. Denote the test scores for student (i), grade (g), and time or year (t), as S_{igt}, and measure each student's performance relative to others with same prior score in the subject as:

$$Y_{igt} = \frac{S_{igt} - E(S_{igt}|S_{i,g-1,t-1})}{[E(S_{igt}^2|S_{i,g-1,t-1}) - E((S_{igt}|S_{i,g-1,t-1})^2]^{.5}} \quad (10)$$

For example, consider all Grade 6 students who had a score of 300 on the prior year's Grade 5 KAP in Mathematics. For this subgroup of students with a Grade 5 score of 300, calculate the mean and standard deviations of the Grade 6 scores for KAP Mathematics. The mean is the expected score in Grade 6 ($E(S_{igt}|S_{i,g-1,t-1})$) for someone with a Grade 5 score of 300; the standard deviation is the denominator in equation (10). Thus, the variable Y_{ijgt} measures individual deviations from the expected score, adjusted for the variance in those expected scores. This is a type of z-score. Transforming individual KAP scores into z-scores in this way allows researchers to aggregate across different grade levels and test subjects despite the differences in the content or scaling of the various tests.

Second, calculate the average conditional z-score (i.e., the average Yigt) across all required mathematics and reading tests for all of the students attending each school.[15] An average conditional z-score of 1 indicates that, on average, the students at Little Elementary scored one standard deviation above the expected score for students with their prior test performance. An average conditional z-score of -1 indicates that, on average, the students scored one standard deviation below expectations.

Finally, for ease of interpretation, transform the z-scores into conditional normal curve equivalent (NCE) scores. NCE scores (defined as 50+21.06*z) are a monotonic transformation of z-scores that are commonly used in the education literature and can be interpreted as percentile ranks.[16] A Conditional NCE score of 50 indicates that (on average) the students performed exactly as expected given their prior test performance; and a Conditional NCE score of 90 indicates that (on average) they performed as well or better than 90% of their peers.

For estimation purposes, the Conditional NCE scores are expressed as percentages. As Table 1 documents, the building-level average Conditional NCE score had a mean of 0.50 with a minimum of 0.30 and a maximum of 0.76.

Input Prices

The most important education inputs are teachers, and the cost function model includes the required teacher wage variable. Public schools take differing approaches to hiring teachers. If there were a teacher

[15] Only students in the accountability subset (i.e., students who attended the same building in the fall of the academic year as they did in the spring) are included in the building average.

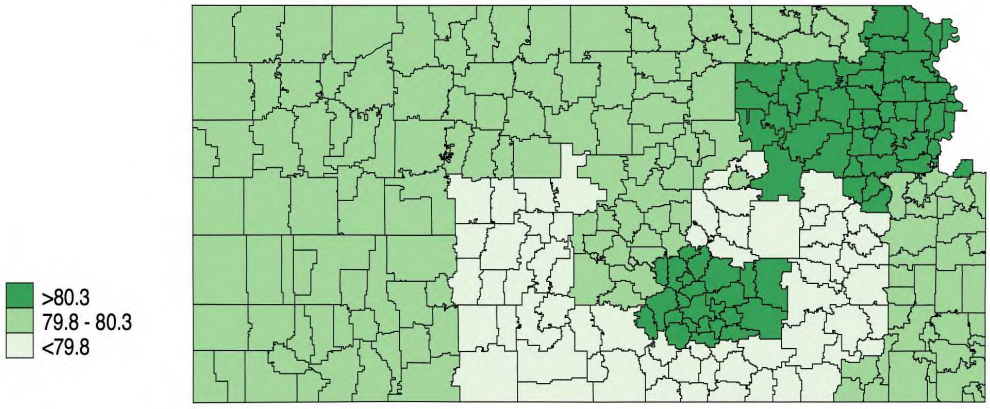
[16] Technically, this interpretation only holds if the scores are normally distributed. Given the large number of students tested each year in Kansas, normality is a reasonable assumption.

type hired by all unified school districts — for example, a teacher with a bachelor's degree from a selective university and two years of experience — then arguably the model should use the wages paid to those teachers as the labor price measures. However, it is not possible to identify a teacher type that is hired by all the school districts under analysis, and any observed average wage — such as the average salary for beginning teachers — reflects school and district choices about the mix of teachers to hire and the salaries offered to teachers in the hiring process.

This issue can be dealt with using a wage index that is independent of school and district choices. Such an index is constructed here by estimating a hedonic wage model for teacher salaries and using that model to predict the wages each school would have to pay to hire a teacher with constant characteristics (see Appendix B). The resulting teacher price index, which reflects the systematic variation in teacher salary that is related to cost factors outside of school district control, ranges from 1.00 to 1.59 and indicates that the cost of hiring teachers is more than 50% higher in some of parts of Kansas than it is in others.

The study team considered using a comparable wage index (CWI) to measure regional variation in labor cost. This approach uses comparable non-teacher salaries under the assumption that if these salaries are higher in a given region the salaries of teachers must also be higher. The main advantage of using this approach over a hedonic model is that it does not rely on the researcher to identify controllable and uncontrollable factors in the price to hire teachers. Simply put, districts cannot control the locally prevailing wage for college graduates. This approach is also used in the education finance context, and examples of it in practice may be found in Florida, Massachusetts, Missouri, New Jersey, New York, and Virginia (Taylor 2011a). Unfortunately, the best available data on non-educator wages and salaries — the American Community Survey — lacks the level of geographic detail needed. However, one of the most well-known comparable wage indices is the Comparable Wage Index (CWI) created by the National Center for Education Statistics (NCES).

Figure 12. Map of Kansas CWI from 2016

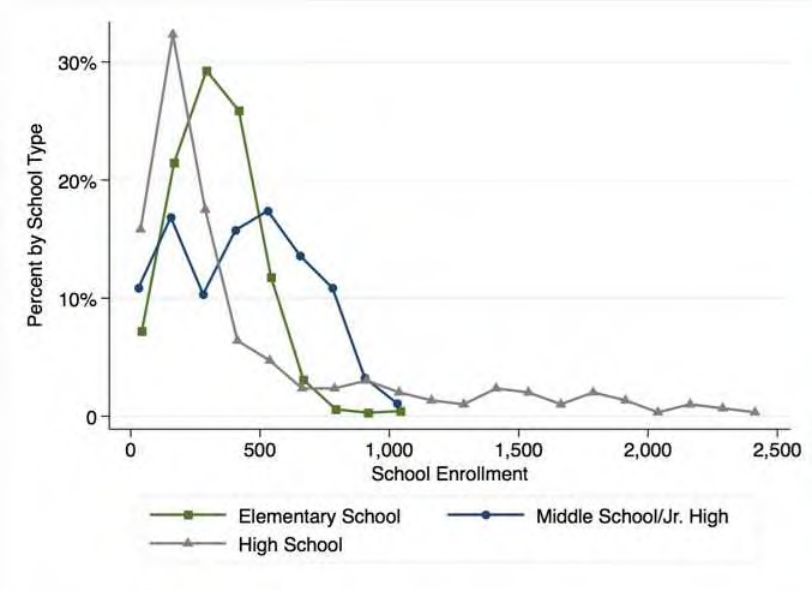


Other Environmental Factors

The model includes indicators for a variety of environmental factors that influence district cost but which are not purchased inputs. A major environmental factor in this study is district enrollment. In the estimation sample district enrollment averaged 8,697 students, with a minimum of 60 and a maximum of 50,988.

The figure below displays the distribution of school enrollment in 2016-17 by school type. As illustrated school enrollment in 2016-17 ranged from 30 students to 2,487, with an average of 308 and a standard deviation of 319.6. This reflects the fact that the distribution is asymmetrical, with the majority of schools clustered around the mean at the low end of the range. Only a few very large schools were one standard deviation above the mean or more. School size varied slightly by school type, with elementary schools smallest on average, followed by middle schools, and then high schools. For example, the largest four schools are all high schools and well above the average size including Andover eCademy at 3,005, Olathe North Sr. High School at 2,487, East High School in Wichita at 2,263, and Olathe Northwest High School at 2,258.

Figure 13. School enrollment for standard buildings in traditional school districts, 2016-17



Another key environmental factor is population density (which we measure as the population per square mile). School buildings are likely to be smaller (all else equal) in districts with larger geographic footprints, where the time costs of transporting students to scale-efficient buildings could be prohibitive. Therefore, the geographic size of the district is a credible instrument for building size.

To capture variations in costs that derive from variations in student needs, the cost function includes the percentages of students in each district who were identified as English Language Learners, special education, and economically disadvantaged.

The measure used to identify economically disadvantaged students was the percentage of students eligible for free or reduced-price lunch. This is based on eligibility for the National School Lunch Program administered by the U.S. Department of Agriculture which provides students from poor families free or reduced price school lunches. Eligibility for free lunches is determined by a student's family income and size, though students may be "categorically eligible" if enrolled in other federal assistance programs.[17] This alternative was considered primarily because there is a stronger reliance in the literature on free and reduced-price lunch eligibility. However, percent eligible for free lunch alone was ultimately determined to be a more relevant measure in Kansas (National Center for Education Statistics, 2018). This is because it is used to allocate funding for at-risk students in the general aid formula (Kansas State Department of Education, 2017).

In Kansas, English language learners are identified in Kansas through a three-step process. First, the student's Home Language Survey must indicate a language other than English. Any student for whom this is the case must then be assessed on a state-approved English-language proficiency assessment. If a student is found to be limited in any domain of English proficiency will receive English for Speakers of Other Languages (ESOL) services and is identified as an English Language Learner.[18]

Data on special education students include students who have been identified as "exceptional children" through a two-pronged eligibility determination. Specifically, in Kansas a student must meet the definition of one of the categories of exceptionality, and in need of special education and related services as a result of that exceptionality.[19]

As with the graduation data, the available demographic data were suppressed for counts of fewer than 10 students resulting in an incomplete data set. To address this issue we imputed the median value within the range of possible values for each of the suppressed observations (i.e. 5). Other approaches were considered, including the approach taken to impute graduation rates. However, since student demographics are less stable over time than graduation rates, the research team decided against using an approach that assumes an average over time is an effective estimate for any particular year. Ultimately, there are no perfect options, but the chosen method has the benefit of balancing the potential measurement error at +/-4 students, as well as being more simple to understand, and thus more transparent.

[17] More information on this program and eligibility requirements can be accessed here: https://fns-prod.azureedge.net/sites/default/files/cn/NSLPFactSheet.pdf.

[18] More information on the identification of English Language Learners can be found at http://www.ksde.org/Portals/0/Title/ESOL/ESOLProgramGuidance.pdf.

[19] More information on this eligibility determination can be found at http://www.ksde.org/Portals/0/SES/misc/iep/EligibilityIndicators.pdf.

Finally, to allow for the possibility that the education technology differs according to the grade level of the school, the cost model includes indicators for whether or not the school serves elementary grades (i.e., grades PK-6), and whether or not the school serves high school grades (i.e. grades 9-12). Fixed effects for year control for inflation and other time trends in Kansas education.

Efficiency Factors

The error terms for all frontier specifications depend on a number of factors that theory suggests may explain differences in school efficiency. Prior research has demonstrated that competition can reduce inefficiency in public education (e.g., Belfield & Levin, 2002; Millimet & Collier, 2008; Gronberg et al. 2015), and so can ease of voter monitoring (Grosskopf et al. 2001). Therefore, the one-sided variance function is modeled as a linear combination of five variables—the degree of educational competition in the metropolitan area or county; an indicator for whether or not the district is located in a metropolitan area that spans state lines (because the level of competition is imperfectly measured in those education markets using only Kansas data); the percentage of household that are owner-occupants, the percentage of the population with at least a bachelor's degree and the percentage of households wherein no residents are over 60 years of age. We note that the latter three variable were also treated as efficiency factors in Duncombe and Yinger (2005).[20]

As is common in the literature, the degree of educational competition is measured with a Herfindahl index of enrollment concentration. A Herfindahl index (which is defined as the sum of the squared enrollment shares) increases as the level of enrollment concentration increases. A Herfindahl index of 1.00 indicates a metropolitan or micropolitan area with a single local education agency (LEA); a Herfindahl index of 0.10 indicates a metropolitan or micropolitan area with 10 LEAs of equal size. Table A1 reports the mean value for the Herfindahl index in the sample is .38, with a minimum value of .13 and a maximum of 1, indicating that some counties in Kansas are served by a single unified school district.

Heteroskedasticity in the two-sided error may also arise. To capture such a possibility, the two-sided variance is modeled as a function of the share of building expenditures that was not specifically allocated to the building by the expenditures file. This variable has been included because measurement error in the dependent variable (a common source of heteroskedasticity) is likely to be a function of the extent to which the dependent variable was imputed.

Instrumental Variables

The key to implementing the control function corrections is the identification of viable instruments for school quality. Human capital theory suggests that local labor market conditions can influence the

[20] By assumption, the one-sided error term has a half-normal distribution. Jenson (2005) finds that specifying a half-normal distribution for the inefficiency term generates more reliable estimates of technical efficiency than other assumptions about the distribution of inefficiency.

demand for educational quality and the opportunity cost of staying in school so, as in Gronberg, Jansen and Taylor (2015) and Taylor, Gronberg and Jansen (2017), this analysis uses labor market conditions in the vicinity of the building as instruments for the Conditional NCE scores and graduation rates. The indicators of labor market conditions—the number of employers in the building zip code, the unemployment rate in the county-- and the number of those employers that are restaurants—reflect industrialization and the availability of the types of jobs most commonly held by teenagers and comes from the ZIP Business Patterns produced by the Census Bureau. The set of instrumental variables also includes a measure of the likely demand for educational services in the community—the ratio of students to working age adults.

Results

Table 17 describes the first-stage independent variable coefficient estimates along with their standard errors. Results for both of the student outcome measures – growth scores and graduation rates – suggest robust results. More specifically, changes in NCE showed to be associated with changes in district enrollment, the percentage of the population that is low-income, and for elementary grades served. For graduation rates we can observe that changes in the rate are associated with changes in district enrollment as well but also the salary index, rural indicator, student demographic characteristics and various other explanatory variables. Crucially, the instrumental variables are well correlated with the outcome measures. The first stage F-statistics are 12.25 and 38.55 for the Conditional NCE and graduation rate, respectively.

Table 19. First-Stage IV Coefficient Estimates

LABELS	NCE	Graduation Rate
District Enrollment	0.0380**	0.0649***
	(-0.016)	(-0.023)
District Enrollment squared	-0.0023**	-0.0054***
	(-0.001)	(-0.002)
Salary index (log)	-0.0275	0.137
	(-0.087)	(-0.101)
Rural indicator	-0.0053	0.0109***
	(-0.003)	(-0.004)
% Economically Disadvantaged	-0.0888***	-0.1874***
	(-0.019)	(-0.026)
% English Learners	-0.0006	-0.1101***
	(-0.023)	(-0.026)
% Special Ed.	-0.1039	-0.2162**
	(-0.072)	(-0.093)
Population density	-0.005	-0.0105
	(-0.005)	(-0.007)
Elementary grades served	0.0155***	-0.0051

	(-0.004)	(-0.007)
High school grades served	-0.004 (-0.004)	-0.0133* (-0.007)
% Economically Disadvantaged, squared	0.0111 (-0.021)	0.0386 (-0.026)
% English Learners, squared	-0.002 (-0.034)	0.2132*** (-0.036)
% Special Ed., squared	0.3860** (-0.191)	0.6742*** (-0.253)
Population density* Salary Index	0.0158 (-0.013)	0.0457*** (-0.015)
AYP Schoolyear = 2017	-0.0005 (-0.002)	-0.0035 (-0.002)
Enrollment per estimated adult	-0.0784*** (-0.016)	0.1111*** (-0.02)
Zip Total Establishments	-0.0031** (-0.001)	-0.0093*** (-0.002)
County annual avg. unemployment rate	0.4207*** (-0.059)	0.8054*** (-0.082)
Constant	-0.0784*** (-0.016)	0.1111*** (-0.02)
Observations	2,310	2,310
Adjusted R-squared	0.18	0.466

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 14 presents two versions of the cost function coefficients. The first model is the preferred specification; the second is presented to demonstrate that certain modeling decisions are not driving the results. As the second column illustrates, top-coding district enrollment and excluding the quadratic term for percent economically disadvantaged are both clearly appropriate.

Table 20. Cost Model Coefficient Estimates

LABELS	Baseline	Alternative Model
Normal Curve Equivalent	5.295*** (-0.607)	5.287*** (-0.629)
Graduation Rate	1.244*** (-0.262)	1.271*** (-0.26)
Graduation Rate * High School	0.696*** (-0.0995)	0.682*** (-0.0999)

LABELS	Baseline	Alternative Model
District Enrollment	-1.444*** (-0.0568)	-1.454*** (-0.0588)
District Enrollment squared	0.0991*** (-0.00378)	0.0998*** (-0.00396)
Salary index (log)	1.373*** (-0.279)	1.369*** (-0.276)
Rural indicator	0.0505*** (-0.0112)	0.0507*** (-0.0112)
% Economically Disadvantaged	0.886*** (-0.078)	0.901*** (-0.105)
% English Language Learner	0.226*** (-0.0667)	0.225*** (-0.0656)
% Special Education	2.157*** (-0.226)	2.146*** (-0.229)
Population Density	0.166*** (-0.018)	0.167*** (-0.0181)
Elementary grades served	-0.129*** (-0.016)	-0.129*** (-0.0161)
High school grades served	-0.508*** (-0.0909)	-0.496*** (-0.0914)
% Economically Disadvantaged, sq		-0.0131 (-0.0627)
% English Language Learner, sq	-0.623*** (-0.109)	-0.619*** (-0.108)
% Special Education, sq	-6.135*** (-0.674)	-6.136*** (-0.684)
Population density* Salary Index	-0.510*** (-0.0414)	-0.515*** (-0.0416)
District Enrollment* Big District Indicator		-0.000512 (-0.0016)
AYP Schoolyear = 2016	-0.0364*** (-0.00591)	-0.0366*** (-0.00591)
First stage Residuals, NCE	-5.102*** (-0.609)	-5.099*** (-0.63)
First stage residuals, Graduation	-1.454*** (-0.271)	-1.477*** (-0.268)
Herfindahl Index, log	0.797*** (-0.249)	0.748*** (-0.249)
Border metro	2.320*** (-0.372)	2.281*** (-0.368)
% Owner occupied	7.293*** (-1.321)	7.556*** (-1.323)

LABELS	Baseline	Alternative Model
% Over 60	-2.316 (-1.496)	-1.963 (-1.473)
% College	-12.06*** (-1.542)	-11.65*** (-1.531)
Constant	9.644*** (-0.357)	9.654*** (-0.398)
Usigma	-7.214*** (-0.958)	-7.667*** (-0.991)
Vsigma	-4.095*** (-0.0418)	-4.105*** (-0.0437)
Observations	2,310	2,310

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Adequacy calculations

One calculates the costs associated with various performance standards by using the coefficient estimates in the above table to predict the excpenditures associated with the designated performance metrics and the observed characteritics of districts. Such calculations are very straightforward with respect to the Conditional NCE and the graduation rate. To calculate the expected cost of increasing the graduation rate to 95%, one replaces the observed graduation rate with 95% and generates the model predictions.

It is a bit trickier to go from Conditional NCE scores—a measure of growth – to performance levels consistent with the Rose Standards. As discussed above, one could interpret the Rose Standards as requiring 90% of the students to score at level 2 or above on the KAP, or one could interpret the Rose Standards as requiring 60% of the students to score at level 3 or above. In neither case can one simply forecast the cost associated with a common Conditional NCE score. After all, if everyone grows at the same rate, existing performance gaps will never close.

If a student is lagging her peers in reading, she needs to grow faster than they do to close the gaps. Therefore, the research team calculated the number of standard deviations of growth required for each student to achieve the cut scores for level 2 and level 3 on the KAP. Then, assuming that all of the students in a district would experience the same number of standard deviations of growth, they calculated the district growth rate that would lead 90% of the students to meet the cut scores for level 2 and the district growth rate that would lead 60% of the students to meet the cut scores for level 3. The cost projections for closing the gaps are based on these estimates. In other words, the researchers estimated the cost associated with each district posting the amount of growth necessary to have a reasonable expectation that the designated percentage of students will make enough progress to meet the appropriate cut scores.

Technical Appendix B: Estimating the Teacher Salary Index

For more than 30 years, economists have used hedonic wage models and regression analysis to explain why labor costs differ from one school district to another. Those analyses suggest that differences in average teacher salaries can be explained by differences in teacher characteristics (such as their educational attainment and years of experience), job characteristics (such as the characteristics of the students being served), and locational characteristics (such as the local cost of living).[21]

The hedonic wage model used in this analysis, which updates the hedonic wage model used in Taylor et al (2014), describes wages as a function of labor market characteristics, job characteristics, observable teacher characteristics, and unobservable teacher characteristics. Formally, the model can be expressed as:

$$ln\,(W_{idjt}) = D_{dt}\beta + T_{it}\delta + M_{jt} + \varepsilon_{idjt} \qquad (1)$$

where the subscripts i,d,j and t stand for individuals, districts, labor markets and time, respectively, W_{idjt} is the teacher's full-time-equivalent monthly salary, D_{dt} is a vector of job characteristics that could give rise to compensating differentials, T_{it} is a vector of individual teacher characteristics that vary over time, and M_{jt} is a vector of labor market characteristics. The ε_{idjt} are random effects for individuals, which are presumed to follow the autoregressive pattern found in the data.[22] (An autoregressive pattern to teacher salaries means that if a teacher earns more than the model predicts in one year, he or she will probably earn more than the model predicts the next year too.)

The data on teacher salaries and individual teacher characteristics come from the Kansas Department of Education. The hedonic wage analysis covers the nine-year period from 2008-09- through 2016–17). As in the cost function analysis, data from open-enrollment charter campuses, virtual campuses and all alternative education campuses have been excluded. All teachers with complete data who worked at least half time for a traditional public district have been included in the analysis.

The measure of teacher salaries that is used in this analysis is the total, full-time equivalent (FTE) annual salary. It is calculated as the observed total salary divided by the percent FTE. Full-time equivalent salaries less than 50% of the state's statutory minimum were deemed implausible and treated as missing. In addition, the

[21] For more on the use of hedonic wage models in education, see Chambers (1998); Chambers & Fowler (1995); Goldhaber (1999); Stoddard (2005); or Taylor (2008a, 2008b, 2010, 2011).

[22] See Drukker (2003) and Wooldridge (2002).

Table 20 presents the coefficient estimates and standard errors for the hedonic wage model. As the table illustrates, the hedonic model includes controls for teacher experience (the log of years of experience, the square of log experience and an indicator for first-year teachers) and indicators for the teacher's educational attainment (no degree, bachelor's degree, specialist degree, master's degree, or doctorate).

Job characteristics in the analysis include indicators for teaching assignment (general elementary, language arts, mathematics, science, social studies, health and physical education, foreign languages, fine arts, computers, vocational/technical subjects, special education, standardized-tested subjects, early childhood, English for speakers of other languages, and other instructional duties). Any given teacher could have multiple teaching assignments (such as an individual teaching both mathematics and science) or serve multiple student populations (such as kindergarten and pre-kindergarten).

Other job characteristics in the analysis include an indicator for whether or not the individual was assigned to multiple buildings and indicators for whether or not the teacher had additional duties as a department head, administrator, team sports, support staff, tutor, study skills, gifted, and other non-teaching duties.

Finally, the hedonic wage model also includes eight variables that describe various aspects of local labor market conditions. The ACS Comparable Wage reflects the prevailing wage for college graduates, the U.S. Department of Housing and Urban Development's estimate of Fair Market Rents for a two-bedroom apartment (in logs) reflects deviations in the cost of living, while the U.S. Bureau of Labor Statistic's measure of the metropolitan area unemployment rate reflects job prospects outside of teaching, U.S. Census indicator for whether or not the school district is located in a major metropolitan area (with 50,000 or more population) and another indicator for a metropolitan area with more than 10,000 but less than 50,000 population), miles to the nearest metro or micro area, and miles to a micro area reflect urbanicity. Distance to the nearest school in another state reflects access to employment opportunities outside of Kansas.

The Teacher Salary Index (TSI) for each building is based on the predicted wage for a teacher with 10 years of experience and a Master's degree, holding all other teacher characteristics and job characteristics constant at the statewide mean, but leaving the building and labor market characteristics unchanged.

Table 21. Hedonic wage model coefficient estimates

	Coefficients	Standard Errors
Years of experience (log)	-0.0222***	(0.00259)
Years of experience (log), sq.	0.0296***	(0.000659)
Teacher Educational Attainment		
No degree	-0.0972	(0.0756)
Bachelor's degree	-0.0531**	(0.0265)
Specialist/Management Specialists	0.121***	(0.00772)

	Coefficients	Standard Errors
Master's degree	0.0874***	(0.00165)
Doctoral degree	0.000	
Teacher Assignment		
Assigned multiple buildings	-0.0179***	(0.00200)
First year teacher	-0.0608***	(0.00210)
Special education	-0.0202***	(0.00292)
Language arts teacher	-0.0202***	(0.00161)
Mathematics teacher	-0.0129***	(0.00182)
Computer science	-0.00207	(0.00290)
Science	-0.0120***	(0.00188)
Social science	-0.0112***	(0.00187)
Fine arts	0.00372**	(0.00271)
Foreign language	0.00284	(0.00512)
Health and physical education	-0.0161***	(0.00283)
General elementary teacher	0.0103***	(0.00163)
Early childhood	-0.0646***	(0.00560)
English for speakers of other languages	-0.00321	(0.00727)
Vocational/technical	0.00486**	(0.00245)
Other instructional duties	-0.0699***	(0.00507)
Administrator	0.300***	(0.00352)
Support staff	0.00389***	(0.00134)
Department head	0.0249***	(0.00494)
At risk	-0.0115***	(0.00355)
Study skills	-0.000232	(0.00216)
Gifted	0.00313	(0.00750)
Tutoring	-0.00198	(0.00349)
Team sports	0.00994	(0.0101)
Other non-teaching duties	0.000219	(0.00129)
School Location Characteristics		
Miles to the nearest metro or micro area	0.000957***	(2.86e-05)
Miles to the nearest metro area	-0.00478***	(8.84e-05)
Fair market rent (log)	-0.109***	(0.00848)
Unemployment rate	-0.00164***	(0.000505)

	Coefficients	Standard Errors
Metro indicator	0.0735***	(0.00360)
Micro indicator	-0.0399***	(0.00331)
ACS-CWI	0.712***	(0.0257)
Distance to a neighboring school in another state	-0.000437***	(3.77e-05)
School year		
School year 2008-09	-0.140***	(0.00241)
School year 2009-10	-0.121***	(0.00253)
School year 2010-11	-0.105***	(0.00241)
School year 2011-12	-0.0730***	(0.00219)
School year 2012-13	-0.0760***	(0.00218)
School year 2013-14	-0.0550***	(0.00175)
School year 2014-15	-0.0356***	(0.00140)
School year 2015-16	-0.0290***	(0.00120)
School year 2016-17	0.0000	
Observations	326,154	
Number of teachers	59,133	

Note: Asterisks indicate a coefficient that is statistically significant at the 1%*** 5%** or 10%* levels.

Estimating the Comparable Wage Index

The ACS-CWI for this analysis is based on an analysis of public use micro-data from the 2014, 2015 and 2016 American Community Surveys (ACS)[23]. The ACS, which is conducted annually by the U.S. Census Bureau, has replaced the decennial census as the primary source of demographic information about the U.S. population. It provides information about the earnings, age, occupation, industry, and other demographic characteristics for millions of U.S. workers. The ACS-CWI measures earnings differences for college graduates and has been modeled after the baseline analysis used to construct the National Center for Education Statistics' (NCES) CWI (Taylor and Fowler, 2006).

Like the NCES CWI, the ACS-CWI comes from regression analyses of individual earnings data. Workers with incomplete data and workers without at least a bachelor's degree were excluded from the estimation sample, as was anyone who had a teaching or educational administration occupation or who was employed in the elementary and secondary education industry. Self-employed workers were excluded because their reported earnings may not represent the market value of their time. Individuals who

[23] The analysis is based on annual files for each survey administration, and not on the combined three-year file.

reported working less than half time or for more than 90 hours a week were also excluded, as were workers under the age of 18 and over the age of 80. Finally, individuals employed outside the United States were excluded because their earnings may represent compensation for foreign travel or other working conditions not faced by domestic workers.

The ACS-CWI was estimated from nationwide data because the national sample is much larger and yields much more precise estimates of wages by industry and occupation than could be generated using only the ACS data for the state of Kansas. For similar reasons, the analyses combines data from the three most recent administrations of the ACS.

Table 23 presents the results from the regression analysis. The dependent variable is the log of annual wage and salary earnings. Key independent variables include the age, sex, race, educational attainment, language ability, and amount of time worked for each individual in the national sample. The model includes the interaction between sex and age, to allow for the possibility that men and women have different career paths, and therefore different age-earnings profiles. In addition, the estimation includes indicator variables for occupation and industry for each year. This specification allows wages to rise (or fall) more slowly in some occupations or industries than it does in others. Such flexibility is particularly important because the analysis period includes the period immediately after the "Great Recession" and some industries and occupations recovered more slowly than others. Finally, each regression includes indicator variables for each labor market area.

The labor markets are based on "place-of-work areas" as defined by the Census Bureau. Census place-of-work areas are geographic regions designed to contain at least 100,000 persons. The place-of-work areas do not cross state boundaries and generally follow the boundaries of county groups, single counties, or census-defined places (Ruggles et al. 2012). Counties in sparsely-populated parts of a state are clustered together into a single Census place-of-work area. All local communities in the United States are part of a place-of-work area. Individuals can live in one labor market, and work in another. Their wage and salary earnings are attributed to their place of work, not their place of residence. The labor markets used in these analyses are either single places of work, or a cluster of the places-of-work that comprise a metropolitan area.[24]

As Table 24 illustrates, the estimated model is consistent with reasonable expectations about labor markets. Wage and salary earnings increase with the amount of time worked per week and the number of weeks worked per year. Earnings also rise as workers get older, but the increase is more rapid for men than for women (perhaps because age is not as good an indicator of work experience for women as it is for men). Workers with advanced degrees earn systematically more than workers with a bachelor's degree. Whites earn systematically more than apparently comparable individuals from other racial groups. Workers who do not speak English well earn substantially less than other workers, all other things being equal.

[24] Place of work areas were matched to counties and aggregated into core based statistical areas using data from the Missouri Census Data Center's MABLE/Geocorr12: Geographic Correspondence Engine.

The predicted wage level in each labor market area captures systematic variations in labor earnings while controlling for demographics, industrial and occupational mix, and amount of time worked [25]. Dividing each local wage prediction by the corresponding national average yields the ACS-CWI.

Table 22. Estimating the ACS-CWI

Explanatory Variables	ACS-CWI Model	
	Estimate	Std. Error
USUAL HRS. WORKED PER WEEK	0.944	0.003
WORKED 27-39 WEEKS	-0.553	0.004
WORKED 40-47 WEEKS	-0.251	0.003
WORKED 48-49 WEEKS	-0.103	0.004
FEMALE	0.308	0.013
AGE	0.086	0.000
AGE, SQUARED	-0.001	0.000
FEMALE*AGE	-0.016	0.001
FEMALE*AGE, SQUARED	0.000	0.000
NOT AN ENGLISH SPEAKER	-0.482	0.021
BACHELOR'S DEGREE	-0.217	0.003
MASTER'S DEGREE	-0.099	0.003
PROFESSIONAL DEGREE	0.000	
DOCTORAL DEGREE	0.059	0.004
HISPANIC	-0.100	0.002
AMERICAN INDIAN OR ALASKA NATIVE	-0.060	0.010
BLACK	-0.127	0.002
CHINESE	-0.081	0.003
JAPANESE	-0.084	0.008

[25] Formally, the predicted wage level in each market is the least-squares mean for the market fixed effect. The least-squares mean (or population marginal mean) is defined as the expected value of the mean for each effect (in this context, each market) that you would expect from a balanced design holding all covariates at their mean values and all classification variables (such as occupation or sex) at their population frequencies.

Explanatory Variables	ACS-CWI Model	
	Estimate	Std. Error
OTHER ASIAN/PACIFIC ISLANDER	-0.078	0.002
OTHER RACE, N.E.C.	-0.065	0.005
MIXED RACE	-0.061	0.004
WHITE	0.000	
INDUSTRY*YEAR INDICATORS?	Yes	
OCCUPATION*YEAR INDICATORS?	Yes	
LABOR MARKET INDICATORS?	Yes	
NUMBER OF OBSERVATIONS	**853,143**	

Source: Ruggles et al. (2015) and author's calculations.

Technical Appendix C: Expenditure Definition

In Chapter 4 of this report a summary of the expenditure definition was discussed including the allocation of costs from the school district to the school. This technical appendix provides additional detail on the items that were included and excluded from the fiscal analysis for this cost study for fiscal years 2017, 2016, and 2015. This technical appendix draws on the most recent Accounting Manual published by the Kansas State Department of Education (KSDE).[civ] The accounting manual is the handbook used by each Kansas school district that guides the classification and assignment of its funds, either revenue, expenditures, transfers or other activity. The tables below identify those expenditures that were included and excluded from the cost function analysis according to the classification of either fund (table 25, function (table 26) or object (table 27). Note that the corresponding fund, function or object number is included in parentheses next to the category title.

Table 23. Included and Excluded Funds from Cost Function Analysis[cv]

Funds	Categories That Have Been Included or Excluded from the Cost Function Analysis
Included	***General Fund (06), Supplemental General Fund (08)***
	Special Revenue Funds
	• Special Liability Expense (42) • Bilingual Education (14) • Virtual Education (15) • Driver Training (18) • Professional Development (26) • Parent Education Program (28) • Summer School (29) • Special Education (30) • Vocational Education (34) • Area Vocational School (36) • Textbook & Materials Revolving (55) • Risk Management (50) • Capital Outlay (16) • Worker's Compensation (52) • Educational Excellence Program (20) • Extraordinary School Program (22) • Extraordinary Growth Facility (45) • Coop Special Education (78) • Federal Funds (07) • At Risk (4-year-old) (11) • At Risk (K-12) (13) • Declining Enrollment (19) • Tuition Reimbursement (57) • KPERS Special Retire Contribute (51) • Cost of Living (33)
	Trust Agency Funds
	• School Retirement (44) • Special Reserve Fund (47) • Recreation Commission (84) • Recreation Comm Employee Benefit (86) • Library Board (82) • Contingency Reserve Fund (53) • Gifts and Grants (35)
	Internal Service Funds

Funds	Categories That Have Been Included or Excluded from the Cost Function Analysis
	• Activity (56)
Excluded	***Special Revenue Funds*** • Adult Education (10) • Adult Education Supplemental (12) • Food Service (24) ***Capital Project Funds*** ***Debt Service Funds*** • Bond & Interest (62, 63) • Special Assessment (67) • No-Fund Warrants, Temp Notes (66)

Table 24. Included and Excluded Functions from Cost Function Analysis[cvi]

Function	Categories That Have Been Included or Excluded from the Cost Function Analysis
Included	***Instruction (1000)*** ***Support Services*** • Students (2100) • Instruction (2200) • General Administration (2300) • School Administration (2400) • Central Services (2500) • Other Central Services (2600) • Other Support Services (2900) ***Operation of Non-Instructional Services*** • Enterprise Operations (3200)
Excluded	***Support Services*** • Student Transportation (2700) ***Operation of Non-Instructional Services*** • Food Service (3100) • Community Service (3300) ***Facilities Acquisition and Construction*** • Land Acquisition (4100) • Land Improvement (4200) • Architecture and Engineering (4300) • Educational Specs Development (4400) • New Building Acquisition (4500) • Site Improvement (4600) • Building Improvements (4700) • Other Facilities Acquisition Cons. (4900)

Function	Categories That Have Been Included or Excluded from the Cost Function Analysis
	Debt Service • Debt Service (5100) • Fund Transfers (5200)

Table 25. Included and Excluded Objects from Cost Function Analysis[cvii]

Objects	Categories That Have Been Included or Excluded from the Cost Function Analysis
Included	***Personal Services – Salaries*** • Regular Certified Salaries (110) • Regular Non-Certified Salaries (120) • Additional Compensation (150) ***Employee Benefits*** • Group Insurance (210) • Social Security Contribution (220) • On-Behalf Payments (240) • Tuition Reimbursement (250) • Unemployment Compensation (260) • Worker's Compensation (270) • Health Benefits (280) • Other Employee Benefits (290) ***Purchased Professional and Technical Services*** • Official/Admin Services (310) • Professional-Education Services (320) • Professional Employee Training (330) • Other Professional Services (340) • Technical Services (350) ***Purchased Property Services*** • Utility Services (410) • Cleaning Services (420) • Repairs and Maintenance Services (430) • Rentals (440) • Construction Services (450) • Repair of Buildings (460) • Other Purchased Property Srvcs (490) ***Other Purchased Services*** • Insurance Services (520) • Communication (530) • Advertising (540) • Printing & Binding (550) • Tuitions (560) • Staff Travel (580) • Interagency Purchased Services (590) ***Supplies and Materials*** • Gen'l Supplies and Materials (610) • Energy (620) • Food and Milk (630) • Books and Periodicals (640) • Supplies-Tech Related (650) • Merchandise Purchased for Resale (660) • Testing Supplies and Materials (670) • Miscellaneous Supplies (680)

Objects	Categories That Have Been Included or Excluded from the Cost Function Analysis
Excluded	***Other Purchased Services*** • Student Transportation (510) • Food Service Management (570) ***Property*** • Land and Improvement (710) • Building (Existing Buildings) (720) • Equipment (730) • Infrastructure (740) • Depreciation (790) ***Debt Service*** • Dues and Fees (810) • Judgments Against the LEA (820) • Debt-Related Expenditures (830) ***Other Items*** • Fund Transfers (930-980)

Technical Appendix D: School District Characteristics

Drawing from the findings discussed in Chapter 5 of this report, below is a list of each school district in Kansas that had sufficient data to generate an estimated General Fund revenue allocation for the current and subsequent four years. The numbers presented in columns 4-6 are expressed as decimals and when multiplied by 100 equal the percentages of the student population for those need categories.

Table 26. List of school district characteristics and index values by each Kansas school district

District ID	District Name	Total Enroll (#)	Percentage Poverty (%)	Percentage ELL (%)	Percentage Special Ed (%)	Teacher Cost Index
D0435	Abilene	1,635	0.36	0.01	0.17	1.30
D0387	Altoona-Midway	177	0.46	0.00	0.19	1.30
D0385	Andover	8,281	0.08	0.03	0.08	1.45
D0359	Argonia Public Schools	191	0.40	0.00	0.26	1.33
D0470	Arkansas City	2,912	0.60	0.17	0.22	1.30
D0220	Ashland	196	0.31	0.14	0.13	1.36
D0377	Atchison Co Comm Schools	527	0.40	0.01	0.19	1.39
D0409	Atchison Public Schools	1,743	0.55	0.01	0.22	1.35
D0511	Attica	172	0.34	0.00	0.23	1.16
D0437	Auburn Washburn	6,323	0.25	0.03	0.12	1.52

D0402	Augusta	2,295	0.33	0.01	0.14	1.41
D0348	Baldwin City	1,431	0.26	0.00	0.18	1.51
D0254	Barber County North	485	0.38	0.01	0.20	1.15
D0223	Barnes	445	0.24	0.11	0.15	1.27
D0458	Basehor-Linwood	2,549	0.12	0.01	0.13	1.36
D0508	Baxter Springs	1,022	0.53	0.04	0.17	1.37
D0357	Belle Plaine	641	0.32	0.00	0.18	1.40
D0273	Beloit	801	0.30	0.03	0.18	1.26
D0229	Blue Valley	22,640	0.05	0.03	0.10	1.56
D0384	Blue Valley	225	0.16	0.00	0.20	1.45
D0205	Bluestem	490	0.44	0.01	0.24	1.37
D0204	Bonner Springs	2,733	0.39	0.07	0.12	1.49
D0314	Brewster	148	0.37	0.00	0.18	1.06
D0459	Bucklin	239	0.43	0.02	0.18	1.40
D0313	Buhler	2,306	0.29	0.02	0.13	1.27
D0454	Burlingame Public School	299	0.34	0.02	0.25	1.44
D0244	Burlington	858	0.30	0.01	0.19	1.25

D0369	Burrton	246	0.46	0.02	0.17	1.41
D0360	Caldwell	241	0.41	0.00	0.14	1.36
D0436	Caney Valley	766	0.40	0.02	0.09	1.34
D0419	Canton-Galva	349	0.30	0.00	0.22	1.33
D0285	Cedar Vale	189	0.58	0.00	0.32	1.33
D0462	Central	316	0.48	0.02	0.24	1.34
D0288	Central Heights	559	0.53	0.01	0.18	1.33
D0112	Central Plains	531	0.34	0.00	0.18	1.34
D0397	Centre	480	0.14	0.00	0.10	1.21
D0413	Chanute Public Schools	1,851	0.52	0.03	0.15	1.28
D0361	Chaparral Schools	848	0.51	0.09	0.21	1.17
D0473	Chapman	1,093	0.34	0.00	0.13	1.34
D0284	Chase County	347	0.24	0.00	0.11	1.29
D0401	Chase-Raymond	160	0.58	0.03	0.26	1.31
D0286	Chautauqua Co Community	374	0.53	0.00	0.19	1.31
D0268	Cheney	797	0.22	0.00	0.12	1.43
D0247	Cherokee	489	0.45	0.00	0.17	1.34

D0447	Cherryvale	911	0.50	0.00	0.12	1.37
D0505	Chetopa-St. Paul	438	0.42	0.00	0.15	1.35
D0103	Cheylin	129	0.48	0.29	0.12	1.00
D0102	Cimarron-Ensign	655	0.35	0.21	0.14	1.44
D0375	Circle	1,971	0.19	0.01	0.11	1.41
D0379	Clay Center	1,363	0.31	0.00	0.20	1.24
D0264	Clearwater	1,154	0.23	0.00	0.18	1.49
D0224	Clifton-Clyde	316	0.29	0.00	0.17	1.19
D0445	Coffeyville	1,777	0.68	0.11	0.12	1.38
D0315	Colby Public Schools	886	0.27	0.06	0.15	1.07
D0493	Columbus	987	0.46	0.00	0.17	1.32
D0300	Comanche County	323	0.31	0.02	0.28	1.26
D0333	Concordia	1,094	0.34	0.03	0.16	1.23
D0356	Conway Springs	535	0.21	0.00	0.13	1.38
D0476	Copeland	96	0.31	0.41	0.05	1.46
D0479	Crest	223	0.43	0.02	0.16	1.27
D0332	Cunningham	160	0.29	0.03	0.16	1.37

D0232	De Soto	7,137	0.09	0.04	0.08	1.51
D0216	Deerfield	210	0.68	0.40	0.12	1.54
D0260	Derby	7,073	0.37	0.10	0.14	1.49
D0471	Dexter	145	0.32	0.00	0.19	1.35
D0482	Dighton	230	0.33	0.02	0.19	1.34
D0443	Dodge City	7,054	0.70	0.57	0.12	1.47
D0111	Doniphan West Schools	339	0.37	0.00	0.11	1.44
D0396	Douglass Public Schools	736	0.26	0.01	0.21	1.43
D0410	Durham-Hillsboro-Lehigh	599	0.27	0.03	0.17	1.26
D0449	Easton	609	0.24	0.00	0.16	1.42
D0490	El Dorado	1,968	0.45	0.01	0.20	1.35
D0283	Elk Valley	118	0.69	0.00	0.28	1.34
D0218	Elkhart	1,147	0.17	0.10	0.10	1.39
D0307	Ell-Saline	464	0.21	0.05	0.15	1.34
D0355	Ellinwood Public Schools	503	0.35	0.00	0.14	1.31
D0388	Ellis	473	0.24	0.00	0.17	1.44
D0327	Ellsworth	641	0.25	0.01	0.13	1.28

D0253	Emporia	4,598	0.48	0.34	0.13	1.34
D0101	Erie-Galesburg	525	0.49	0.01	0.18	1.35
D0491	Eudora	1,736	0.29	0.01	0.16	1.51
D0389	Eureka	661	0.52	0.01	0.14	1.18
D0310	Fairfield	286	0.52	0.06	0.18	1.31
D0492	Flinthills	273	0.32	0.00	0.20	1.31
D0234	Fort Scott	1,881	0.50	0.01	0.13	1.34
D0225	Fowler	150	0.37	0.03	0.19	1.44
D0484	Fredonia	682	0.44	0.00	0.14	1.34
D0249	Frontenac Public Schools	940	0.31	0.01	0.10	1.34
D0495	Ft Larned	943	0.42	0.02	0.23	1.31
D0207	Ft Leavenworth	1,681	0.04	0.04	0.13	1.38
D0499	Galena	849	0.53	0.01	0.17	1.35
D0457	Garden City	7,701	0.60	0.47	0.12	1.54
D0231	Gardner Edgerton	5,914	0.23	0.02	0.16	1.52
D0365	Garnett	992	0.36	0.00	0.17	1.35
D0475	Geary County Schools	7,802	0.40	0.09	0.15	1.35

D0248	Girard	1,024	0.39	0.02	0.12	1.41
D0265	Goddard	5,679	0.18	0.04	0.15	1.49
D0411	Goessel	273	0.22	0.02	0.16	1.29
D0316	Golden Plains	180	0.57	0.18	0.23	1.12
D0352	Goodland	939	0.38	0.12	0.13	1.03
D0281	Graham County	365	0.34	0.00	0.21	1.32
D0428	Great Bend	2,928	0.58	0.26	0.14	1.36
D0200	Greeley County Schools	251	0.37	0.29	0.16	1.28
D0291	Grinnell Public Schools	82	0.35	0.00	0.13	1.18
D0440	Halstead	771	0.33	0.03	0.15	1.39
D0390	Hamilton	60	0.47	0.00	0.22	1.25
D0312	Haven Public Schools	892	0.31	0.06	0.13	1.27
D0474	Haviland	104	0.32	0.00	0.19	1.23
D0489	Hays	3,177	0.32	0.07	0.17	1.50
D0261	Haysville	5,648	0.46	0.04	0.16	1.52
D0468	Healy Public Schools	67	0.54	0.21	0.22	1.34
D0487	Herington	487	0.49	0.00	0.21	1.29

D0460	Hesston	802	0.17	0.04	0.09	1.42
D0415	Hiawatha	933	0.41	0.01	0.17	1.37
D0227	Hodgeman County Schools	292	0.25	0.06	0.16	1.39
D0431	Hoisington	753	0.44	0.01	0.17	1.40
D0363	Holcomb	1,018	0.45	0.17	0.09	1.58
D0336	Holton	1,128	0.34	0.03	0.12	1.44
D0412	Hoxie Community Schools	392	0.26	0.00	0.19	1.19
D0210	Hugoton Public Schools	1,047	0.50	0.37	0.08	1.41
D0258	Humboldt	805	0.28	0.00	0.11	1.26
D0308	Hutchinson Public Schools	4,677	0.55	0.06	0.19	1.30
D0446	Independence	2,137	0.51	0.03	0.19	1.44
D0477	Ingalls	212	0.27	0.13	0.02	1.42
D0448	Inman	431	0.20	0.00	0.15	1.29
D0257	Iola	1,305	0.50	0.00	0.19	1.23
D0346	Jayhawk	577	0.49	0.02	0.15	1.31
D0339	Jefferson County North	464	0.23	0.00	0.19	1.50

D0340	Jefferson West	861	0.21	0.00	0.16	1.42
D0500	Kansas City	21,937	0.78	0.40	0.13	1.54
D0321	Kaw Valley	1,182	0.27	0.00	0.21	1.45
D0331	Kingman - Norwich	979	0.32	0.01	0.21	1.38
D0347	Kinsley-Offerle	349	0.45	0.18	0.21	1.35
D0422	Kiowa County	420	0.16	0.00	0.14	1.30
D0483	Kismet-Plains	708	0.65	0.67	0.11	1.50
D0395	LaCrosse	289	0.36	0.00	0.17	1.33
D0506	Labette County	1,574	0.46	0.00	0.15	1.41
D0215	Lakin	636	0.43	0.26	0.10	1.48
D0469	Lansing	2,698	0.21	0.02	0.17	1.34
D0497	Lawrence	11,969	0.28	0.09	0.13	1.54
D0245	LeRoy-Gridley	208	0.32	0.00	0.18	1.23
D0453	Leavenworth	3,873	0.49	0.02	0.16	1.37
D0243	Lebo-Waverly	428	0.30	0.01	0.17	1.30
D0467	Leoti	400	0.44	0.35	0.16	1.39
D0502	Lewis	118	0.48	0.22	0.14	1.26

D0480	Liberal	4,971	0.71	0.64	0.11	1.48
D0298	Lincoln	353	0.41	0.01	0.16	1.34
D0444	Little River	315	0.21	0.02	0.19	1.31
D0326	Logan	150	0.31	0.03	0.16	1.23
D0416	Louisburg	1,720	0.15	0.02	0.09	1.36
D0421	Lyndon	436	0.28	0.00	0.15	1.44
D0405	Lyons	847	0.59	0.23	0.25	1.28
D0351	Macksville	236	0.48	0.36	0.17	1.24
D0386	Madison-Virgil	219	0.40	0.00	0.21	1.30
D0266	Maize	7,173	0.14	0.02	0.12	1.48
D0383	Manhattan-Ogden	6,388	0.29	0.07	0.17	1.44
D0456	Marais Des Cygnes Valley	220	0.49	0.00	0.29	1.48
D0408	Marion-Florence	521	0.33	0.00	0.19	1.20
D0256	Marmaton Valley	287	0.44	0.00	0.16	1.29
D0364	Marysville	747	0.31	0.01	0.20	1.29
D0342	McLouth	488	0.32	0.00	0.19	1.40
D0418	McPherson	2,404	0.29	0.02	0.19	1.37

D0226	Meade	408	0.27	0.05	0.18	1.43
D0219	Minneola	244	0.51	0.02	0.18	1.48
D0330	Mission Valley	497	0.28	0.00	0.21	1.46
D0371	Montezuma	236	0.37	0.12	0.08	1.43
D0417	Morris County	733	0.34	0.03	0.13	1.29
D0209	Moscow Public Schools	175	0.61	0.35	0.07	1.46
D0423	Moundridge	401	0.19	0.00	0.15	1.28
D0263	Mulvane	1,797	0.31	0.01	0.15	1.47
D0115	Nemaha Central	603	0.14	0.02	0.11	1.22
D0461	Neodesha	697	0.48	0.01	0.12	1.38
D0303	Ness City	312	0.38	0.14	0.20	1.27
D0373	Newton	3,539	0.43	0.06	0.16	1.37
D0309	Nickerson	1,139	0.43	0.03	0.14	1.31
D0335	North Jackson	367	0.31	0.00	0.22	1.46
D0251	North Lyon County	395	0.44	0.00	0.14	1.29
D0239	North Ottawa County	616	0.32	0.00	0.20	1.35
D0246	Northeast	496	0.58	0.01	0.20	1.36

D0212	Northern Valley	146	0.39	0.00	0.16	1.19
D0211	Norton Community Schools	665	0.31	0.01	0.17	1.18
D0274	Oakley	409	0.38	0.00	0.17	1.16
D0294	Oberlin	340	0.32	0.00	0.13	1.15
D0233	Olathe	29,029	0.21	0.11	0.13	1.53
D0322	Onaga-Havensville-Wheaton	302	0.33	0.00	0.23	1.39
D0420	Osage City	685	0.35	0.01	0.20	1.43
D0367	Osawatomie	1,161	0.53	0.00	0.23	1.41
D0392	Osborne County	278	0.38	0.00	0.18	1.24
D0341	Oskaloosa Public Schools	612	0.41	0.00	0.21	1.40
D0504	Oswego	461	0.49	0.00	0.18	1.35
D0403	Otis-Bison	246	0.40	0.00	0.11	1.38
D0290	Ottawa	2,479	0.42	0.01	0.11	1.34
D0358	Oxford	444	0.25	0.01	0.15	1.41
D0269	Palco	88	0.27	0.00	0.18	1.39
D0368	Paola	2,029	0.27	0.01	0.14	1.38

D0399	Paradise	113	0.37	0.04	0.26	1.41
D0503	Parsons	1,314	0.60	0.01	0.17	1.37
D0496	Pawnee Heights	152	0.25	0.03	0.11	1.25
D0398	Peabody-Burns	262	0.47	0.00	0.22	1.20
D0343	Perry Public Schools	745	0.29	0.01	0.19	1.46
D0325	Phillipsburg	621	0.26	0.00	0.17	1.20
D0426	Pike Valley	223	0.40	0.02	0.20	1.17
D0203	Piper-Kansas City	2,186	0.13	0.04	0.09	1.48
D0250	Pittsburg	3,143	0.57	0.10	0.18	1.33
D0270	Plainville	340	0.28	0.00	0.18	1.44
D0344	Pleasanton	359	0.46	0.00	0.23	1.29
D0113	Prairie Hills	1,125	0.27	0.00	0.16	1.27
D0362	Prairie View	919	0.38	0.01	0.18	1.36
D0382	Pratt	1,229	0.40	0.08	0.14	1.21
D0311	Pretty Prairie	244	0.25	0.00	0.05	1.30
D0293	Quinter Public Schools	304	0.24	0.05	0.22	1.29
D0105	Rawlins County	335	0.33	0.10	0.18	1.08

D0206	Remington-Whitewater	515	0.29	0.07	0.14	1.37
D0267	Renwick	1,856	0.10	0.00	0.11	1.45
D0109	Republic County	515	0.41	0.00	0.20	1.15
D0378	Riley County	681	0.20	0.01	0.17	1.41
D0114	Riverside	642	0.45	0.00	0.24	1.49
D0404	Riverton	741	0.42	0.01	0.14	1.34
D0323	Rock Creek	1,043	0.22	0.01	0.14	1.46
D0107	Rock Hills	312	0.42	0.00	0.17	1.20
D0217	Rolla	134	0.34	0.28	0.13	1.41
D0394	Rose Hill Public Schools	1,616	0.22	0.02	0.13	1.46
D0337	Royal Valley	837	0.40	0.00	0.17	1.47
D0481	Rural Vista	297	0.35	0.02	0.22	1.30
D0407	Russell County	836	0.42	0.01	0.21	1.37
D0305	Salina	7,386	0.47	0.12	0.14	1.34
D0434	Santa Fe Trail	1,040	0.40	0.00	0.22	1.46
D0507	Satanta	307	0.59	0.50	0.09	1.47
D0466	Scott County	1,023	0.37	0.25	0.12	1.41

D0345	Seaman	3,807	0.28	0.01	0.16	1.50
D0439	Sedgwick Public Schools	479	0.31	0.00	0.14	1.42
D0450	Shawnee Heights	3,504	0.27	0.03	0.13	1.49
D0512	Shawnee Mission Pub Sch	27,333	0.28	0.12	0.09	1.56
D0372	Silver Lake	716	0.14	0.01	0.12	1.53
D0438	Skyline Schools	412	0.23	0.05	0.12	1.20
D0237	Smith Center	400	0.37	0.00	0.19	1.21
D0400	Smoky Valley	1,572	0.13	0.00	0.09	1.32
D0393	Solomon	316	0.38	0.00	0.19	1.35
D0255	South Barber	255	0.36	0.02	0.24	1.12
D0430	South Brown County	577	0.58	0.05	0.19	1.44
D0509	South Haven	208	0.36	0.00	0.23	1.42
D0306	Southeast Of Saline	697	0.18	0.00	0.14	1.28
D0334	Southern Cloud	207	0.46	0.00	0.20	1.30
D0252	Southern Lyon County	498	0.34	0.00	0.14	1.29
D0381	Spearville	356	0.27	0.05	0.12	1.42
D0230	Spring Hill	3,896	0.11	0.01	0.16	1.47

D0297	St Francis Comm Sch	283	0.30	0.09	0.14	1.05
D0350	St John-Hudson	328	0.39	0.16	0.20	1.25
D0349	Stafford	209	0.52	0.10	0.22	1.27
D0452	Stanton County	438	0.41	0.36	0.10	1.28
D0376	Sterling	508	0.28	0.01	0.14	1.33
D0271	Stockton	342	0.40	0.01	0.25	1.33
D0374	Sublette	466	0.49	0.33	0.08	1.47
D0299	Sylvan Grove	248	0.34	0.00	0.13	1.26
D0494	Syracuse	542	0.49	0.43	0.09	1.33
D0110	Thunder Ridge Schools	217	0.50	0.02	0.22	1.18
D0464	Tonganoxie	1,963	0.22	0.01	0.14	1.39
D0501	Topeka Public Schools	13,794	0.66	0.13	0.19	1.53
D0275	Triplains	65	0.28	0.00	0.23	1.18
D0429	Troy Public Schools	333	0.22	0.00	0.18	1.44
D0202	Turner-Kansas City	4,110	0.63	0.24	0.11	1.54
D0240	Twin Valley	603	0.34	0.00	0.15	1.37
D0463	Udall	311	0.33	0.00	0.18	1.24

D0214	Ulysses	1,758	0.50	0.39	0.11	1.38
D0235	Uniontown	442	0.45	0.00	0.12	1.34
D0262	Valley Center Pub Sch	2,879	0.30	0.02	0.14	1.45
D0338	Valley Falls	381	0.31	0.00	0.19	1.45
D0498	Valley Heights	401	0.37	0.01	0.17	1.29
D0380	Vermillion	578	0.22	0.00	0.12	1.27
D0432	Victoria	288	0.13	0.00	0.16	1.44
D0329	Wabaunsee	446	0.23	0.00	0.16	1.42
D0272	Waconda	325	0.36	0.00	0.17	1.20
D0208	Wakeeney	387	0.27	0.00	0.27	1.39
D0241	Wallace County Schools	202	0.29	0.02	0.17	1.16
D0320	Wamego	1,533	0.20	0.01	0.14	1.42
D0108	Washington Co. Schools	340	0.37	0.01	0.22	1.25
D0353	Wellington	1,622	0.46	0.01	0.23	1.36
D0289	Wellsville	782	0.23	0.00	0.17	1.27
D0242	Weskan	104	0.26	0.05	0.20	1.12
D0282	West Elk	353	0.46	0.00	0.28	1.25

D0287	West Franklin	601	0.42	0.00	0.28	1.29
D0106	Western Plains	107	0.56	0.25	0.18	1.31
D0292	Wheatland	110	0.25	0.00	0.10	1.22
D0259	Wichita	50,566	0.65	0.22	0.14	1.50
D0465	Winfield	2,227	0.46	0.04	0.18	1.33
D0366	Woodson	464	0.47	0.00	0.21	1.18

Technical Appendix E: School District Cost Estimates and Weights

Drawing from the findings discussed in chapter 5 of this report, below is a list of each school district in Kansas and the associated estimated base cost per pupil, gap closure per pupil cost, and associated index values for regional cost variation, overall size, and student demographic composition. These tables would apply for the latest year of financial data available which was the 2016-17 school year. The numbers presented in columns 4-6 are expressed as decimals and when multiplied by 100 equal the percentages of the student population for those need categories.

Table 27. School district base and gap closure cost estimates and index values

			Maintenance					Compensate	
District ID	District Name	Total Enroll	Base (95%)	Base (90%)	Regional Index	Economies of Scale Index	Student Need Index	Scenario A	Scenario B
D0435	Abilene	1,635	$3,757.95	$3,483.82	1.88	1.00	1.35	1.29	1.40
D0387	Altoona-Midway	177	$3,724.81	$3,425.46	1.79	1.56	1.47	1.28	1.42
D0385	Andover	8,281	$3,739.55	$3,468.94	1.46	1.35	1.00	1.35	1.35
D0359	Argonia Public Schools	191	$3,668.30	$3,385.17	1.69	1.51	1.34	1.37	1.49
D0470	Arkansas City	2,912	$3,691.10	$3,429.75	1.78	1.05	1.68	1.09	1.14
D0220	Ashland	196	$3,821.00	$3,542.61	1.77	1.49	1.30	1.09	1.21

D0377	Atchison Co Comm Schools	527	$3,929.73	$3,622.75	1.70	1.11	1.40	1.43	1.46
D0409	Atchison Public Schools	1,743	$3,694.44	$3,431.28	1.71	1.00	1.58	1.12	1.15
D0511	Attica	172	$3,639.13	$3,387.73	1.71	1.57	1.31	1.10	1.03
D0437	Auburn Washburn	6,323	$3,799.58	$3,527.01	1.37	1.24	1.21	1.22	1.27
D0402	Augusta	2,295	$3,718.73	$3,452.10	1.61	1.02	1.30	1.18	1.23
D0348	Baldwin City	1,431	$3,722.02	$3,454.77	1.54	1.00	1.23	1.18	1.20
D0254	Barber County North	485	$3,823.36	$3,536.73	1.65	1.13	1.37	1.33	1.33
D0223	Barnes	445	$3,757.56	$3,483.51	1.76	1.15	1.23	1.19	1.24
D0458	Basehor-Linwood	2,549	$3,764.68	$3,489.27	1.68	1.03	1.07	1.25	1.35
D0508	Baxter Springs	1,022	$3,915.11	$3,610.93	1.76	1.01	1.58	1.40	1.46
D0357	Belle Plaine	641	$3,720.23	$3,453.32	1.68	1.07	1.30	1.58	1.74

D0273	Beloit	801	$3,875.12	$3,578.59	1.77	1.04	1.28	1.45	1.43
D0384	Blue Valley	225	$3,720.60	$3,453.61	1.72	1.42	1.13	1.26	1.37
D0229	Blue Valley	22,640	$3,761.13	$3,486.39	1.15	1.97	1.00	1.31	1.31
D0205	Bluestem	490	$3,866.36	$3,571.50	1.71	1.13	1.42	1.15	1.13
D0204	Bonner Springs	2,733	$3,722.69	$3,455.30	1.41	1.04	1.38	1.16	1.27
D0314	Brewster	148	$3,835.54	$3,546.58	1.37	1.68	1.35	1.29	1.25
D0459	Bucklin	239	$3,524.15	$3,282.37	1.72	1.38	1.44	1.48	1.49
D0313	Buhler	2,306	$3,704.92	$3,440.93	1.83	1.02	1.26	1.29	1.29
D0454	Burlingame Public School	299	$3,667.20	$3,384.38	1.67	1.28	1.28	1.31	1.36
D0244	Burlington	858	$3,756.92	$3,482.99	1.86	1.03	1.28	1.37	1.32
D0369	Burrton	246	$3,682.50	$3,395.29	1.69	1.37	1.48	1.12	1.21

D0360	Caldwell	241	$3,690.79	$3,401.21	1.71	1.38	1.39	2.09	2.26
D0436	Caney Valley	766	$3,952.68	$3,641.32	1.72	1.04	1.33	0.95	0.91
D0419	Canton-Galva	349	$3,898.47	$3,597.47	1.72	1.23	1.26	1.26	1.44
D0285	Cedar Vale	189	$3,681.62	$3,394.67	1.77	1.51	1.43	0.77	0.86
D0462	Central	316	$3,902.09	$3,600.40	1.70	1.26	1.46	1.06	1.17
D0288	Central Heights	559	$3,689.73	$3,400.45	1.72	1.10	1.57	1.41	1.49
D0112	Central Plains	531	$3,775.15	$3,497.73	1.77	1.11	1.33	0.98	0.96
D0397	Centre	480	$3,956.33	$3,590.57	1.68	1.13	1.07	1.07	1.10
D0413	Chanute Public Schools	1,851	$3,723.43	$3,455.91	1.91	1.01	1.55	1.01	1.04
D0361	Chaparral Schools	848	$3,858.93	$3,565.50	1.74	1.03	1.56	1.08	1.05
D0473	Chapman	1,093	$3,764.03	$3,488.74	1.79	1.01	1.31	1.14	1.21

D0284	Chase County	347	$3,923.67	$3,617.85	1.74	1.23	1.18	1.08	1.20
D0401	Chase-Raymond	160	$3,761.06	$3,486.33	1.76	1.62	1.57	0.99	1.11
D0286	Chautauqua Co Community	374	$3,980.06	$3,663.46	1.78	1.20	1.56	1.04	1.14
D0268	Cheney	797	$3,722.22	$3,454.93	1.66	1.04	1.17	1.00	1.02
D0247	Cherokee	489	$3,813.08	$3,528.41	1.74	1.13	1.46	1.21	1.34
D0447	Cherryvale	911	$3,877.80	$3,580.75	1.71	1.02	1.50	1.10	1.24
D0505	Chetopa-St. Paul	438	$3,748.02	$3,461.57	1.76	1.16	1.42	1.46	1.61
D0103	Cheylin	129	$3,917.57	$3,612.92	1.24	1.79	1.49	1.36	1.40
D0102	Cimarron-Ensign	655	$3,892.72	$3,592.82	1.82	1.07	1.35	1.05	1.06
D0375	Circle	1,971	$3,812.65	$3,537.11	1.66	1.01	1.13	1.30	1.33
D0379	Clay Center	1,363	$3,474.29	$3,254.40	1.81	1.00	1.28	1.06	1.13

D0264	Clearwater	1,154	$3,846.49	$3,564.64	1.59	1.01	1.20	1.31	1.35
D0224	Clifton-Clyde	316	$3,800.66	$3,518.37	1.75	1.26	1.27	0.90	0.98
D0445	Coffeyville	1,777	$3,789.23	$3,517.99	1.66	1.00	1.79	1.24	1.32
D0315	Colby Public Schools	886	$3,394.97	$3,190.25	1.79	1.03	1.25	1.76	1.90
D0493	Columbus	987	$3,723.05	$3,455.59	1.82	1.02	1.47	1.08	1.20
D0300	Comanche County	323	$3,716.60	$3,450.38	1.68	1.25	1.20	1.31	1.28
D0333	Concordia	1,094	$3,394.97	$3,190.25	1.85	1.01	1.33	1.34	1.49
D0356	Conway Springs	535	$3,785.39	$3,506.02	1.70	1.11	1.17	1.30	1.40
D0476	Copeland	96	$3,394.97	$3,190.25	1.84	2.09	1.16	1.20	1.28
D0479	Crest	223	$3,692.32	$3,430.75	1.77	1.42	1.43	1.21	1.29
D0332	Cunningham	160	$3,850.85	$3,558.96	1.70	1.62	1.27	1.07	1.20

D0232	De Soto	7,137	$3,739.73	$3,469.09	1.38	1.28	1.01	1.21	1.26
D0216	Deerfield	210	$3,715.99	$3,449.89	1.76	1.45	1.75	0.61	0.76
D0260	Derby	7,073	$3,693.81	$3,431.94	1.35	1.28	1.37	1.13	1.18
D0471	Dexter	145	$3,665.97	$3,383.51	1.70	1.70	1.29	2.81	2.96
D0482	Dighton	230	$3,899.50	$3,598.31	1.76	1.40	1.32	1.15	1.18
D0443	Dodge City	7,054	$3,705.07	$3,441.05	1.57	1.28	1.66	1.18	1.26
D0111	Doniphan West Schools	339	$3,831.82	$3,543.57	1.71	1.24	1.33	1.33	1.38
D0396	Douglass Public Schools	736	$3,816.91	$3,531.51	1.66	1.05	1.23	1.25	1.33
D0410	Durham-Hillsboro-Lehigh	599	$3,685.13	$3,397.17	1.83	1.08	1.25	1.21	1.22
D0449	Easton	609	$3,794.21	$3,513.15	1.65	1.08	1.21	1.37	1.42
D0490	El Dorado	1,968	$3,711.46	$3,446.22	1.71	1.01	1.46	1.17	1.23

D0283	Elk Valley	118	$3,844.53	$3,553.85	1.78	1.87	1.68	1.34	1.54
D0218	Elkhart	1,147	$3,750.74	$3,477.99	1.80	1.01	1.11	1.14	1.28
D0307	Ell-Saline	464	$3,918.97	$3,614.05	1.70	1.14	1.19	1.22	1.38
D0355	Ellinwood Public Schools	503	$3,765.93	$3,499.25	1.73	1.12	1.32	1.20	1.18
D0388	Ellis	473	$3,927.69	$3,621.11	1.70	1.13	1.21	0.84	0.93
D0327	Ellsworth	641	$3,877.51	$3,580.52	1.80	1.07	1.21	1.25	1.28
D0253	Emporia	4,598	$3,747.89	$3,475.69	1.72	1.14	1.48	1.32	1.38
D0101	Erie-Galesburg	525	$3,765.46	$3,489.90	1.79	1.11	1.51	1.13	1.18
D0491	Eudora	1,736	$3,702.03	$3,438.60	1.47	1.00	1.26	1.38	1.44
D0389	Eureka	661	$3,846.40	$3,555.36	1.73	1.06	1.54	1.36	1.50
D0310	Fairfield	286	$3,956.33	$3,590.57	1.68	1.30	1.57	1.31	1.51

D0492	Flinthills	273	$3,876.71	$3,589.95	1.67	1.32	1.30	1.12	1.19
D0234	Fort Scott	1,881	$3,735.16	$3,465.39	1.81	1.01	1.50	1.17	1.23
D0225	Fowler	150	$3,837.04	$3,547.79	1.84	1.67	1.36	1.33	1.31
D0484	Fredonia	682	$3,883.98	$3,585.76	1.80	1.06	1.44	0.77	0.82
D0249	Frontenac Public Schools	940	$3,712.59	$3,447.13	1.72	1.02	1.25	0.97	1.03
D0495	Ft Larned	943	$3,730.15	$3,461.34	1.80	1.02	1.41	1.29	1.39
D0207	Ft Leavenworth	1,681	$3,583.00	$3,342.32	1.60	1.00	1.01	1.60	1.60
D0499	Galena	849	$3,736.02	$3,466.09	1.79	1.03	1.57	1.03	1.09
D0457	Garden City	7,701	$3,773.73	$3,504.71	1.57	1.31	1.59	1.36	1.53
D0231	Gardner Edgerton	5,914	$3,394.97	$3,190.25	1.40	1.21	1.20	1.18	1.19
D0365	Garnett	992	$3,881.82	$3,584.01	1.80	1.02	1.34	1.36	1.43

D0475	Geary County Schools	7,802	$3,633.77	$3,383.38	1.71	1.32	1.41	1.23	1.30
D0248	Girard	1,024	$3,394.97	$3,190.25	1.68	1.01	1.36	1.07	1.19
D0265	Goddard	5,679	$3,806.19	$3,532.27	1.40	1.20	1.16	1.43	1.53
D0411	Goessel	273	$3,711.63	$3,416.07	1.82	1.32	1.20	1.32	1.37
D0316	Golden Plains	180	$3,755.08	$3,481.50	1.58	1.55	1.63	1.10	1.13
D0352	Goodland	939	$3,883.16	$3,585.09	1.61	1.02	1.37	1.01	1.00
D0281	Graham County	365	$3,888.51	$3,589.42	1.76	1.21	1.31	1.17	1.28
D0428	Great Bend	2,928	$3,819.30	$3,543.33	1.70	1.05	1.65	1.51	1.61
D0200	Greeley County Schools	251	$3,654.40	$3,375.26	1.68	1.36	1.37	1.13	1.18
D0291	Grinnell Public Schools	82	$3,394.97	$3,190.25	1.59	2.28	1.33	1.24	1.31
D0440	Halstead	771	$3,741.86	$3,470.81	1.68	1.04	1.31	1.13	1.13

D0390	Hamilton	60	$4,113.33	$3,771.25	1.68	2.75	1.47	1.06	1.25
D0312	Haven Public Schools	892	$3,856.54	$3,566.41	1.75	1.02	1.28	1.30	1.32
D0474	Haviland	104	$3,394.97	$3,190.25	1.67	2.00	1.30	1.20	1.13
D0489	Hays	3,177	$3,708.94	$3,444.19	1.55	1.06	1.32	1.22	1.26
D0261	Haysville	5,648	$3,394.97	$3,190.25	1.31	1.20	1.48	1.17	1.24
D0468	Healy Public Schools	67	$3,906.32	$3,603.82	1.76	2.57	1.59	0.23	0.25
D0487	Herington	487	$3,714.95	$3,449.04	1.84	1.13	1.50	1.05	1.12
D0460	Hesston	802	$3,753.25	$3,480.02	1.62	1.04	1.09	1.22	1.21
D0415	Hiawatha	933	$3,697.14	$3,434.64	1.79	1.02	1.42	1.26	1.36
D0227	Hodgeman County Schools	292	$3,887.00	$3,588.19	1.81	1.29	1.23	1.20	1.29
D0431	Hoisington	753	$3,720.28	$3,453.36	1.70	1.04	1.45	1.28	1.25

D0363	Holcomb	1,018	$3,743.45	$3,472.10	1.67	1.01	1.42	0.83	0.92
D0336	Holton	1,128	$3,704.70	$3,440.76	1.63	1.01	1.30	1.44	1.46
D0412	Hoxie Community Schools	392	$3,834.20	$3,545.50	1.65	1.19	1.23	1.24	1.29
D0210	Hugoton Public Schools	1,047	$3,752.84	$3,488.33	1.80	1.01	1.45	1.12	1.22
D0258	Humboldt	805	$3,730.27	$3,461.43	1.84	1.04	1.22	1.15	1.26
D0308	Hutchinson Public Schools	4,677	$3,863.10	$3,573.61	1.83	1.14	1.61	1.31	1.37
D0446	Independence	2,137	$3,548.90	$3,300.02	1.61	1.01	1.55	1.12	1.13
D0477	Ingalls	212	$3,686.24	$3,397.96	1.83	1.45	1.10	0.92	0.94
D0448	Inman	431	$3,953.96	$3,642.36	1.73	1.16	1.17	1.44	1.57
D0257	Iola	1,305	$3,726.94	$3,458.74	1.94	1.00	1.53	1.04	1.12
D0346	Jayhawk	577	$3,856.57	$3,563.59	1.71	1.09	1.51	0.99	0.99

D0339	Jefferson County North	464	$3,721.28	$3,454.16	1.63	1.14	1.20	1.16	1.20
D0340	Jefferson West	861	$3,748.15	$3,475.90	1.62	1.03	1.18	1.15	1.12
D0500	Kansas City	21,937	$3,679.89	$3,420.69	1.17	1.97	1.91	1.33	1.39
D0321	Kaw Valley	1,182	$3,923.24	$3,617.51	1.66	1.00	1.23	1.09	1.16
D0331	Kingman - Norwich	979	$3,788.83	$3,508.80	1.70	1.02	1.30	1.18	1.21
D0347	Kinsley-Offerle	349	$3,874.51	$3,578.10	1.79	1.23	1.48	0.99	1.10
D0422	Kiowa County	420	$3,805.13	$3,499.86	1.74	1.17	1.12	0.97	1.03
D0483	Kismet-Plains	708	$3,677.24	$3,391.54	1.77	1.05	1.50	1.20	1.23
D0395	LaCrosse	289	$3,815.03	$3,539.92	1.77	1.30	1.35	1.12	1.18
D0506	Labette County	1,574	$3,757.27	$3,483.28	1.69	1.00	1.47	1.39	1.39
D0215	Lakin	636	$3,685.16	$3,424.95	1.76	1.07	1.41	1.03	1.08

D0469	Lansing	2,698	$3,775.74	$3,498.22	1.72	1.04	1.19	1.32	1.39
D0497	Lawrence	11,969	$3,742.54	$3,471.36	1.30	1.55	1.25	1.18	1.20
D0245	LeRoy-Gridley	208	$3,798.78	$3,516.85	1.77	1.46	1.30	1.35	1.37
D0453	Leavenworth	3,873	$3,789.90	$3,509.66	1.62	1.10	1.52	1.06	1.04
D0243	Lebo-Waverly	428	$3,708.44	$3,413.79	1.80	1.16	1.28	1.13	1.13
D0467	Leoti	400	$3,878.48	$3,581.31	1.81	1.18	1.45	1.20	1.19
D0502	Lewis	118	$3,394.97	$3,190.25	1.69	1.87	1.52	1.46	1.71
D0480	Liberal	4,971	$3,720.29	$3,457.82	1.55	1.16	1.60	1.11	1.23
D0298	Lincoln	353	$3,842.67	$3,552.34	1.78	1.22	1.41	0.91	0.97
D0444	Little River	315	$3,848.11	$3,573.81	1.74	1.26	1.18	1.44	1.45
D0326	Logan	150	$3,984.39	$3,666.97	1.68	1.67	1.29	1.16	1.26

D0416	Louisburg	1,720	$3,759.93	$3,485.43	1.70	1.00	1.08	1.23	1.32
D0421	Lyndon	436	$3,736.20	$3,466.23	1.66	1.16	1.25	1.35	1.45
D0405	Lyons	847	$3,684.38	$3,424.32	1.85	1.03	1.63	1.37	1.37
D0351	Macksville	236	$3,928.82	$3,622.02	1.69	1.39	1.50	1.06	1.14
D0386	Madison-Virgil	219	$3,990.45	$3,671.86	1.77	1.43	1.38	1.16	1.14
D0266	Maize	7,173	$3,742.63	$3,471.43	1.37	1.28	1.10	1.17	1.21
D0383	Manhattan-Ogden	6,388	$3,730.71	$3,466.03	1.52	1.24	1.28	1.32	1.34
D0456	Marais Des Cygnes Valley	220	$3,726.52	$3,458.40	1.68	1.43	1.40	1.13	1.08
D0408	Marion-Florence	521	$3,778.91	$3,500.78	1.82	1.11	1.31	1.20	1.18
D0256	Marmaton Valley	287	$3,922.52	$3,616.93	1.78	1.30	1.45	1.69	1.83
D0364	Marysville	747	$3,951.25	$3,640.16	1.82	1.05	1.29	1.08	1.11

D0342	McLouth	488	$3,734.67	$3,465.00	1.67	1.13	1.30	1.44	1.66
D0418	McPherson	2,404	$3,750.79	$3,478.03	1.68	1.02	1.27	1.11	1.10
D0226	Meade	408	$3,394.97	$3,190.25	1.82	1.18	1.25	1.57	1.66
D0219	Minneola	244	$3,721.08	$3,454.01	1.85	1.37	1.54	1.39	1.48
D0330	Mission Valley	497	$3,970.90	$3,656.06	1.71	1.12	1.24	1.17	1.36
D0371	Montezuma	236	$3,839.91	$3,550.11	1.80	1.39	1.31	1.33	1.26
D0417	Morris County	733	$3,874.43	$3,578.03	1.78	1.05	1.31	1.36	1.37
D0209	Moscow Public Schools	175	$3,690.08	$3,400.70	1.86	1.56	1.57	1.23	1.22
D0423	Moundridge	401	$3,730.57	$3,461.68	1.74	1.18	1.16	1.10	1.12
D0263	Mulvane	1,797	$3,736.69	$3,466.63	1.52	1.00	1.29	1.36	1.44
D0115	Nemaha Central	603	$3,819.75	$3,533.81	1.84	1.08	1.08	1.67	1.61

D0461	Neodesha	697	$3,915.05	$3,610.88	1.78	1.06	1.47	1.06	1.05
D0303	Ness City	312	$3,993.60	$3,674.42	1.73	1.27	1.40	0.85	0.89
D0373	Newton	3,539	$3,503.07	$3,291.83	1.67	1.08	1.44	1.19	1.28
D0309	Nickerson	1,139	$3,795.45	$3,523.64	1.75	1.01	1.42	1.13	1.23
D0335	North Jackson	367	$3,932.46	$3,624.96	1.71	1.21	1.28	1.24	1.34
D0251	North Lyon County	395	$3,759.59	$3,485.15	1.69	1.19	1.43	1.30	1.36
D0239	North Ottawa County	616	$3,911.67	$3,608.15	1.70	1.08	1.29	1.01	1.03
D0246	Northeast	496	$3,767.07	$3,491.20	1.70	1.12	1.63	1.27	1.36
D0212	Northern Valley	146	$3,735.60	$3,465.75	1.66	1.69	1.38	1.30	1.34
D0211	Norton Community Schools	665	$3,798.11	$3,524.48	1.74	1.06	1.30	1.14	1.18
D0274	Oakley	409	$3,775.97	$3,498.40	1.64	1.17	1.37	0.84	0.89

D0294	Oberlin	340	$3,895.54	$3,595.11	1.60	1.24	1.28	1.16	1.22
D0233	Olathe	29,029	$3,731.06	$3,462.08	1.19	1.97	1.18	1.20	1.23
D0322	Onaga-Havensville-Wheaton	302	$3,720.66	$3,453.67	1.71	1.28	1.29	1.60	1.68
D0420	Osage City	685	$3,724.10	$3,456.44	1.65	1.06	1.33	1.67	1.62
D0367	Osawatomie	1,161	$3,750.98	$3,478.19	1.64	1.01	1.54	1.15	1.16
D0392	Osborne County	278	$3,879.97	$3,582.51	1.72	1.31	1.37	1.37	1.32
D0341	Oskaloosa Public Schools	612	$3,881.53	$3,583.77	1.67	1.08	1.41	1.53	1.59
D0504	Oswego	461	$3,892.13	$3,592.34	1.71	1.14	1.51	1.02	1.13
D0403	Otis-Bison	246	$3,941.27	$3,632.09	1.80	1.37	1.36	1.18	1.22
D0290	Ottawa	2,479	$3,727.24	$3,458.98	1.72	1.03	1.38	0.99	1.01
D0358	Oxford	444	$4,074.50	$3,739.84	1.69	1.15	1.22	0.74	0.82

D0269	Palco	88	$3,696.38	$3,434.02	1.81	2.19	1.25	1.76	1.80
D0368	Paola	2,029	$3,739.63	$3,469.01	1.68	1.01	1.24	1.13	1.19
D0399	Paradise	113	$3,835.08	$3,546.21	1.84	1.92	1.32	1.47	1.67
D0503	Parsons	1,314	$3,709.38	$3,444.54	1.68	1.00	1.66	1.14	1.19
D0496	Pawnee Heights	152	$3,956.33	$3,590.57	1.68	1.66	1.20	2.02	2.22
D0398	Peabody-Burns	262	$3,739.10	$3,435.65	1.78	1.34	1.46	1.12	1.17
D0343	Perry Public Schools	745	$3,746.55	$3,474.60	1.62	1.05	1.27	1.35	1.38
D0325	Phillipsburg	621	$3,725.99	$3,457.97	1.77	1.08	1.24	1.35	1.51
D0426	Pike Valley	223	$3,722.06	$3,454.79	1.72	1.42	1.40	0.74	0.86
D0203	Piper-Kansas City	2,186	$3,394.97	$3,190.25	1.43	1.02	1.05	0.95	1.02
D0250	Pittsburg	3,143	$3,718.12	$3,451.61	1.74	1.06	1.65	1.16	1.21

D0270	Plainville	340	$4,024.17	$3,699.13	1.80	1.24	1.25	1.33	1.28
D0344	Pleasanton	359	$3,878.29	$3,581.15	1.74	1.22	1.44	1.25	1.33
D0113	Prairie Hills	1,125	$3,738.80	$3,468.33	1.80	1.01	1.25	1.33	1.28
D0362	Prairie View	919	$3,749.73	$3,477.17	1.71	1.02	1.38	1.48	1.58
D0382	Pratt	1,229	$3,722.06	$3,454.79	1.90	1.00	1.40	1.76	1.78
D0311	Pretty Prairie	244	$3,693.91	$3,432.03	1.70	1.37	1.10	1.54	1.60
D0293	Quinter Public Schools	304	$3,809.41	$3,525.44	1.74	1.28	1.20	1.17	1.14
D0105	Rawlins County	335	$3,846.93	$3,555.79	1.51	1.24	1.33	1.37	1.50
D0206	Remington-Whitewater	515	$3,762.64	$3,487.62	1.70	1.11	1.28	1.33	1.41
D0267	Renwick	1,856	$3,739.74	$3,469.09	1.63	1.01	1.04	1.54	1.54
D0109	Republic County	515	$3,678.93	$3,392.74	1.71	1.11	1.41	1.25	1.18

D0378	Riley County	681	$3,743.88	$3,472.45	1.67	1.06	1.17	1.58	1.59
D0114	Riverside	642	$3,394.97	$3,190.25	1.58	1.07	1.42	1.05	1.06
D0404	Riverton	741	$3,739.49	$3,468.90	1.81	1.05	1.41	1.48	1.61
D0323	Rock Creek	1,043	$3,843.18	$3,552.76	1.66	1.01	1.18	1.15	1.19
D0107	Rock Hills	312	$3,645.06	$3,368.60	1.67	1.27	1.42	1.51	1.45
D0217	Rolla	134	$3,734.30	$3,432.23	1.83	1.76	1.33	1.48	1.78
D0394	Rose Hill Public Schools	1,616	$3,394.97	$3,190.25	1.53	1.00	1.18	1.10	1.12
D0337	Royal Valley	837	$3,732.99	$3,463.64	1.64	1.03	1.40	1.25	1.26
D0481	Rural Vista	297	$3,685.21	$3,425.00	1.78	1.29	1.33	1.26	1.42
D0407	Russell County	836	$3,394.97	$3,190.25	1.79	1.03	1.42	1.14	1.22
D0305	Salina	7,386	$3,722.29	$3,454.98	1.73	1.30	1.51	1.22	1.28

D0434	Santa Fe Trail	1,040	$3,739.27	$3,468.72	1.64	1.01	1.38	1.11	1.11
D0507	Satanta	307	$3,667.42	$3,384.54	1.83	1.27	1.51	0.99	1.10
D0466	Scott County	1,023	$3,394.97	$3,190.25	1.80	1.01	1.36	1.01	1.11
D0345	Seaman	3,807	$3,817.64	$3,541.90	1.44	1.09	1.26	1.18	1.26
D0439	Sedgwick Public Schools	479	$3,930.25	$3,623.18	1.64	1.13	1.28	1.03	1.09
D0450	Shawnee Heights	3,504	$3,824.30	$3,547.08	1.48	1.08	1.24	1.33	1.38
D0512	Shawnee Mission Pub Sch	27,333	$3,764.90	$3,494.81	1.05	1.97	1.22	1.41	1.42
D0372	Silver Lake	716	$3,871.92	$3,576.00	1.57	1.05	1.09	1.12	1.16
D0438	Skyline Schools	412	$3,700.77	$3,437.57	1.61	1.17	1.20	1.18	1.16
D0237	Smith Center	400	$3,919.92	$3,614.83	1.70	1.18	1.36	1.44	1.56
D0400	Smoky Valley	1,572	$3,756.68	$3,482.80	1.72	1.00	1.06	1.26	1.35

D0393	Solomon	316	$3,937.06	$3,628.69	1.79	1.26	1.37	1.13	1.18
D0255	South Barber	255	$3,841.37	$3,551.29	1.59	1.35	1.32	1.70	1.82
D0430	South Brown County	577	$3,711.00	$3,445.85	1.75	1.09	1.65	1.31	1.38
D0509	South Haven	208	$3,697.24	$3,405.80	1.72	1.46	1.33	1.34	1.44
D0306	Southeast Of Saline	697	$3,894.44	$3,594.21	1.73	1.06	1.14	1.29	1.34
D0334	Southern Cloud	207	$3,939.54	$3,630.69	1.76	1.46	1.46	1.39	1.43
D0252	Southern Lyon County	498	$3,849.63	$3,546.11	1.70	1.12	1.31	1.31	1.28
D0381	Spearville	356	$3,704.03	$3,410.65	1.72	1.22	1.23	1.08	1.13
D0230	Spring Hill	3,896	$3,675.47	$3,417.11	1.50	1.10	1.08	1.37	1.39
D0297	St Francis Comm Sch	283	$3,690.53	$3,401.02	1.47	1.31	1.29	1.76	1.94
D0350	St John-Hudson	328	$3,910.49	$3,607.20	1.75	1.25	1.41	1.32	1.37

D0349	Stafford	209	$3,710.55	$3,415.29	1.76	1.46	1.56	1.27	1.35
D0452	Stanton County	438	$3,922.32	$3,616.76	1.72	1.16	1.36	1.15	1.20
D0376	Sterling	508	$3,904.04	$3,601.98	1.80	1.12	1.25	1.16	1.17
D0271	Stockton	342	$3,659.95	$3,404.56	1.78	1.23	1.36	1.15	1.27
D0374	Sublette	466	$3,766.73	$3,498.92	1.82	1.14	1.44	1.21	1.27
D0299	Sylvan Grove	248	$3,889.62	$3,590.32	1.70	1.37	1.31	1.67	1.68
D0494	Syracuse	542	$3,865.99	$3,571.21	1.75	1.10	1.42	1.05	1.17
D0110	Thunder Ridge Schools	217	$3,756.57	$3,482.71	1.64	1.43	1.51	1.04	1.10
D0464	Tonganoxie	1,963	$3,739.70	$3,469.06	1.66	1.01	1.19	1.39	1.51
D0501	Topeka Public Schools	13,794	$3,717.47	$3,450.62	1.16	1.65	1.79	1.52	1.60
D0275	Triplains	65	$3,803.03	$3,520.28	1.46	2.61	1.23	1.13	1.13

D0429	Troy Public Schools	333	$3,879.52	$3,582.15	1.67	1.24	1.19	1.01	1.03
D0202	Turner-Kansas City	4,110	$3,760.81	$3,495.38	1.21	1.11	1.71	1.25	1.33
D0240	Twin Valley	603	$3,913.65	$3,609.75	1.71	1.08	1.32	1.74	1.75
D0463	Udall	311	$3,757.44	$3,483.41	1.73	1.27	1.32	1.03	1.13
D0214	Ulysses	1,758	$3,729.60	$3,460.90	1.79	1.00	1.49	1.02	1.05
D0235	Uniontown	442	$3,905.05	$3,602.79	1.79	1.15	1.44	1.02	1.05
D0262	Valley Center Pub Sch	2,879	$3,807.23	$3,533.53	1.54	1.05	1.27	1.29	1.31
D0338	Valley Falls	381	$3,664.73	$3,408.43	1.66	1.20	1.29	1.29	1.36
D0498	Valley Heights	401	$3,866.25	$3,571.41	1.79	1.18	1.37	1.18	1.15
D0380	Vermillion	578	$3,861.51	$3,567.58	1.77	1.09	1.18	1.23	1.32
D0432	Victoria	288	$3,880.16	$3,582.67	1.70	1.30	1.10	0.88	0.95

D0329	Wabaunsee	446	$3,837.81	$3,557.73	1.71	1.15	1.20	1.24	1.31
D0272	Waconda	325	$3,641.97	$3,366.39	1.74	1.25	1.34	1.11	1.05
D0208	Wakeeney	387	$3,741.41	$3,470.44	1.81	1.19	1.18	1.24	1.28
D0241	Wallace County Schools	202	$3,695.88	$3,433.62	1.53	1.47	1.28	1.35	1.33
D0320	Wamego	1,533	$3,719.46	$3,452.69	1.65	1.00	1.16	1.27	1.34
D0108	Washington Co. Schools	340	$3,866.29	$3,571.45	1.76	1.24	1.35	0.93	1.05
D0353	Wellington	1,622	$3,720.66	$3,453.66	1.70	1.00	1.45	1.33	1.36
D0289	Wellsville	782	$3,758.64	$3,484.38	1.78	1.04	1.20	1.25	1.34
D0242	Weskan	104	$3,968.81	$3,654.36	1.41	2.00	1.24	1.35	1.44
D0282	West Elk	353	$3,956.33	$3,590.57	1.73	1.22	1.37	1.31	1.35
D0287	West Franklin	601	$3,706.73	$3,442.40	1.74	1.08	1.33	1.63	1.66

D0106	Western Plains	107	$3,557.61	$3,306.23	1.73	1.97	1.64	0.82	0.92
D0292	Wheatland	110	$3,907.12	$3,604.47	1.62	1.94	1.17	0.99	1.12
D0259	Wichita	50,566	$3,682.95	$3,422.86	1.24	1.97	1.76	1.29	1.36
D0465	Winfield	2,227	$3,751.82	$3,478.87	1.73	1.02	1.48	1.32	1.36
D0366	Woodson	464	$3,723.66	$3,456.09	1.72	1.14	1.48	1.22	1.22

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[i] Unified Sch. Dist. No. 229 v. State, 885 P.2d 1170, 1177 (Kan.1994) (quoting *Caldwell*, No. 50616).

[ii] *Mock v. State*, No. 91CV1009 at 8, (Shawnee County District Court, 1991).

[iii] Thompson, D. C. & Clark, R. (2001). Kansas. *Public School Finance Programs of the United States and Canada: 1998–99*. National Center for Education Statistics. Washington, DC: National Center for Education Statistics, Institute for Education Sciences, U.S. Dept. of Education. https://nces.ed.gov/edfin/pdf/StFinance/Kansas.pdf

[iv] Unified Sch. Dist. No. 229 v. State, 232,275,885 P.2d 1170 (1994).

[v] Long, J.B. (2016). A History of School Finance Litigation. Legislature of the State of Kansas. Topeka, KS: Kansas Office of Revisor of Statutes.

[vi] *Montoy v. State,* 275 Kan. 153, 62 P.3d 228 (2003) (*Montoy I*).

[vii] *Montoy v. State*, No. 99C1738, at 29 (Shawnee Co. Dist. Ct. Dec. 2, 2003).

[viii] *Montoy v. State*, No. 99C1738 at 11 (Shawnee Co. Dist. Ct. May 11, 2004).

[ix] *Montoy v. State*, 278 Kan. 769 at 9 (2005) (*Montoy II*).

[x] *Id*. 774.

[xi] Long (2016).

[xii] *Gannon v. State*, 298 Kan. 1107 (2014) (*Gannon I*).

[xiii] *Id.* 1170 (citing *Rose*, 790 S.W.2d at 212).

[xiv] *Id.* at 67-68.

[xv] *Id.* at 69 (quoting *U.S.D. 229*).

[xvi] *Id.* 1175.

[xvii] *Id.* at 80.

[xviii] *Gannon v. State*, No. 2010CV1569 at 114-115 (Shawnee Co. Dist. Ct. Dec 30, 2014).

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[xx] *Gannon v. State*, No. 2010CV1569 at 7 (Shawnee Co. Dist. Ct. June 26, 2015).

[xxi] *Gannon v State*, No. 113,267 (Kan. Sup. Ct. Order July 24, 2015).

[xxii] *Gannon v. State*, 303 Kan. 682, 720, 726 (2016) (*Gannon II*).

[xxiii] *Id.* 741.

[xxiv] *Gannon v. State*, 304 Kan. 490, 493 (2016) (*Gannon III*).

[xxv] *Gannon v. State*, No. 113, 267 (Kan. Sup. Ct. Order June 28, 2016).

[xxvi] *Gannon v. State*, No. 113,267 at 7 (March 2, 2016) (*Gannon IV*).

[xxvii] *Id.*

[xxviii] *Id.* at 81.

[xxix] Kansas Legislative Research Dept (2017).

[xxx] *Gannon v. State*, No. 113,267 at 78 (Kan. Sup. Ct. Oct. 2, 2017) (*Gannon V*).

[xxxi] K.S.A. 72-8801 and L. 2017, ch. 95, § 91.

[xxxii] *Gannon V* at 59-60.

[xxxiii] *Id.* at 56-57.

[xxxiv] *Id.* at 67.

[xxxv] *Id.* at 70.

[xxxvi] *Id.* at 73-75.

[xxxvii] *Id.* at 18.

[xxxviii] *Id.* at 24.

[xxxix] *Id.* at 25.

[xl] *Id.* at 30.

[xli] *Id.* at 28.

[xlii] *Id.* at 29.

[xliii] *Id.* at 5.

[xliv] *Gannon V* at 77-78.

[xlv] *Id*. Quoting *Gannon II*, 303 Kan. at 744 (quoting *Edgewood Independent School Dist. v. Kirby*, 804 S.W.2d 491, 498 [Tex. 1991]).

[xlvi] *Gannon V* at 80.

[xlvii] *Alabama Opinion of the Justice*, 624 So.2d 107, 165-66 (Ala. 1993); *Idaho Sch. for Equal Educ. Opportunity v. Evans*, 850 P.2d 724, 734 (Idaho 1993); *McDuffy v. Secretary*, 615 N.E.2d 516, 554 (Mass. 1993); *Claremont Sch. Dist. v. Governor*, 703 A.2d 1353, 1359 (N.H. 1997); *Leandro v. State*, 488 S.E.2d 249, 255 (N.C. 1997); *Abbeville Cty. Sch. Dis. v. State*, 515 S.E.2d 535, 540 (S.C. 1999); *Lake View Sch. Dis. No. 25 v. Huckabee*, 91 S.W.3d 472, 485 (Ark. 2002); *Carrollton-Farmers Branch Indep. Sch. Dis. v. Edgewood Indep. Sch. Dist*., 826 S.W.2d 489, 527-28 (Tex. 1992).

[xlviii] *Gannon I.*

[xlix] *Council for Better Education v. Collins*, No. 85-CI-1759 (Franklin County Circuit Court, Kentucky, October 14, 1988).

[l] Ky. Const. §183

[li] *Council for Better Education v. Wilkinson*, No. 85-CI-1759, slip op. at 4 (Franklin Cir. Ct., Oct. 14, 1988).

[lii] *Rose v. Council for Better Education*, 790 S.W.2d 186, 212-213 (1989).

[liii] *Id.* 197.

[liv] *Id.* 209-210.

[lv] *Id.* 215.

[lvi] *Id.*

[lvii] *Id.* 12.

[lviii] *Id.* 19.

[lix] *Id.* 13-14.

[lx] *Id.* 12.

[lxi] *Dupree v. Alma School District No. 30,* 279 Ark. 340, 651 S.W. 2d 90 (1983).

[lxii] *Dumas, E. Jim DuPree v. Alma School District No. 30. The Encyclopedia of Arkansas History & Culture*. Retrieved from http://www.encyclopediaofarkansas.net/encyclopedia/entry-detail.aspx?entryID=8465.

[lxiii] *Lake View Sch. Dist. No. 25 v. Huckabee*, 91 S.W.3d 484 (2002) (*Lake View III*), (citing Ark. Const. art. XIV, § 1).

[lxiv] *Id* 486.

[lxv] *Id.*, citing Ark. Act 917 of 1995, § 6(c-d).

[lxvi] *Id.* 487-88.

[lxvii] 1997 Ark. Acts 1108 (codified at Ark. Code Ann. § 6-15-1003(a) to (c)).

[lxviii] *Lake View III, 510.*

[lxix] *Id.*

[lxx] 2003 Ark. Acts 35 (codified at Ark. Code Ann. § 6-15-404(a) to (h)).

[lxxi] 2003 Ark. Acts 57 (codified at Ark. Code Ann. § 10-3-2101).

[lxxii] 2003 Ark. Acts 57 (codified at Ark. Code Ann. § 10-3-2002(a)).

[lxxiii] K.S.A. 2013 Supp. 72-1127, as amended by section 32 of 2014 House Bill No. 2506, published as section 32 of chapter 93 of the 2014 Session Laws of Kansas, to be codified at K.S.A. 2014 Supp. 72-1127

[lxxiv] K.S.A. § 72-1127 (2013)

[lxxv] Kansas SB 19, Sec. 43.

[lxxvi] Division of Learning Services. Kansas State Department of Education (2014). *Kansas Alignment to Rose Standards.* Topeka, KS.

[lxxvii] Ibid.

[lxxviii] Ibid.

[lxxix] K.S.A. §72-1101

[lxxx] Kansas Department of Education. September 2014. *Kansas Graduation Requirements: 2014-2015 School Year.* Topeka, KS.

[lxxxi] Kansas Department of Education. Submitted on September 21, 2017. *Revised State Template for the Consolidated State Plan.* Washington, DC.

[lxxxii] K.S.A. §72-1101

[lxxxiii] Kansas Department of Education. September 2014. *Kansas Graduation Requirements: 2014-2015 School Year.* Topeka, KS.

[lxxxiv] K.S.A. §72-1101

[lxxxv] Kansas Department of Education. September 2014. *Kansas Graduation Requirements: 2014-2015 School Year.* Topeka, KS.

[lxxxvi] Kansas Department of Education. Submitted on September 21, 2017. *Revised State Template for the Consolidated State Plan.* Washington, DC.

[lxxxvii] Kansas Department of Education. September 2014. *Kansas Graduation Requirements: 2014-2015 School Year.* Topeka, KS.

[lxxxviii] Kansas Department of Education. Submitted on September 21, 2017. *Revised State Template for the Consolidated State Plan.* Washington, DC.

[lxxxix] Kansas Department of Education. September 2014. *Kansas Graduation Requirements: 2014-2015 School Year.* Topeka, KS.

[xc] Selected from algebra I; geometry; algebra II; or any math course that has algebra II as a prerequisite

[xci] Including biology; advanced biology; chemistry; physics; earth-space science; principles of technology; with at least 1 unit in chemistry or physics.

[xcii] Including: (A) min. ½ unit of U.S. gov't; (B) min. of ½ unit of world history; world geography; or international relations; (C) min. of 1 unit of U.S. history; (D) not more than one unit of the following: anthropology; current social issues; economics; psychology; race and ethnic group relations; sociology; U.S. history; U.S. gov't.

[xciii] Kansas State Department of Education (2018). Kansas Consolidated State Plan for the Every Student Succeeds Act. U.S. Department of Education. Retrieved from http://www.ksde.org/Portals/0/ECSETS/ESEA/KSconsolidatedstateplan01182018_Approved.pdf. (*Kansas ESSA State Plan*)

[xciv] Special Committee on K-12 Student Success. KS Legis. Sess. November 10, 2015. (Testimony of Brad Neuenswander).

[xcv] Kansas Assessment Program. *Technical Manual 2017.* Retrieved from http://ksassessments.org/sites/default/files/documents/KAP_Technical_Manual_2017.pdf

[xcvi] Kansas Assessment Program. *Relating Kansas Assessment Program Scores to ACT Scores.* Retrieved from http://www.ksassessments.org/act.

[xcvii] *Kansas ESSA State Plan.* Appendix A. page 95.

[xcviii] *Kansas ESSA State Plan.* Appendix A. page 95.

[xcix] *Montoy v. State*, No. 92032 (S. Ct. Kan. July 28, 2006).

[c] Kansas Assessment Program. *Performance Levels.* Retrieved from http://www.ksassessments.org/scorereports#PerformanceLevels-Educators.

[ci] Kansas Assessment Program. *Cut Scores for KAP Summative Assessments.* Retrieved from http://ksassessments.org/sites/default/files/documents/KAP_summative_cut_scores.pdf

[cii] *Kansas ESSA state plan*. Appendix A. page 95.

[ciii] The most recent school finance reform put in place in Kansas, SB 19 provided "to fund the necessary supports and interventions for at-risk students, special education, and ELL students, the new funding formula in SB 19 provides additional funding for students in these groups. This includes raising the weighting for at-risk students from .456 to .484, the weighting recommended by the 2006 LPA cost study; authorizing $12 million more per year for special education than the prior law, for a total of $24 million more; and adjusting the weighting for ELL students to the greater of either the FTE enrollment multiplied by 0.395 (based on contact hours) or the actual enrollment in bilingual programs multiplied by 0.185.

[civ] Kansas State Department of Education (KSDE). September 2015. *Accounting Manual for all Unified School Districts.* Retrieved from http://www.ksde.org/Agency/Fiscal-and-Administrative-Services/School-Finance/Guidelines-and-Manuals. Direct link to the accounting manual: http://www.ksde.org/Agency/Fiscal-and-Administrative-Services/School-Finance/Guidelines-and-Manuals.

[cv] Kansas State Department of Education (KSDE). September 2015. *Accounting Manual for all Unified School Districts.* Retrieved from http://www.ksde.org/Agency/Fiscal-and-Administrative-Services/School-Finance/Guidelines-and-Manuals. Fund classification descriptions starting on page 6.

[cvi] Kansas State Department of Education (KSDE). September 2015. *Accounting Manual for all Unified School Districts.* Retrieved from http://www.ksde.org/Agency/Fiscal-and-Administrative-Services/School-Finance/Guidelines-and-Manuals. Function classification descriptions begin on page 14.

[cvii] Kansas State Department of Education (KSDE). September 2015. *Accounting Manual for all Unified School Districts.* Retrieved from http://www.ksde.org/Agency/Fiscal-and-Administrative-Services/School-Finance/Guidelines-and-Manuals. Object classification descriptions starting on page 30.

Appendix 7:

"Estimating the Costs Associated with Reaching Student Achievement Expectations for Kansas Public Education Students: Methods, Data, and Analysis Plan," Prepared by WestEd, dated February 23, 2018

"Estimating the Costs Associated with Reaching Student Achievement Expectations for Kansas Public Education Students: Methods, Data, and Analysis Plan" is publicly available at: https://www.dropbox.com/sh/v24n392eg9ikgiu/AAAIISMNJwzWIE8uK9K_Y-qLa?dl=0&preview=2.23+KS_House+Senate+Hearing_23Feb2018_FINAL.pdf. It is appropriate for this Court to take judicial notice of the WestEd Report and testimony, which is publicly available and part of the legislative history of S.B. 423, and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

Estimating the Costs Associated with Achievement Expectations for Kansas Public Education Students

Methods, Data, and Analysis Plan

Hearing to a Joint Session of the Kansas Senate & House of Representatives

February 23, 2018

Dr. Lori L. Taylor & Jason Willis

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WestEd's Mission

WestEd is a ***nonprofit, nonpartisan research, development, and service agency*** that works with education and other communities to *promote excellence, achieve equity, and improve learning for children, youth, and adults.*

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Jason Willis

- Director of Strategy & Performance at WestEd overseeing the agencies school finance and school system improvement work
- 10 years experience as senior business official in school districts (Oakland, Stockton, San Jose)
- School finance expert in cost studies and district resource allocation methods
  - Work in states such as Maryland, Florida, New York, Arizona, and California

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Dr. Lori L. Taylor

- Verlin and Howard Kruse '52 Founders Professor, Bush School of Government and Public Service, Texas A&M University
- Director, Mosbacher Institute for Trade, Economics and Public Policy
- School finance expert in regional cost, educational cost function analysis
- Board member
  - Association for Education Finance and Policy
  - Regional Education Laboratory Southwest

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Quotes from a Texas Court:

- "[T]he Taylor Study overemphasizes small district behavior and understates the urban influence on cost relationships. Stated another way, **the decision not to "pupil weight" likely explains the Taylor Study's finding of lower costs in large districts**."
- "Dr. Taylor **incorrectly assumes that all of the district's funding is fungible**, i.e., that a district's revenue dollars can be freely allocated according to the efficiency dictates of the model."
- "Dr. Taylor's numbers **simply are not credible [o]n their face**."

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Routledge

The Adequacy of Educational Cost Functions: Lessons From Texas

Timothy J. Gronberg, Dennis W. Jansen, and Lori L. Taylor
Texas A&M University

Adequacy studies based on cost functions have come under attack. A recent Texas court battle featured two cost function studies that reached markedly different conclusions about the additional funding needed to meet designated performance goals. Some critics see such disparities as indicators of a general futility in the whole education cost function enterprise. We argue that the more appropriate conclusion is that it is critically important to demand best-practice techniques from any analyst of educational costs. This article uses the Texas litigation studies as a lens through which to explore best practices in the estimation of educational cost functions. The analysis highlights five key decisions that researchers must make when using the cost function methodology in an educational setting and explores the implications of the various possible choices using recent data on public schools in Texas. As the analysis demonstrates, some common practices in cost function analyses of education are not best practices, and these deviations from best practice can have a significant impact on the estimated cost of an adequate education.

Policymakers, educators, and increasingly litigators demand reliable estimates of the resources needed to provide an adequate education. This demand has led to studies using a variety of techniques to generate estimates of the resources needed for an adequate education. Two popular methods of generating these estimates are the professional judgment method and econometric cost functions. Recently these methods have been put to the test in Texas, in a lawsuit that confounded the issue of the school funding mechanism with the issue of the resources needed to achieve an adequate education.

In the spring of 2004, 46 school districts brought suit against the state of Texas, arguing that the Texas school finance formula was unconstitutional. The plaintiff districts argued that the formula provided inadequate funding, that cost adjustments for student need were too low, and that as a result school districts were forced to raise their local property tax rates to the maximum allowed under the formula, thereby removing local discretion over property tax rates. The latter point was particularly salient because the Texas Constitution prohibits a statewide property tax,

We thank John Yinger for helpful comments and Maria Grandy for research assistance on this project. Professors Gronberg and Jansen also thank the Private Enterprise Research Center at Texas A&M University for research support. All views expressed are those of the authors alone.

Correspondence should be sent to Lori L. Taylor, The Bush School of Government and Public Service, Texas A&M University, Texas College Station, TX 77843-4220. E-mail: ltaylor@tamu.edu

Prediction of various cost studies to reach state definition of adequacy in Texas West Orange Cove lawsuit (2004):

- Cost Function analysis by I&R = **$457 million more**
- Professional Judgement analysis by MAP = **$683-$830 million more**
- Cost Function analysis by Taylor = **$861 thousand more**

In 2004, all 46 plaintiff districts met or exceeded the performance benchmarks used in the cost studies, and all were deemed "acceptable" by the state.

Spending fell in 28 districts and rose by only $8.7 million in the other 18.

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"Peer Review"

- … the court found a number of other methodological flaws in the Taylor study. These "[flaws in the Taylor Study] included a failure to properly account for the relative size of districts in the study's expenditure recommendations, the use of flawed methods used to compare scores on the current state achievement test with scores on a predecessor exam, and failure to capture variations in teacher salaries which result from cost of living and other factors outside a district's control." (Rebell 2007)
- "Little if any attention was given, however, to the critical, practical cost analysis question of what level of resources needs to be made available now in order to reach a desired outcome goal at a particular point in the future. . . . These are the types of difficult questions that must be posed and answered if the output measures used in adequacy cost study are to have any real credibility."

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Today's Objectives

- **Describe the methods, data, and analysis plan for the study**
- **Discuss incorporation of the Rose standards into the analysis plan**
- **Take any questions or comments regarding the two objectives noted above**

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Agenda

- Purpose & Study Aims
- Explaining Spending Variation
- Methods: Estimating the Cost of Education
- Data & Variables included in Cost Function Analysis
- Rose Standards
- Effective Resource Use
- Closing & Next Steps

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Purpose & Study Aims

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Study Aims

Estimate the level of spending required to produce a given outcome within a given educational environment.

- Investigate the ***linkage between the Rose standards and Kansas K-12 educational spending.***
- Explain the ***option or options*** to "produce an education system reasonably calculated to achieving those Rose standards."
- ***Focus on the structure of the Kansas school finance system*** as well as overall K-12 spending levels including forms of funding available to Kansas K-12 schools.

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Important Note

- The information presented today remains **preliminary** and in a **formative stage.**

- Information, particularly in the **Data & Variables** and **Rose Standards** section, are **preliminary** and may change between now and the final report.

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Explaining District Spending Variation

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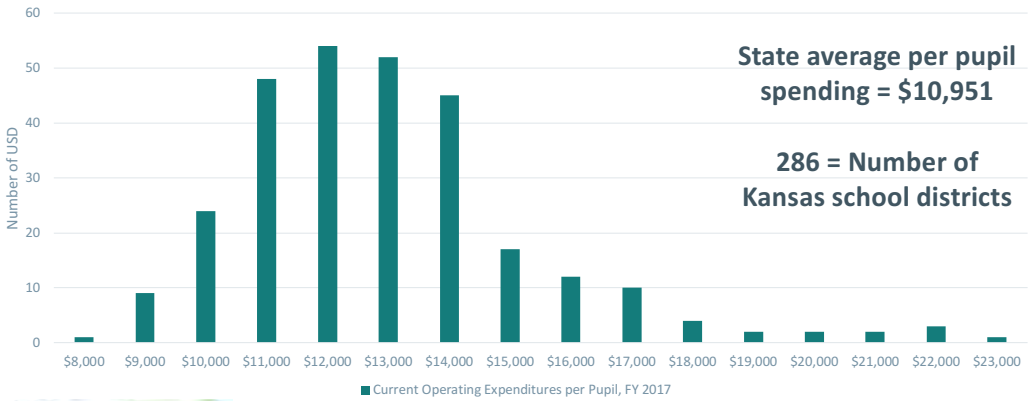
Spending Variation

Spending Differs Across School Districts in Kansas



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Why Does Spending Differ?

Outcomes	Costs	Efficiency
Considers the different outcomes of the system relative to the make-up of the student population and services provided.	Considers the *costs* associated with: • student needs, • input prices, and • economies of scale.	Considers how schools and school districts differ in their output (student outcomes) relative to the amount of funding available.

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Spending Variation

Why Does Spending Differ?

Outcomes	Costs	Efficiency
Considers the different outcomes of the system relative to the make-up of the student population and services provided.	Considers the *costs* associated with: • student needs, • input prices, and • economies of scale.	Considers how schools and school districts differ in their output (student outcomes) relative to the amount of funding available.

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Differences in Student Outcomes

- **Some districts are producing higher levels of core student outcomes.**
- **Some districts are providing enrichments other districts do not provide.**

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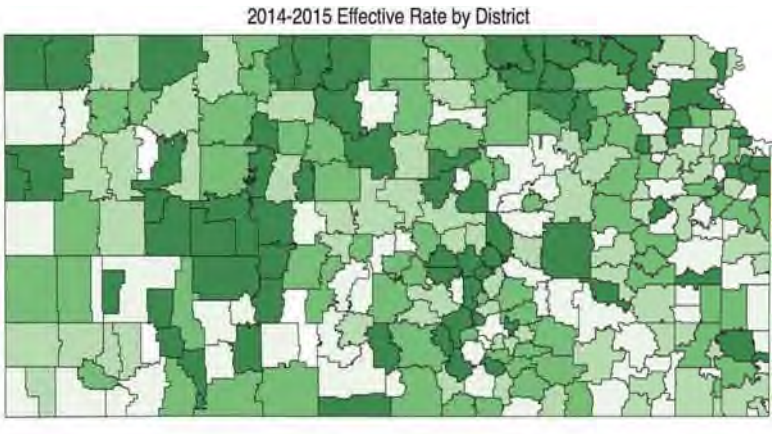
Variation in Effective Rate by District

Effective rate – a composite of overall student performance – shows variation across Kansas.



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Why Does Spending Differ?

Outcomes	Costs	Efficiency
Considers the different outcomes of the system relative to the make-up of the student population and services provided.	**Considers the *costs* associated with:** • **student needs,** • **input prices, and** • **economies of scale.**	Considers how schools and school districts differ in their output (student outcomes) relative to the amount of funding available.

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Cost Differences Attributable to Student Needs

Near consensus in research that it costs more to serve:

- Economically disadvantaged (ED) students,
- English language learners (ELL) students, and/or
- Students with disabilities (SWD).

However, and perhaps importantly to this investigation, there is no consensus as to how much more is necessary for these populations to achieve desired outcomes.

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Brief Literature Review on Student Need Costs

Economically Disadvantaged Students

- Less than 1% additional funding needed[1]
- More than 100% additional funding needed[2]

English Language Learner Students

- No additional funding needed[3]
- More than 400% additional funding needed[4]

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Reschovsky and Imazeki (2001). *Achieving Educational Adequacy through School Finance Reform.;* Duncombe and Yinger (2005). *Estimating the Costs of Meeting Student Performance Outcomes Adopted by the Kansas State Board of Education*.; Duncombe, Lukemeyer, and Yinger (2008). *The No Child Left Behind Act: Have Federal Funds been Left on the Table?;* Duncombe and Yinger (1998). *School Finance Reforms: Aid Formulas and Equity Objectives.*

Explaining Range in Cost for Student Need Groups

For economically disadvantaged students:

- **Student poverty not well measured**
  - The poverty level income is the same in New York City as in Salina, Kansas
  - Though the costs of living are very different.
- **Being identified as economically disadvantaged means something very different in New York City than in Kansas.**
  - That is, the needs of students in New York City compared to Kansas likely require different configurations of resources with different, associated costs.

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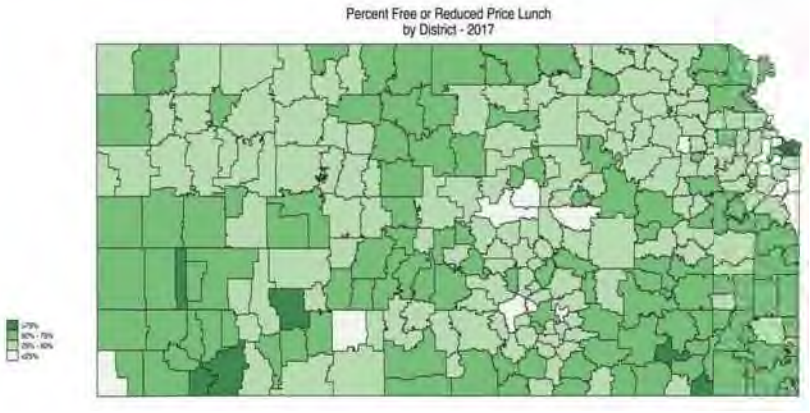
Distribution of Economically Disadvantaged Stds.

Some districts have larger concentrations of poverty. But, most districts are serving between 25% and 50% low-income students.



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Explaining Range in Cost for Student Need Groups

For English Language Learner students:

- A student who is ELL in high school likely has greater needs than a student who is ELL in kindergarten.
- States where nearly all the ELL students share a common language may have a cost advantage over other states.
- A general lack of economies of scale can make for greater cost in some states and districts.

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Explaining Range in Cost for Student Need Groups

For students with disabilities:

- Diagnosis of disability can be large and varied across physical, emotional, and behavior bounds;
- Each of which has different combinations of necessary resources to support the student.

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Cost Differences Due to Differences in Input Prices

- **Labor is the largest component in a school district's budget.**
  - 81% of current operating expenditures in Kansas
- **The price of labor is higher in some parts of the state than in other parts.**

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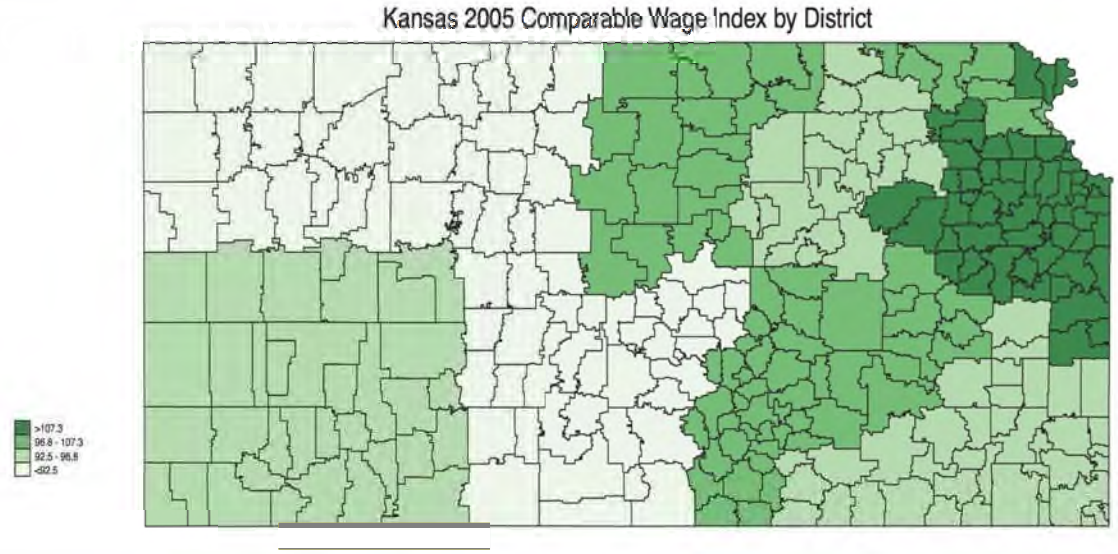

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Cost Differences Due to Economies of Scale

- The per-pupil cost of operating a small *district and/or school* is much higher than the per-pupil cost of operating a larger one.[1]
- And, once school districts get significantly larger we can observe a diseconomies of scale take effect.[2]
- Geography forces some districts to have smaller schools.

(1) Taylor, L., Gronberg, T.J., & Jansen, D.W. (2017). 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.
(2) Robertson, F.W. (2007). *Economies of scale for large school districts: a national study with local implications.* The Social Science Journal. Volume 44, Issue 4, Pages 620-629.

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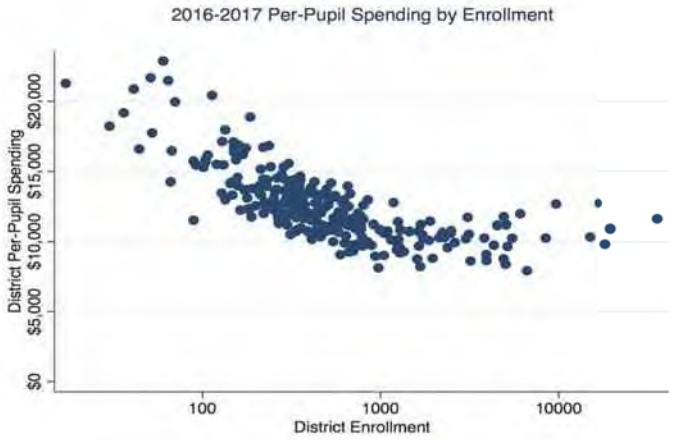
Spending Variation: Differences in Costs – Economies of Scale

Per Pupil Expenditures and Enrollment

Kansas is subject to these economies of scale as any other state – experiencing diseconomies of scale among the smallest and largest school districts.



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Spending Variation

Why Does Spending Differ?

Outcomes	Costs	Efficiency
Considers the different outcomes of the system relative to the make-up of the student population and services provided.	Considers the costs associated with: • student needs, • input prices, and • economies of scale.	**Considers how schools and school districts differ in their output (student outcomes) relative to the amount of funding available.**

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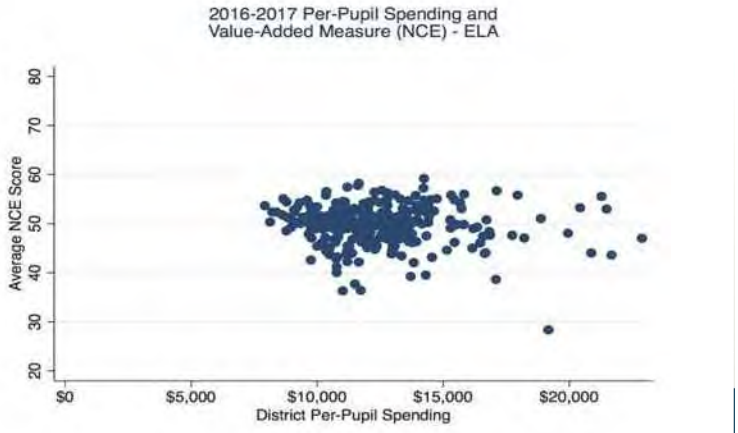
Some School Districts Accomplish More than Others

Kansas school districts experience a range of achievement relative to the amount of spending per pupil.



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Methods: Estimating the Cost of Education

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Two Approaches to Costing Out Studies

Approach	Input-Based	Output-Based
Description	Sum up the costs associated with building a prototype school	Estimates costs based on observed relationships between: (1) school spending, (2) student performance, and (3) other school characteristics
Methods	• Professional Judgment • Evidence-Based	• Education Cost Function • Successful Schools

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Summary of Various Methods

Professional Judgment • Convene focus groups of local practitioners to design prototype schools that meet performance goals. • Calculate the cost of the prototype in various locations.	**Education Cost Function** • Cost and performance data to estimate the relationship between expenditures and school outcomes, resource prices, student needs and other factors. • Predicts the cost of achieving outcomes.
Evidence-Based • Resource needs derived from "proven effective" school reform models.	**Successful Schools** • Data on student performance identifies schools that meet a designated standard. • The cost is the average level of spending among those "successful schools".

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Input-Based Considerations

	Considerations
Both methods are simple, transparent and straightforward. But, many only be applicable to a handful of prototypical school districts.	
Professional Judgment	• Vulnerable to the **blind spots and biases** of panel members • Frequently cost out performance standards that are **difficult to quantify** and well beyond current levels
Evidence-Based	• **Seldom specify the performance standards** being evaluated • Evidence of practitioners following evidence-based reform is lacking • Identified, proven outcomes may be out of line with system goals.

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Output-Based Considerations

	Considerations
Direct link between education costs and desired outcomes. And, estimates based on what districts actually do. But, method requires high-quality datasets.	
Successful Schools	• Policymakers must designate *measurable* performance standards.
Cost Function Analysis	• Provides a strong empirical foundation for estimates of cost differentials. • Describe relationships within the experience of the data • Statistical models are not transparent and explicitly involve errors of estimation and modeling.

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Previous cost studies in Kansas

- **Successful schools analysis** (Augenblick & Myers, 2002; 2011)
- **Professional Judgement analysis** (Augenblick & Myers, 2002)
- **Education cost function analysis** (Duncombe & Yinger, 2005)
- **Legislative Post Audit (LPA) analysis** (2006)

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Data & Variables Included in Analysis

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Data Needed for Education Cost Function Analysis

- **Expenditures**
- **Outcomes**
- **Prices**
- **Environmental factors**

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Important Note

- The information presented today remains **preliminary** and in a **formative stage.**
- Information, particularly in the **Data & Variables** and **Rose Standards** section, are **preliminary** and may change between now and the final report.

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Measuring current expenditures per pupil

- All spending included **except:**
  - Transportation (function 2700)
  - Food Service (function 3100 and fund 24)
  - Community Service (function 3300)
  - Construction (functions 4000 – 4900 and object code 700)
  - Debt Service (functions 5000 and 5100 and object code 820)
  - Fund Transfer (function 5200)
  - Adult Education (funds 10 and 12)

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Assigning costs to the school-level

- Reported payroll for certified staff with actual salary and building assignment are assigned to each building.
- Proportion of benefits for those certified staff are assigned to the building as well.
- Remaining current expenditures for the school district are pro-rated on a per-student basis and then assigned.
- Non-payroll special education expenditures are pro-rated on a per-special-education-student basis and then assigned.

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Data & Variables: Expenditures

Costs associated with Special Education Co-ops

- Special Education COOP spending allocated to the member districts according to their share of special education students in the co-op.

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Data & Variables: Outcomes

Incorporating several outcome measures

State assessments

- English, math and (possibly) science
- Normal curve equivalent (NCE) scores measuring the **growth** from one year to the next[1]

Effective rate

- Graduation rate and post-secondary pursuits and outcomes

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Gronberg, Jansen, and Taylor (2017). *Are Charters the Best Alternative? A Cost Frontier Analysis of Alternative Education Campuses in Texas.;*Taylor, Gronberg, and Jansen (2015).; Gronberg, Jansen & Taylor (2015).

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Teacher Salary Index for Kansas

- **Based on a regression analysis of the wages that teachers are willing to accept from school districts.**
- **Wages are a function of:**
  - Teacher characteristics
  - Building and district characteristics
  - Location characteristics
- **A teacher salary index reflects only factors outside of school district control.**

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Variables Included in the Analysis

Dependent variable

- Full-time equivalent monthly salary

Independent variables

- Teacher Characteristics
- Building & District Characteristics
- Location Characteristics

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Teacher Characteristics

- **Years of experience**
- **Educational attainment**
  - For example: bachelor's degree, master's degree, doctorate
- **Teaching assignment**
  - For example: ELA, math, computer science, social science, science, health and physical education, world language, fine and performing arts, career and technical education
- **Other assignments**
  - For example: administration, support staff (librarian/media specialists, school psychologists)

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Building and District Characteristics

- **Percent Free and Reduced-Price Lunch, i.e., At-Risk**
- **Percent Limited English Proficient**
- **Percent Special Education**
- **Campus Enrollment**

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Location Characteristics

- **Unemployment rate**
- **Fair Market Rent**
- **Metropolitan area indicator**
- **Micropolitan area indicator**
- **Geographic isolation**
  - Miles from Metro Center
  - Miles from any Core Based Statistical Area
- **Climate**
  - Heating degree days
  - Cooling degree days

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Incorporating several environmental factors

- **District size**
- **Building size**
- **Student demographics**
- **Remoteness**

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Education Cost Function Steps

Data	• Request, obtain, and clean the data • **Product:** Validated data sets
Construct variables	• Construct variables • **Product:** Salary index, outcome measures, school-level spending
Regression analysis	• Explain how the **variation in expenditures** is related to **variation in outcomes, prices, demographics, and other cost factors**

Education Cost Function Steps (cont.)

Rose Standards	• Translate to various, existing Kansas laws and regulations • **Product:** Identify the associated, appropriate outcome measure and performance thresholds
Estimate Spending	▪ **Product**: predicted (a) **level of base spending** required to produce those outcomes and (b) **spending adjustments for student need, size, and labor prices**
Implementation	• Contextualize the spending estimates and possible implications for the Kansas public education system • **Product:** Various recommendations for implementation

Rose Standards

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Origin of the *Rose Capacities*

- Ruling by Kentucky Supreme Court in 1989 (***Rose v. Council of Better Education***)
- Court articulated seven capacities as a <u>minimum standard</u> for each and every child
- Kentucky General Assembly adopted KERA in response in 1990

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Arkansas' Experience with *Rose Capacities*

- **In 2001, Arkansas trial court deemed education system inequitable and inadequate**
- **Court pointed to *Rose Capacities* as requirements for an adequate education**
- **Along with Arkansas' standards and accountability system**

Rose Standards

Breaking down the Rose standards, it is important to understand a bit more about the elements of the capacities. The standards contain references to:

- content, e.g., economic, social, and political systems
- skill(s), e.g., oral and written communications, and
- aspiration of a standard.

Further, other terms such as 'sufficient' and 'enable' also offer guidance

Rose Standards to Performance Measure Thresholds

Rose Standard: standard set by the Court in *Gannon* rulings

↓

College & Career Skills; Accreditation: set broad student and system boundaries of ***expectations***

↓

Standards for the Schools; Grad Requirements: determine the ***offerings*** aligned to skills and accreditation

↓

Measures of Student Outcomes: ***progress towards expectations*** and insight on effectiveness of offerings

↓

Thresholds of Performance Statewide: ***determine aggregate bar of performance*** for Kansas to achieve

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SAMPLE **Standard 1:** Sufficient oral and written communication skills to enable them to function in a complex and rapidly changing civilization.

College & Career Ready Skills; Accreditation	Minimum Standards for Schools to Teach; Graduation Requirements	Standard, Statewide Measures of Student Outcomes
KCCRES: These basic skills encompass reading, listening, speaking and performing math computations. **Accreditation:** The Relevance Rubric defines the criteria for Technology in a school district. Those criteria include having a vision for 21st Century learning and being able to apply digital learning through the use of technology.	**Elementary schools must teach:** reading, writing, spelling, English grammar and composition, arithmetic (and) such other subjects as the state board may determine. **Elementary and secondary schools must provide:** language arts; library services; computer literacy; counseling services; mathematics; science; services for students with special learning needs. **For graduation:** English language arts (4 units), including reading, writing, literature, communication, and grammar; Science (3 units), including physical, biological, and earth and space science concepts and at least 1 unit as a lab course; and Math (3 units) including algebraic and geometric concepts.	**State Assessments** (as required by the federal Every Student Succeeds Act (ESSA) reauthorizing the Elementary and Secondary Act of 1965) **English Language Arts and Mathematics (and alternate)** **Science (and alternate)** **Graduation rate**

Addressing Rose standards without measures

- Some of the Rose standards currently do not have statewide, standard measures of performance associated with them.
- There is a *presumption* of little variation in the type of expected outcome associated with the standard.

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Effective Resource Use

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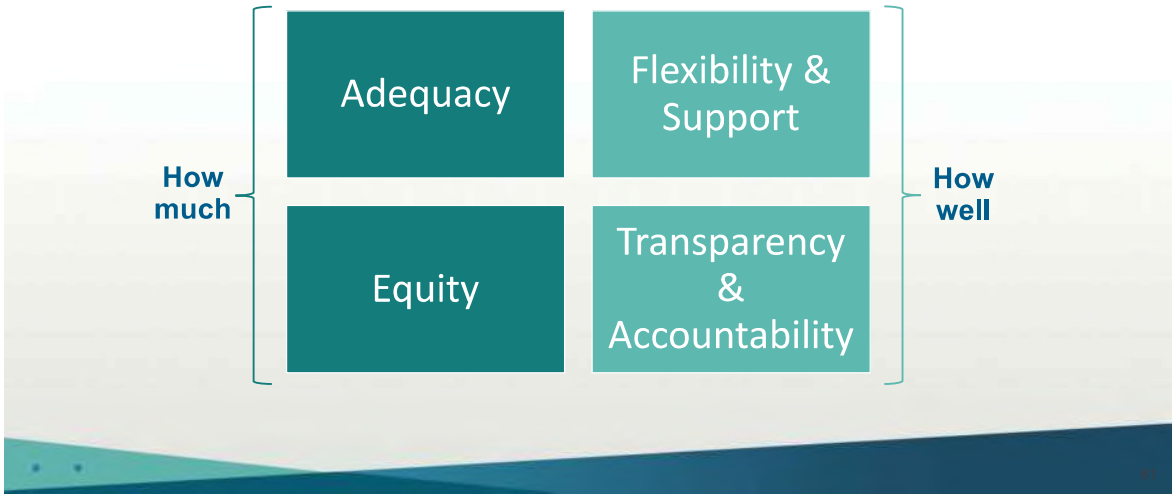
Addressing both 'how much' and 'how well'



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Key enabling conditions are crucial

Districts lack	Results in misaligned incentives that:
Flexibility over certain resources	• Incentivize investments that may not be strategic • Encourage overspending (e.g., funds allocated in arrears) • Create significant compliance burden
Support to inform resource choices	• Activate decision-making processes that are incongruent with strategic planning • Collect data that do not inform decision-making
Accountability for paying attention to the right things	• Focus only on financial inputs • Measure only investments over base amount
Transparency focused on compliance	• Capture and report the wrong types of data

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Closing & Next Steps

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Next Steps

- Practitioner engagement (Saturday, February 24)
- Final study report due (Thursday, March 15)

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Thank you!

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Appendix 8:
WestEd PowerPoint Presentation delivered to the Joint Session of the Education Finance Committees of the Kansas Legislature on March 19, 2018

The WestEd PowerPoint Presentation is publicly available at: https://www.dropbox.com/sh/v24n392eg9ikgiu/AAAIISMNJwzWIE8uK9K_Y-qLa?dl=0&preview=3.19+KS_Joint+Leg+Hearing_Cost+Study+Report+Out.pdf. It is appropriate for this Court to take judicial notice of the WestEd PowerPoint Presentation, which is publicly available, and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

Estimating the Costs Associated with Achievement Expectations for Kansas Public Education Students

Study Results

Presentation to a Joint Session of the Education Finance Committees of the Kansas Legislature

March 19, 2018

Lori L. Taylor & Jason Willis

Today's Objectives

- Briefly review methodology results
- Present findings from the cost model and cost estimates
- Take any questions or comments regarding the two objectives noted above

Agenda

- Purpose & Study Aims
- Methods
- Rose Standards and Thresholds of Performance
- Review of Findings
- Question & Answer

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Purpose & Study Aims

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Study Aims

Estimate the level of spending required to produce a given outcome within a given educational environment.

- Investigate the ***linkage between the Rose standards and Kansas K-12 educational spending.***
- Explain the ***option or options*** to "produce an education system reasonably calculated to achieving those Rose standards."
- ***Focus on the structure of the Kansas school finance system*** as well as overall K-12 spending levels including forms of funding available to Kansas K-12 schools.

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Methods

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Education Cost Function Steps

Data	• Request, obtain, and clean the data • **Product:** Validated data sets
Construct variables	• Construct variables • **Product:** Salary index, outcome measures, school-level spending
Regression analysis	• Explain how the **variation in expenditures** is related to **variation in outcomes, prices, demographics, and other cost factors**

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Education Cost Function Steps (cont.)

Rose Standards	• Translate to various, existing Kansas laws and regulations • **Product:** Identify the associated, appropriate outcome measure and performance thresholds
Estimate Spending	▪ **Product**: predicted (a) **level of base spending** required to produce those outcomes and (b) **spending adjustments for student need, size, and regional cost**
Implementation	• Contextualize the spending estimates and possible implications for the Kansas public education system • **Product:** Various recommendations for implementation

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Methods

Measuring current expenditures per pupil

- All spending (federal, state, and local) included **except:**
  - Transportation (function 2700)
  - Food Service (function 3100 and fund 24)
  - Community Service (function 3300)
  - Construction (functions 4000 – 4900 and object 700)
  - Debt Service (functions 5000 and 5100 and object 820)
  - Fund Transfer (function 5200)
  - Adult Education (funds 10 and 12)

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Methods

Assigning costs to the school-level

- Certified staff with actual salary and building assignment.
- Proportion of benefits for certified staff assigned to the building as well.
- Remaining current expenditures for the school district are pro-rated on a per-student basis and then assigned to each school.
- Special Education COOP spending allocated to the member districts according to their share of special education students in the co-op.
- Non-payroll special education expenditures are pro-rated on a per-special-education-student basis and then assigned.

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Methods

Food Service & Transportation Expenditures

Excluded from the analysis:

- Food Service: Heavily subsidized by the federal government or direct pay for meals; self-contained function of school districts
- Transportation: Does not vary on student demographic or outcome, i.e., associated with factors for the cost of education

FY2017 Spending	Food Service	Transportation
Total ($)	$236.7 million	$215.5 million
Per Pupil ($)	$483	$440

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Methods

Rose Standards to Performance Measure Thresholds

Rose Standard: standard set by the Court in *Gannon* rulings

↓

College & Career Skills; Accreditation: set broad student and system boundaries of ***expectations***

↓

Standards for the Schools; Grad Requirements: determine the ***offerings*** aligned to skills and accreditation

↓

Measures of Student Outcomes: ***progress towards expectations*** and insight on effectiveness of offerings

↓

Thresholds of Performance Statewide: ***determine aggregate bar of performance*** for Kansas to achieve

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Methods

Method to establish threshold of performance

Referenced both existing performance, plan documents, and historical performance:

- Investigate current performance for those school districts at the 90th percentile and above;
- Consider the state's ESSA plan that was developed by KSDE and signed by the Governor; and
- Historical patterns of growth and performance during periods in which the state was considered to be funded adequately.

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Relative comparison: old and new state assessment

'Meets' often cited in *Gannon* rulings is just above Level 2 in the new assessment; formed basis of Scenario A

Level 3 in new assessment tied to college ready; formed basis of Scenario B

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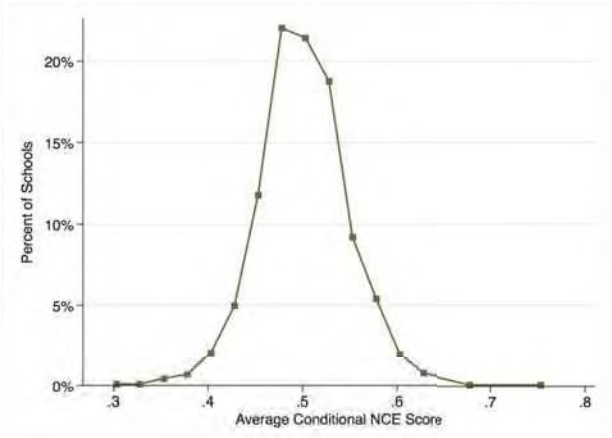
Methods

Distribution of average conditional NCE scores in 2016-17



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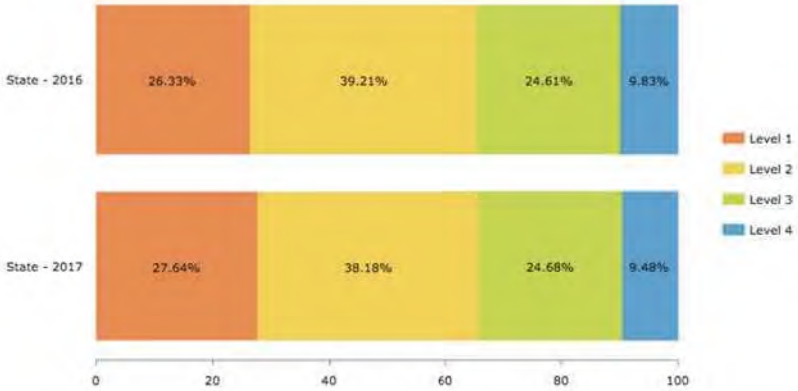
Methods

Kansas state assessment math performance, by level



Source: Kansas State Department of Education. Data Central. Kansas Report Card 2016-17. Performance Level Reports. Subject: math. Retrieved March 18, 2018.

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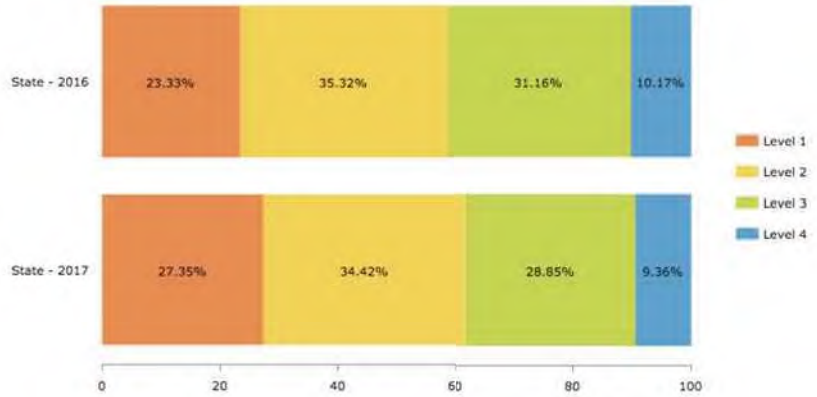
Kansas state assessment ELA performance, by level



Source: Kansas State Department of Education. Data Central. Kansas Report Card 2016-17. Performance Level Reports. Subject: ELA. Retrieved March 18, 2018.

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Methods

Proposed graduation performance threshold

School Year	Graduation rate thresholds
2016-17	86.1
2017-18	87.9
2018-19	89.7
2019-20	91.5
2020-21	93.3
2021-22	95.0

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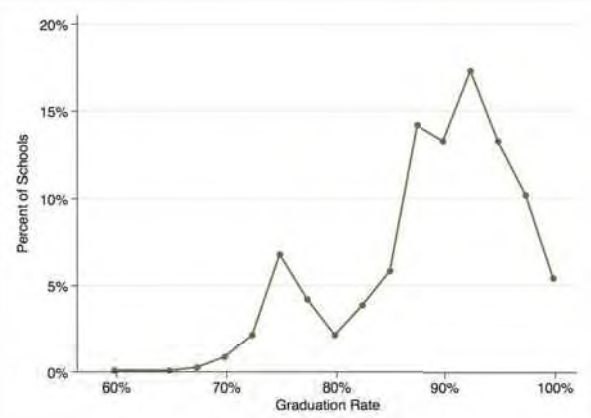
Distribution of school graduation rates in 2016-17



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Study Findings

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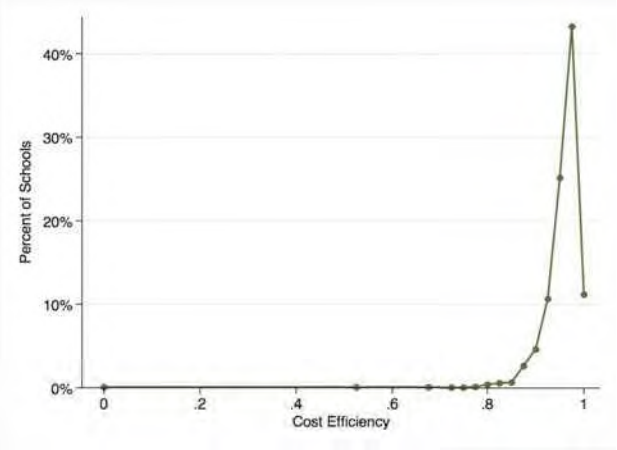
Study Findings: Finding #1

Most Kansas schools are highly efficient

Possible explanations:

- Decreased spending over last seven years combined with sustained effort to improve performance
- Systematically school districts are exceedingly good at the efficient use of their resources.



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Study Findings: Finding #2

Performance thresholds for base and compensatory costs

	ELA Assessment (Level 2+)	Math Assessment (Level 2+)	ELA Assessment (Level 3+)	Math Assessment (Level 3+)	Graduation Rate
Scenario A: Approaching on track	90%	90%			95%
Scenario B: On track			60%	60%	95%

- Scenario A establishes target of 90% proficient for Level 2 or better
- Scenario B establishes target of 60% proficient for Level 3 or better
- Both scenario A and B use a graduation rate of 95%

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Study Findings: Finding #2

Calculation of cost estimates for maintenance funding

Base Funding	Regional Cost Adjustment	Economies of Scale Adjustment	Student Need Adjustment
• Varies by composition of elementary, middle and high students in districts	• Accounts for differences in wage and sparsity	• Accounts for differences in size of the school district	• Need categories include low-income, English learners, and special education

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= Maintenance funding

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Study Findings: Finding #3

Student need weights

Economically disadvantaged students

- Free lunch counts that are used to determine at-risk aid for Kansas was used in the analysis
- Weight is 1.89

English learner students

- Weight is 1.23 but drops as concentration increases

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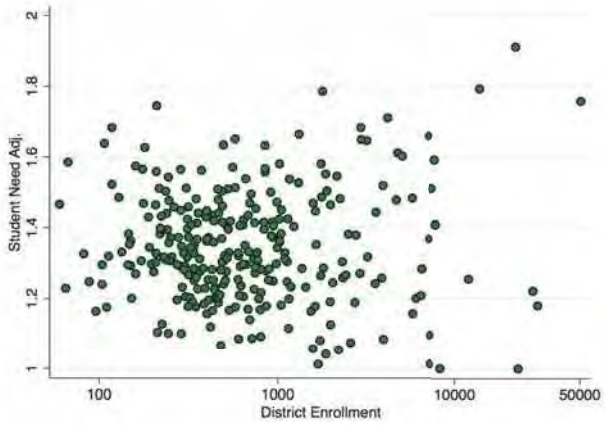
Study Findings: Finding #3

Student need weight distribution by district enrollment



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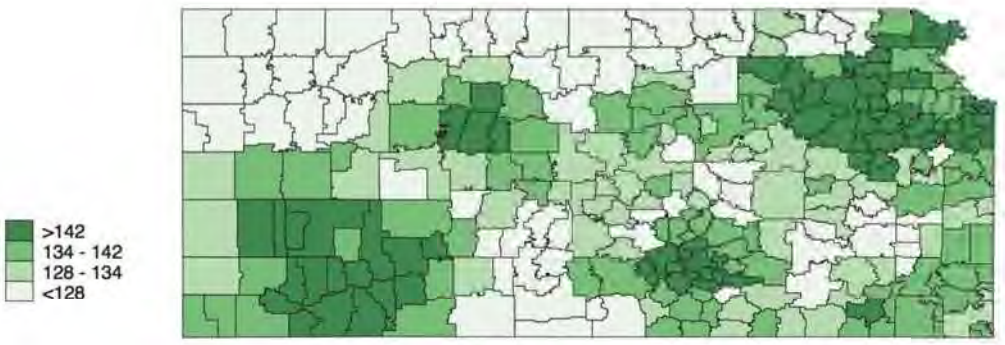
Study Findings: Finding #4

Map of Kansas Teacher Salary Index in 2016-17



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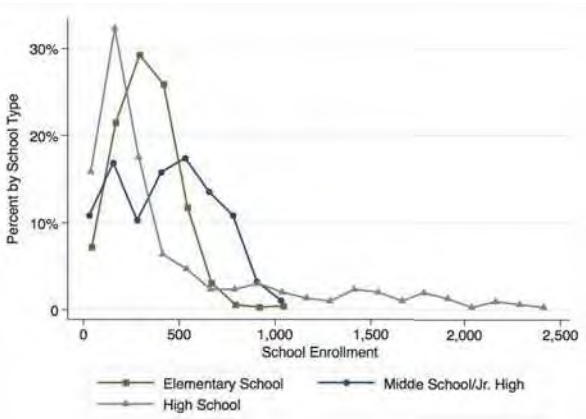
Study Findings: Finding #5

School enrollment in traditional school districts, 2016-17

- Kansas has a very large proportion of its schools that operate with less than 300 students per school.
- This is particularly true for high schools in which ~32% enroll approximately 200 students.



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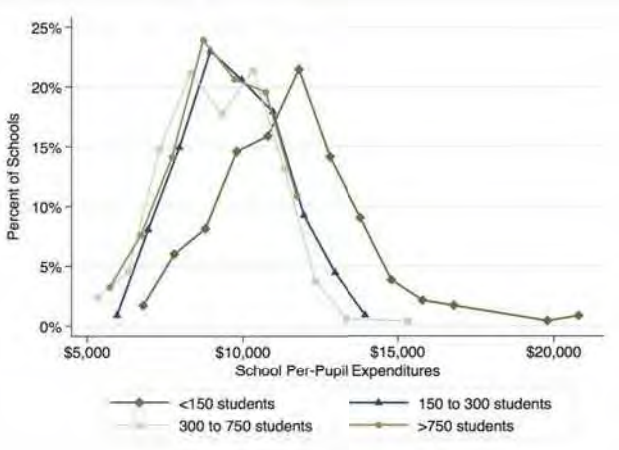
Study Findings: Finding #5

Distribution of per pupil spending by school size, 2016-17

- Kansas, due in part to the geographic dispersion, have higher per pupil school costs.
- This is particularly true of schools with less than 150 students.



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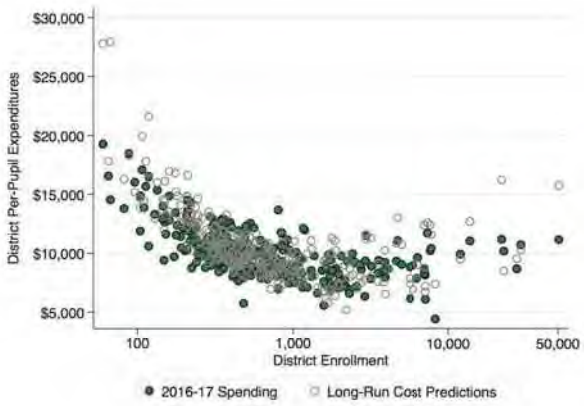
Study Findings: Finding #5

District per pupil spend compared to cost estimates

Comparing FY17 spending to generated cost estimates in the study the pattern changes from a flatter basin to a larger U-shape



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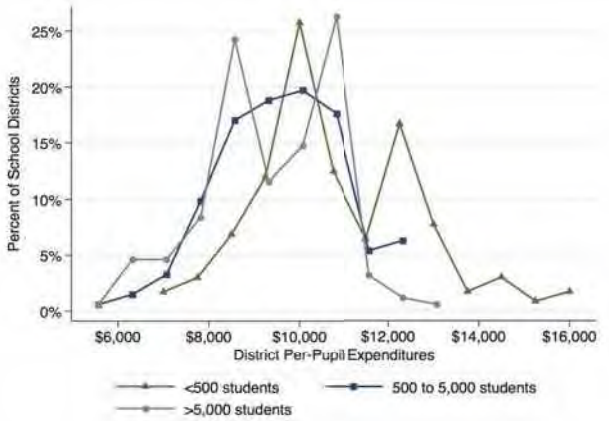
Study Findings: Finding #5

Distribution of per pupil spend by district size in 2016-17

The larger variation in per pupil spend may be influenced by the local revenue-raising ability of school districts relative to performance, price, and economies of scale.



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Cost estimates based on thresholds in the report

- Applies performance assumptions stated earlier.
- 2016-17 enroll in Kansas is 489,795

2016-17	Total estimated K-12 spending	Increase over current (%)	Per pupil ($)
Current spending levels	$4.652 billion	n/a	$9,497
Maintenance	$5.103 billion	9.7%	$10,419
Scenario A	$6.438 billion	38.4%	$13,144
Scenario B	$6.719 billion	44.4%	$13,717

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Study Findings: Finding #5

Other considerations for the cost estimates

- **Sensitivity analysis** when using headcount enrollment versus FTE enrollment figures
- **Adjustment of graduation rate threshold**; current performance goal is 95%

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Study Findings: Finding #5

Sensitivity analysis: Cost estimates using FTE enrollment

- Applies performance assumptions stated earlier.
- 2016-17 FTE enroll in Kansas is 459,650
- ***Slightly higher levels of estimated cost compared to headcount enrollment***

2016-17	Total estimated K-12 spending	Increase over current (%)	Per pupil ($)
Current spending levels	$4.652 billion	n/a	$10,119
Maintenance	$5.125 billion	10.2%	$11,150
Scenario A	$6.490 billion	39.5%	$14,119
Scenario B	$6.788 billion	46.0%	$14,768

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Study Findings: Finding #5

Cost estimates based on different grad rates

Graduation Rate	90%	92%	95%
Current spending levels	*$4.652 billion*	*$4.652 billion*	*$4.652 billion*
Maintenance	$4.737 billion	$4.880 billion	$5.103 billion
Scenario A	$5.978 billion	$6.158 billion	$6.438 billion
Scenario B	$6.239 billion	$6.426 billion	$6.719 billion

On average, for every 1% increase in the graduation rate, the approximate associated cost increase is 1.5%.

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Study Findings: Finding #6

Bringing forward the cost study estimates to 2018-19

	2016-17	Additional Funding for 2017-18	Additional Funding for 2018-19
Maintenance	$4.737 billion	+$115 million	+$315 million
Scenario A	$5.978 billion	+$145 million	+$398 million
Scenario B	$6.239 billion	+$152 million	+$415 million

The estimates above apply:

- Inflation factor using a 3-year average of the national CPI for all items, and
- Assumes a graduation rate of 90% in 2016-17 and 2017-18 and then increases to 91% in 2018-19.

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Study Findings: Finding #7

Considering phase-in of funding increases over time

Kansas schools are already highly efficient in the use of spending. The state should consider:

- Ensuring that Kansas schools can maintain their level of efficiency as additional resources are invested,
- Investments of large portions of funding may be better spent by extending the phase-in period.

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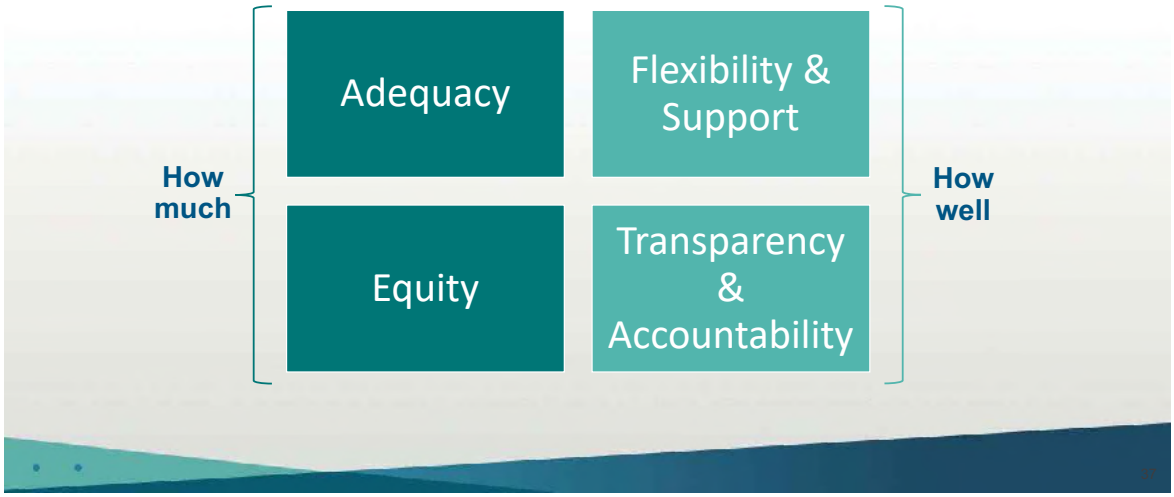
Addressing both 'how much' and 'how well'



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Study Findings: Finding #8

Transparency and availability of data

- **Kansas nationally recognized for internal data systems**
  - With such small systems, enabling that function may help lift that burden off of very small school systems
- **Data Central is a place to start**
- **Additional information organized to enable comparisons**
- **Example: Texas Smart Schools**

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Study Findings: Finding #9

Pair support strategies with accountability measures

- The analytical and comparative techniques used by the Legislative Post Audit have applicability in other environments and forums;
- The insights reached – although mostly oriented towards compliance with the law – surface matters of process, culture and performance important for any organization to consider; and
- The school district's response represents one way in which to engage in an exchange

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Thank you!

Happy to take any questions that you may have.

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Appendix 9:
Transcript of Joint Meeting of the House K-12 Education Budget Committee and Senate Select Committee on Education Finance, dated March 19, 2018

The testimony is publicly available at http://sg001-harmony.sliq.net/00287/Harmony/en/PowerBrowser/PowerBrowserV2/20180319/-1/3746. It is appropriate for this Court to take judicial notice of the testimony, the transcript of the testimony (Appx. 9), the Report (Appx. 6), and the PowerPoints (Appx. 7 and 8), all of which is publicly available and part of the legislative history of S.B. 423, and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

In The Matter Of:

State of Kansas v.

Senate Select Committee on Education Finance

March 19, 2018

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O F

J O I N T M E E T I N G

of the House K-12 Education Budget Committee

and

Senate Select Committee on Education Finance

Chair Fred Patton, Presiding

Held on the

19th day of March, 2018

Commencing at
12:10 p.m.

Kansas Statehouse
Supreme Courtroom
Southwest 8th & Van Buren Streets
Topeka, Kansas

COMMITTEE MEMBERS PRESENT:

Representative Helgerson
Representative Smith
Representative Hoffman
Representative Trimmer
Representative Huebert
Representative Vickrey
Representative Johnson
Representative Winn
Representative Jones
Senator Baumgardner
Representative Karleskint
Senator Denning
Representative Landwehr
Senator Estes
Representative Lusk
Senator Goddard
Representative Patton, Chair
Senator Hensley
Representative Rooker
Senator Kerschen
Representative Aurand
Senator Pettey
Representative Schwab

P R O C E E D I N G S

CHAIR BAUMGARDNER: Ladies and gentlemen, thank you for joining us today for the Joint Senate and House Education Funding Committee meeting. Like to start briefly by just thanking Megan Bottenberg of Cox Communications; Leslie Kaufman, Kansas Electric Cooperative; Rob Reynolds, AT&T Kansas, and Karen Browning from Capital Advantage for providing the lunches for our staff members and for our legislators today.

At this point in time we will start with a presentation that has been prepared by Dr. Lori Scott and Jason Willis for us and then we will -- as there are appropriate times, we will pause for questions.

So, Dr. Taylor, if you would like to begin, please.

DR. LORI TAYLOR: Thank you very much to the members. I very much appreciate you being here today to hear from us regarding a research project that we've been involved in for the past few months. So I'd like to turn to my colleague, Jason Willis, to set the

stage.

MR. JASON WILLIS: Good morning -- or afternoon, as it formally is.

So I want to talk briefly about today's objectives for this session. We want to review the methodology results from the cost function study that we conducted on behalf of the State of Kansas. We want to present our findings from the cost model and cost estimates and then take any questions or comments that you have regarding the two stated objectives above.

A little bit of our agenda for this hearing, purpose and study aims, methods. We'll talk about the Rose standards and thresholds of performance that were used in the study, a review of those findings and, as I mentioned before, any question and answer.

A little bit about the study aims. We presented this at our last visit to the -- to the State of Kansas looking to estimate the level of spending required to produce a given outcome within a given educational environment here in Kansas and in specifically investigating the linkage between the Rose standards in K-12 education spending in Kansas,

offering explanation around option or options to produce that education system reasonably calculated to the Rose standards and then to focus on the structure of the Kansas school finance system as well as its overall spending levels in consideration of how schools are -- are funded.

So one thing I just want to mention. Obviously, there are representatives or senators who received a revised report. There was a clerical error in the data tables that we produced moving from Excel over to the actual Word document as produced for the report. It has no underlying issue around the structure of the analysis, was simply a -- a clerical error.

So I want to talk for a moment just around some of the steps that we used for this cost function analysis. Here are the first three. In collecting the data, looking to obtain clean data and getting to a validated set of data sets, we wanted to be able to construct various variables that helped us in producing the cost estimates that we'll talk about a little bit later. These include things like the salary index or outcome measures and

the school level spending here in the State of Kansas.

The third and perhaps the most -- the most statistically heavy -- academically heavy concept is around regression analysis. Most simply, we are looking at being able to explain how the variation in expenditures here in the State of Kansas is related to variations in outcomes of our students, the prices associated with -- with running school systems in various locations in the state, the demographics of those students and other cost factors. From there we have the Rose standards estimating spending and implementation.

One of the things that the research team took on was to investigate the kind of -- the various existing Kansas laws and regulations, many of the court documents associated with the Gannon ruling and its identification of the Rose standards and identifying an appropriate associated outcome measure and associated performance thresholds and, from there, estimating the spending, so then predicting a base level of spending.

And we'll talk about how we arrived at

that base level of spending to produce a certain set of outcomes that then adjusts for other characteristics such as student need, makeup, if you're a low income student, the ELA student and special ed student, the size of the district -- so think economies of scale, if you're a very small district of if you're a very large district like Wichita -- and regional cost. Depending on where I live in the state, what it costs for me to live in that locality is going to differ across the -- the state.

And, finally, the implementation. I really wanted to contextualize these spending estimates and possible implications for the Kansas public education system. And so associated with the actual estimates themselves, which has been the focus of a lot of attention over the last 72 hours, we think it's very important for the State of Kansas to consider how those numbers are considered in context and how they may be implemented given our observations of how other states have performed their funding systems.

So I want to talk briefly about the

expenditures per pupil, the -- one of the kind of cruxes of the study. In this study here you can see listed the spending categories that have been excluded. We'll talk in a little bit about transportation and food service, but other things, particularly construction and debt service, are all things that fluctuate greatly and are based on factors that are separate and apart from what we were looking at in terms of the relationship between spending and the ongoing -- that ongoing spending and outcomes for students.

Kansas currently does not report school level per pupil expenditures. We worked with several of the stakeholders here in -- in Kansas and the Department of Education and other places to look at assigning some of those costs. You can see here in Kansas you have a file that basically lists every certified staff in the state. That associates them with a building assignment. It associates them with their years of experience and some other factors but notably for spending, their actual salary, which we can assign to the building. We took a proportion of their benefits, which

would include their retirement and health and welfare benefits and proportionally assigned those to the building as well and then took remaining current expenditures for the school district and prorated them on a per student basis to those assigned schools.

Special education was slightly more complicated. In Kansas you get -- you have special education co-ops that are basically an opportunity to consolidate spending for very small districts to serve special education students, and those members were basically assigned a proportion of the cost associated with those co-ops based on their share of special education students.

So here is a look at the -- their food service and transportation expenditures in particular. For the research team, for food service, for example, the exclusion was really heavily based on the fact that the federal government either directly pays for these meals or it's a self-contained function of the district, meaning the students will pay for their meals, parents will provide them money, which does not have much of a -- a function to

outcome.

Transportation, where we can see in the research literature offers that we don't see any variance on the student demographic or outcome, meaning that it has an impact on associated factors for the cost of education. Now, obviously, having a student that has a -- has a full stomach when they're walking into class or can get to the school is an important thing but, relative to the ways in which the study was designed, isn't appropriate, but we offer here observed 16/17 spending, both in aggregate for food service and transportation but also on a per pupil basis. So for those that are carrying this work forward in thinking about reforming the finance formula here in Kansas, these are offered as estimates of what would need to be added back to the estimates that we'll talk about a bit later.

So I want to talk a little bit about how we got from the Rose standards to the performance measure thresholds. So the Rose standards themselves were set out on the Gannon rulings. They originally came from the State of Kentucky in a 1989 court ruling, and Kansas

has taken them up in their -- their debates over Gannon over the last several years.

Working off of documents that were produced here in the State of Kansas around the new standards and accreditation, standards looking at college and career skills and accreditation, these set essentially broad student and system boundaries of expectations. It's what the state says to schools or school districts as here are the things that (a) we want to make sure that each individual student knows and understands as they graduate the system and, two, as we think about our institutions, our schools in particular, here are the things that they need to be able to provide in order to achieve the first thing that I said.

Further, Kansas statute offers standards for those schools and graduation requirements, so they outline different subjects that should be provided and the graduation requirements, so determining, if you will, the offerings that are aligned to those skills and accreditation. And from there we can measure -- we can look at and observe kind of measures of student

outcomes, so what are the -- what's been the progress towards those set of expectations, and provides us some insight on effectiveness of the various offerings that are currently being provided in Kansas schools. And based on those measures of student outcomes, we can then identify what might be the threshold of performance statewide on those various measures, could be ELA, it could be math, could be graduation rates, are the three measures that we used, fundamentally, as a part of the study.

So in Chapter 3 of the documents, following a -- a pretty lengthy discussion on the Rose standards, we go into a discussion around arriving at some of the thresholds of performance. And before I get into a little bit more detail I'm going offer the three kind of primary points of data and evidence that we looked at when arriving at some of those thresholds of performance.

So the first one was looking at current performance. All right. We have to be able to see that these levels of performance are possible and so, by looking at schools and

school districts in Kansas, we can see that across, you know, ELA, math and graduation rate that, you know, at the 90th percentile of performance there are schools and districts in large numbers that are achieving the levels that we were considering in the study.

The second is the state's ESSA plan. So this is a document that the State of Kansas, specifically from the Kansas State Department of Education, along with endorsement from the governor, produced. It was submitted originally to the US Department of Education in compliance with the federal Every Student Succeeds Act back in the fall. It was approved in mid January, so just a few months ago, and it provides some narrative about the expectations that Kansas and the Kansas public is holding for itself in regards to several of these measures, including ELA, math and graduation rate.

So they not only look -- not only identify what the overall threshold of performance should be. And they put in this -- in the plan itself they identified a 12-year trajectory to 2030, but they also provide a

schedule of targets. So year by year, from where the baseline currently is, what would need to be the levels of performance that statewide would need to be achieved in order to achieve the target that's identified in the ESSA plan.

And, finally, we looked at historical patterns of growth and performance, and we wanted to look at this specifically during a period in which -- in Kansas in the recent past there was some general agreement that the system had been funded. So these were the years between Montoy and Gannon in which the court had said to the state, you know, you're funding the public education system well. And over that five-year period of time we looked at the growth in performance on -- based on that old assessment, again, as a reference to think about the threshold of performance and what those growth patterns should be.

So one of the other things that is really important to consider in the context of these findings is to think about the difference between your old and new state assessment. Most every other state in the union has gone

through this transition from their old assessment system to some version or variant on what was known -- what is known as the common core state standards. Some states have adopted them in whole and said we're bringing these in and interpreting them. Others have taken pieces and parts of it. Kansas is somewhere in that mix.

And so what I offer -- we offer on the slide is a comparison between the performance levels. That is, based on a scale score of students, what is the score that those students need to be able to achieve in order to meet these various levels of performance.

And in the old state assessment -- you can see it was used between 2002 and 2013 -- there were five levels in the State of Kansas to be considered proficient. That dotted line just above, "Approaching," is the minimum threshold for meets. And you can see in the new college and career ready assessments where you currently have been administrating for the last couple of years, primarily in ELA and math -- you've got science online with history coming in the next year or so. You can see

that it's only four levels of performance. But you can see here that the scale score and where the minimum bar has been established is new and it's higher. And this is really reflective of the increase in rigor that, nationally, we expect of students and has clearly been incorporated into the work here in the State of Kansas.

So this is a chart that describes the distribution of the percent of schools for the average conditional NCE score. Simply, this is a measure of growth, meaning there's a couple of ways we understand in K-12 education to think about student performance. We can think about it as what are the percent of students that reach a certain threshold of performance, as I -- as I was describing in this previous slide.

Another and growing and -- and more popular way is to think about growth, how much progress are our students making from one year to the next. And what the introduction of this concept does around growth is it allows us to observe that where kids in previous testing systems may not have necessarily been

recognized for achieving a certain level of performance but can be recognized for their ability to grow.

So, just a basic example of this, if I am a student in the old testing system, there was at the very bottom a performance level of warning and over the course of the year I made tremendous progress but only missed the bar to meet by two scale score points, in this regard I wouldn't be recognized for making that level of growth. In this chart it allows us to recognize that student and to look at that in aggregate. So when we look at students over time, you know, measuring them from year to year on their state assessment, we can see their patterns of growth, which give us some insight into the ways in which Kansas is currently performing under a growth scenario relative to level of spending that you are committing to the K-12 system.

One of the other things that we looked at was, obviously, the overall performance of students in Kansas. And this is a -- a screen graph from the school -- the Kansas report card for 16/17, so you can see a comparison of

Kansas' performance over the last couple of years. And a couple of things that we can see here is that your bands for levels 3 and 4, which are the highest, basically hovers somewhere in the 33 to 35 percent range.

So just over a third of the students currently in the State of Kansas, relative to the standards that have been set and the assessments aligned to the standards, are meeting that level of -- of proficiency. And the same is true if we look at ELA as well, and what we see is either flat or slightly declining growth over just this one year.

Now, what I would say is that part of the work that we did was trying to incorporate as much and multiple years of data as possible to create stability and stability from the perspective of being able to make sure that when we were observing performance or any other measure, that we would have confidence in what we were seeing.

Another thing that we looked at was graduation performance and the thresholds that were established. You can see this is the schedule of growth. You're currently at 86.1

percent, the baseline for the most recent year that was reported. We can see that schedule of growth moving up to the 95, which the cost estimates in the study and which you have is based on. And we do have some additional information to present around graduation rates today.

Here you can see the distribution of those graduation rates in 16/17 with a -- with the percent of schools tailing off to the left as a -- as a proportion with their graduation rate with large proportions. You know, nearly 35, 40 and 50 percent of your schools that are achieving rates that are approaching 90 percent, if not over the 90 percent threshold, currently here in -- here in Kansas.

So I wanted to offer some -- some demonstration of some of the things that we looked at when we were considering these thresholds of performance. One thing to be -- to keep in mind is that for these education costs that is particular to this approach in particular, it's important that the state has agreement on what those levels of performance should be. The ESSA plan offers evidence of

that. The research team also looked at other places in which your historical performance might indicate what those thresholds of performance might be and is an important part of -- of any kind of cost function study and, certainly, this one as well.

So, with that, I'll take a pause and turn it over to -- to Lori to discuss our study findings.

CHAIR BAUMGARDNER: Actually, let's take a pause right here.

Are there questions committee members -- yes, Senator -- or Representative Rooker.

REPRESENTATIVE ROOKER: Thank you, Madam Chair. And thank you very much for the thoroughness of the study.

I want to drill into the -- the graduation rates. I'm looking at page 49 of the report we received on Friday and I'm understanding the ESSA plan goal of 95 percent is -- the year is 2030. So this table appears to be the progression for the next five years landing at 89 1/2 percent by 2021/22 school year.

So my question for you is, why is it that

the scenarios in the study in the -- the five years that we're look -- we're being given guidance on uses 95 percent as opposed to the -- the prorated rate, if you will?

DR. LORI TAYLOR: Okay. So thank you very much for the question. The study kind of comes in two parts. There is a -- an estimate of the cost for long-run maintenance after the state has transitioned to the performance thresholds that it set for itself, what are -- would it take to maintain -- to sustain that level of excellence from year to year. And so that what maybe inartfully was labeled, "maintenance," is the estimate for sustaining in the long run, after the transition period has finished, the performance threshold of the 95 percent graduation, which is the state's long-run goal, and an expectation that year to year all of the districts will accomplish the same sorts of progress with respect to tested performance. Okay?

But then there -- one has a transition, and over the transition period one is making progress towards that goal of the -- the long-run estimate at 95 percent graduation rate

and sustainable -- everybody's growth -- everybody's at grade level and progressing from one year to the next remaining at grade level.

So the -- the transition estimates which we'll present to you today would incorporate the glide path towards those long-run goals. But in the long run what the state has set for itself is that once the transition period has been -- has been completed, the -- we wanted to estimate what would be the long-run cost of continuing to maintain that level of excellence.

CHAIR BAUMGARDNER: Senator Bollier.

SENATOR BOLLIER: Madam Chair.

Along those lines -- thank you. When you looked at the school boards college and career ready, are you making the assumption that everybody is college and career ready or college or career ready, and is there a differentiation between those two things?

MR. JASON WILLIS: So thank you for the question. So a couple of things, I think, that references your question. So in the assessment that was built, in alignment with the college and career standards that you're

referencing, the performance thresholds are noted as college ready. There's no reference to career ready. So that's the first thing.

The second is that -- that the targets that were set, even at 95 percent, acknowledge that some students, you know, may not go on to some secondary pursuit. We see this in your post-secondary data, where a fair number of students don't go on to receive some type of post-secondary degree but they pursue, perhaps, a certificate that would allow them to pursue a career that provides them a living wage and kind of fell for the productivity to -- to society.

SENATOR BOLLIER: So if I can continue. So if we were going to tease this out further, if we looked at our own state and said our expectation is that whatever percentage at a certain school meets college ready versus career ready, we might come up with some different numbers. Is that a fair assessment?

MR. JASON WILLIS: So I would -- so I'll -- I'll start and then Lori can jump in. So the -- the graduation rate establishes that

bar of meeting that kind of minimum threshold to kind of receive that -- that certificate. There are other data that are collected, was not -- we -- we talk about this in the study, were not able to be incorporated into the -- into the work simply because of some of the challenges with some of the collection. Particularly in post-secondary, a lot of your community colleges aren't reporting, and that's where a lot of these students, you know, are going to pursue some type of post-secondary pursuit, but not necessarily a four-year college degree. So there could be, but there's no -- the way in which we built the cost model does not incorporate that work.

SENATOR BOLLIER: Okay.

DR. LORI TAYLOR: And if I -- if I might follow up a bit. The -- the question is really about where does one set Level 2 or Level 3 on the state's assessments and the -- it's clearly within the state's discretion to determine what is the appropriate goal threshold. What we tried to do is to estimate that which would be consistent with our interpretation of the -- the prior legal

decisions.

SENATOR BOLLIER: And when you say, "the state," you're meaning the state school board that is in charge of that decisionmaking?

DR. LORI TAYLOR: I'm actually thinking more broadly than that. The decisionmaking is clearly influenced by the legislature as well.

SENATOR BOLLIER: Okay.

DR. LORI TAYLOR: And so I -- I would not presume to tell you how to internally make that decision.

SENATOR BOLLIER: Thank you. Thank you.

CHAIR BAUMGARDNER: Representative Hubert.

REPRESENTATIVE HUBERT: Thank you, Madam Chairman.

You talked about the state assessments that were taken and looked at during that period between Montoy and Gannon.

Did -- did you look at other assessments that -- such as the national standard of the NAEP and ACT and -- and other types of assessments taken from that same time to try to

collaborate some of the state assessments work done then?

MR. JASON WILLIS: We did -- we did, obviously, take a -- a look at those data. They weren't incorporated into the final findings for a couple reasons. First, NAEP is a sample. One of the things that's really important when we think about a study like this is looking at the full population. We offer some discussion about the comparison of this type of an approach as opposed to a successful school's model earlier on in the -- in the study.

Second, in regards to ACT, the state assessment that we used inside of the study, there is actually some pretty extensive review of how the KAP, the -- the Kansas Assessment Program, is aligned with the ACT, specifically the assessments that you provided, ELA and math, to -- to the ACT. So by reference we did, but what we were -- we were focusing on the ELA and math assessments as a condition of they're relatively equivalent to what the ACT is -- is benchmarking and, as I mentioned, the difference between population versus sample for

NAEP and the state assessment.

CHAIR BAUMGARDNER: Majority Leader Denning.

MAJORITY LEADER SENATOR DENNING: Thank you, Madam Chair.

Just concentrating on Rose for a bit, reading your report and then looking at that last graph, it appears you've crossed -- in your -- in your analysis you've taken your approach to Rose and crosswalked it into the state's ESSA plan that's on file; is that correct?

MR. JASON WILLIS: Sorry -- sorry. Can you repeat your question?

MAJORITY LEADER SENATOR DENNING: From reading your report and then looking at some of the graphics that you've showed us, your approach to Rose is to crosswalk it into -- and match it up into certain segments of the state's ESSA plan that's on file with the federal government?

MR. JASON WILLIS: No, that's not entirely correct.

MAJORITY LEADER SENATOR DENNING: What is incorrect about it?

MR. JASON WILLIS: So I talked about this earlier. It was one of three areas of reference that we made in establishing the thresholds of performance. So the ESSA plan was one, but we also looked at existing performance here in the State of Kansas for those schools and districts that were performing, excuse me, at higher levels on the distribution of those assessments. We also looked at historical levels of performance and growth rates that referenced a prior question in the years between Montoy and Gannon.

MAJORITY LEADER SENATOR DENNING: But, having said that, if you -- if you go back and -- and read your report and look at some of the other graphics, you're -- you're fairly matching up your approach to Rose inside of our ESSA plan. I see no deviation.

MR. JASON WILLIS: Yeah. So -- so if folks would turn to page 46. This provides a schedule that was outlined in the ESSA plan looking at your baseline 16/17 year through 21/22 and you can see where, that five-year period, the ending proficiency targets identified in the ESSA plan was 54.65 for ELA

and 49.15 for math. When we look at some of the growth performance during the Montoy and Gannon years, the rate of the growth was actually faster than what was identified in the ESSA state plan. So, again, we're looking at multiple factors, not just drawing from a -- a single document.

MAJORITY LEADER SENATOR DENNING: So, Madam Chair, I'm just skipping ahead.

I think it was your Scenario B. It appeared to me that you were looking at ESSA almost entirely when you came up with those projections.

MR. JASON WILLIS: Yeah, again, I -- we presented the -- the kind of various ways in which we looked at the -- establishing the targets and the back half of Chapter 3, after discussions of the Rose standards, provides the discussion of how we -- how we arrived at those targets.

MAJORITY LEADER SENATOR DENNING: All right. So, as far as developing Rose, you don't have a whole other standalone, noniterational set of standards for Rose, you're looking at some of the ESSA, possibly

some of the old No Child Left Behind to come up with -- with your projections?

DR. LORI TAYLOR: Well, there clearly is a significant influence of the ESSA plan on the identification of thresholds, because that's an articulation of the state's expectations for itself.

MAJORITY LEADER SENATOR DENNING: So let's just use an example of Iowa. Iowa has their ESSA plan on file and they're showing with their improvement plan between a half a percent and a full percent progress.

And if you were doing the same analysis for Iowa, would the -- would the spending be tied to that type of assumption?

DR. LORI TAYLOR: I'm not aware of what data are and are not available in Iowa, but the process would be the same, which is to identify what the state's definition for itself of -- of the -- the standard it's expecting itself to meet. Now, you have to translate through the observable information, which is the -- the KAP on the math and ELA scores. So you have to cross -- you do have to crosswalk from the thresholds to the goals for the

analysis, but the thresholds were not taken straight from ESSA. They were very much something that we identified through our more holistic review of the information.

MAJORITY LEADER SENATOR DENNING: Okay. So, using that line of reasoning, the State Board of Education can change the Rose and the calculations simply by changing their assumptions and goals, based on your approach to this?

MR. JASON WILLIS: So I think this goes back to an earlier discussion we were having about the importance of the state. And when Lori and I talk about the state we think about this holistically. This includes the governor, his executive branches, it includes the legislature, the State Board of Education and even, more generally, the populus to think about what is it for the State of Kansas that is acceptable levels of performance and at what pace.

And when there is consensus, and we have seen evidence of this in other states, across those various bodies of government there seems be a coalescence around the amount of resources

that needs to be invested in the system, the way in which the state interacts with school districts to monitor that performance, to hold them accountable, but also provide that level of support. And so, as we said earlier, this was our analysis -- independent, objective analysis of what we think those levels of performance should be but, certainly, the state has a very large hand to play in determining what those thresholds of performance should be.

MAJORITY LEADER SENATOR DENNING: Would it be a -- would it be a safe assumption that if our ESSA plan looked like Iowa, you would have a significantly different approach than you do in -- in this document that I have my left elbow on?

DR. LORI TAYLOR: Well, we definitely were informed by the -- the Montoy decision in terms of the kinds of levels of performance that the -- the court seemed willing to accept as consistent with the Rose standards. It's a bit challenging given the -- the relative lack of specifics with respect to those -- those performance standards.

So what we needed to do was look at what

has been interpreted by the courts as satisfactory and include from that information on what the state has signaled through its ESSA plan would be satisfactory and work to integrate those two pieces of information, but we definitely are purely advisory in this role. So it is our information to you that we believe these standards would be consistent with the Rose standards, but it's not our position that these are the only -- that you couldn't have a different opinion.

MAJORITY LEADER SENATOR DENNING: So my final question, Madam Chair, is any state that has an ESSA plan on file, be it -- I'll just use the word realistic and then use the word lofty.

With this type of analysis, you would chase those two descriptions?

MR. JASON WILLIS: Again, we -- we haven't reviewed all of the ESSA plans and looked at that relative to existing performance or patterns of growth but, again, you know, the ESSA plan was one of three different areas that we looked at in regards to establishing those performance thresholds.

DR. LORI TAYLOR: I also think you could interpret our Scenario A and Scenario B as trying to triangulate through two different paths to satisfying the Rose standards, one of which is more consistent with the position that seems to have been taken by the court, which would be to get to -- 90 percent of the students to the Level 2 or better and one of which is more consistent with our interpretation of the ESSA plan, which is getting 60 percent of the students to Level 3 or better.

CHAIR BAUMGARDNER: Representative Landwehr.

REPRESENTATIVE LANDWEHR: Thank you, Madam Chair.

In looking at current performance, did you look at what impact, if any, that the high influx of post-Montoy dollars had compared to pre-Montoy performance?

DR. LORI TAYLOR: Thank you for the question. We did not look at the -- we focussed the analysis on the two most recent years and, although we -- we did a lot of inspection of the other data, we did not do any

formal analysis of the relationship between spending and performance in the prior years.

REPRESENTATIVE LANDWEHR: All right. Thank you. And then the other is, when you talked earlier about, you know, being college ready, does that mean vo-techs and community colleges or just four-year?

MR. JASON WILLIS: That -- that definition, the language that's used there around college ready, is tied to your assessment program. So as they would identify the ability, the level of performance that's associated with -- with being college ready would be the definition we followed.

REPRESENTATIVE LANDWEHR: Thank you.

MR. JASON WILLIS: Sure.

CHAIR BAUMGARDNER: Representative Aurand.

REPRESENTATIVE AURAND: Thank you, Madam Chair.

Back to the factors that go into this, I was looking specifically at the -- when you tried to come up with performance in the previous growth during the time the court regarded the education system adequately

funded.

When you looked at that did you take into -- consider any type of, I guess, testing issues? Our standards were revised, I believe, in 05/06, and if you look at the growth on top of page 47 you'll have a -- that's when we had a very large jump 4.05 in ELA and 7.6 in -- in math proficiency. That coincided with kind of the phasing in the No Child Left Behind, high-stakes testing. I heard from teachers all the time who were -- were overtesting, were preparing. So did you look in terms of how that coincided with any possible testing bias?

I'm thinking of the pizza parties. I have three kids in grade school at this time and I have teachers talking about the preparation that went into getting them ready, and in terms of how that coincided almost exactly with that new, redone state test there seems to be a -- a jump there that's really hard to tease out in ACT or any other scores.

Did you look at testing bias in any ways and possibly what other states did at the same time with new tests in terms of maybe study spending and a jump in their scores based on

just the -- an overall feeling of going no child left behind and the importance of the tests at that time frame?

MR. JASON WILLIS: We don't have -- we didn't have any evidence -- I guess, systematic collection of evidence. I mean, many states -- all states have gone through those kinds of testing transitions. The focus of on what years of data and their improvement that we looked at was really tied to the funding levels that tie back to the Montoy case and the years between Montoy and the Gannon case.

REPRESENTATIVE AURAND: When you look at that, there's this -- this level of jump, the 4.05 and 7 in that particular year, which was the first comparative year with the new.

Is that -- did that indicate anything to you that there might be something else going on in there, because in my schools it was mostly the same teachers teaching the same things, but the test preparation was the big change that I noticed. Did that play any role at all in your analysis?

MR. JASON WILLIS: No. Again, our

point of reference was really thinking -- was really looking at the years between Montoy and -- and Gannon and the levels of spending during those years.

REPRESENTATIVE AURAND: Do you think that is something that is worth considering?

DR. LORI TAYLOR: I think that the -- the testing that -- I'm quite confident that there were levels of growth that were sustained; when you make the transition to more high-stakes testing and -- and people, that they learn a number of things. They -- they learn how best to prepare students for the testing, they learn how best to help prepare them on the content that will be covered on the test, and so you can see growth rates that cannot be sustained subsequently. But what you also can see is just -- in looking at the kinds of growth that were being experienced very close to the period of time of the Montoy decision was really what we were focussing on.

REPRESENTATIVE AURAND: All right. Thank you. Thank you, Madam Chair.

CHAIR BAUMGARDNER: I have a few brief questions.

So does any state receive any type of punishment or any -- is there any type of accountability from a federal standpoint if the state's ESSA goals are not met? So if they've failed the ESSA goals, is there any type of stick, if you will, from the carrot -- or a stick, if you will, from the federal government?

MR. JASON WILLIS: I'm not aware of direct action that's been taken by the federal government to -- I guess, can you clarify? When you say, "punishment," what -- what are you referring to?

CHAIR BAUMGARDNER: Well, we do receive funding from the federal government and we are required to submit an ESSA plan.

So when the Department of Education came up with the ESSA plan that was signed by the governor, what -- what impact does that have if the state, any state, fails in what they set out as their goal?

MR. JASON WILLIS: So I -- and, again, this isn't an issue -- a question that we were prepared for, but what I can say is I know that the -- the federal government engages

in ongoing discussions with -- with states around all kinds of provisions of their plan and they do monitoring. And in those cases when they are monitoring and they find that there is something that, you know, they need to engage the state in, there are different stages of that engagement that usually start with a conversation, with deeper investigation, some opportunity to course correct, but I -- I'm not aware of a state that, you know, for example, has lost large amounts of federal funding as a result of their submission of an ESSA plan.

CHAIR BAUMGARDNER: And earlier, when you were speaking about goal thresholds, you said it's very important for the state to have agreement.

Could you express again -- when you say it's very important for the state to have agreement, are you talking about the State Board of Education, the State Board of Education and the legislature? What are you talking about as far as that agreement?

MR. JASON WILLIS: So when researchers walk into supporting states through these education cost studies there are certain

factors that are not at the behest of the researcher. One of those factors, when we think about the education cost function, is the -- the level of performance, the threshold of performance. That's not in our purview because it's, you know, up to the state to make those decisions.

However, given the muddiness of how that's been defined in the State of Kansas we were using documents, we were using historical levels of performance, we were using reviews of the Gannon rulings and associated testimony and evidence to help identify an objective, independent level of performance. And when we refer to the state we are talking about all branches of government, executive, legislative. That would include the State Board of Education, the Department of Ed, this body, the legislature, as well as the governor to think and consider what is acceptable for you, what is acceptable for the public around the level of performance that you expect of students, how they are prepared through the K-12 education system.

CHAIR BAUMGARDNER: So when we talk

about the aspiration of the 95 percent graduation rate and we know that less than 70 of our school districts in the state have gotten to that 95 percent, does that mean that the other districts are not in agreement? Does it mean that the legislature with funding isn't in agreement? Is it the school boards that aren't in agreement with the ESSA aspirations? What would that be attributed to?

MR. JASON WILLIS: So I -- I think it's dangerous to speculate around what the reasons and rationale are for why some schools and districts have different levels of graduation performance than -- than others. In this study we used research techniques that have been proven time and time again in other states and across the country that allow us to see some of those relationships.

We'll talk a little bit later about the practicalities of actually implementing the work. It is one thing -- and this -- this body has an important role to play in the actual funding of the system, but the work that goes into translating the dollars themselves to how systems implement those resources, how they use

those to help achieve levels of student performance given the background of the students, given the place in which they reside and the size of their system, it's overwhelmingly complicated. But that's where the work of sitting side by side with districts and identifying what those targets are and coming up with the right set of incentives is really important to consider, along with whatever level of funding you think is necessary for the K-12 system.

CHAIR BAUMGARDNER: Representative Lusk.

REPRESENTATIVE LUSK: Thank you, Madam Chair.

On page 61, I'm curious about the -- you've talked before about the strengths of this cross model function approach versus the 2005 study. Please explain again -- I mean, this indicates there is a relationship between the amount of funding put in and -- and money and the results you get.

Could you elaborate on that?

DR. LORI TAYLOR: Thank you for the question.

I presume you mean by the results you get the academic and graduation outcomes for the students; is -- is that correct?

REPRESENTATIVE LUSK: Okay. Table 17, yes.

DR. LORI TAYLOR: Right. But what you're -- what -- pardon me. But what you want me to articulate is why this model shows a linkage between academic outcomes --

REPRESENTATIVE LUSK: Exactly.

DR. LORI TAYLOR: -- and cost?

REPRESENTATIVE LUSK: Yes.

DR. LORI TAYLOR: Okay. And so the idea of any regression analysis, of which this is an example, is one is trying to use the data to best predict the level of spending that occurs based on the level of student performance, the demographic characteristics of the students, the geographic cost drivers for their school district, size of the school district, these kinds of things.

So what one does is identifies a series of weights or coefficient estimates that best trace out the relationship between spending and the determinants of spending. And in this

model, in the first two rows, are articulated the relation -- the estimated relationship or the best available relationship between outcomes and spending. And what we did find was a strong, statistically significant and positive relationship between the level of student performance on the conditional NCE score and cost such that a -- a 1 percentage point increase in the conditional NCE scores associated with about an 85 percent increase in cost.

And so a 1 percentage point increase in the graduation rate is associated with between a 1.2 and a 1.7 percent increase in cost depending on whether you're talking about kids in high school grades or lower grades, on average, ball park, 1.5. So what we did find was a strong, statistically significant and positive relationship between out -- educational outcomes and expenditures once one controls for efficiency, as was done in our statistical model.

REPRESENTATIVE LUSK: Thank you.

CHAIR BAUMGARDNER: Any other questions from the committee? Yes, Senator

Bollier.

SENATOR BOLLIER: Thank you.

As long as we're on page 61 and 62, at the bottom of page 62 there is a missing number. Right now it says, "XX." It's in the third sentence down on page 62 at the bottom, and I think there's supposed to be a number there.

DR. LORI TAYLOR: There -- there most definitely is supposed to be a number. Thank you very much for that. If the committee will permit -- I'm not doing math in public, so I will -- I will calculate that and provide it to the body.

CHAIR BAUMGARDNER: I think we're ready to move on to the next portion on the PowerPoint.

DR. LORI TAYLOR: So our cost function analysis as articulated, in response to Representative Lusk, looks at the observed relationship between the spending that occurs in the school districts and schools, the outcomes that are accomplished and the cost drivers that could modify that relationship, in particular the size of the school district,

labor costs.

One thing that's been particularly important in Kansas is the population density of the area. One of the factors that seems to be particularly important here is that you are in some sense forced into -- into building sizes that are not as -- not cost minimizing by virtue of the fact that you have to have a reasonable amount of distance between the school buildings; that if you were to be operating in a densely populated area like in Wichita or Kansas City, one can get to school buildings that are the cost effective size. One can have 22 Algebra 1 students and -- in a classroom and be able to therefore use your teaching resources as -- as efficiently as possible.

If you are in a much less densely populated part of the state you might not have 22 Algebra 1 students in a -- a district or in a high school to be served. You're going to have to have a much more labor intensive delivery mechanism for education in sparsely populated parts of the state because you can't put the kids on the bus for two hours to -- to

bring them in to try to get to a -- a cost effective size school. You're going to have to operate a school that is smaller than would be cost minimizing, and that's a major driver of cost in the state of Kansas. So we built the model to accommodate all of these factors that drive differences in cost.

One of the other factors that we built into the model was a recognition that sometimes spending exceeds that which can be explained and, to the extent that spending exceeds that which can be explained, there are three ways that can happen. One way is that a school district is attempting to -- is producing performance that we don't -- we didn't have eyes on, that we weren't able to -- to measure, art, music, factors that are not perfectly well correlated with reading, writing, arithmetic, the -- the measured educational outcomes.

So one source of unexplained spending would be outcomes that are not captured. One source of unexplained spending is that there could be constraints on the school district's behavior that are not being fully captured, cost factors that we are unable to observe.

The third source of unexplained variation in spending is inefficiency, a lack of the utilization of best practices in the state.

And so, essentially, what one sees when one looks at these inefficiency measures are that some schools and districts are spending more than you could explain, and it might very well be that they are just -- they are not using the best practices in a cost effective sense that are available to other schools. So when we talk about inefficiency we're talking about this amalgam of outcomes. We're not reserving cost, we're not reserving -- and just straight failure to adopt best practices.

So, when we look at that, we typically see in other states inefficiency measures in the 10 to 12 percent range, although I have seen studies that went substantially greater than that. When we look in Kansas what we are observing is that the cost efficiency of the -- the Kansas school buildings is typically quite high, that on average we're talking about a cost efficiency of nearly 96 percent, and that is remarkably good. It suggests a -- a very prudent use of the -- of resources to produce

the outcomes required by the state. There are, however, some places where spending is substantially more than those estimates would lead you to predict, but what we did find was strong evidence of efficient practices, in general, in the state of Kansas relative to other districts.

The second major finding that comes out of our analysis is to think about using the cost model to predict the level of spending required to meet certain performance thresholds. And in order to use the cost model to make those predictions one has to designate performance thresholds. So we designated a -- a set of performance thresholds that, as Jason described earlier, we believe to be consistent with the Rose standards and the standards the state has set for itself.

The first is Scenario A, which is establishing a target of 90 percent proficiency at Level 2 or better on the KAP, and Scenario B, which establishes the target of 60 percent efficiency for a Level 3 or better on the KAP. Both Scenarios A and B use a graduation rate of 95 percent because that's the -- the long-run

standard of expectation. We also present to you cost estimates at a graduation rate of 90 percent, but we wanted to -- to make you aware of what we were talking about when we referred to Scenario A and Scenario B.

In making these, essentially, predictions of what the cost would be necessary for a -- a school to achieve the level of performance identified, what you're going to see is there's an estimate of base funding, okay, and then there are adjustments to that base funding. The adjustments to the base funding, there's a regional cost adjustment. Those are driven by differences in labor costs and differences in sparsity, and I'll tell you right now the differences in sparsity dominate that particular relationship.

There's an economies of scale adjustment for differences in school district size and a student needs adjustment for differences in the demographic characteristics of the students. If you were curious, one could turn to the back of the report in Table E and see estimates of these, base funding, regional cost adjustment, the economies of scale adjustment, student

needs adjustment for each of the districts. And one starts with a base, multiplies by the adjustment in column 1, column 2, column 3 and gets to the maintenance.

The final two pieces in Scenario B are the estimates of what it would take to raise -- or how -- and essentially how much -- how high the conditional core of equivalent score would need to be to be on the path towards the Scenario A and Scenario B with respect to the percent passing at Level 2 and the percent passing at Level 3 on the KAP. So what we did was we translated to what does the normal core of equivalent score need to be to have -- to have an expectation that the passing rate would be 60 percent at Level 2, what does the normal core of equivalent score need to be to have an expectation that the passing rate would be 90 percent -- 90 percent at Level 2, 60 percent at Level 3 on -- on the test. So these are -- this is the way one uses the cost model to predict cost at various levels of performance.

Clearly, one could also use the cost model to predict costs at levels of performance that we have not yet articulated. What we

found in the estimation is that costs are substantially higher in particular for students who are eligible for free lunch. They -- the best estimate is that the multiplicative weight is 1.98, which would translate into a -- an additional student rate of about .98. That -- or, excuse me, .89. So that is to say that the -- the cost of serving an economically disadvantaged student is about 80 -- about 90 percent higher than the cost of serving a student who is not receiving the free lunch, according to the systematic relationships identified in the cost model.

Similarly, the English language learner students, we're talking about the weight of 1.22, and that is going to be a relationship that we identified as becoming smaller as the fraction of English language learners in the school increased. And that's actually something that makes a lot of sense to me in thinking about how one serves English language learners when they are but a small fraction of the student body compared to how one can serve that same population when they're a relatively large fraction of the student body. When

English language learners are a small fraction of the students you're going to have to serve them even through some sort of pullout program that provides them with ESL or bilingual instruction or you're going to want to place them into a bilingual classroom where you have a small number of students and a teacher, which is a very labor intensive way to bring services to English language learners.

As the number of English language learners tends to increase, if you're going to be delivering services in a bilingual classroom, then what you -- you are in a situation where you are able to get to a more cost effective size classroom and you can have a bilingual education classroom of 18 instead of a bilingual education classroom with 9, for example, in a particular --

And so it's much more -- it's much less expensive to operate once you get to, essentially, critical mass with respect to the -- the number of English language learners in the school, but there is a critical mass phenomenon going on here, and that's one of the things the model represents. Okay.

And there's a scatter plot, that the student need weight distribution by district enrollment I shared with you, only to illustrate that student need is not a function of district size, that what's going on here is not that big districts are the districts where the kids have need. There are large districts where that's true. There's also large districts where the student demographics do not drive cost, particularly. There are small districts with very -- with student pop -- that have fractions of populations that are expensive to serve and there are small districts where the fraction of student population is -- has relatively limited needs for -- for those particular students.

This is a map of the -- another of the cost drivers in Kansas. This is the teacher salary index. I'd like to talk really briefly about how this was estimated, which is to look at the observed relationship between the -- the salaries of Kansas teachers and the demographic characteristics of those teachers. If you're interested in the nitty-gritty details, they'll be presented to you in Appendix B but,

basically, that's articulated in a relationship between what the district is paying for their teachers and the demographic characteristics of the teachers they are hiring and then the factors outside of school district control that can lead to variation in the salaries that they need to pay, so basically following a typical labor model to estimate the -- the -- the wage that each school district in Kansas would need to pay to be able to hire a teacher with ten years of experience and a master's degree and then asking how that predicted salary for a person with ten years of experience and a master's degree differs from district to district throughout the state based on things like the prevailing wage for people who are not educators but do have a college degree, the unemployment rate in the community, the distance from a metropolitan area or a micropolitan area in relation to geographic remoteness.

I should note that our teacher's salary is probably best characterized as a salary and benefit index, which basically means what we're trying to do is -- and what we're doing with

this model is mapping out the prediction of what each district would have to pay to hire exactly the same person -- or the same set of qualifications and characteristics in each of the various districts, which you'll see is a dark green in the metropolitan areas, which makes a lot of sense, but also some -- some dark green going on in southwest Kansas, which I had real trouble explaining until we overlaid an oil and gas map on the same areas and saw that what we have here is a lot of what's going on with -- with very recent fracking activity, that things have -- things have changed a bit since I lived in Kansas, but that it's definitely reflective of some of what's going on in those labor markets where school districts risk losing their personnel to the higher-paying, local occupations related to fracking, also the influx of people related to oil and gas extraction driving up the cost of living or the wages for other folks in those particular locations.

Okay. I should also note the literature has suggested that it's very costly to operate schools with less than about 300 students per

school, and a whole lot of the schools in Kansas are like that, that many of the -- and for reasons that are outside of school district control, having to do largely with population density, and that there are some schools that are -- are larger, but most schools -- about 32 percent of high schools have 200 students or fewer. That's a -- a costly configuration for the various schools.

As a result, if you look at the distribution of per people spending by building size or with enrollment, what you'll see is that the -- if you look at those buildings with fewer than 150 students, that's going to be the little spike out there to the right, centered over about $1,200 dollars per student -- $12,000 per student as opposed to the more tightly clustered observations you get when you're operating a campus or building with between 150 and 300 students or between 300 and 750 students.

So we basically used the cost estimates to -- the estimated cost model to forecast the amount that each -- that each building would need to spend to achieve the performance and

then the amount which each district would need to spend to achieve the level of performance. This is a scatter plot showing you the long-run kind of cost estimates compared to the observed school district estimates. The dark circles are going to be the 16/17 spending. The open circles, the hollow circles, our -- our forecast of what they would need to spend to achieve the 95 percent passing rate and growth from one year to the next are a normal core of equivalent score of .50. Equivalent, what we were saying is these are the long-run, sustaining levels of cost.

What you observe is a relationship with school district size that has much more of a U shape to it than the existing level of expenditures. So if you thought of the existing level of expenditures as kind of tracing out a saucer, the cost model traces out a bowl, which is something a little bit higher for the very smallest of districts and higher for the largest of districts when -- when everything is taken into account.

The -- the distribution of spending per people by district size in 2016/17 also is

going to be telling you something about the relationship between the per people spending and the number of the districts that are spending at that level. You get a lot less kind of variation in spending at the district level than you do at the school level because there are so many different configurations at the school level.

Then we get to the -- the part that everybody's been waiting for, which are the aggregate cost estimates. The -- the first thing we estimate is what we call the current -- what is the current levels of current operating expenditures. So this is the average of our dependent variable, the level of spending excluding the food, excluding transportation, excluding con -- excluding all of the capital outlay and construction costs.

Our estimate is that the level of long-run maintenance would be 5,000 -- 5.103 billion dollars or about a 10 percent increase over current levels of spending. That would not be adjusted for inflation with Scenario A. To be on the path towards the performance thresholds of Scenario A would require 6.4

billion dollars; to be on the path toward Scenario B, 6.7. Okay. These are best understood as temporary transitional funding under Scenario A and Scenario B to get to the point of a long-run scenario where the maintenance run level is required to sustain, but first you have to catch up, that there are some -- as we showed you in the previous graphics, there are some districts that are not particularly close to the graduation rate that's being cast out here, which is 95 percent, and they're not particularly close to a 90 percent of the students passing at Level 2, which is what I think of as the closest to the way that the Gannon ruling articulated the standards, is to Level 2.

So there would need to be some additional funding to bring the students, basically, up to grade level and -- in some sense and then, once they are at grade level, it is the maintenance cost would represent the long-run cost required to sustain that level of student performance.

There are a number of considerations that need to go into this that we'd like to -- to talk to you about. The first is that we

recognize that the state doesn't fund on enrollment or really think about enrollment as the -- the metric of student performance, although that is the measure most commonly used in the -- the scholarly literature in doing cost analyses and, for that reason and other reasons, the baseline we used.

But there was some question about whether or not -- how would things be different if we had done the analysis based on FTE rather than on student enrollment. There's also the question of what would happen if, rather than using a -- a graduation threshold for cost analysis or the fore -- for the cost forecast of 95 percent, we would use something more like 90 percent in -- in looking at those numbers.

So we wanted to share with you how the -- the scenario would change if we were to use the FTE enrollment rather than -- than straight enrollment. We -- we estimated the -- the cost model, the -- the FTE enrollment and the straight enrollment are correlated about .999, so it -- statistically, there wasn't a whole lot of -- of change that would occur here.

And, if you see in the estimates, what

we're seeing is if you were to have a analysis on the basis of FTE, the maintenance cost would be 5.12 billion as opposed to the 5.103 billion that we estimate using district enrollment. So I think the -- the big takeaway of this particular supplemental analysis is that FTE or district enrollment is not really the issue here, that either one is going to give you the same number in terms of the additional resources the state's going to have required.

Now, it does mean that when you -- if you were to choose to operationalize in any way our results you would want to make a translation from the enrollment-based estimates to an FTE basis to be able to incorporate them into your funding formula, and we can provide research staff with the strategy for doing that.

The second is to it look at cost estimates based on different graduation rates. And so if you start at the 90 percent graduation rate rather than 95 you're going to bring the estimate of -- of maintenance down substantially. Rather than a 5.1 billion down to a 4.7-billion-dollar estimate, you're going to bring the Scenario A down from a 6.4 to a --

a -- a 5 point -- or 6.0, basically. So there definitely is a sensitivity in the analysis to the -- as you would expect, to the choice of graduation rate for costing out purposes.

So there would definitely be a reduction in the cost estimates associated with a 90 percent graduation rate rather than a 95 percent graduation rate, but the -- essentially, there is about a 1.5 percent increase in cost for every 1 percentage point increase in the graduation rate, and that's kind of the best way to be thinking about it in this context. Then -- yeah.

MR. JASON WILLIS: So one of the other things that we wanted to make sure that we provided the body with was understanding that the analysis used are the most recent year of expenditure data that was available, which was the 2016/17 year. We all recognize we're kind of nearing the end of 17/18 and headed into 18/19, so we wanted to provide a supplemental analysis that brought forward the spending from -- that was observed in 16/17 to the year which we're currently in as well as the year in which you are headed into.

And so here's a presentation of the maintenance Scenario A and Scenario B that you can see at the very bottom applies two things. The first is an inflation factor to bring forward the funding levels from 16/17 to 18/19. We used a -- a five-year CPI average -- national average to apply those increases across those years and we also -- of important note is that the assumptions for the graduation rate in 16/17 were 90 and then 17/18 the same at 90 and then increases to 91 percent in 2018/19.

So these are additive funding amounts. So the 4.737 billion for maintenance, you would add 115 million in 17/18 and then an additional 315 million in the subsequent year. And that's, again, looking at the -- those two factors of inflation as well as the change between '17 and '18 and 18/19 from 90 to 91 percent.

The other thing that I'll mention and also just recognize for the -- for the body is that we are aware that on the SB19 there was an investment that the legislature made in the K-12 system, and to some degree you can account

for it. The figures that we have are 194 million in ongoing funding starting the 17/18 year plus another 97 million in -- starting in FY19 and ongoing. And so that cumulative over -- over the two years is that 485 million, again, which could be contributing or supporting the initial investment that we're describing here.

So to bring us to the -- near the end of the presentation, one of the things that the study team really looked at was in considering -- was thinking about the kind of phase-in of these funding increases. And clearly, I think, everybody can acknowledge that these cost estimates are large and that we can also recognize that -- and this was a -- a surprise to Lori and I. The Kansas schools are already highly efficient in their use of spending.

Kansas schools are operating at levels that we have not seen anywhere else in the country and, as Lori explained, there could be some -- there could be some considerations of that maybe in pockets but, clearly, Kansas schools are using dollars well given what they are tasked to do with it. And so the state

might consider ensuring how do you help to maintain their level of efficiency as you would -- as you invest in additional resources.

And what we can also observe is that when you have seen states make very large investments of dollars, it's perhaps prudent to think about that being extended into some type of phase-in period, and there's a couple of reasons for this. The first and probably the most important is for leaders of your schools and districts to take the time to plan how they would use that money.

Every year governmental agencies go through a planning process. They think about how they want to use their resources and to what set of outcomes or desires they want to address those resources to get to that outcome. And making overly large investments of these resources at once does not create an opportunity for leaders in our -- in your schools and districts to plan and be thoughtful about how to use those resources.

As I was mentioning earlier, education systems are extraordinarily complex and so being able to understand how additional

resources can have a direct impact on the outcome takes time, it takes practice and, frankly, trial and error. And so a phase-in period would create an opportunity for school and district leaders to identify ways in which those dollars can be used most effectively. Perhaps it is lowering class size to allow students to be pulled out for different instruction. Perhaps it is providing a mental health counselor that can provide social and emotional support to students.

But unless local leaders and practitioners have an ability to think about how they might use that money, to work with one another to identify how to implement it -- Lori and I would -- would think that, without that in place, Kansas being able to maintain its level of highly efficient use of resources may slip a bit.

And we presented this last time but wanted to bring it back again. You know, much of the work of -- and discussion has been about how to adequacy and equity here in the state Kansas and thinking about these other fundamental levers that help to support

practitioners and using dollars well and efficiently includes some of these other things around flexibility and support and transparency and accountability.

So -- so, whatever level of performance the state agrees is important for ELA and math and graduation, that you're offering combinations of different policy levers that are supporting schools and districts but are also holding them accountable to make sure that they're making progress and that they have the flexibility within various rules and regulations to actually achieve those means.

And so one of the examples that we offer in the report is just thinking around the transparency and availability of data. Kansas has been nationally recognized for their internal data systems by the Data Quality Campaign out of DC. And one of the things that we can -- we can observe is that, with so many small school systems thinking about the use of data and how it helps to inform instruction may be a challenge for these schools in that -- you know, for some of the schools and districts that we work with across the country, when they

have student enrollment levels at 200 or 250 your superintendent is also the bus driver and janitor and -- they're playing so many different roles and so how might you consider, as a state, how to take advantage of scale to support those smaller school systems that might give them some insights or a direction to start a conversation about how to continually improve achievement in the classroom.

And Data Central, which we drew some of our date from for this study here, is a good place to start. And, you know, KSD has done a nice job of putting together those data sets, offering some insight into how Kansas schools operate today on a variety of different levels, and it might be useful to think about ways in which that system can be enhanced. You know, one example that we look to nationally is Texas smart schools, that starts to look at the interaction between these various data sets that help practitioners to more finely tune and understand how they make decisions going forward.

The last thing that I'll mention, and then we'll close our presentation, is thinking

about the combination of support and accountability strategies. So the legislative post audit that you have here in the State of Kansas does a series of reviews every year, and they're directed from various bodies. And we took a pretty good look at about a dozen or so of those studies and came up with a couple of insights that we think might be helpful as you think about the additional resources that you invest here in the State of Kansas.

The first and foremost, that the analytical and comparative techniques that LPA uses are actually pretty good in that they might have some applicability in other environments and forums. Like, for example, if you're getting a set of superintendents together and they're discussing how they want to break the -- the nut around early literacy that they're struggling with, what are some of the comparative and analytical techniques that can be adopted into those scenarios to help drive those conversations.

The second is that some of the -- the insights that are reached in the -- in the reports themselves, although mostly oriented

towards compliance with the law, and we fully recognize that that was the mission and outset of LPA, surfaces matters of process, culture and performance that are really important for organizations to consider.

The law is guaranteeing a minimum level of compliance but as school systems, practitioners aspire to provide students with a level of performance that well exceeds that minimum level of performance, and some of the ways in which the LPA studies have commented on issues of process, culture and performance in schools could actually be very insightful for practitioners to think about and use.

And there's a discussion section at the end of each of the reports that is the -- basically, the response by the district on what plan they're going to put into place but thinking about how do you get beyond just the response and how do you get the district to engage in both implementing those practices, but also sharing with others is something that we think would be very beneficial as you consider the additional investment of resources here in Kansas.

So, with that, I just wanted to thank the -- the committee for your time, and we'll take any additional questions that you might have.

CHAIR BAUMGARDNER: I have first down Representative Landwehr followed by Johnson and Trimmer.

REPRESENTATIVE LANDWEHR: Thank you, Madam Chair.

You've provided several spending scenarios, but each is a single number that includes state, federal and local funding, but we currently don't mandate specific local funding level and the legislature has no control over those -- those levels.

So do you have any thoughts on how any funding increases should be divided between the state, federal and the local?

DR. LORI TAYLOR: Thank you for the question.

I think it's -- it's very important whenever one does these kinds of cost analyses that one combines all of the resources of -- of funds, to look at the federal, the state and the local, because they -- that is the -- the best estimate of the resources being brought to

bear for those specific children.

As to how responsibility for coming up with those resources should be divided between federal, state and local, federal law would hold that you cannot supplant federal resources in the sense that because the federal money is there the state cuts back. So you really have to focus on the dimension between state and local and the division between state and local, and that is very much a -- an issue of state policy and not something that I want to -- that I have the expertise to really advise you on. I would point out, however, that there -- it would be an issue of equity concerns if one were to assign a certain level of resourcing to the local level and the local level be unable to -- to generate such a source of resources.

REPRESENTATIVE LANDWEHR: And, just a little follow-up to that, so then do you have any thoughts on the merits of providing all adequate funding through the state instead of relying on local option budgets?

DR. LORI TAYLOR: My read of the literature on school finance equity and adequacy suggests that the -- the requirements

of equity would seem to require state funding for what we call a foundational level of spending or regular instruction, but it would be relatively up to local discretion with respect to enrichment, and it's a state's call where that line between regular instruction and enrichment might happen to be.

When I was in high school anything about computers was clearly enrichment activity. Nowadays my kids were getting it in their public school in the 3rd grade, so it has become an essential element of regular instruction, so -- but the -- the typical school funding model that is analyzed in the literature is one that makes the distinction between enrichment and foundation and obligates the state on the foundation side.

REPRESENTATIVE LANDWEHR: Thank you.

CHAIR BAUMGARDNER: Representative Johnson.

REPRESENTATIVE JOHNSON: Thank you, Madam Chair. I do have a few questions. Is it okay to go through --

CHAIR BAUMGARDNER: It is.

REPRESENTATIVE JOHNSON: Thank you.

I'll start with one that folks might expect me to ask you. You mentioned KPERS and pensions being included. Is that the full payment that's included or -- or what is in the number?

MR. JASON WILLIS: So the dollars that we included in the -- the spending estimates would include those contributions that are made by the school districts on behalf of employees. So that's captured in your benefit line items. There was also -- we also recognize that there was a separate fund that looks like it was passed through. Basically, the state provided dollars to the district, those districts then, basically a day later, would transfer it to the pension retirement system on behalf of the districts. All that spending was included.

REPRESENTATIVE JOHNSON: So all of that spending is included.

DR. LORI TAYLOR: Anything that ran through the districts.

REPRESENTATIVE JOHNSON: Say again?

DR. LORI TAYLOR: Anything that ran through the districts was included. If it

shows up on the fund function and object expenditure reports of the districts we would have included it as current operating expenditures. If it's something that the state makes direct contributions to the retirement system, we would not count that.

REPRESENTATIVE JOHNSON: So something like a bond payment wouldn't be in, but anything that went through the district would be?

DR. LORI TAYLOR: If it went through the district and its current operating expenditures. Most bond payments are for -- for capital improvements and not part of current operating.

REPRESENTATIVE JOHNSON: Certainly, we have a other issues there which aren't worth belaboring. On the pension payment, then, as we currently work through what we hope is a temporary rather than permanent unfunded liability, there may be a 4-to-5-hundred-million payment going towards that unfunded liability currently through there that we would be projecting we would grow, along with the other spending that we do, then?

DR. LORI TAYLOR: My apologies. Could you rephrase what is -- what you see as the source of the unfunded liability?

REPRESENTATIVE JOHNSON: So --

DR. LORI TAYLOR: Is it the pension? I mean, are you talking about an unfunded pension liability?

REPRESENTATIVE JOHNSON: Right, right. So our total payment includes the majority towards the unfunded liability and some towards the normal cost of what goes to current benefit, but each is run through the school districts to their share, et cetera, to try and get there.

So I was just trying to get a sense if, then, we were calculating that as a fraction of the total cost that I would then bring forward and -- and potentially increase to meet the -- the needs that are there, just to get a handle on how that rather large variable might impact.

DR. LORI TAYLOR: Yeah, and -- and, definitely, when we did the analysis, the expenditures that are reported by the districts that are not fund transfers --

REPRESENTATIVE JOHNSON: Right.

DR. LORI TAYLOR: -- would be included in our estimate of cost that we used for the cost analysis.

REPRESENTATIVE JOHNSON: Certainly, you have a lot of data to get through quickly, but that may be a variable that we'd want to look at a little further to try and drive to the detail of cost and ongoing cost as we go forward. And I've been trying to learn more on the cost function analysis and understand everything that's there and how that works and -- well, I know there's nothing that is a perfect and predictable result and what is useful as -- as we get that standard error of estimate. And I get the linear results as I change an assumption, but I'm also interested if there's anything that helps define the range of outcomes.

If I spend $1,000 dollars more per student, what -- what range of outcome in student achievement would I expect and how do I better define that -- that standard error of estimate?

DR. LORI TAYLOR: I -- thank you for the question. I think I have a new research

project.

I have never seen somebody really try and go that direction, from the -- the additional $1,000 per people back to the outcome measures. I know one could make certain assumptions and reverse engineer it, but there are a lot of possible pathways. One could go back -- assuming that the graduation rate does not change, but the academic performance does, one can go back assuming some sort of pro rata between the two. So I've never seen anybody able to do that but would be kind of intrigued by the possibility.

REPRESENTATIVE JOHNSON: Thank you. And if I may continue.

CHAIR BAUMGARDNER: You may. I have six others behind you.

REPRESENTATIVE JOHNSON: So hurry up. Okay. Thank you.

CHAIR BAUMGARDNER: One more. I'm sure they have the questions that you are wanting to ask.

REPRESENTATIVE JOHNSON: Yes. Well, let -- I'll go to -- are there other states that are funding at 95 percent?

DR. LORI TAYLOR: That focus on graduation rates?

REPRESENTATIVE JOHNSON: Right.

DR. LORI TAYLOR: Quite frankly, most of the cost analyses that I have seen have not articulated a graduation rate because they seem to always find that when the graduation goes up, spending goes down because the locations where the graduation rate is low have a dropout problem, as students that tend to drop out are from the lower tail of the academic performance, that the students who anticipate that they will not be passing the standardized tests, that may not be passing the grades. So we take this very costly-to-serve population out of the high school, performance spending goes down and graduation rate goes up, and that kind of perverse structure has made it much more rare that researchers have looked at graduation rates.

I've done work on graduation rates looking at alternative education programs in -- in Texas with charter schools and traditional public schools and in that context, where we're looking at alternative education populations,

you would not want to think about a 95 percent graduate rate because these are dropout recovery programs, by and large, in the state.

When the LPA study was conducted by Duncombe and Yinger for the State of Kansas they -- they costed out a 75 percent graduation rate and yet their base estimate, if you will, adjusted forward for inflation is about $5,000 per kid. Specifically, $5,232 per kid would be their base estimate just brought forward, and our base cost estimate is more in the neighborhood of about $3,700 per pupil.

REPRESENTATIVE JOHNSON: Thank you. Thank you, Madam Chair. If I could be added to the bottom of the list.

CHAIR BAUMGARDNER: I'll put you -- I've got you down there. So, at this time, Representative Trimmer.

REPRESENTATIVE TRIMMER: Thank you, Madam, Chair.

I have two requests. One, could we get a copy of those last two tables that were, basically, kind of addendums to the overall cost numbers that you gave us, because we didn't find those in the report.

DR. LORI TAYLOR: Yes, sir. Those were addenda that were based on the questions that you all asked on Friday. We thought it would be appropriate to be prepared to respond and we'd be very pleased to share with you the slide deck.

REPRESENTATIVE TRIMMER: Okay. So a request before I get to my question, and I'll make it fast.

What you talked about with legislative post audit, as a member of that committee, would there be a way to get a draft statement of what the post audit might include in addition to what they already knew that you suggested when it came to, you know, for instance, superintendents talking about, you know, how they would get together and deal with something that -- talking about how to make that a more efficient process, the things you talked about there? Could we get some kind of a -- an idea that we could give to post audits so we could take a look at that?

MR. JASON WILLIS: Yeah, we're happy to present.

REPRESENTATIVE TRIMMER: Okay. And,

finally, did you all use any -- I know there are different methodologies. Did you -- you did your research independent of the legislative post audit Augenblick and Myers, basically using your own formula. It didn't use a lot of the data from those studies. Okay. I just --

DR. LORI TAYLOR: No, sir. Thank you.

The -- the data for those studies was the vintage of 2002, 2004, 2005, and our focus of our analysis is the period of 15/16 and 16/17.

REPRESENTATIVE TRIMMER: All right. Thank you.

CHAIR BAUMGARDNER: Senator Pettey.

SENATOR PETTEY: Thank you.

You had mentioned about phasing in funding. You gave some reasons why. Is there a time frame that you're referring to for a phase-in?

DR. LORI TAYLOR: Thank you for the question.

My best judgment with respect to things is that I think that some of the goals set forth in the -- the ESSA plan but also some of

the expectations of the court in terms of the Montoy decisions are very aggressive with respect to timeline. I don't think that the school districts could fully absorb and efficiently utilize a big influx of funds without a lot of support. So my recommendation would be to not try to get there in -- in five or ten years but to push it to a -- a longer time frame for these particular items.

MR. JASON WILLIS: The other thing that I would say that, in states that we've seen kind of making these commitments to their public schools, it is a commitment. So school districts would need to be able to expect this level of investment on an ongoing basis, and some states have crafted school finance formulas that basically create that kind of schedule of investment. Obviously, things happen within states, but having that level of expectation of knowing what's coming in the future really helps districts to think about and plan better for the future.

SENATOR PETTEY: That kind of -- you had actually answered what I was going to ask next, and that was about best performance, if

there's reliability in funding, and so you spoke to that over time.

The last thing is that you talked about economy of scale, and yet you did say earlier in your presentation that our co-ops presented some sort of -- presented a little bit of difficulty, but don't co-ops express an economy of scale?

DR. LORI TAYLOR: Thank you for the question.

It's totally -- the idea of a co-op is a -- a wonderful mechanism by which a -- a number of small districts can achieve economies of scale in sharing the resources that make them more cost effective. In fact, the heavy reliance on the interlocals and cooperatives may be part of why Kansas is able to be so very efficient. The challenge is purely one of appropriate attributing to the districts these spending by the co-ops. And the -- the source of that particular challenge is that sometimes, as I understand the data, there are funds from, say, federal sources that go straight to the co-op rather than through the districts such that the reported outlays on behalf of the

cooperative exceed the transfers of the members into the cooperative, so it's important to account for the expenditures of the cooperative rather than the spending into the cooperative by the districts.

So what we did was we shared out the cooperative spending to the member districts according to their share of special education students, since this was a special education cooperative. That's imperfect but it's, in my professional opinion, a more honest and accurate way of reflecting what resources are being brought to bear on the kids than would be to ignore that particular piece of funding.

SENATOR PETTEY: Thank you.

CHAIR BAUMGARDNER: Representative Rooker.

REPRESENTATIVE ROOKER: Thank you, Madam Chair. A couple different topics I'll try and briefly articulate.

On clarification, when you talk about the LPA studies that you looked at, we had -- there's a couple different schedules of studies that are -- that have been conducted in the past. There were annual studies done of small,

medium, large districts and then there were other studies over that time frame that were specific topics. Which -- are you talking about all of it or something specific?

MR. JASON WILLIS: Yeah, we -- we just had staff pull a random sample, basically, over the last five years and then had staff kind of read through them and look for some of the kind of emerging themes. It -- it wasn't specific to the results of LPA, but in the -- in the body of the report we talk specifically around how we think some of the things that -- that LPA is doing in reference to work with the district has some significant benefit as that is -- as that could be shared with other districts, and then what are the vehicles in which to share and work on those kinds of practices.

REPRESENTATIVE ROOKER: Thank you. Have you -- have you accounted -- in your -- your cost estimate have you accounted for inflation over a long-term phase-in?

DR. LORI TAYLOR: The -- the analysis fully accounts for inflation over the -- the period of time that we analyzed, and the -- the

supplemental slides specifically account for inflation, but the numbers in the printed report are in 2016/17 dollars.

REPRESENTATIVE ROOKER: Dollars. So we have -- in some of the legislation we've enacted we have used CPI -- the Midwest CPI as a factor. Would that be a --

DR. LORI TAYLOR: It would be crucially important to incorporate something related to the Consumer Price Index, and the Midwest CPI seems like a very reasonable strategy to use for Kansas, but it -- I used to work with the Federal Reserve System. So we're very much totally into the whole inflation measurement thing, and it's important to recognize that these are estimates of real resources and that, as the prices change over time, one would need to also change the -- the dollar estimates.

REPRESENTATIVE ROOKER: Madam Chair, if I may, my colleagues' questions about KPERS raised -- I need to clarify what that discussion was about.

So there -- obviously, with current school district employees there is a cost to

their benefit package that would include their pension contributions, but I think what my colleague was alluding to is the state is making additional payments to get caught up on, you know, a long-term, unfunded liability and we have an escalated schedule on payments. On top of that, as was mentioned, the pension, the KPERS, is a -- a very brief pass-through on the school district books, so I -- I'm not sure I understood in your answer what it is you are and are not accounting for in this with regard to the KPERS piece.

DR. LORI TAYLOR: Thank you for the question.

The cost estimates that they -- we used excluded specific functions of school districts like construction and food service and transportation. It excluded a few specific funds like the food service funds and we excluded a -- a couple of objects, but otherwise everything that shows up on the books as reported expenditures of the districts that is not simply a fund transfer would be included. And I am not -- basically, as I understood the fund transfers, they were within

district transfers of funds from one pocket to the next.

REPRESENTATIVE ROOKER: Well, we actually, I think, have a system where the KPERS payment comes out of the state general fund, lands in the school district account and then is almost immediately transferred into the KPERS system and it's that much larger payment, it's not just for today's school district employees.

MR. JASON WILLIS: Yes. So the -- so on page 95 of the report -- this is Appendix C -- we lay out by fund, function and object, although funds, functions or objects that were either included or excluded. You can see there on the bottom where the -- sorry, near the bottom of page 95 that the KPERS special retirement contribution is --

SENATOR ROOKER: Is included. So I -- I don't know if there's any deeper analysis that might be done in terms of how we tag that KPERS burden.

Is it appropriate to be cleaning up 20 years of an unfunded liability and tagging it as today's per pupil cost? Is that appropriate

because it is being paid for today? I guess...

MR. JASON WILLIS: So you can treat it several ways, and states do this differently depending on if it's a liability of the school district. In some states what a state will do is kind of provide dollars in the funding formula but will give the obligation for the districts to make the payments on behalf of those current and future -- I'm sorry, previous, current and future employees with those funding formula increases.

There are other states that will make contributions directly to the retirement system and say, you know, we're going to leave that outside of the -- the work of key total systems. But generally what we see with pension programs across the country is there is some share of that burden between local and state agencies to pay for prior, current and future employees, but it's up to the discretion of the state to decide that.

REPRESENTATIVE ROOKER: Okay. Thank you very much.

DR. LORI TAYLOR: And -- and, if I might point out, we -- we have a visibility on

the expenditures, not a visibility on the revenue stream that generated the funding.

CHAIR BAUMGARDNER: Representative Aurand.

REPRESENTATIVE AURAND: Thank you, Madam Chair.

A couple of real quick items. One, specifically with regard to economies of scale and on their Appendix E, handily, Abilene is .1, to start the list. As I understand economies of scale, you know, typically, as we grow to look and fill the rooms and everything we get there, which makes sense, but I -- I don't quite understand how it reverts and goes backwards, then, quite so much.

When I look at Blue Valley, which a lot of us look at as a large suburban school, it's 1.97, and I'm struggling to see that that also equates to Western Plains with 107 students. So I'm struggling to see how on economies of scale a district with 22,000, with very limited poverty, equates to a district that is so small as to keep any class -- have any full class at all.

How do those both get to the 1.97, and

what is it about economies of scale? I don't understand that the large schools revert back to being very poor.

DR. LORI TAYLOR: Thank you for the question.

What the estimated relationship between the school district enrollment and cost is basically a U-shaped relationship. This has been found in almost every study that has been done across the country, is that there's kind of a cost-minimizing point and then costs continue to rise due to cost associated with largeness that are not otherwise captured in the model.

The -- in fact, one of the criticisms of some -- of the work in Texas has been that we failed to find the U shape relationship everybody else was -- was finding, that this kind -- this has to do with -- in Texas, with this -- the really big districts being really, really big. But the -- the fact remains is that the best fit to the spending patterns in Kansas is its costs -- costs fall as you get bigger until you get to about 1,600 and then costs start to rise again. One could think of

those as costs associated with the large districts also having additional sources of cost. One could also associate it with some sources of the challenges of administering larger units. Jason, do you want --

MR. JASON WILLIS: So just to -- in like very practical experience, the three districts that I served as the chief financial officer in were all over 25,000 students. So the district you're referencing with Blue Valley, the ones that Lori is talking about, part of the practical experience of working in such large systems is the communication that you have to do to get a -- a message, a directive, a strategy from one place of the organization to another. That's very different than if I was working in a district of 1,600 kids in which decisionmaking might be my sole discretion or it might be one other person. And those are kind of represented in costs associated with operating larger systems versus the smaller system, what we kind of -- what you see borne out in the research itself.

REPRESENTATIVE AURAND: I guess I understood the U-shaped summary and I would

have thought some of that would have been picked up on large districts, that kind of open area of maybe the cost. You also have that on the regional price index, some of that cost of large urban areas.

But, specifically to this size, have you ever seen -- does that make any, I guess, sense in the terms of it would be so bad with what you've discussed that it would have reverted back to a school the size of 100 that would have absolutely no ability to have any sort of efficiencies?

DR. LORI TAYLOR: In a survey of the literature that -- that was conducted a few years back they looked at the relationship between economies of scale and costs for a variety of districts and reached the conclusion that costs are minimized in the 2,000 -- kind of nationwide. In lots and lots of studies costs are minimized in about the 2,000 to 4,000 enrollment range and increased sharply on either end of that. So 1,600 being the cost minimizing size in Kansas does not -- it is very much consistent with the estimates that have been found in other states, especially

other rural states.

REPRESENTATIVE AURAND: All right. Thank you, Madam Chair.

CHAIR BAUMGARDNER: Senator Denning.

MAJORITY LEADER SENATOR DENNING: Thank you -- thank you, Madam Chair.

Circling back around on Representative Aurand's question, I've also noticed that you schedule in the LPA Duncombe and Yinger cost function study. They also recognized it. But your -- your study has a 97 percent index. Their study had less an 3 percent index. All the literature that I was able to review was all around their 3 percent index. Nothing came even close to the 97 percent that you're using for the big schools, which basically doubles the base value.

So what logic are you using that Duncombe and Yinger did not use in their cost function?

DR. LORI TAYLOR: Duncombe and -- thank you for the question.

Duncombe and Yinger looked at differences in the relationship between size categories for school districts and cost, and the largest size category in their analysis was 5,000 students

-- school districts with 5,000 students or fewer. So they did not allow for any difference in cost between a 5,000 school -- 5,000-student district and a 20,000-student district. Our analysis, if -- if that were in fact the pattern in Kansas, then that would have been the pattern that we detected.

What we observe is that as this size was continuing to grow, costs were going back up. So the primary driver of the difference between the two models is that the Duncombe and Yinger model did not allow for any increase in costs associated with bigger districts.

MAJORITY LEADER SENATOR DENNING: It just seems like a big discrepancy. It's over a billion dollars in your analysis if you compare it to Duncombe and Yinger's analysis. You come up with an extra billion dollars to the big schools in your formula. I just think that's noteworthy.

The second thing I wanted to ask you about is going back to Appendix E, starting on page 117, and I'm looking at the regional index. And, again, I'm -- it doesn't -- I'm not following the logic here. And we'll use

two schools in specific. Blue Valley has a regional index of 1.15 and Beloit has a regional index of 1.77. Blue Valley is on the eastern side of the state and Beloit is not.

So how does that -- how does that sort out?

DR. LORI TAYLOR: Yeah, sure. Thank you very much.

The -- the issue is that the regional adjustment is not purely about labor cost but also about the population density, and what you're observing is that the population density is much lower in Beloit; therefore, the costs of operating schools is much higher. Their campus -- their buildings are smaller than would be cost effective and that what we observed in the data is that the sparsity factor, the population density factor dominates the geography -- the geographic relationship. And that's what you're observing there as well.

MAJORITY LEADER SENATOR DENNING: And then, on that same line of thinking, when you go to page 80 and you have your comparable wage index map, are you -- the underlying data is being calculated into this index; is that

correct?

DR. LORI TAYLOR: Yes, sir.

MAJORITY LEADER SENATOR DENNING: So Wyandotte and Johnson County, the couple of two largest counties, aren't on that map. They're inside the Missouri.

So is this data excluding those? Is that -- could that be a reason why Blue Valley is so low? Is -- is --

DR. LORI TAYLOR: Yeah, no.

MAJORITY LEADER SENATOR DENNING: Those two counties are not on that map.

DR. LORI TAYLOR: Yes, sir, I'm seeing that and, no, sir, that's not -- I don't think that that's what's going on, but I will find out.

MAJORITY LEADER SENATOR DENNING: Yeah, I think that would be really important to find out.

And then, just my closing remarks, you know, the amount of money that you're asking us to put in schools -- I know this is an academic exercise and not a financial exercise, but it's 148 percent of 100 percent of the tax growth in Kansas, so just to put that into perspective.

And then, on that same line of thinking, when you put -- when you're asking us to put 400-some million dollars in to chase the 95 percent graduation rate, does that have anything to do with -- with improving math and reading, that number that you gave us? It seems like it did not.

DR. LORI TAYLOR: Well, it -- it's a -- it does in the sense that it's a multiplicative factor so that to achieve a certain performance level in math and reading with a higher graduation rate would be more expensive.

MAJORITY LEADER SENATOR DENNING: So, just by definition, if we're chasing graduation rate with that amount of money, would not -- would not the other assessments come up? It seems like we're double-counting. Seems like they would have to come up by definition.

DR. LORI TAYLOR: The -- thank you very much.

The methodology of regression analysis is going to give you the -- the marginal costs or the additional costs associated with a small change in graduation rate, holding the normal

core of equivalent score constant and simply -- similarly, the estimated cost of that increase in scores holding the graduation rate constant. So when one does the forecasting exercise one -- both of them simultaneously, but the estimates are independent, so no double-counting.

CHAIR BAUMGARDNER: Senator Bollier.

SENATOR BOLLIER: Thank you, Madam Chair.

I think this will come up partially from that Appendix E, and a question with that base number and then the next of all those multipliers. You used an assumption that it is a different cost for a -- a K-through-8 versus 9-through-12 student.

So can you help me understand, then, as we go back into our own funding formula, how these base numbers follow that change and the multipliers?

DR. LORI TAYLOR: Thank you very much.

The -- the way in which the -- the grade level of a school influences cost is built into the base estimates for each district. That's

why the base is not identical from one district to the next. It differs according to the current grade configurations of the buildings operated by that district. We presume that if a district currently operates as a K-8 it would continue to operate as a K-8 and then a high school campus -- rather than trying to make some sort of extrapolation about how the district would change its school configuration in response to policy changes, so...

CHAIR BAUMGARDNER: Senator Hensley.

SENATOR HENSLEY: I want to go back to a question that I asked J.F. King on Friday. If you wouldn't mind putting that previous slide up that you -- you had there.

MR. JASON WILLIS: Sorry, which -- sorry, which one?

DR. LORI TAYLOR: Which one?

SENATOR HENSLEY: On the expenditures. That may have been the previous slide, but I'm talking about the one that Representative Trimmer was referring to on the expenditures that you're recommending.

DR. LORI TAYLOR: Ah. Okay. There. Yes, sir.

SENATOR HENSLEY: Yeah, I believe that's it. Actually, the -- no, I'm talking about over the three-year period of time. That's it.

I'm looking at finding number 6 on page 70, and it's with regard to phasing in the funding increases over a period of time. And the other day I asked Mr. King -- you had referred to the table below and there was no table. Is this the table?

DR. LORI TAYLOR: Yes, sir, this is the table.

SENATOR HENSLEY: Okay. But on -- on the -- the other day you were talking about over a five-year period of time. This differs from that inasmuch as it's over a three-year period of time.

DR. LORI TAYLOR: And the -- and one would then carry it forward for the remaining five years. So each year we would have an additional 1 percentage point increase in the graduation rate --

SENATOR HENSLEY: Right.

DR. LORI TAYLOR: -- and, therefore, you could --

SENATOR HENSLEY: So can you provide that for us?

DR. LORI TAYLOR: For a five-year plan?

SENATOR HENSLEY: Yeah.

DR. LORI TAYLOR: Sure, gladly.

SENATOR HENSLEY: I'd be curious to see it.

The other thing that I would say with regard to the point that Jason made about school leaders planning for the future -- you know, when I think back to our response to the Montoy decision, we had a special session in 2005 called by the governor to respond to that. And then, of course, in the regular session of 2006, combined, we invested somewhere in the neighborhood of about 700 million dollars and we phased in over a three-year period of time, and the court found that acceptable. But, obviously, this country went into the greatest economic downturn since the Great Depression and, as a consequence, we cannot keep our commitment. You know, you were talking about the legislature keeping its commitment. And so it's very difficult for local school people to

make plans when those kinds of things happen, and that's the difficulty with this.

I'd be curious to know what other states -- do they have a lockbox? Do they, you know, provide for absolute guarantee? How do they do it? Obviously, you can't hold one legislative session -- legislature over the actions of another, and I'm just curious to know if you're aware of what other states may do to make sure that the commitment is kept.

MR. JASON WILLIS: Yes, there are several states. They've been raised up nationally for their efforts, and some of this can be observed over the last decade. And they've learned a lot of things, some things that worked for them, some things that didn't, and we're happy to provide the committee with some of those specific state examples and some of the writings that I have in my mind that I think might be helpful in providing some guidance about, as you refer, the lockbox, if you will.

SENATOR HENSLEY: That's the only term I can come up with. You know, we talk about Social Security being put into a lockbox,

and I'm wondering if we couldn't, you know, come up with a similar idea here at the state level.

MR. JASON WILLIS: They're -- they're generally referred to as minimum funding guarantees, and there's a set of --

SENATOR HENSLEY: Say that again?

MR. JASON WILLIS: Sorry. Minimum funding guarantees.

SENATOR HENSLEY: Minimum funding guarantees.

MR. JASON: And they're a set of procedures and policies that surround that level of funding and some of which are tied to the economic activity of the state, others of which track with the level of spending. Again, we can certainly provide some of the write-ups around that that could provide some of the lessons learned that other states have experienced.

SENATOR HENSLEY: One of things that we did not do in the '92 school finance law -- I was actually in the house at that time -- is we did not build in a CPI index. We didn't index the base budget per pupil, which I think

was a real big mistake on our part and going back to Representative Rooker's question, you would advise us to do that under -- under this.

DR. LORI TAYLOR: Most definitely, yes, sir. I would -- I would advise the -- the use of some sort of inflation adjustment, and it -- it can be very attractive to automate that rather than requiring debate and -- on that end.

SENATOR HENSLEY: Thank you.

CHAIR BAUMGARDNER: Representative Johnson, we're back to you. Get out that list.

REPRESENTATIVE JOHNSON: Thank you, Madam Chair. I'll -- I'll jump into some of the assumptions and calculations.

So I think it was page 66 where you talked about the different weightings in general, and I think you mentioned that the reduced lunch student had a multiplier of 1.98 and the English learner had a multiplier of 1.22.

And then would I be correct in assuming the study would multiply those numbers so that a student would be a factor of 2.41 if I am both, because I -- I can imagine in some of my

communities where I would have an English learner who would also be reduced lunch and I -- I think it at least implies that would be a linear relationship, or is that different?

DR. LORI TAYLOR: One would add -- pardon me. One would add the student weight plus the ELA weight, most definitely, and that would -- then we'd have to take the log. So it's -- it's definitely a compounding weight.

REPRESENTATIVE JOHNSON: So it's not a simple multiplication?

DR. LORI TAYLOR: No, it's not a --

REPRESENTATIVE JOHNSON: Okay.

DR. LORI TAYLOR: -- simple multiplication.

REPRESENTATIVE JOHNSON: Okay. So --

MR. JASON WILLIS: Let me -- sorry, Representative Johnson.

So just -- I'm just thinking forward to the practicalities of applying that practice. So some states what we've seen is the way they think about this is creating an unduplicated count. So if I'm a student that is special education and low income, in the kind of early going of the formula you only count them once.

There is some research to suggest that where there are concentrations of these types of students there are additional costs and so some states will add concentration factors at some threshold for those districts that then provide additional funding in recognition of, if I have both English learners and special education students, there are sets of services that are going to need to be accounted for in both of those circumstances.

DR. LORI TAYLOR: But the estimation model treated them as separable.

REPRESENTATIVE JOHNSON: Okay. However, it sounds like not only is there a compounding effect, but there may be even more than that that you're mentioning that's dealt with in practice so that it may understate rather than overstate the actual cost?

DR. LORI TAYLOR: Well, we explored whether there was a -- a relationship between the two that was statistically significant and concluded that there was not in -- in the Kansas context, but it's clearly been found to be that other way in other contexts. We also looked for whether or not there was a

concentration of poverty effect, that if one looked at the -- get wonky on you -- wonkier on you for a moment -- to look at whether or not there was a quadratic relationship between poverty and cost rather than a linear relationship and basically found that it was linear, that the quadratic term could be discarded. And that is what one of the models presented in Appendix A lays out for folks so they can see that.

REPRESENTATIVE JOHNSON: Okay. Thank you.

Then that number, whatever number, I would also apply towards the rate on page 61 which Senator Johnson talked about in terms of the 1.2 or 1.9 if I'm looking at grades K-8 or high school to -- to get the eventual factor that that student might apply?

DR. LORI TAYLOR: Right. The -- the -- the grade level, the K-8s versus the -- the higher grades, basically what that yields are four possible base values, one for schools that serve only elementary grades, one for schools that serve only high school grades, one that's for schools that serve both, which would be

your -- like a K-12 building, and one for -- for buildings that serve neither, and that would be like a middle school or a junior high school, and then the base estimate for any single district is a weighted average of the basis for all the buildings the district currently operates. So it differs slightly from district to district because of the configuration of buildings in those districts.

REPRESENTATIVE JOHNSON: Related to that, you had mentioned that if we adjusted the no compensatory support number from 5.1 billion it would be about 4.7 billion if we reduced it by 5 percent, and that 5 percent reduction would equate to more than the 1.9.

Is there something else that goes on as we put the -- the percent change to the percent increase in the graduation rate? Am I making any sense?

DR. LORI TAYLOR: If you might, try to --

REPRESENTATIVE JOHNSON: So if I go from 5.1 to 4.7, that would be a difference of around 357 million, I think, which would be equivalent to essentially a 2.24 percent

increase, which would be above even the high school increase given that the range was between 1.2 and 1.9 for the grades. The number that we were given appeared to be a higher multiplier. Now, they're big enough numbers that a lot could be explained in rounding, but I was trying to just get to --

DR. LORI TAYLOR: On average what we found was that the -- each additional 1 percentage point in increase in the graduation rate as associated with a 1.5 percent increase in cost, but what we were estimating when you wring the -- the modest amount of inefficiency out of the system was that it would not cost as much as you currently spend to operate the districts as they currently are operated. And so then you come up from there for the increases in the graduation rate.

REPRESENTATIVE JOHNSON: Thank you. And then I know we're assuming linear and I know at some point linear breaks down in terms of getting from 89 to 90 percent versus 99 to 100 percent.

Is there something that would give us confidence that linear is a good assumption in

the relevant range where we're going from essentially 86 to 95 on the graduation rate?

DR. LORI TAYLOR: We -- we did do analyses very early on presuming that there could be a -- a square chart -- a nonlinear relationship between the graduation rate and the percentage change in cost. We did not detect that particular relationship. I would be glad to provide tables to that effect.

REPRESENTATIVE JOHNSON: Thank you. Something that would give us some sliding scales would be -- would be useful.

And then in the cost function analysis -- is there a way that we can delve into that to see where the money was being spent per student and -- and better define how we might spend it, whether it's on increasing salaries or increasing teachers or how that -- that plays through or does this data not get to that point?

MR. JASON WILLIS: So I think that this goes back to one of the things that I was saying earlier that currently Kansas, as far as we can observe, doesn't have a structure in which to identify, point out those schools and

districts that are at high levels of performance with certain characteristics and then basically study -- to your point, studying them, understanding how and where they're investing resources and how that might apply in other contexts. This study does not delve into looking at those categories of spending across schools or districts.

DR. LORI TAYLOR: Although it does clearly generate a -- or could be used to generate a set of best practitioners, districts that are particularly cost effective while accomplishing particularly high performance goals. The problem, typically, is one gets into that exercise -- you can use it for -- for drilling down in the data and seeing how they spend their resources. You don't want to fall into the trap of presuming that you can do some sort of successful schools analysis that way, because the demographic characteristics of the schools are frequently somewhat privileged.

REPRESENTATIVE JOHNSON: Thank you. To the ultimate end, not necessarily directly related on the study, I would assume one of the things that would help outcomes is more staff,

and I know at the margin I can increase staff and have that impact. I think you addressed it through saying staged implementation would be key. But at some point I am not able to acquire the degree of staff at that rate, just isn't anything -- if I increase the number of -- number of NBA teams by 20 percent I just don't have the talent to fill them, as much as I might want to do that. And that's one of the concerns that I had, just in the ability to implement as well, depending on where those monies were dedicated.

DR. LORI TAYLOR: Thank you very much for the question.

We are not making specific school size or class size recommendation or any presumption that additional resources should be spent specifically lowering class sizes. One of the cost drivers in Kansas is that the class sizes are already dysfunctionally low in rural areas where you just can't get to a cost-minimizing size classroom. And so it's -- it's not always going to be the case that the solution should be to lower class sizes. In a lot of rural Kansas that -- that would not be the best

solution. One might want to think to -- to other strategies about sharing resources or some sort of heavier reliance on virtual instruction for certain subject matters or that sort of thing.

What we -- and that kind of reinforces the point that there needs to be some support to school districts and figure out how best to use any additional resources being provided by the state to identify who best practitioners are in the state and what they -- they do. Other states have mechanisms by which you can do that.

I'm associated with the Texas Smart Schools project, which is essentially helping schools and districts in Texas identify their peers with similar kinds of kids, similar kinds of labor markets but yet they're able to accomplish more, and the question is figuring out who those -- who those best practitioners are so one can learn from them.

REPRESENTATIVE JOHNSON: Thank you. Thank you, Madam Chair.

CHAIR BAUMGARDNER: Could you please share with us, how is it that we have that

accountability, so that increase in -- in graduation rate, increase in scores, without having what, you know, we know has occurred in -- in some school districts and in some states whereby students are driven out of the schools? So how do we have that accountability and provide that support without having those negative consequences, I think, for -- for children?

MR. JASON WILLIS: So what I would -- what I would start with is probably being very transparent and open about agreements, like where does the state have agreement about how schools and districts are going to achieve some set of outcomes. That's typically the first step, right, so if -- if the State of Kansas could identify for itself, you know, here are the three priorities, the three things that we're going to focus on that we really believe is going to drive outcomes. Early literacy has been a very popular hot topic nationally and continuing kind of funding and research going into it identifying -- so we'll just pick that.

So early literacy becomes a driver of education policy here in Kansas. And if

schools and districts are clear that that is the priority and that's where they should be putting their focus to drive outcomes, some of the things that you could ask schools and districts for are, with the provision of additional sets of resources, how do they use those additional resources in combination with current funds to drive that outcome.

So they produce some type of, you know, short document or plan that makes clear to the public and to, you know, their practitioners where they're going as an organization. And that really speaks to both consensus about focus but also about prioritizing where people will spend their time and energy.

One of the things that we can observe in school districts across the country, particularly from a practical standpoint, is that without that kind of focus, the demands on school districts and schools are tremendous. I mean, you could be aiming in any number of directions given the requests and things that happen in your schools and districts. So unless you have that focus and you're aiming in a certain direction together, it's going to be

really difficult to stay away from getting pulled in one direction or another on a day-to-day or a week-to-week basis. And it's through those plans and those conversations that you create opportunities.

It's called -- you can call it accountability, but really what it is is what's going on for you as a school or district, what's the opportunity for you to be able to continue to make progress given the amount of resources that the state continues to invest in those organizations.

CHAIR BAUMGARDNER: Representative Rooker.

REPRESENTATIVE ROOKER: Thank you, Madam Chair, and I did promise one question.

In the study on page 45 at the top you -- you speak to the fact that it's not practical to make a onetime, significant investment in statewide -- in a statewide public education system and expect at the end of that school year to see dramatic improvement, and you're asking us to frame our expectations around long-term investment in our schools. So what is there -- and I -- when we see the charts

with the year-by-year-by-year improvement, I assume that this is all calibrated to get us to a long-term goal.

What is realistic in terms of expectations? We as lawmakers do the work to put these long-term investments in place, but we know there's lag time in -- in improvement in those student -- the performance measures. What is a realist expectation for us to begin to see that return on the investment in our students?

MR. JASON WILLIS: So I -- I'll start and if Lori wants to jump in. I think that really resides with the people that are in your schools and districts. I think their experience is paramount to understanding where they feel like they can make progress on a month-to-month basis and the annual basis for moving forward. And so I think, you know, to one of the prior questions, being able to get people in a room to have those kinds of conversations, it's not only the start of helping you to understand -- not you, the -- the body at large -- to understand, you know, what does that investment look like, what do we

get as a result of that, but it also starts to condition the system to a common understanding, right? If everybody's consistently talking about grad rates or early literacy or, you know, higher order math, that becomes a way in which the system starts to understand like this is the focus, this is where we should be putting our attention.

DR. LORI TAYLOR: I would add that there's a -- there's a really good quality and a really large amount of -- of research suggesting that early education, especially pre-K education, has some significant and persistent benefits, but you're not going to get a return with respect to the graduation rate the next year from an invest -- a greater investment or an increased investment in pre-kindergarten. It takes a while for those kids to matriculate through the system.

So part of the complexity of your question has to do with what type of intervention or where the district is planning to put additional resources. And that would lead me to kind of echo Jason's comments regarding asking for deliberate and

deliberative planning on the part of districts about how they would use additional resources should those be provided by the state.

CHAIR BAUMGARDNER: Senator Bollier, yes.

SENATOR BOLLIER: Quick request. Tying into what Representative Johnson was asking about graduation rates and how much can you expect percentage-wise, but would you be able to provide us with, essentially, a sliding scale for -- for a thing, you know, percentage change costs X amount of money from all of the things that we're trying to measure, so we can have a better, clearer understanding?

DR. LORI TAYLOR: For -- for all of the things we're trying to measure --

SENATOR BOLLIER: Well --

DR. LORI TAYLOR: -- or for the outcome measure?

SENATOR BOLLIER: -- you've used ELA, so we have set up that parameter that the school board set up. So if we were going to make a -- a 1 percent increase in that per year or what -- whatever, can that be teased down into that?

DR. LORI TAYLOR: Probably, and I'd definitely be willing to try.

SENATOR BOLLIER: Thank you.

CHAIR BAUMGARDNER: I think that we would like to see some type of sliding scale, if you would, for not only the graduation rate but for the math and the reading performance. So if --

DR. LORI TAYLOR: Yes, ma'am.

CHAIR BAUMGARDNER: If we could just kind of just see how that shifts and -- and what impact that has, I think that would be helpful.

DR. LORI TAYLOR: I would be glad to -- to provide you with whatever's possible there, yes.

CHAIR BAUMGARDNER: And, committee members, I know that Dr. Taylor will be providing us a PDF of the PowerPoint and so our two assistants will get that sent out to you. And, also, those of you in the audience who are already on the distribution list. You'll be receiving a copy of that PDF also.

At this point in time we are late on the senate side to be on the floor, so the meeting

is adjourned.

(The Hearing Proceedings went off the record at 2:34 p.m. with the conclusion of the hearing.)

C E R T I F I C A T E

STATE OF KANSAS)
)
COUNTY OF SHAWNEE)

I, Dana L. Burkdoll, a Certified Shorthand Reporter of the State of Kansas, do hereby certify that I was present at and reported in machine shorthand the proceedings had on the 29th of March, 2018, at the Kansas Statehouse, Old Supreme Courtroom, Southwest Eighth and Van Buren Streets, City of Topeka, County of Shawnee, State of Kansas.

I further certify that the foregoing transcript is a true, correct and complete transcript of all the testimony and proceedings aforesaid.

IN TESTIMONY WHEREOF, I have hereunto set my hand at my office in Topeka, Kansas, this day of , 2018.

Dana L. Burkdoll
Certified Shorthand Reporter
#1364

Appendix 10:
April 2, 2018 Amended Memorandum from WestEd Report Authors

The April 2, 2018 Amended WestEd Memorandum is publicly available at: https://www.dropbox.com/sh/v24n392eg9ikgiu/AAAIISMNJwzWIE8uK9K_Y-qLa?dl=0&preview=4.3+AMENDED+Kansas+Cost+Study_Follow-up+Requests_FINAL+(002).pdf. It is appropriate for this Court to take judicial notice of the Amended WestEd Memorandum, which is publicly available and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

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TO: Senate Select Committee on Education Finance, Kansas Legislature

FROM: Dr. Lori T. Taylor & Jason Willis

DATE: ~~Wednesday, March 28, 2018~~ **Monday, April 2, 2018**

SUBJECT: **AMENDED** Follow-up Requests from Committee Members, Responses from Consultants

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On Monday, March 19, 2018 testimony was provided before the Senate Select Committee on Education Finance of the Kansas Legislature to present the *Estimating the Costs Associated with Reaching Student Achievement Expectations for Kansas Public Education Students: A Cost Function Approach* report. There were several follow-up requests from committee members. Each of those requests are captured below.

1. What effect would there be if the analysis observed a quadratic (non-linear) relationship of spending to outcomes compared to the current model which is a linear relationship?

2. What is the size threshold (of a school district) at which costs begin to increase?

3. What factors are included in the economies of scale index?

4. What is the difference between the maintenance and compensatory support scenarios?

5. The maintenance scenario contains a performance threshold of 0.50 NCE score and a 95% graduation rate. Is the 95% a statewide rate or the rate reached by each district?

6. Can the research team provide other cost estimates at various ELA/math passing rates?

7. Does the research team have examples of states that have created a 'minimum funding guarantee' for public education? What has been the impact of that legislative language?

8. Can the research team reproduce the map on page 80 of your report to identify the school district values in the northeastern corner of the state?

9. Can the research team produce the cost estimates for seven years?

10. What impact, if any, would removal of the KPERS spending have on the findings?

11. Can the research team expand upon the strategies that may be employed by the Legislative Post Audit (LPA) that further expands upon finding #9 in the report?

1. What effect would there be if the analysis observed a quadratic (non-linear) relationship of spending to outcomes compared to the current model which is a linear relationship?

The research team re-ran the analysis assessing the impact of a quadratic or non-linear relationship of spending to outcomes and found that the squared terms were statistically insignificant, indicating that the relationship was not quadratic. Below are the coefficient estimates and associated significance tests generated from the re-run of the analysis.

LABELS	Baseline	Quadratic Outputs Model
Normal Curve Equivalent	5.295***	4.796***
	(0.607)	(0.926)
NCE, squared		0.570
		(0.712)
Graduation Rate	1.244***	0.284
	(0.262)	(1.057)
Graduation Rate, squared		0.590
		(0.627)
Graduation Rate * High School	0.696***	0.699***
	(0.0995)	(0.101)
District Enrollment	-1.444***	-1.444***
	(0.0568)	(0.0569)
District Enrollment squared	0.0991***	0.0991***
	(0.00378)	(0.00378)
Salary index (log)	1.373***	1.332***
	(0.279)	(0.280)
Rural indicator	0.0505***	0.0505***
	(0.0112)	(0.0112)
% Economically Disadvantaged	0.886***	0.900***
	(0.078)	(0.0792)
% English Language Learner	0.226***	0.236***
	(0.0667)	(0.0666)
% Special Education	2.157***	2.179***
	(0.226)	(0.229)
Population Density	0.166***	0.171***
	(0.018)	(0.0183)
Elementary grades served	-0.129***	-0.130***
	(0.016)	(0.0159)
High school grades served	-0.508***	-0.511***
	(0.0909)	(0.0920)
Salary Index (log), squared	-0.648	-0.550
	(0.578)	(0.581)
% English Language Learner, sq	-0.623***	-0.640***

LABELS	Baseline	Quadratic Outputs Model
	(0.109)	(0.109)
% Special Education, sq	-6.135***	-6.211***
	(0.674)	(0.684)
Population density, squared	-0.00202	-0.00208
	(0.00134)	(0.00133)
Population density* Salary Index	-0.510***	-0.519***
	(0.0414)	(0.0419)
AYP Schoolyear = 2016	-0.0364***	-0.0366***
	(0.00591)	(0.00591)
First stage Residuals, NCE	-5.102***	-5.180***
	(0.609)	(0.608)
First stage residuals, Graduation	-1.454***	-1.517***
	(0.271)	(0.280)
Constant	9.644***	10.12***
	(0.357)	(0.550)
Error Variance		
Herfindahl Index, log	0.797***	0.798***
	(0.249)	(0.248)
Border metro	2.320***	2.268***
	(0.372)	(0.364)
% Owner occupied	7.293***	7.154***
	(1.321)	(1.286)
% Over 60	-2.316	-1.976
	(1.496)	(1.475)
% College	-12.06***	-11.90***
	(1.542)	(1.415)
Usigma	-7.214*** (0.958)	-7.294*** (0.941)
Vsigma	-4.095*** (0.0418)	-4.086*** (0.0415)
Observations	2,310	2,310

2. What is the size threshold (of a school district) at which costs begin to increase?

The size threshold (of a school district) at which costs begin to increase is 1,464 students.

3. What factors are included in the economies of scale index?

School district enrollment is the only factor used to derive the economies of scale index. The U-shaped curve observed in Kansas is consistent with a large body of research demonstrating the

same effect in other states as well as national data sets. The costs that may be more highly associated with higher levels of spending may be urbanicity or the demographic of the students. However, even when held constant it is likely that the loading – or the increased cost – would be born on wages within those school districts. That is, if the cost was not to show up in the economies of scale it was highly likely to have presented itself in other variables introduced in the model.

4. What is the difference between the maintenance and compensatory scenarios?

There are several distinguishing characteristics between the maintenance and compensatory scenarios that are important to understand. As the label implies, the maintenance scenario is the necessary funding level in order to maintain, on average, a specified level of performance. In this case a 95% graduation rate and an annual growth of a 0.50 NCE score. Also, important to note is that the maintenance scenario would accomplish an outcome of raising the overall, statewide achievement average but would not close gaps between school districts that are performing below the current state average. ***That is, the maintenance scenario can be considered an ongoing and perpetual investment in the public education system to improve overall statewide achievement.*** Further details on the maintenance scenario and presumptions of improvement are outlined in question #5 below.

In contrast, the compensatory support scenarios identify the necessary investment to support individual school districts to close the gap between their current performance and the identified performance threshold over a period of five years. And further, that once the investment was made in a school district that they would be able to close the gap and then having achieved that threshold be able to return to a spending level in line with the maintenance scenario. ***That is, the compensatory scenarios can be considered a remedial, one-time investment in the public education system (spread out over a five-year period) to support school districts and their respective students to 'catch-up' and achieve the identified performance thresholds.***

There are several precedents for the combination of both ongoing and one-time funding streams in both federal and state education policy to support student achievement growth. And, in those examples policymakers made explicit the intent of each of the types of funding – ongoing and one-time – and how each should contribute to helping raise the level of student achievement in schools and school districts. In particular, school districts would need to guard against hiring staff (which is primarily an ongoing expense) using one-time funds. Examples of the use of one-time funds may be directed towards activities that help to provide a boost to the educational system that can be further maintained over a longer period of time. Such investments may include building stronger teacher supply pipelines from post-secondary institutions to school districts; designing training for teaching staff that build their capacity for instructional delivery; developing partnerships with other local mental health and wellness partners to provide services to students. All of these examples would aim to significantly increase the capacity of schools and school

districts to achieve higher levels of performance then allow for a level of maintenance to sustain that achievement over a longer period of time.

5. The maintenance scenario contains a performance threshold of 0.50 NCE score and a 95% graduation rate. Is the 95% a statewide rate or the rate reached by each district?

The long-run maintenance scenario includes an assumption of a performance threshold for ELA and math of a 0.50 NCE score and a 95% graduation rate at the end of the 2021-22 school year. The 95% graduation rate presumes that each district achieves that level of performance. The 0.50 NCE score presumes that every student performs as expected given his or her prior scores, or equivalently that every student experiences the normal amount of progress from one year to the next, given where they started. If all of the students had experienced average progress from 2015-16 to 2016-17 under the long-run maintenance scenario, rather than their actual progress, then the percentage of students scoring at level 2 or better in ELA and math would have been roughly 2 percentage points higher statewide, the percentage of students scoring at level 3 or better in math would have been roughly 3 percentage points lower, and the percentage of students scoring at level 3 or better in ELA would have been essentially unchanged. The percentage scoring at level 3 or better in Math would have been lower because many students with above average growth had just barely crossed the threshold into level 3 and would not have done so had they posted only average progress.

	Actual Progress (Actual NCE)	Average Progress (0.50 NCE)
Percent scoring at level 3 or better, statewide		
ELA	39.46%	39.04%
Math	32.81%	29.97%
Percent scoring at level 2 or better, statewide		
ELA	73.97%	76.56%
Math	73.97%	75.88%

Note that the conditional NCE scores measure the change in student performance from one year to the next, so conditional NCE scores are not defined for grades 3 and 10 (because there are no corresponding prior year's scores). The actual percentages reported above therefore cover grades 4-8 and will not match those reported elsewhere because only a subset of grades are included in the calculations above.

6. Can the research team provide other cost estimates at various ELA/math passing rates?

The research team re-ran the analysis looking at three other scenarios in which the ELA/math passing rates for Level 2 was 85% (Scenario C) the ELA/math passing rates for Level 3 was 55% (Scenario D), and Level 2 was 80% (Scenario E). The results of that analysis can be captured in the table below (in 2017 dollars). Note that the relationship is not linear between the percent proficient students in ELA and math and the amount of dollars invested.

	Cost Estimate ($)	Percent Increase Over Current	Per Pupil Cost Estimate ($)
Current K-12 Spending	$4.652 billion	n/a	$9,313
Long-run maintenance	$5.103 billion	9.7%	$10,419
Compensatory support: Scenario A (Level 2 @ 90%)	$6.438 billion	38.4%	$13,144
Compensatory support: Scenario B (Level 3 @ 60%)	$6.719 billion	44.4%	$13,717
Compensatory support: Scenario C (Level 2 @ 85%)	$6.111 billion	31.4%	$12,477
Compensatory support: Scenario D (Level 3 @ 55%)	$6.664 billion	43.3%	$13,605
Compensatory support: Scenario E (Level 2 @ 80%)	$5.768 billion	24.0%	$11,766

7. Does the research team have examples of states that have created a 'minimum funding guarantee' for public education? What has been the impact of that legislative language?

There are several states that have statutory language in their education funding formulas which guarantees a minimum funding level for the state K-12 education system. One of the most prominent of these systems is in California. In 1998, the California taxpayers approved Proposition 98 which created several scenarios (“tests”) under which K-12 education is guaranteed a certain amount of public funding.

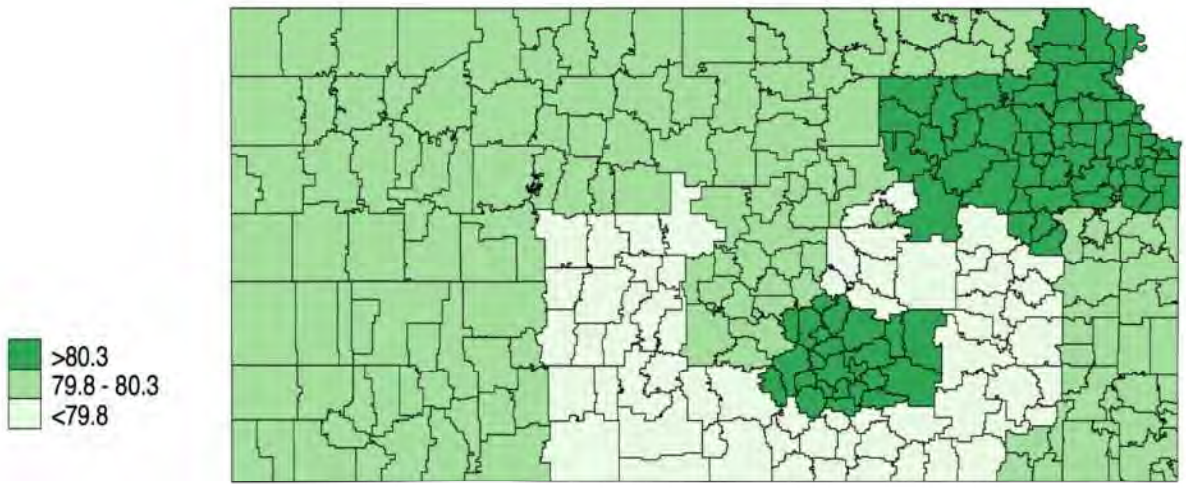
The selection of the test during a fiscal year is determined largely on the size of the state budget (driven by the state economy) as well as other factors, e.g., growth in student attendance, that determines the overall investment for the upcoming school year. This legal provision has provided California with a healthy balance between ensuring that policymakers recognize and commit to minimum investments in the K-12 education system while also ensuring that the growth of the

state budget is shared with public education. A one-page description of the formula best captures the method of the formula: https://edsource.org/wp-content/publications/PolicyBriefR3.pdf

Notably, the formula has not been without its benefits and challenges. In particular, policymakers in California has instituted a myriad of formula adjustments to the basic premise associated with the proposition which arguably has led to some of the findings in a recent review by the state's Legislative Analyst's Office (LAO). There are numerous lessons learned from California's experience, among which is the acknowledgement that ensuring the statute is flexible enough that it allows policymakers to work within the parameters of the minimum funding guarantee for public education. A link to the LAO's recent review can be found here: http://www.lao.ca.gov/reports/2017/3526/review-prop-98-011817.pdf

8. Can the research team reproduce the map on page 80 of your report to identify the school district values in the northeastern corner of the state?

Below is a reproduction of the map of Kansas identifying the comparable wage index (CWI) by school district. The identified school districts in the northeastern corner have values greater than 80.3.



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9. Can the research team produce the cost estimates for seven years?

The tables below provides a 7-year schedule which adds several additional years to the 3-year schedule presented during the hearing.

	2016-17	Change: 16-17 to 17-18	2017-18	Change: 17-18 to 18-19	2018-19	Change: 18-19 to 19-20	2019-20	Change: 19-20 to 20-21	2020-21	Change: 20-21 to 21-22	2021-22	Change: 20-21 to 21-22	2022-23
Maintenance	$4.737 B	+$46 M	$4.782 B	+$119 M	$4.901 B	+$122 M	$5.023 B	+$125 M	$5.147 B	+$128 M	$5.275 B	+$131 M	$5.406 B
Inflation		*+$46 M*		*+$46 M*		*+$47 M*		*+$49 M*		*+$50 M*		*+$51 M*	
Graduation Cost		*$0*		*+$72 M*		*+$75 M*		*+$76 M*		*+$78 M*		*+$80 M*	
Scenario A	$5.978 B	+$58 M	$6.036 B	+$150 M	$6.185 B	+$154 M	$6.339 B	+$157 M	$6.496 B	+$161 M	$6.657 B	+$165 M	$6.821 B
Inflation		*+$58M*		*+$58 M*		*+$60 M*		*+$61 M*		*+$63 M*		*+$64 M*	
Graduation Cost		*$0*		*+$91 M*		*+$94 M*		*+$96 M*		*+98 M*		*+$101 M*	
Scenario B	$6.239 B	+$60 M	$6.299 B	+$156 M	$6.455 B	+$160 M	$6.615 B	+$164 M	$6.779 B	+$168 M	$6.948 B	+$172 M	$7.120 B
Inflation		*+$60 M*		*+$61 M*		*+$62 M*		*+$64 M*		*+$65 M*		*+$67 M*	
Graduation Cost		*$0*		*+$95 M*		*+$98 M*		*+$100 M*		*+$103 M*		*+105 M*	
Graduation Rate	90%		90%		91%		92%		93%		94%		95%
ELA at Level 2 %	72.6%		74.6%		76.6%		78.6%		80.6%		82.6%		84.6%
Math at Level 2 %	72.4%		74.4%		76.4%		78.4%		80.4%		82.4%		84.4%

Notes: B=billion; M=million; some calculations do not add due to rounding

These additional funding figures presume two variables: (1) adjustments for annual inflation presuming the 5-year historical Midwest U.S. average consumer price index (CPI) of 0.965% and (2) a graduation rate of 90% in 2016-17 and 2017-18 growing one percentage point to 95% in the 2022-23 school year. The additional funding identified in the 2017-18 school year is exclusively associated with the annual inflation factor because the graduation rate is held steady. The additional funding identified in 2018-19 is associated with a combination of both the inflation factor as well as necessary resources to achieve a one percentage point increase in the graduation rate.

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The table below presents the application of the same scenarios except it applies a graduation rate of 91% in the 2016 the maintenance scenario. Note that the growth in the percentage of students at Level 2 for ELA and math scores rep statewide average and is an approximate figure.

	2016-17	Change: 16-17 to 17-18	2017-18	Change: 17-18 to 18-19	2018-19	Change: 18-19 to 19-20	2019-20	Change: 19-20 to 20-21	2020-21	Change: 20-21 to 21-22	202
Maintenance	$4.808 B	+$46 M	$4.854 B	+$47 M	$4.901 B	+$47 M	$4.948 B	+$48 M	$4.997 B	+$48 M	$5.(
Inflation		*+$46 M*		*+$47 M*		*+$47 M*		*+$48 M*		*+$48 M*	
Graduation Cost		--		--		--		--		--	
Graduation Rate	91%		91%		91%		91%		91%		9
ELA at Level 2 %	72.6%		74.6%		76.6%		78.6%		80.6%		82
Math at Level 2 %	72.4%		74.4%		76.4%		78.4%		80.4%		82

Notes: B=billion; M=million; some calculations do not add due to rounding

The table below presents a gradual increase of the graduation rate to 91% in the 2022-23 school year for the mainter

	2016-17	Change: 16-17 to 17-18	2017-18	Change: 17-18 to 18-19	2018-19	Change: 18-19 to 19-20	2019-20	Change: 19-20 to 20-21	2020-21	Change: 20-21 to 21-22	202
Maintenance	$4.737 B	+$46 M	$4.783 B	+$60 M	$4.843 B	+$61 M	$4.904 B	+$62 M	$4.966 B	+$62 M	$5.
Inflation		*+$46 M*		*+$46 M*		*+$47 M*		*+$47 M*		*+$48 M*	
Graduation Cost		--		*+$14 M*		*+$14 M*		*+$14 M*		*+$14 M*	
Graduation Rate	90%		90%		90.2%		90.4%		90.6%		90
ELA at Level 2 %	72.6%		74.6%		76.6%		78.6%		80.6%		82
Math at Level 2 %	72.4%		74.4%		76.4%		78.4%		80.4%		82

Notes: B=billion; M=million; some calculations do not add due to rounding

10. What impact, if any, would removal of the KPERS (fund 51) spending have on the findings in the report?

The research team reviewed its coding of the school district's operational spending for the 2016-17 school year against the guidance from KSDE to Chief Administrative Officers on how to classify the remedial KPERS spending payments. Based upon a memo produced in October 2016, these funds were reflected as a revenue received for each school district then transferred (within the district) to Fund 51 (KPERS Retirement Contribution). This activity – both the revenue recognition as well as the fund transfer – were not included in the analysis of a school district's operational spending. The extended reference cited above was an October 17, 2016 memo from Dale Dennis at KSDE to all Chief Administrative Officers.

11. Can the research team expand upon the strategies that may be employed by the Legislative Post Audit (LPA) that further expands upon finding #9 in the report?

The research team, following a review of many of the LPA reports for school districts outlined three possible avenues in which that information could further developed and used. These possible avenues include:

The analytical and comparative techniques used by the Legislative Post Audit have applicability in other environments and forums

LPA often uses in their individual investigations of school districts analytical techniques that leverage trend information over time and/or comparisons of the school district to other populations, i.e., similar or all other Kansas school districts. These types of techniques may be of real value to other school districts interested in maintaining or increasing their effectiveness. This platform may also create an opportunity to generate consensus among practitioners for common metrics that can be used to investigate spending and resource patterns.

The insights reached – although mostly oriented towards compliance with the law – surface matters of process, culture and performance important for any organization to consider

While the LPA investigations largely focus on checking the school districts compliance against language that exists in statute it is often the case that LPA further identifies other characteristics of school district culture – such as their processes, performance, behavior and activities – that are reflected in, at a minimum, compliance with the law but also their ability to operate a highly effective school system. The research team would suggest that

broadening the scope to have the LPA investigate some of these other elements of the school systems as compared to benchmarks besides the law, e.g., best practice within industry or other well-established metrics, etc., would create an aspiration and learning opportunity for the school district that continues to add value for the state's engagement with school districts.

The school district's response represents one way in which to engage in an exchange

Currently, the school district has an opportunity to respond to the LPA findings in the report by attaching an appendix that may include their narrative response and often an action plan that is responsive to the LPA findings. This written document is simply one way in which a school district may respond to the findings. While these activities are helpful and also create samples of how well local education agencies are doing relative to the law, there are other opportunities to engage school districts in the pursuit of higher levels of performance.

And, there are other approaches that – with encouragement from the state – the school district can identify other ways in which to respond to the findings. For example, one method that has been shown to produce results is creating professional learning communities (PLC) with a group of professionals with a common interest or aim. Originally this concept rose to prominence with Richard DuFour's work on PLC focusing primarily on instructional practices in the classroom. However, over time there has also been the applicability of such structures for other education professionals, including various Central Office administrator-similar roles.

Appendix 11:
Total Funds Comparison

Appendix 11 is a demonstrative exhibit created from the WestEd Report (Appx. 6) and using inflation (*See* Appx. 46).

It is appropriate for this Court to take judicial notice of this exhibit, which is created with publicly available information and Plaintiffs respectfully request that this Court do so. K.S.A. 60-409(b)(4); K.S.A. 60-412(c).

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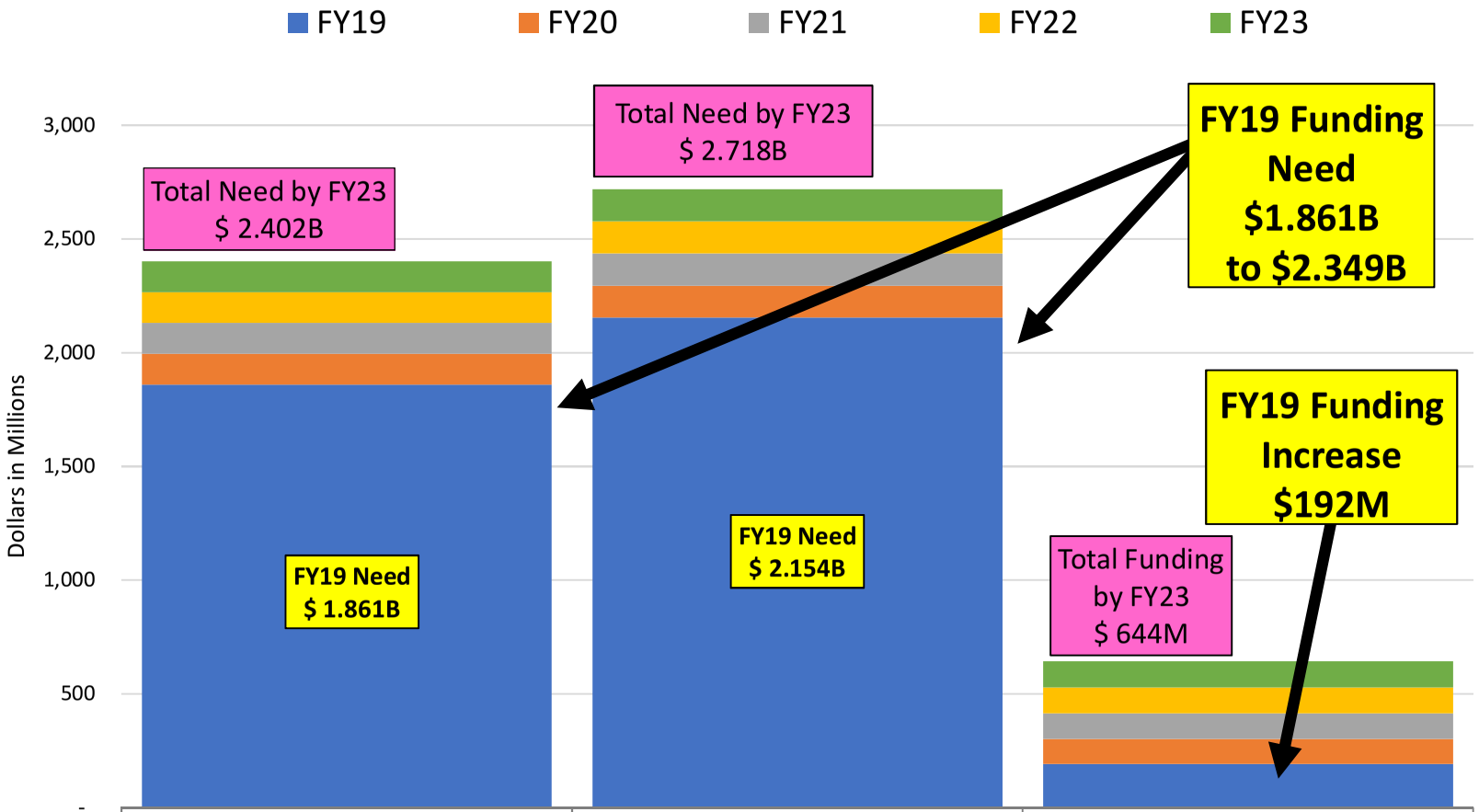
Total Funds Comparison



	Taylor Scenario A	Taylor Scenario B	SB19 + Sub SB423
FY23	135	141	116.2
FY22	135	141	113.8
FY21	135	141	112.5
FY20	135	141	109.5
FY19	1,861	2,154	191.9

Inflation of 2.1% added each year to totals of $6.438B for Taylor Scenario A, $6.719B for Taylor Scenario B
FY19 Taylor Scenario A = 1.786B (FY17 dollars from study) + 2 years inflation - 195M already increased in FY18
FY19 Taylor Scenario B = 2.067B (FY17 dollars from study) + 2 years inflation - 195M already increased in FY18

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