RETURN ON INVESTMENT (ROI) REPORT

KNOX COUNTY SCHOOLS

Office of Accountability

APRIL 13, 2012

(updated from March 9, 2012 draft)

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Executive Summary for Return on Investment Report

In July 2009, the Knox County Board of Education adopted a strategic plan for the Knox County Schools (KCS) entitled, *Building on Strength: Excellence for All Children*. Through a continued focus on implementation of the plan, and by reallocating existing resources, strategically targeting federal and private dollars, and implementing internal efficiencies, the Knox County Schools has begun to meet some of the milestones and academic goals outlined in the plan. Our goals are purposefully ambitious however, and while improvements in student achievement are encouraging and noteworthy, they have been largely incremental and continue to reflect some significant challenges facing our school district.

Acknowledging the need to accelerate improvements in our academic outcomes and recognizing that the strategies and initiatives necessary to make these improvements require resources beyond our current funding level presented a compelling case for a detailed analysis in the following areas:

1. Current funding sources and allocation practices
2. Expenditures versus student performance outcomes
3. Present return on investment for major district initiatives
4. Comparison study of other schools with similar demographics but better outcomes

The financial analysis revealed that the vast majority of the Knox County Schools budget represents the cost of the people necessary to perform the work of education, and the increase in the budget since fiscal year (FY) 2009 has totaled $14.5 million, an average of only 1.3% annually. The vast majority of that increase has been committed to instruction and instructional support expenditures, with debt service also taking up the next largest proportion of the total increase. The budget increase over the past three years has generally not been for salaries and wages, which have remained relatively stable since 2009, but rather can be largely attributed to the impact of required increases in insurance premiums and retirement contributions (principally for teachers) which the school system does not directly control. The budget increases of the past three years were funded almost entirely (97.8%) by additional revenues from the state basic education program (BEP). Funding from Knox County sources is roughly equal in FY 2012 to where it was in FY 2009, essentially because sales tax revenue has decreased more than property and other local tax revenue has increased. To maintain an essentially flat budget, the Knox County Schools has made use of grants and other time-limited resources and aggressively managed non-instructional expenses to maximize the proportion of funds available for instruction and support.

It is also clear that the funding provided from the state through the "Basic Education Program" is insufficient to adequately meet the needs of the students in Knox County and woefully insufficient to attain the ambitious goals outlined in the Knox County Schools Strategic Plan. In absence of significant enhancements to the BEP, the burden will continue to fall on our local community to provide adequate resources necessary to ensure *Excellence for All Children*.

Several operational themes emerged from our return on investment analyses:

- Time matters. The amount of time students are meaningfully engaged in learning and their level of expectations for themselves are directly proportional to academic outcomes.
- We need the right people doing the right work. Clearly defined roles and skills matched to role can make or break an initiative.
- Leadership, consistency, focus and resources make a difference. Outcomes of an educational initiative depend on fidelity of implementation. Fidelity of implementation requires consistency in focus and support. The level of focus and support depends on the level of leadership and investment.
- We need data to keep score and inform decisions. Appropriate data for decision-making requires an infrastructure and culture of assessment and accountability to investments from the outset.

Below is a summary of the operational recommendations associated with each of these themes, with rationale and highlights from the details provided in the full text of the report. These recommendations are designed to maximize the return on our educational investment.

Time on Task and Student Expectations

- Scheduling Models: Maintain current middle school schedule but allow/encourage hybrid scheduling in high school.
- Excellence Through Literacy: Revise structure of literacy interventions in middle and high school. Ensure that middle school and high school students received the full grade-level course of language arts regardless of reading-specific intervention.
- Magnet and Project GRAD: Increase academic rigor in magnet schools and continue Project GRAD scholarship program.
- Kindergarten: Implement a full-day Kindergarten program for all students in the district.
- Benchmarking: Explore options for more time on task at all levels, informed by an examination at the school level of the amount of time during the existing school day that students are not – but could be – engaged in learning.

Defined Roles and Appropriate Skills

- Instructional Coaching Model and Excellence Through Literacy (Elementary): Clearly define a feasible set of coaching roles and responsibilities focused on professional development and facilitation of professional learning communities (PLCs).
- Project GRAD: Discontinue academic components; for remaining Project GRAD math coaches, assess skills and match to the KCS coaching model, where appropriate. If the scope of the Project GRAD partnership will be broader than the college access program in future years, outline in the contract details of the activities and staff associated with the KCS dollars

committed as well as a reporting structure that defines accountability to the Project GRAD staff and principals.

- Block scheduling: Targeted professional development to ensure that in every high school, the personnel responsible for the master schedule have the appropriate skills for the complexity of the task.
- Magnet: Develop specific criteria for staff selection and consider significant restructuring where necessary to ensure highly effective education
- Benchmark: Continue to provide principals with flexibility for staffing their schools via the budget allocation formula *as long as decisions have and continue to lead to improved outcomes.*

<u>Focus, Consistency, and Support</u>

- Coaching Model:
  - Build into the budget additional assistance matched to need for schools that do not have assistant principals.
  - Maintain a full-time coaching model in elementary schools and consistent school assignments for coaches.
  - Implement a supervisory structure for coaches to report to content supervisors as well as principals to ensure district-wide coordination and support.
- Magnet: Develop rigorous and specialized curriculum for magnet offerings, and provide ample resources to support implementation.
- Staffing formulas: It is important that the current staffing model be reviewed and adjusted each year to ensure that its philosophical underpinnings translate to rational allocations.
- All present and future initiatives: Develop assessment plan including short-term fidelity/quality measures and longer-term outcome indicators and workload priorities.

<u>Culture of Data Driven Decision-making (Quantitative and Qualitative)</u>

- All present and future initiatives: Develop *and execute* assessment plan as noted above, including collection of data/information from the outset and funding contingent on short-term quality and progress measures and project milestones for termination or expansion based on achievement of outcomes.
- Project GRAD: Develop in coordination with Project GRAD an analysis plan including agreed-upon structure and content for tracking and data collection regarding students in the scholarship program.
- Middle and high school reading interventions: Convene a representative selection of principals, teachers, coaches, and directors to review full program evaluation data for Language! and develop a data-driven course of action.
- Elementary school scheduling model (parallel block) and coaching: Ensure focus in elementary PLCs with coaches to facilitate and assess quality and continue to collect data to assess appropriate staffing ratios and the effect of full Excellence Through Literacy investment.

These recommendations and analyses support the broader priorities for several important initiatives, including: more instructional time for students, enhanced instructional support for teachers, interventions for struggling students and enrichment opportunities for excelling students, consistently excellent magnet programs, and expanded performance pay to recruit and retain the very best educators. However, these priorities appear not to be within reach of the Knox County Schools' current revenue structure and instructionally-focused budget. This analysis suggests that if the KCS wants to accelerate and enhance student growth and achievement and be competitive at regional, state and national levels, additional investment will be needed. Therefore, it is recommended that the district develop a five-year budget proposal that identifies priority areas for additional resources based on these findings and an assessment plan and progress measures that lead toward the anticipated impact on student achievement and attaining the district's ambitious goal of *Excellence for All Children*.

Introduction

Purpose of the Project

In July 2009, the Knox County Board of Education adopted a strategic plan for the school district, entitled *Building on Strength: Excellence for All Children*. The five-year plan was designed to improve student achievement through intense attention to four overarching goals: Focus on the Student, Effective Educators, Engaged Parents and Community, and Infrastructure. By reallocating existing resources, strategically targeting resources from Race to the Top and other grant initiatives, and implementing internal efficiencies, the Knox County Schools has met many of the goals outlined in the plan:

Goal 1: Focus on the Student

- Implemented significantly higher curriculum standards and expectations
- Implemented 9th Grade Academies, Advisories, and research-based instructional strategies to meet individual needs
- Opened the L&N STEM Academy High School
- Provided alternate pathways to graduation via the Dr. Paul L. Kelley Volunteer Academy

Goal 2: Effective Educators

- Implemented the TEAM evaluation system and created Lead Teacher role
- Expanded TAP System from four to 18 schools
- Developed the APEX Strategic Compensation Plan
- Collaborated with the University of Tennessee to develop and implement a Leadership Academy for aspiring school leaders

Goal 3: Engaged Community and Parents

- Developed and implemented Professional Development in community engagement for the KCS personnel
- Initiated a District-wide Parent Conference
- Created a Parent University focused on providing skills for parents that will enhance their ability to support and be advocates for their children
- Implemented a Full-Service Community School Pilot at Pond Gap Elementary School
- Developed and implemented a Volunteer Management System

Goal 4: Infrastructure to Support Student Learning

- Downsized and reorganized Central Office **(8% reduction in positions in FY12 alone)**
- Created and implemented an Education Information Management System (EMIS) to effectively manage data from many disparate sources

Through implementation of the Strategic Plan, the Knox County Schools has seen steady improvement in student performance outcomes, as reflected in:

    a) Increased Overall Achievement (all 4 subject areas)
    b) Increased Graduation Rate (7.3% increase in three years)
    c) Increased percentage of ninth grade students graduating within four years and with an ACT score of 21 or better
    d) Significant increase in ACT takers and Advanced Placement and Honors course enrollees
    e) Progress on closing some achievement gaps

But while these improvements are encouraging and noteworthy, they are incremental at best and continue to reflect some significant challenges as evidenced in the following data:

- Only 19% of the Class of 2011 met all four ACT College Readiness Benchmarks
- Only 47% of 3rd grade students are Proficient or Advanced in Reading/ Language Arts as measured by the Tennessee Comprehensive Assessment Program (TCAP)
- Only 38% of the Class of 2011 graduated with a score of 21 or better on the ACT (goal is 73%)
- Significant achievement gaps exist at all grades and in all subject areas defined by income, race, disability and language

Acknowledging the need to accelerate improvements in our academic outcomes and recognizing that the strategies and initiatives necessary to make these improvements will require resources beyond our current level presented a compelling case for this analysis. To that end, this analysis seeks to answer three essential questions:

1. How are we using existing resources and what outcomes are we achieving for outcomes with those resources?
2. Are we using existing resources in the right way to best achieve our target outcomes?
3. What additional resources and strategies will improve student learning outcomes?

This information will be critical in developing a 3-5 year budget plan that will help us achieve our ambitious district goals and ensure *Excellence for All Children*.

Methodology

The development of a 3-5 year budget plan that is designed to significantly improve student learning requires a comprehensive analysis of existing revenue structures and major program initiatives. To accomplish this task, this report has examined the following areas:

5. Current funding sources and allocation practices
6. Expenditures versus student performance outcomes
7. Present return on investment for major district initiatives
8. Comparison study of other schools with similar demographics but better outcomes

Information derived from these analyses was then used to develop key recommendations for future investments.

Section I: Current Funding and Allocation Practices

How Our Schools are Funded

The Basic Education Program or BEP, established in the Tennessee Education Finance Act of 1977 (the Act), defines the formula used by the State of Tennessee to allocate state funds for K-12 education to school districts, known under that Act as Local Education Agencies (LEAs). Each year, the state uses a complex BEP formula to calculate for each LEA the "funding necessary for our schools to succeed."[1] The state then sums these individual LEA calculations to determine total BEP funding for the entire state. State funding contributes about 42% of the KCS revenue in the operating budget.

Most of the funding generated by the BEP formula is based on a particular school system's average daily student membership (ADM) applied to various categories within the formula. The calculation generates a percentage of the total cost of a 'basic' education for students, with the State percentage being further adjusted by a fiscal capacity index based on each county's *ability* to collect locally generated revenue.

The Act assigns responsibility for funding BEP to both the state and Tennessee counties. The various costs included in the BEP formula are categorized under three very broad headings for which the Act mandates different levels of shared state and county funding—

Cost Category	State Share	Counties' Share
Instructional Component	70 %	30 %
Classroom Component	75 %	25 %
Non-Classroom Component	50 %	50 %

For example, 70% of the summed total of all LEA BEP "Instructional Component" calculations is to be funded by the state, while the remaining 30% is to be funded by each county. The 70% and 30% represent state-wide funding averages, not the percentages of BEP funding that any one LEA might receive from the state and its county government. The actual percentages vary widely from county to county due to the Act's "equalization" provision.

Once total BEP funding is determined by summing the results of all LEA BEP calculations, each county's portion of the local share of total BEP funding is calculated using an equalization scheme. For example, a county's share of the 30% of the total BEP "Instructional Component" is calculated by multiplying 30% of the total BEP "Instructional Component" by the county's "fiscal capacity index" which is a statistical estimate of the county's relative ability to raise revenue.[2] The "fiscal capacity index" reflects a county's

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[1] TCA 49-3-302(3)
[2] The fiscal capacity index is a simple average of two "affordability" indices developed by the UT Center for Business and Economic Research and by the Tennessee Advisory Commission on Intergovernmental Relations.

local assessed property values per capita and local option sales tax per capita, and in effect, shifts the burden for higher proportions of local BEP funding to those counties where per capita local option sales tax and property tax revenues are the greatest.

The table below shows how equalization affected the Knox County local funding share of BEP costs in the three cost categories for the 2010-2011 and 2011-2012 fiscal years—

Cost Category	2010-2011			2011-2012		
	State Avg	Knox County	Variance	State Avg	Knox County	Variance
Instructional Component	30.00 %	43.85 %	13.85 %pts	30.00 %	43.42 %	13.42 %pts
Classroom Component	25.00 %	37.68 %	12.68 %pts	25.00 %	37.05 %	12.05 %pts
Non-Classroom Component	50.00 %	69.86 %	19.86 %pts	50.00 %	69.23 %	19.23 %pts

As a consequence of "equalization," Knox County's local funding share exceeded the Act's nominal local funding share by the following dollar amounts for the fiscal years shown. (A detailed calculation is provided in Appendix A.)

Cost Category	2010-2011	2011-2012
Instructional Component	$ 23.8 million	$ 23.7 million
Classroom Component	5.8 million	5.6 million
Non-Classroom Component	19.2 million	18.3 million
Total	$ 48.8 million	$ 47.6 million

In each year, this "equalization" portion of the Knox County local share represented more than 12% of the Knox County Schools (KCS) General Purpose Budget. The following table is an example of how this impacts a representative group of elementary schools in Knox County.

School Level BEP Analysis				
School	BEP Formula Calculated Positions	State Funded %	State (BEP) Funded Positions	Difference between BEP formula and state funding
A. L. Lotts	58.0	56.15%	32.6	25.5
Adrian Burnett	35.2	56.15%	19.8	15.4
Amherst	38.1	56.15%	21.4	16.7
Ball Camp	24.2	56.15%	13.6	10.6
Bearden	17.4	56.15%	9.8	7.6
Beaumont	27.2	56.15%	15.3	11.9
Belle Morris	20.7	56.15%	11.6	9.1
Blue Grass	39.6	56.15%	22.3	17.4
Bonny Kate	19.4	56.15%	10.9	8.5
Brickey-McCloud	52.4	56.15%	29.4	23.0
Carter	27.1	56.15%	15.2	11.9
Cedar Bluff	69.9	56.15%	39.2	30.6
All KCS Elementary	1,391.1	56.15%	781.1	610.0

Note: The state BEP formula allocates positions on a district level. Positions allocated to individual schools are calculated based on a school's estimated proportional share of ADM.

Financing Sources

The FY 2012 operating budget contains an annual revenue projection that is $13.2 million higher than the one included in the FY 2009 budget. Most of the projected increase in revenues comes from higher estimated State of Tennessee BEP funding ($12.9 million, 97.8% of the projected revenue increase). The remainder ($0.3 million, 2.25%), comes from a combination of federal, local, and non-BEP state revenue sources. While Knox County Property Tax collections are projected to increase ($7.9 million, 7.7%), Local Option Sales Tax collections are expected to decline (-$9.2 million, 8.5%), for a net decrease of $1.3 million. Local Wheel and Litigation Taxes and other federal, state, and local revenue sources show a net increase ($1.6 million, 12.1%).

	FY 2009	+/-	FY 2010	+/-	FY 2011	+/-	FY 2012	FY 2009 - 2012 Net Change	% Change
State Funding									
BEP	$ 143.4	$ 5.2	$ 148.6	$ 5.5	$ 154.1	$ 2.2	$ 156.3	$ 12.9	9.0 %
Other	7.5	(0.9)	6.6	1.2	7.8	(1.3)	6.5	(1.0)	(13.3) %
State Total	150.9	4.3	155.2	6.7	161.9	0.9	162.8	11.9	7.9 %
Knox County Funding									
Property Tax	102.9	6.1	109.0	1.4	110.4	0.4	110.8	7.9	7.7 %
Local Option Sales Tax	108.6	(7.4)	101.2	(4.3)	96.9	2.5	99.4	(9.2)	(8.5) %
Wheel Tax	1.5	-	1.5	-	1.5	-	1.5	-	0.0 %
Litigation Tax	-	0.7	0.7	0.4	1.1	-	1.1	1.1	
Knox County Total	213.0	(0.6)	212.4	(2.5)	209.9	2.9	212.8	(0.2)	(0.1) %
Federal–ROTC Reimbursement	0.5	-	0.5	-	0.5	-	0.5	-	
Other Local Sources	2.5	1.3	3.8	-	3.8	0.2	4.0	1.5	60.0 %
Total Revenues	$ 366.9	$ 5.0	$ 371.9	$ 4.2	$ 376.1	$ 4.0	$ 380.1	$ 13.2	3.6 %

Operating Budget -- Net Change in Projected Financing by Source -- FY 2009 to FY 2012 (millions)
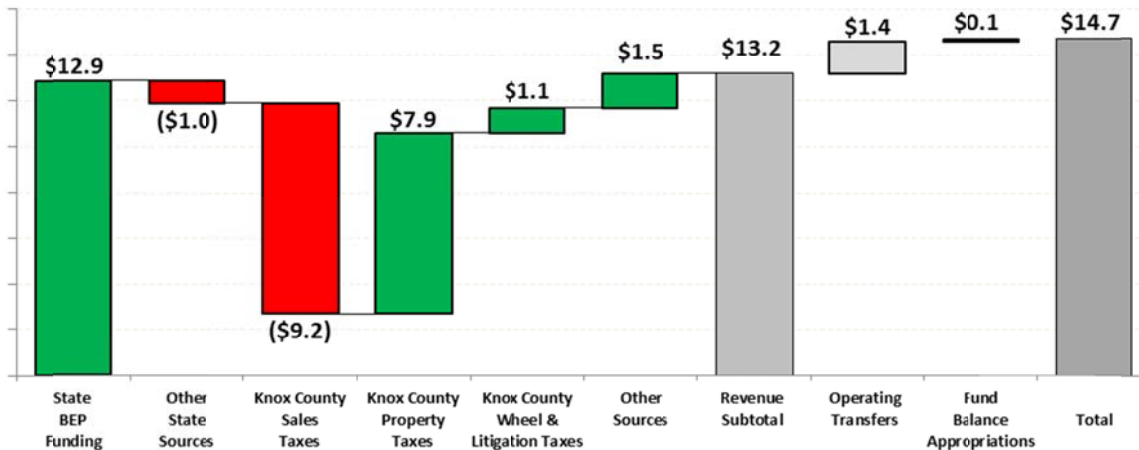
Funding from Knox County sources shows a net decline of $200,000 from FY 2009 to FY 2012.

FY 2009 to FY 2012 Change in Funding by Source

	State of Tennessee	Knox County	Other Sources
	$11.9	-$0.2	$1.5
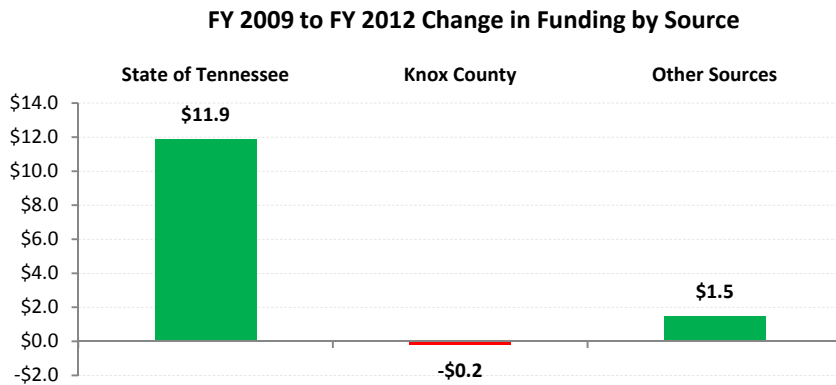
Operating Budget -- Projected Revenue Sources (millions) — FY 2009 ■ FY 2012

	State BEP Funding	Other State Sources	Knox County Sales Taxes	Knox County Property Taxes	Knox County Wheel & Litigation Taxes	Other Sources
FY 2009	$143.4	$7.5	$108.6	$102.9	$1.5	$3.0
FY 2012	$156.3	$6.5	$99.4	$110.8	$2.6	$4.5
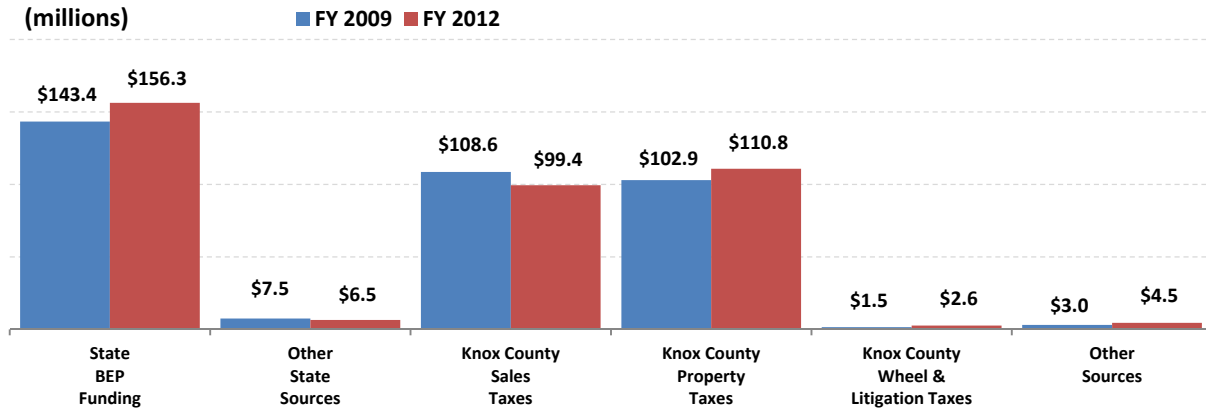
Points of Reference

For the 2010-2011 fiscal year, Knox County ranked among the Tennessee counties with the largest local share percentages in each of the three categories—

The Five Counties with the Largest Local Share Percentages (2010-2011)

County	Instructional Component	Classroom Component	Non-Classroom Component
Sevier	55.23 %	45.33 %	88.20 %
Davidson	50.49 %	43.31 %	92.68 %
Knox	**43.85 %**	**37.68 %**	**69.86 %**
Hamilton	43.33 %	35.65 %	69.54 %
Williamson	39.43 %	44.78 %	67.48 %
State Average	*30.00 %*	*25.00 %*	*50.00 %*
Smallest County Share[3]	*9.39 %*	*6.67 %*	*13.81 %*

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[3] Hancock County.

For the 2010 – 2011 fiscal year, Knox and adjacent counties had the following local share percentages in each of the three categories—

Knox and Adjacent Counties (2010-2011)

County	Instructional Component	Classroom Component	Non-Classroom Component
Sevier	55.23 %	45.33 %	88.20 %
Knox	**43.85 %**	**37.68 %**	**69.86 %**
Loudon	30.63 %	25.62 %	50.01 %
Blount	29.94 %	26.59 %	49.80 %
Roane	28.87 %	24.76 %	47.25 %
Anderson	26.01 %	22.58 %	43.59 %
Jefferson	23.66 %	18.55 %	37.62 %
Union	12.46 %	9.33 %	18.47 %
Grainger	11.32 %	9.08 %	16.80 %
State Average	*30.00 %*	*25.00 %*	*50.00 %*
Smallest County Share	*9.39 %*	*6.67 %*	*13.81 %*

Sevier County and Knox County are among the highest in the state. Loudon, Blount, and Roane Counties are close to the state average. Union and Grainger Counties are among the smallest in the state.

A somewhat incongruous relationship exists between the State's funding and its educational mandates. Though the state calculates its funding obligation from a system-wide lens, a school system must adhere to state mandated class size requirements at every school location. This dichotomy leads to the development of additional mandates that are unfunded.

For example, at the elementary kindergarten through grade three (K-3) level the State mandates an average ratio of one teacher for every 20 students. So, if a school system had a total of 100 first grade students, the state would fund the system (in part) for five teachers. Suppose, however, that these first grade students were housed across six different elementary schools. At least six first grade teachers would be needed in that school system. The cost of one teacher would, therefore, be funded entirely from local revenue and the cost of five teachers would be partially funded from State revenue.

It is important to note that the BEP funding formula does not dictate how schools are staffed, aside from the class size mandates in the BEP legislation.

While the state funds what is entitled the Basic Education Program, what a basic education includes is not defined. However, there are assumptions embedded into the BEP that incur an additional financial burden for many districts. For example, the state funds districts based on an average teacher salary of $38,700 which does not account for differences in salary scales driven by market competition and cost of living adjustments. In Knox County, where the average teacher salary is $44,588, this creates a gap of $5,888 per position that must be funded using local dollars. This same average salary is also applied to fund assistant principals and principals, counselors, librarians, nurses and a variety of other

professionally licensed personnel, many of whom require advanced and specialized degrees and garner significantly higher salaries.

Other assumptions in the BEP formula apply to differential support for students. While the BEP does provide some additional resources to address the needs of students with disabilities and English Language Learners, it is not sufficient for many of the reasons already noted. Additionally, data used to calculate these allocations does not reflect the current student enrollment, rather it is based upon the previous year's demographics. Furthermore, curriculum enhancements that require additional and/or specialty teachers beyond the basic education formula (e.g. advanced placement, magnet schools, foreign language courses, and intervention courses) must be funded entirely by local revenue source.

Finally, the BEP does not provide any funding to support and professionally develop teachers. Professional development (including for example instructional coaches), is the sole responsibility of the local district.

In summary, it is clear that what the state defines in its funding formula as a "basic education" is insufficient to adequately meet the "basic" needs of the students in Knox County and woefully insufficient to attain the ambitious goals outlined in the Knox County Schools Strategic Plan. In absence of enhancements to the BEP, the burden is on the local community to provide adequate resources necessary to ensure *Excellence for All Children*.

Where the Money Goes

As previously noted, the state BEP formula allocates funds to districts, but does not mandate how those funds are spent, with the exception of class size mandates. The following analysis provides details about how the Knox County Schools has used its funds over time.

General Purpose Fund Operating Budget

Since FY 2009, the KCS General Purpose Fund operating budget has grown from $370.0 to $384.7 million, a cumulative change of slightly less than 4.0% and an average annual change of $4.9 million or around 1.3%.
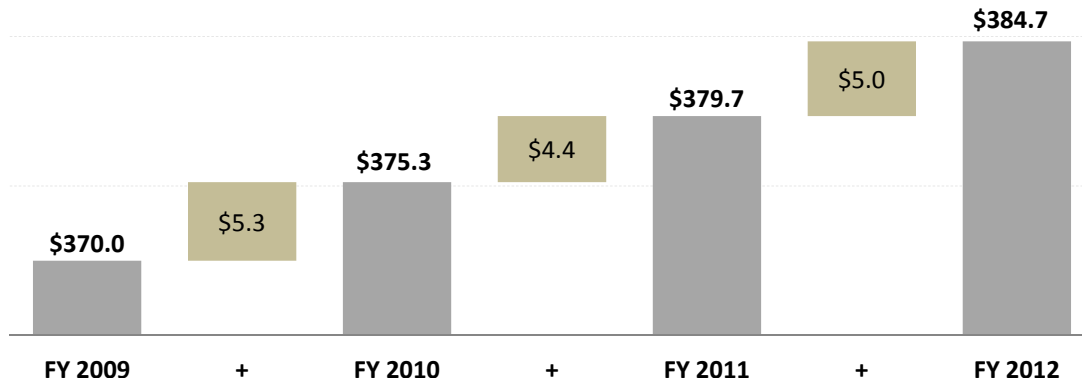
Economic constraints on budgetary growth led the district in FY 2012 to supplement the General Purpose Fund budget with slightly more than $7.0 million in funds provided by the federal *Education Jobs Program*. These additional funds increased the amount budgeted in FY 2012 for school operations to $391.7 million and allowed the district to preserve the equivalent of 136 teaching positions that might otherwise have been cut.

During the four year period FY 2009 to FY 2012, overall student enrollment has grown by 1,257, a cumulative 2.27%.[4] This year, enrollment has increased 1.27% from 2011, which is more than three times the 0.41% rate of increase from FY 2010 to FY 2011.
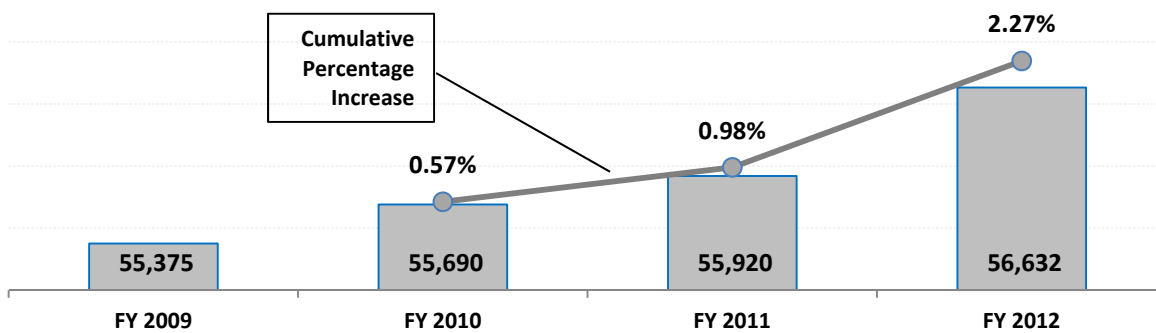
From FY 2009 to FY 2012, total student enrollment in the district's schools has been relatively stable: Elementary school enrollment has increased by 771 (+2.9%), middle school by 390 (+3.2%), and high school enrollment has decreased by 35 (-0.2%).

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[4] All attendance figures come from ADM Period 4 reporting.

Student Enrollment by School Level   ▪ High ▪ Middle ▪ Elementary

	FY 2009	FY 2010	FY 2011	FY 2012
High	16,540	16,608	16,605	16,505
Middle	12,359	12,382	12,606	12,749
Elementary	26,312	26,478	26,504	27,083
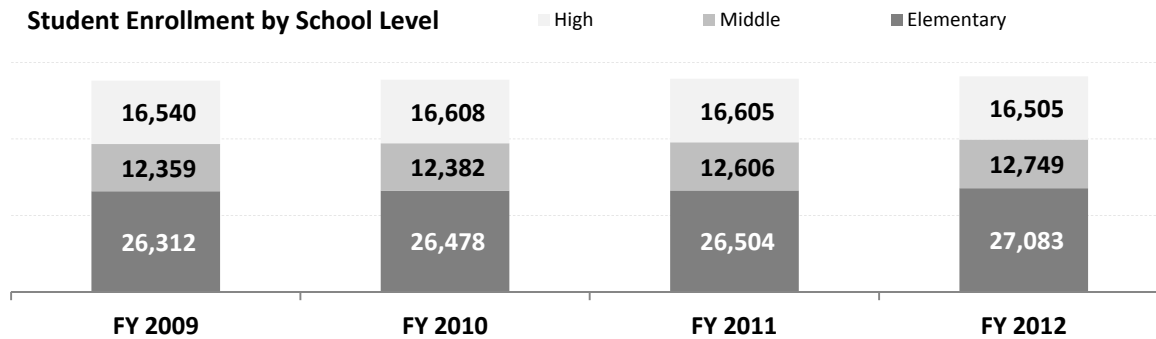
Other than completing the merger of Cedar Bluff Intermediate and Cedar Bluff Elementary Schools in FY 2010, opening the Dr. Paul L. Kelley Volunteer Academy in FY 2010, and launching the L&N STEM Academy this year, the number of elementary, middle, and high schools has remained the same throughout the four years. To address high capacity utilization in existing high schools, Hardin Valley Academy opened in FY 2009 with an enrollment of 1,200 students, which added 258,000 square feet of school capacity to the fixed cost burden included in the General Purpose Fund budget. Hardin Valley Academy's enrollment now stands at approximately 1,900.

The KCS student body has seen a 16.0% increase in minority enrollment since FY 2009. The percentage of students in the federal free or reduced lunch program in FY 2012 is an increase over FY 2009. The percentage of students with limited English proficiency continue to grow, while the cohort having special needs remains in the historical 11.0% to 12.5% range.[5]

	FY 2009	FY 2010	FY 2011	FY 2012
Minority	20.6%	21.2%	22.3%	23.9%
Free or Reduced Lunch Status	40.3%	44.4%	45.1%	45.5%
Limited English Proficiency	2.5%	2.5%	3.1%	3.4%
Special Education Requirements	11.0%	11.7%	12.3%	11.5%

Cost Categories and Areas of Utilization

Line item costs in the KCS General Purpose operating budget fall into six broad categories: Salaries and Wages, Taxes and Benefits, Contracted Services, Supplies and Materials, Debt Service, and Other.[6] Salaries and wages for personal services and the related employer payroll taxes and employer

[5] Data for 2009, 2010, and 2011 come from the Tennessee Department of Education Report Card. Data for 2012 come from the KCS data warehouse.
[6] Budget details come from documents published by Knox County and the KCS.

contribution toward the cost of employee benefits are by far the largest categories, making up historically more than 80% of the entire budget.

$ Millions

	FY 2009	FY 2010	FY 2011	FY 2012
Other	$9.7	$9.2	$8.8	$9.2
Debt Service	$6.1	$7.3	$9.3	$10.9
Supplies and Materials	$21.8	$23.7	$21.7	$23.2
Contracted Services	$22.9	$21.8	$21.5	$22.5
Taxes and Benefits	$57.5	$58.6	$65.1	$68.0
Salaries and Wages	$252.0	$254.7	$253.3	$250.8
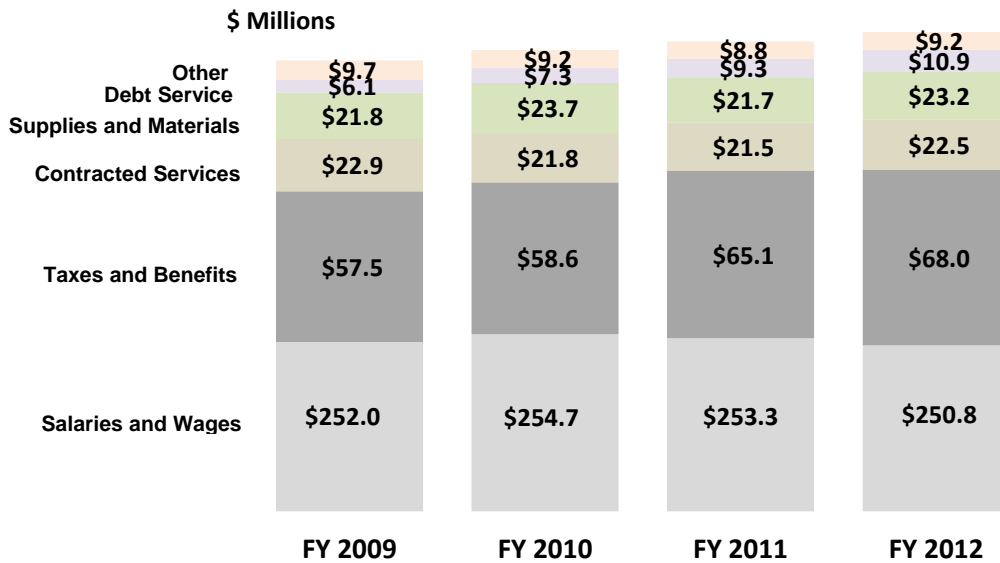
Areas of Utilization

Recasting the line item budget by area of utilization reveals that spending for classroom instruction has risen from $228.3 million in FY 2009 to $237.4 million in FY 2012. Most of the $9.1 million increase has been directed toward Regular Instruction ($6.4 million, 70.3% of the increase) and Special Education ($3.5 million, 38.5%), while CTE and Other Instructional programs have been reduced a net $0.8 million. An additional $7.1 million in one-time funding from the Federal Education Jobs Program was utilized in FY 2012 for regular education instruction, which is not reflected in the chart below.

Operating Budget -- Instruction -- Spending by Type -- FY 2009-2012 (millions)

Legend: Regular ■ Special Ed ■ CTE ■ Other

	FY 2009	FY 2010	FY 2011	FY 2012
Total	$228.3	$231.4	$236.9	$237.4
Other		$7.0	$7.1	$6.9
CTE	$7.1			
Special Ed	$13.5	$12.9	$12.7	$12.9
(Special Ed 2)	$31.1	$32.1	$32.7	$34.6
Regular	$176.6	$179.4	$184.4	$183.0
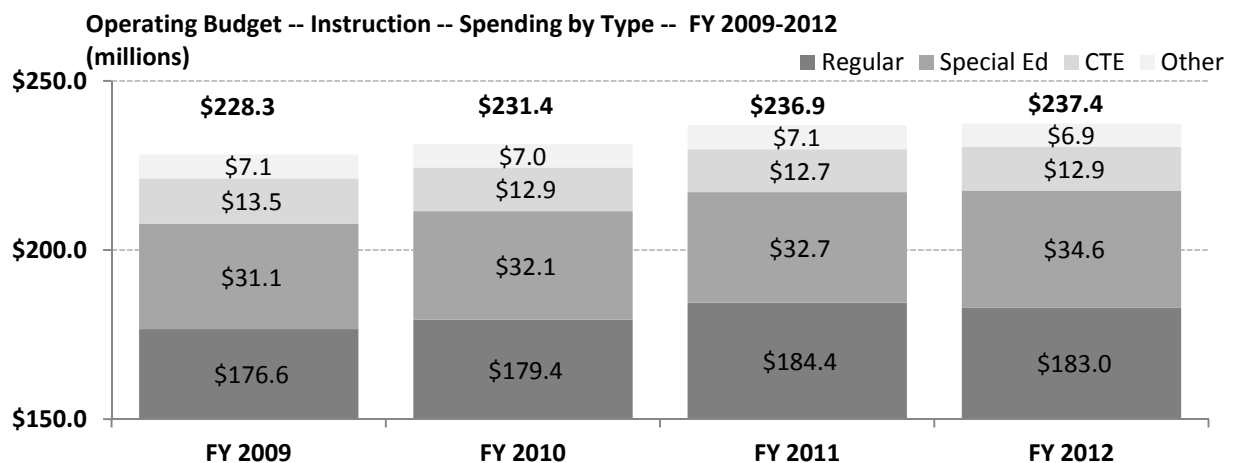
Adding budgeted Instruction Support costs to the amounts budgeted for Instruction produces totals that account for approximately 80% of the total annual operating budget.

Operating Budget -- Instruction and Support -- FY 2009-2012 (millions)
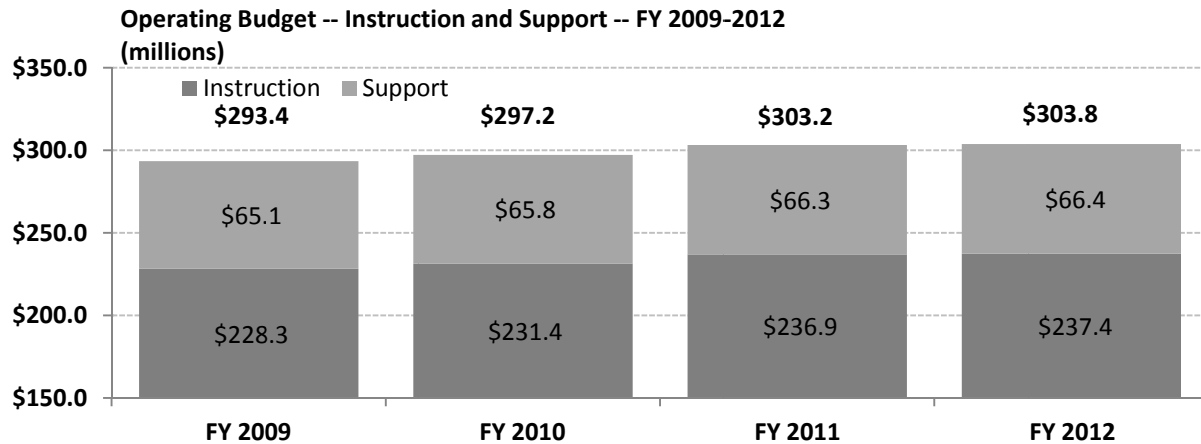
Over the four fiscal years, most of the $14.7 million increase in the total operating budget (from $370.0 million in FY 2009, to $384.7 million in FY 2012) has gone into Classroom Instruction and Instruction Support ($10.4 million, 70.8% of the $14.7 million total) and to satisfy scheduled Debt Service and other district level requirements ($5.0 million, 34.0%). Cost cutting in the areas of Administrative and Technology spending (-$1.3 million, -8.9%) have more than offset modest increases in the budgeted costs of Operations, Student Transportation, and Security ($0.6 million, 4.1%).

Operating Budget -- Net Growth by Area of Utilization -- FY 2009-2012 (millions)
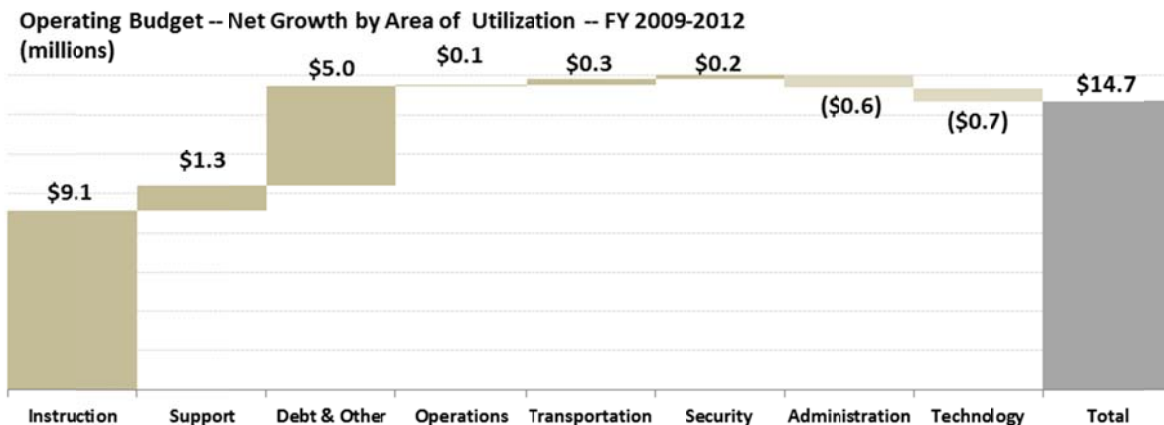
Salaries and Wages

The two largest cost categories in the FY 2012 operating budget—"Salaries and Wages" and "Taxes and Benefits"—make up 82.9% of the total $384.7 million budget.

FY 2012 Operating Budget by Categories (millions)

Category	Amount	Cumulative %
Salaries & Wages	$250.8	65.2%
Taxes & Benefits	$68.0	82.9%
Contracted Services Including Student Transportation	$22.5	88.7%
Utilities, Supplies, & Materials	$23.2	94.7%
Debt Service	$10.9	97.6%
Other	$9.3	100.0%
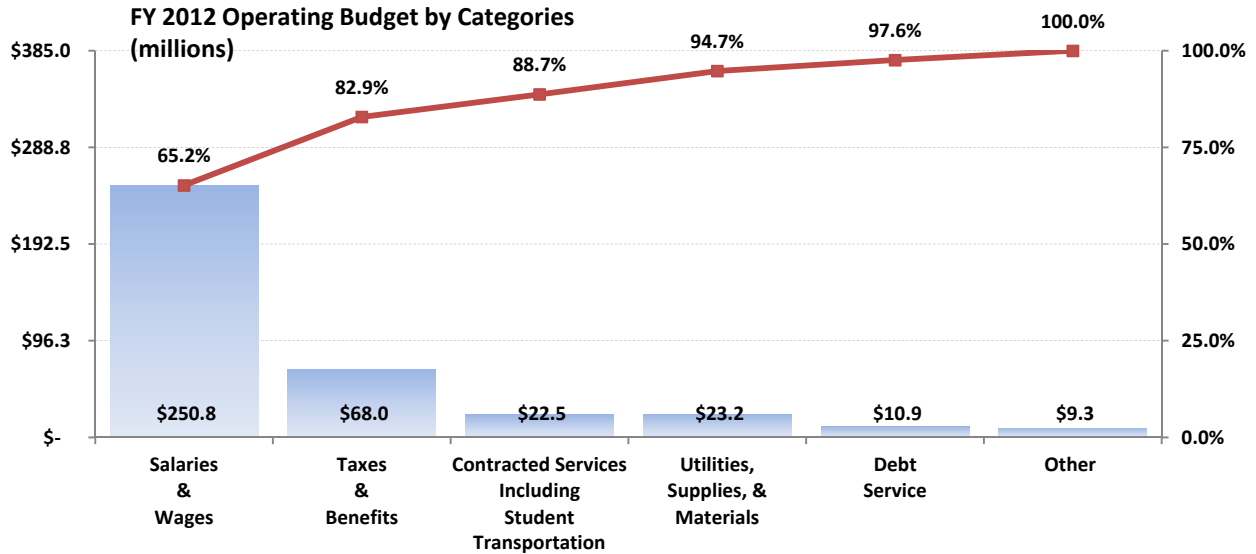
Top Ten Line Items

The largest category of the KCS salaried employees is "Teachers," and payments to teachers represent two-thirds of budgeted hourly and salaried wages, by far the single largest salaries and wages line item. Budgeted payments to employees who are included in the next nine largest line items sum to less than 25% of the total salaries and wages budget.

FY 2012 Operating Budget -- Salaries and Wages Category -- Top 10 Line Items ($ millions)

Line Item	Amount	Cumulative Percentage of the Category
Teachers	$166.2	66.3%
Education Assistants	$9.8	70.2%
Assistant Principals	$8.3	73.5%
Custodians	$8.2	76.8%
Health Professionals	$7.3	79.7%
Principals	$6.5	82.3%
School Clerical	$5.8	84.6%
Guidance	$5.3	86.7%
Maintenance	$5.3	88.8%
Directors and Supervisors	$4.8	90.7%
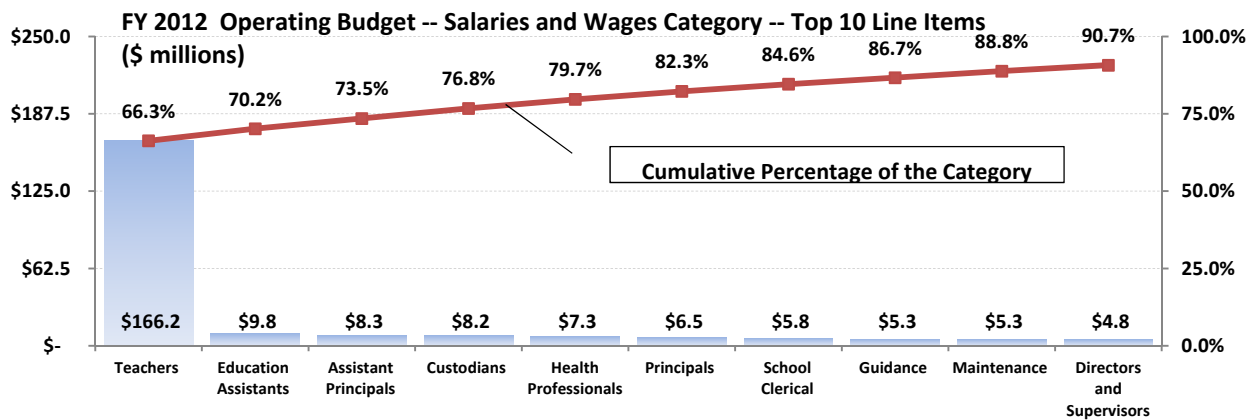
Comparables

In fiscal year 2011, the KCS paid classroom teachers—on average—significantly less than those who work in nearby school districts and in the state as a whole. In other comparisons, the KCS spent less from all funding sources per pupil, had higher average school enrollment, in almost all cases maintained a higher student / classroom teacher ratio, and because of the larger average size of the KCS schools, pockets of poverty, and historically low performing schools, employed relatively more principals and assistant principals, as reflected in the classroom teacher to principal and assistant principal ratios.[7]

Fiscal Year 2011

	Oak Ridge	Alcoa	Maryville	Sevier County	KCS	Entire State
Enrollment (ADM)	4,533	1,699	4,962	14,315	55,588	897,807
Number of Schools	7	3	7	23	76	1,682
Average School Enrollment	648	566	709	622	731	534
Per Pupil Spending ($ / ADM)	$11,457	$10,342	$8,835	$8,432	$7,991	$8,591
Classroom Teachers						
Number	344	114	319	983	3,735	65,009
Average Salary	$57,242	$57,032	$54,362	$47,190	$44,401	$45,891
Students / Classroom Teacher Ratio	13.2	14.9	15.6	14.6	14.9	13.8
Principals and Asst Principals	16	6	12	59	208	3,396
Classroom Teachers / Principals and Asst Principals Ratio	21.5	19.0	26.6	16.7	18.0	19.1

Note: The State Report Card calculates spending based on average daily attendance (ADA). The chart above calculates on average daily membership (ADM).

Management and Supervisory Positions

As part of its focus on redirecting district resources into the schools, during the four year period FY 2009 to FY 2012, the KCS spending for management and supervisory positions has shifted from those in

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[7] Data for academic year 2011 (the latest available data) were taken from various Tennessee Department of Education files published on its web site.

district-level administrative support areas to those who work at school locations. Salaries and wages budgeted for Principals, Assistant Principals, and Counselors has increased 6.7%, while the budget for Supervisors, Directors, and Superintendents has been cut by 8.9%.
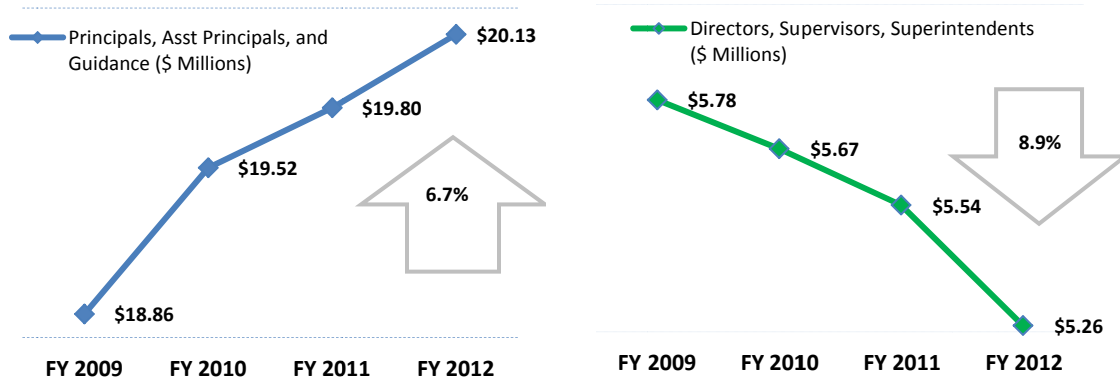
Additional information on central administration is included in the appendices.

Other Operating Costs

Line items other than "Salaries and Wages" comprise $133.9 million or 34.8% of the FY 2012 operating budget. The largest ten total $113.4 million or 84.7% of the $133.9 million. Three of the ten are for payroll taxes and employee benefits, a fourth is for student transportation, a fifth utilities, and a sixth debt service. These six total 77.1% of the $133.9 million.
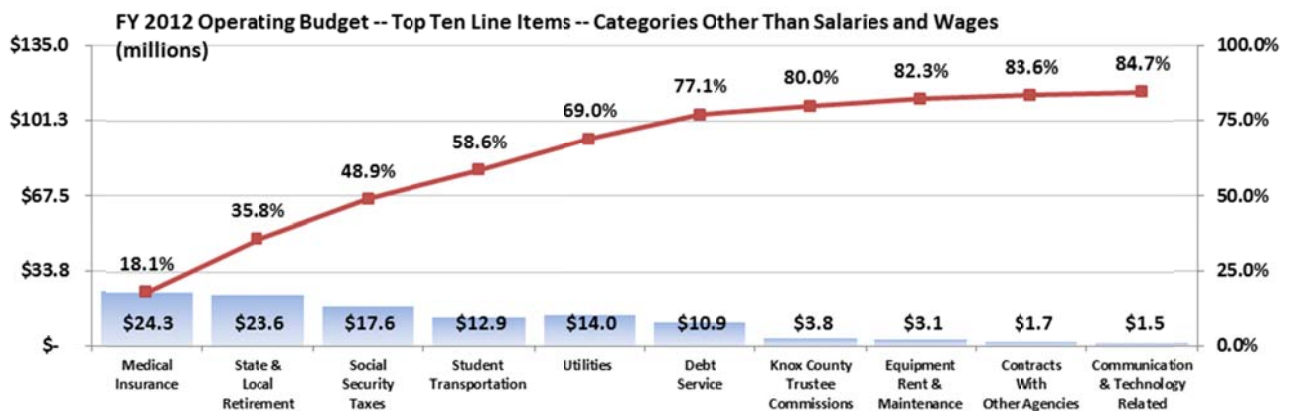
Adverse Budget Impacts

Over the last four years, the district has experienced very large increases in three of these line items. The increases were driven either by historical capital requirements for major maintenance and expansion of school facilities or by employee benefits policies.

Capital Requirements

The KCS' capital improvement plan initiatives for new building construction and major renovations are funded through the issuance of general obligation bonds (i.e. borrowings). School related debt incurred from these bonds is largely financed through the School Construction Fund, which is supported by sales tax revenue. However over the last several years, increases in bond indebtedness have grown at a more accelerated pace than sales tax revenue dedicated to the School Construction Fund, requiring the General Purpose (operating) Fund to subsidize this difference. Over the last four years, annual debt supplemented by the General Purpose Fund has increased almost 80%, from $6.1 to $10.9 million.

Employee Medical Insurance and Retirement Contributions

Even though total district employment and salaries and wages have remained relatively flat over the four years, the employer portion of medical insurance premiums paid to the state administered plan and contributions to state and local retirement funds have risen by a combined $10.0 million. Both line items are administered by the State of Tennessee and do not lend themselves to active management at the local district level.
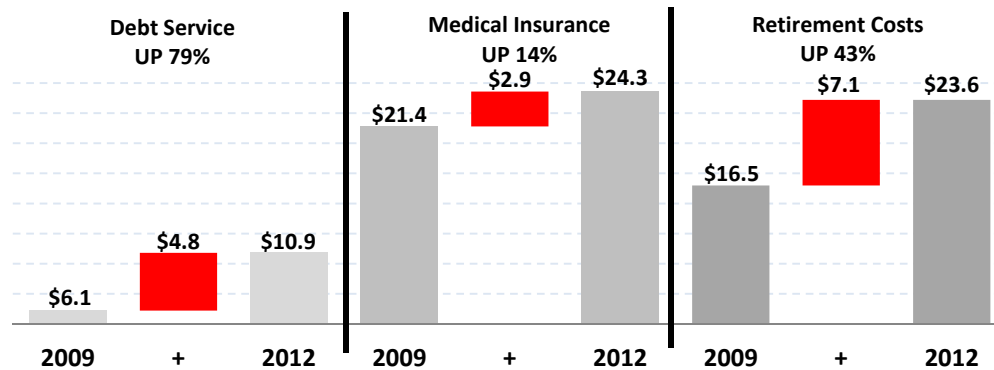
Cost Management Examples

Student Transportation

The budget for student transportation rose from $12.6 million in 2009 to $12.9 million in 2012, a modest 2.4% increase in light of recent fuel price inflation. The district's Transportation Department actively manages school bus routing and scheduling to hold the line on these costs. Consequently, even though the number of miles ridden by the KCS students each school day has increased 6.6% from 22,700 to 24,200, the number of buses used to carry them has been reduced by 5.5% from 328 to 310.

Chart: Bar graph showing Average Miles Each Day and line graph showing Number of Buses for FY 2009–FY 2012.
- FY 2009: 22,700 miles; 328 buses
- FY 2010: 23,100 miles; 326 buses
- FY 2011: 23,400 miles; 315 buses
- FY 2012: 24,200 miles; 310 buses
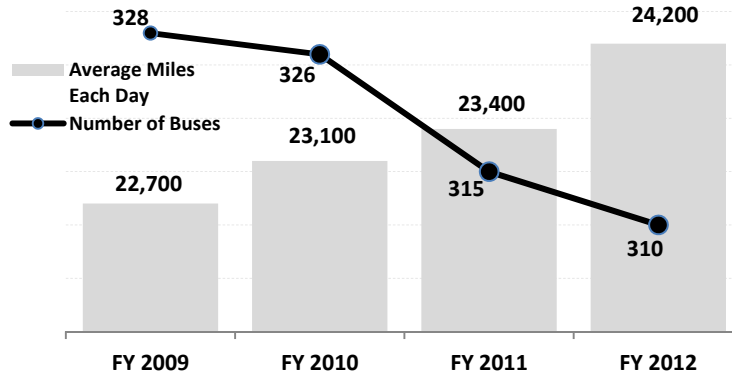
Utilities

Since 2008, the district's Maintenance Department has pursued a highly aggressive utility conservation program, which has led to a 20% reduction in overall electricity consumption, even though the district opened Hardin Valley Academy in 2009, adding 258,000 square feet of school capacity to the fixed cost burden in the operating budget. The district's 21.9 million kWh reduction in annual electricity consumption from 2008 to 2011 is nearly six times the 3.8 million kWh needed to power Hardin Valley Academy in 2011.

Chart: Bar graph showing kwH Used and line graph showing Savings from 2008 Level for FY 2008–FY 2011.
- FY 2008: 128,525,102
- FY 2009: 119,900,405; 9.4%
- FY 2010: 111,755,635; 15.8%
- FY 2011: 106,616,065; 20.0%
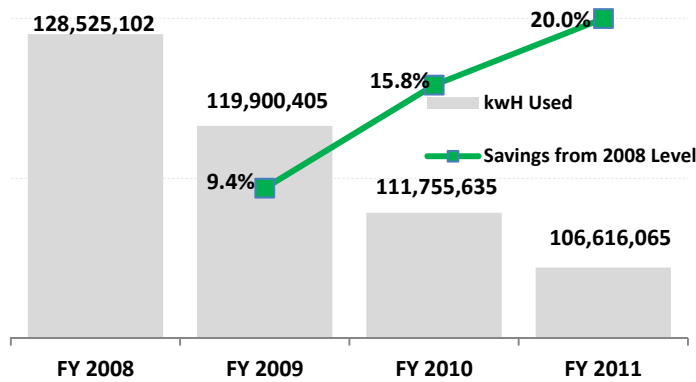
In summary, the vast majority of the Knox County Schools budget represents the cost of the people necessary to perform the work of education, and the annual increase in the budget since 2009 has averaged only 1.3%. That increase has not been for salaries and wages, which have remained relatively stable since 2009, but rather due to circumstances out of the Knox County Schools' direct control, mainly the impact of state-required increases in insurance premiums and retirement contributions. To maintain an essentially flat budget, the Knox County Schools has made use of grants and other time-limited resources and aggressively managed non-instructional expenses to maximize the proportion of funds available for instruction and support.

School Staffing Formulas

Recognizing that the majority of the KCS budget is designated for classroom instruction and instructional support, it is important to have a rational means of allocating personnel to individual schools. The Knox County Schools uses a budget allocation methodology, or formula, that is transparent and rational.

There is clear evidence in the research literature that illustrates the links between a student's socio-economic status and academic achievement[8,9]. For example, high poverty students typically start school at a disadvantage as compared to their middle and upper class peers, so they generally require additional services to mitigate learning gaps and maintain academic progress. Nearly half of the students in the Knox County Schools are classified as Economically Disadvantaged (ED) based on free and reduced lunch rates. And while every school has a percentage of ED students, many schools have higher concentrations of students living in poverty than others. To address these differences, the Knox County Schools budget allocation formulas at all three grade spans reflect differentiated resource allocations based on the percent of ED students. Other differentials include adjustments for small schools, magnet schools, reconstituted schools and high priority schools. In this manner, the Knox County Schools seeks to provide an equitable education for all students.

It is important that the current staffing model be reviewed and adjusted each year to ensure that its philosophical underpinnings translate to rational allocations. Some areas to consider are the support and administrative differences between schools of equal size at different grade spans, as well as the manner in which poverty and instructional need are addressed in the formulas.

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[8] Janus, Magdalena, and Duku, Eric. "The School Entry Gap: Socioeconomic, Family, and Health Factors Associated With Children's School Readiness to Learn." *Early Education & Development* Volume 18 Issue 3 (2007).
[9] Hernandez, Donald J. "Double Jeopardy: How Third-Grade Reading Skills and Poverty Influence High School Graduation." Reported in Annie E. Casey Foundation (April 2011).

Section II: Expenditures versus Student Performance Outcomes

Research has long demonstrated the strong correlation between poverty and educational outcomes. Additional analyses also point to a strong association between poverty, educational outcomes, and the amount of money that a school district spends per pupil. Examples of award-winning school districts and countries with outcomes closer to the KCS strategic goals reinforce this belief, as their spending per pupil is also higher than in Knox County. For example, in a comparison of funding from state, local and other sources, Maryville City Schools (the SCORE Best District Winner) spends $8,835 per pupil, Charlotte-Mecklenburg Public Schools in North Carolina (the 2011 Broad Prize winner) spends $9,280 per pupil, while Boston Public Schools (chosen by London's McKinsey Group as one of the most promising school systems in the world) spends over $12,000. And high performing countries such as Germany and Japan spend approximately $9,500 and $10,000 per pupil respectively.

These are selective comparisons, of course, and there are other factors which determine the per pupil cost and outcomes in different locations across the country and around the world. However, a comparison of the highest performing school districts in Tennessee also corroborates this correlation.

State Comparisons

Using student performance on the ACT as an outcome measure and data from all 119 Tennessee school districts that have at least one high school, a statistical regression model was estimated which demonstrates that per pupil expenditures and the level of student poverty have a statistically significant relationship with composite ACT scores in Tennessee school systems. Specifically, this regression falls along a line with the following equation:

2011 ACT Score = 19.49684 + ((State & Local Per Pupil Funding) X 0.0005622) + (Economically Disadvantaged % X -7.305375)

This regression equation (which is significant at the 0.01 level) means that ACT scores can generally be predicted by the level of poverty in a school district in Tennessee and the amount of per pupil funding committed to public education in that district. Put another way, if two Tennessee school districts have equal rates of student poverty, the one with higher per pupil spending would generally be expected to see better results on the ACT. The basic take away is that per pupil spending in Tennessee appears to have a direct correlative relationship to student outcomes, specifically ACT scores.

Output from STATA statistical software showing the specifications of the model:

```
      Source |       SS       df       MS              Number of obs =     119
-------------+------------------------------           F(  2,   116) =   88.23
       Model |  134.926952     2  67.4634759           Prob > F      =  0.0000
    Residual |  88.6986036   116  .764643134           R-squared     =  0.6034
-------------+------------------------------           Adj R-squared =  0.5965
       Total |  223.625555   118  1.89513183           Root MSE      =  .87444


------------------------------------------------------------------------------
     act2011 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    stloc_pp |   .0005622   .0001017     5.53   0.000     .0003607    .0007637
    ed_perc2 |  -7.305375   .6510565   -11.22   0.000    -8.594875   -6.015876
       _cons |   19.49684   .9025087    21.60   0.000     17.70931    21.28437
------------------------------------------------------------------------------
```

The table below shows the ten highest performing school districts in the state and the comparison between the state and local per pupil expenditures in those districts versus the current Knox County School per pupil expenditure. The "Variance" columns of the table illustrate the magnitude of the difference between the current KCS per pupil expenditure and the expenditure if the KCS were to spend the same amount per pupil as these other districts who achieve higher ACT scores.

Knox County Schools Per Pupil Expenditure Analysis							
District	Enrollment 2010	2011 ACT Composite	2010-11 State/Local Per Pupil Expenditure (PPE)	ED %	2010-11 Knox PPE	PPE Variance	PPE Variance X Knox Enrollment
MARYVILLE	4,965	24.4	$ 8,422	33.0%	$ 7,453	$ 969	$ 53,777,419
OAK RIDGE	4,460	23.1	$ 10,998	45.0%	$ 7,453	$ 3,545	$ 196,805,067
GREENEVILLE	2,696	22.9	$ 8,779	44.0%	$ 7,453	$ 1,326	$ 73,619,736
WILLIAMSON COUNTY	30,517	22.8	$ 7,541	12.2%	$ 7,453	$ 88	$ 4,858,421
ALCOA	1,681	22.4	$ 9,679	61.3%	$ 7,453	$ 2,226	$ 123,608,512
KINGSPORT	6,439	21.8	$ 8,997	50.9%	$ 7,453	$ 1,544	$ 85,718,150
JOHNSON CITY	7,313	21.7	$ 8,139	51.4%	$ 7,453	$ 686	$ 38,061,256
CLEVELAND	4,801	20.7	$ 7,689	61.9%	$ 7,453	$ 236	$ 13,080,192
SHELBY COUNTY	47,892	20.7	$ 8,151	38.3%	$ 7,453	$ 698	$ 38,746,440
ELIZABETHTON	2,137	20.5	$ 7,913	56.7%	$ 7,453	$ 460	$ 25,519,783

It is important to note that ACT scores are a cumulative result of twelve years of schooling and the majority of material tested on the ACT has clear foundations in the elementary curriculum. This underscores the importance of investment in elementary education to truly impact long-term outcomes.

The top two performing school districts in Tennessee in the table above, Maryville and Oak Ridge, are adjacent to Knox County, so warranted a closer review.

Contiguous District Comparisons

When student performance outcomes from the Knox County Schools (KCS) are compared to those from contiguous districts, both Maryville City Schools and Oak Ridge Schools show significantly higher outcomes. A comparison of the three school districts shows several important differences:

- The average teacher salary in Maryville and Oak Ridge is $54,362 and $57,242 respectively, a difference of nearly $10,000 and $13,000 respectively, as compared to the average teacher salary of $44,401 in Knox County. Oak Ridge has the highest average teacher salary in the state and Maryville is 4th highest.
- Maryville and Oak Ridge both spend significantly more per student than the KCS (approximately $800 and $3500 per student more, respectively.) The special education population in Oak Ridge is proportionally twice that of the KCS and Maryville, which accounts for some of their higher per pupil spending.
- Of twelve schools system in the Knoxville area, only two spend less per pupil than the KCS: Jefferson County and Grainger County. Both of these school systems have lower proficiency rates and ACT scores than the KCS. Both of these systems also have higher proportions of economically disadvantaged students.
- The KCS serves a greater proportion of economically disadvantaged students (45.8%) compared to Maryville (33%).
- The KCS serves ten times as many students and manages ten times as many schools as the city systems of Maryville and Oak Ridge or Jefferson and Grainger counties.

Comparison of Knox County Schools to Four Knoxville Area School Systems (2010-2011 school year)					
Jurisdiction	Knox County County	Maryville City	Oak Ridge City	Jefferson County	Grainger County
Student enrollment (average daily membership)	55,588	4,962	4,533	6,946	3,300
Grade 3-8 achievement state letter grades (Math, Reading, Social Studies, Science)	BBBB	AAAA	AAAA	CCBC	CCCC
Grade 3-8 Reading Proficient/Advanced	55.1%	73.2%	60.2%	45.4%	42.8%
Grade 3-8 Math Proficient/Advanced	47.4%	63.8%	53.0%	35.9%	40.1%
Reading change in % P/A 2010 to 2011	1.5	4.6	3.0	6.9	5.9
Math change in % P/A 2010 to 2011	5.8	7.5	3.4	9.1	13.3
Grade 3-8 "value-added" state letter grades (Math, Reading, Social Studies, Science)	BCBC	AABC	CCBC	BCCD	BDBD
Math Value-added mean gain (3-year average)	0.8	1.8	0.4	0.9	0.6
Reading value-added mean gain (3-year average)	0.1	0.5	-0.1	-0.2	-1.2
2011 Graduation Rate	86.60%	92.10%	87.50%	92.30%	91.90%
2011 ACT Composite	20.4	24.4	23.1	18.4	17.7
Economically Disadvantaged Students	45.80%	33.00%	45%	64.00%	70.50%
Special Education	12.30%	12.00%	23%	12.00%	14.70%
Per Pupil Expenditure	$7,991	$8,835	$11,457	$7,431	$7,173
Average Teacher Salary	$44,401	$54,362	$57,242	$42,123	$41,182

Highlighting indicates a significant difference from KCS.

Note: Table reflects per pupil expenditures from all sources based on ADM.

It is also noteworthy that while Oak Ridge spends significantly more than Maryville or the KCS, the absolute achievement is higher in Maryville, and the growth indicators (value-added and change in %P/A) in math are better in the KCS. Also, while the absolute achievement is lower in Jefferson and Grainger Counties, the increase in percent proficient or advanced since last year is greater than in the KCS or Oak Ridge. This highlights the importance of not only how *much* is spent, but *how* it is spent.

Knox County Outcomes Related to Strategic Plan Goals

After implementing new higher standards in school year 2009-10, data from 2010-11 showed an overall upward trend, suggesting that the increased rigor in the curriculum and higher expectations for students are having a positive impact on student learning. Some notable achievements included:

- The proportion of students scoring proficient or advanced on the Tennessee Comprehensive Assessment Program (TCAP) improved by:
  - o 1.5 % in reading,
  - o 5.8% in mathematics,
  - o 2.8% in science, and
  - o 1.9% in social studies.
- Significant gains in student achievement in mathematics were noted, including the following increases in proficiency:
  - o 10.3% increase on 5th grade TCAP
  - o 9% increase on 8th grade TCAP
  - o 3% increase on Algebra I End of Course Assessment (EOC)
- A 13% increase in students (and 49% increase in schools) achieving at least one year's student academic growth.
- Steady progress on four-year high school graduation rates from 79.3% for the class of 2008 to 86.6% for class of 2011
- An increase from 34% to 38% in the past two years on the 100/90/90/90 Composite Index, which measures the percentage of incoming high school freshmen who graduate four years later with a score of 21 or better on the ACT.
- An impressive 22% increase over the previous year in Advanced Placement (AP) test takers, marking a 243% increase since 2000. A noteworthy 59% of AP test takers scored a 3 (on a scale of 1-5) or better on the AP exam (most colleges accept a score of 3 or better).

However, while much progress has been made, academic results are still not nearly where they need to be for the KCS students to be competitive in today's challenging and increasingly global economic environment. The Knox County Schools must ensure that all students are well prepared for the next steps in life: college, a meaningful career, and/or rigorous technical training. The data indicate that the KCS still has several considerable challenges and deficiencies that must be addressed:

- Only 47% of 3rd grade students scored proficient or advanced on the reading and English/language arts TCAP.
- Only 19% of students in the class of 2011, or 685 out of 3,590 students, hit the benchmarks in all four subject areas on the ACT. The ACT benchmarks tell us whether students have a fifty percent chance of scoring a B or better in college coursework.

- A significant number of students require remedial work when they arrive at college unprepared for college-level work. In 2011, the following percentages of the Knox County Schools students required remediation at local community colleges:
    - o Pellissippi State: 68%
    - o Roane State: 62%
    - o Walters State: 76%
- Achievement gaps defined by income, race, disability and language can be seen in many grades and subject areas. For example, on the high school End-of-Course exam for English I, approximately 54% of economically disadvantaged students scored proficient or advanced, as compared to 86%of their non-economically disadvantaged peers; and in elementary mathematics, 56% of White students scored proficient or advanced on the TCAP, while only 26% of African-American students did. While we have made some progress in closing them, achievement gaps are also evident in ACT composite scores.
- While an increase from 34% to 38% on the 100/90/90/90 Composite Index has been achieved, the goal is 73%.

Many of the most critical initiatives outlined in the strategic plan - the very strategies that will help accelerate our effectiveness and therefore improve our students' results – have significant resource implications that our current revenue structure does not support. This analysis suggests that if we want to do better, if we want to be competitive at a regional, state and national level, we are going to need to invest more to ensure *Excellence for All Children*.

<u>**Section III: Initiative Review**</u>

Overview

As part of this budget analysis project, it was important to conduct an evaluation of several initiatives that have significant budget implications associated with them. Five major initiatives were reviewed: Project GRAD, magnet schools, Excellence Through Literacy, scheduling models, and instructional coaching. For each of these initiatives we provided an overview describing the initiative and the rationale for implementation, developed a logic model for the analysis, and identified key findings and recommendations. An executive summary of each of these analyses is provided in this report, with the full analysis for each included in the appendices.

<u>**Project GRAD**</u>

Project GRAD was partially introduced in Knox County schools in 2001-2002 to address challenges facing students and schools in the city's empowerment zone in their progress toward higher education. There were five key elements of Project GRAD which at the time had shown results in Houston: a scholarship program, classroom management/discipline strategy for elementary and middle schools, Success For All reading curriculum in grades K-5, math curriculum in grades K-8, and campus and family support. By 2004-2005, Project GRAD was fully implemented in 10 elementary, 2 middle, and 2 high schools.

Several years into the initiative, the Knox County Schools discontinued the **reading** program due to lack of significant outcomes. Until December 2011, the **math** program had been ongoing. Recent analysis shows:

- On Algebra I end-of-course tests, there was a greater percentage of students scoring basic or below basic in the cohort of students who had been in Project GRAD (PG) schools for 6 or 7 years than in the cohort who had been in PG schools for only 3 years.
- On math TCAP, two cohorts of students who went to a PG school for grades 3-5 and a non-PG school for grades 6-8 had greater growth in middle school than those who went to PG schools for all 6 years, but in a third cohort, the opposite was true.

As of January 2012, Project GRAD has decided to discontinue the math program in 2012-2013.

Project GRAD was fully implemented at Maynard Elementary in 2002-2003 as a part of a full-school reconstitution. The percent of students who were proficient or advanced on standardized tests increased from 2003 to 2005 in reading/language arts from 44.8% to 85.4% and in math from 42.9% to 87.8%.

The trend in the number of students with **discipline** infractions from 2005-2006 to 2010-2011 shows no clear trend across the two middle schools. There was a modest improvement on average at the elementary level, however there was wide variation among schools. In separate interviews, leadership representatives at Project GRAD and the Knox County Schools agreed that success of any discipline strategy is possible but depends on school-wide commitment and leadership oversight, which depend on time and priorities.

The **scholarship program**, which has granted scholarships to 20-30% of graduates at Fulton and Austin East High Schools, is designed to increase students' personal commitment to school as well as motivate them to continue their education beyond high school.

- The graduation rate at Fulton High school was the same in 2009 as it was in 2003, but after reconstitution in 2008-2009, has increased from 60% to 81.4%.
- The graduation rate at Austin East High School increased from 51.6% in 2003 to 84.2% in 2011.
- According to Project GRAD, of the 78 students in the Class of 2005 who received scholarships and went on the higher education, 22 (28%) had completed higher education as of May 2011.
  - According to the National Student Clearinghouse, of the entire KCS class of 2005 who went on to higher education, 32.5% graduated within 6 years.
  - The same rate was slightly below 9% for Fulton High School and slightly above 10% for Austin East High School.

The **Campus and Family Support (CFS)** and social services component of Project GRAD is highly school-specific with activities ranging from assistance with truancy to planning community engagement events (which range from monthly to bi-annual). In feedback from schools over time, where Project GRAD's involvement is appreciated, it has been because of the additional assistance for understaffed needs; where reluctance is expressed, it has related to the accountability structure and ensuring the appropriate skill set of Project GRAD staff for the work most needed. The 2010-2011 annual cost to the Knox County Schools for Project GRAD campus managers at each of 14 schools and CFS student advocates was $1.14 million. This does not include the additional effort of teachers and principals and volunteers in implementing the activities planned through Project GRAD and the half-salaries of two directors of social services and college access paid by Fulton High School.

Following are recommendations based on the Project GRAD review:

- Based on the achievement data analysis and ambiguity of the discipline results, discontinue the academic and classroom components of Project GRAD; employ the district-wide math curriculum and coaching in PG schools and leave it to the principals' discretion which and to what extent research-based discipline strategies are employed at the school.
  - While the academic progress, particularly in the early years of the program, may have been greater than what could have been achieved without Project GRAD, the KCS is currently capable of achieving the same or better results.
  - PG math coaches for the discontinued math program should be reassessed for skills and matched to the needs of the KCS coaching model, where appropriate.

- o   Consider continuation of PG discipline/climate consultants in schools where discipline is a priority and the principals have valued PG's contributions to date.
- Allow continuation of the scholarship program. Work with Project GRAD to improve student tracking and data collection for analysis.
- If Project GRAD contract is to be renewed beyond the scholarship, include only Campus and Family Support and specify the following in the contract:
  - o   Analysis plan, jointly developed, including data and structures needed to assess progress measures and expected outcomes supporting the community and family engagement pillar of the strategic plan, with annual contingent funding milestones.
  - o   Clear outline of the activities and staff associated with the dollars committed.
  - o   Reporting structure that includes accountability of PG staff to both the principal and PG.
    - ▪   Because campus and family support is school-specific and involves the time and commitment of school staff, school leadership needs to have authority to direct PG efforts, to the extent that the direction will increase progress toward the goals defined in the KCS-PG agreement.
    - ▪   In contrast, an important value of an external partner is to build capacity and commitment where it does not already exist. So PG staff need also to be accountable to PG, which is particularly important in schools whose leadership is not as committed to or skilled in campus and family engagement.
    - ▪   The KCS- PG agreement should define the feedback to be obtained from PG's experience to identify common school needs to help build capacity and commitment district-wide.

Magnet Programs

Magnet programs were introduced in five Knox County schools in the 1990s: Austin-East High School (performing arts), Beaumont Elementary School (honors academy and fine arts) Vine Middle School (performing arts), Sarah Moore Green Elementary School (technology) and Green Elementary School (math and science). The original purpose was to desegregate these schools in response to an Office of Civil Rights lawsuit which was subsequently settled, and the programs have continued as an effort in school reform, encouraged by successful magnet schools in other states.

The logic of magnet schools as a path to school reform is to provide specialized offerings that attract students from outside the school's normal zoning to enrich student-to-student learning and raise academic expectations and involvement within the school community. In 2010-2011, there were 335 students from out-of-zone in these schools to participate in the magnet offerings. The Knox County Schools annually spends approximately $1.46 million dollars for additional teaching positions and educational assistants, transportation and materials designated specifically for magnet programs in these five schools.

There are two important factors that influence the decision to attend a magnet school: the quality of the magnet offerings and the rigor of academic offerings. Even the perception of academic integrity can deter potential transfer students and their parents, regardless of the quality of the magnet offerings, and often the perception is based on published absolute achievement at the school which may not reflect the actual academic integrity of the school. This disconnect is the ongoing conflict for magnet programs as a model of school reform.

One indicator of academic integrity independent of absolute achievement is the significance of an "A"; is it an accurate indicator to students that they have learned what they need to know? Below are the findings from a review of grades vs. standardized tests in Knox County:

- At Beaumont, 89-100% of students earning all As and Bs also score proficient or advanced on the TCAP, on par or better than all other elementary schools in the district.
- At Green, this number is 46-57%.
- At Sarah Moore Greene, it is 23-30%, the lowest in the district for elementary schools.
- At Vine 31-42%, the lowest in the district for middle schools.
- At Austin East High School, only 34% of students with a Grade Point Average of 3.0 or better score a 21 or better on the ACT (an indicator of college and career preparedness). This number is 53% at Fulton High School and 65%-92.6% at all other schools in the district.

Based on information from a 2005 Knox County magnet evaluation and published research about other districts, many successful magnet schools and other successfully reformed schools have specific criteria for principal selection, and extensive, ongoing professional development for the teaching staff. According to extensive interviews conducted by SCORE Tennessee, turnaround schools have high expectations for students, which is manifest "not in what the administrators think they are doing, but in what the students say about what they expect of themselves."

The accompanying recommendations are modeled on the level of rigor, commitment, and scrutiny present in in magnet schools that have been successful in other states.

1. Ensure both a high quality academic program as well as specialized magnet offerings:
   o Develop specific criteria for personnel selection in magnet schools (both administrative and instructional).
   o Provide district participation and oversight in personnel decisions.
   o Consider reconstituting the existing magnet schools to ensure that the school leadership and instructional staff are highly effective educators and committed to the school's magnet theme.
2. Develop rigorous and specialized curriculum for magnet course offerings.
3. Provide ample resources to support the implementation of magnet offerings, such as a full-time, school-based magnet facilitator, additional teaching allocations, funds for materials and supplies and marketing, and ensure that they are used as designated.
4. Develop targeted plan (by school leadership) to integrate in-zone and magnet students and engage community, with defined progress measures.

5. Develop an assessment plan for each school and continue funding/magnet designation each year only if the pre-defined measures show progress and can be replicated (e.g., accountability measures). Also, define milestone criteria for point at which magnet school or program designation is continued or ended.
6. Provide professional development resources necessary to ensure high quality teaching and learning (e.g., curriculum and grading practices, impact of class size on students' expectations and quality of student-to-student learning, leadership skills and support) as well as a professional development plan specific to the needs identified during TEAM/TAP teacher observation and evaluation process.
7. Consider Project GRAD's role in magnet schools to raise expectations and integrate the student community.
8. Assess implementation and outcomes in the new magnet programs like the L&N STEM Academy, International Baccalaureate, and Communications, and if successful, consider expansion of magnet to include themes such as Montessori, Dual Language Immersion and feeder programs to support existing magnet pathways.

Language!

Language! is a reading intervention for students in 6th grade and above, implemented as a component of the Excellence Through Literacy initiative which was launched in 2008 in response to the high rate of students reading behind grade level across the district (measured on Gates-MacGinitie test administered to 9th grade students in the fall of 2007). Through 2010-2011, Language! involved approximately 200 teachers, approximately $200,000 per year in materials, and 5-7 literacy coaches who have helped to assess students for proper placement, conduct student reviews each semester, and ensure fidelity to the curriculum. Over 8,000 Knox County middle school and high school students have been placed in the program.

The intended short-term outcome of Language! is for participating students to be able to read on grade level which in the longer term should increase their ability to learn in all classes. Several indicators have been used in a thorough analysis of the KCS students' outcomes after successfully completing Language!.
- At least 1378 students have improved reading fluency and comprehension during Language!, representing exit rates of 19-27% based on comprehension and 24-50% based on book level.
  - If students demonstrate progress while in the program, they continue until they reach exit criteria (on average 1.7 years)
  - Students not benefiting sufficiently are moved to a different reading program (Read180 or Jamestown) which have a different structure but higher per pupil costs.
- There were statistically significant zero or negative changes in the TCAP reading/language arts RLA normal curve equivalent (NCE), overall NCE (four subjects), GPA, attendance, and Explore/Plan/ACT (a series of college and career readiness assessments). Comparisons were completed from multiple perspectives, including Language! students vs. themselves before and

after the program and vs. their grade-level or NCE-level peers. (An explanation of NCE is included in Appendix H.)

- o Participating students are scheduled for 90-minute Language! classes plus a minimum of 30 minutes of language arts in middle school. The 30 minutes rather than a full class period is identified as the reason for the TCAP results, first suggested in a 2009 evaluation and now confirmed.
- 6th grade students not in Language! had significant NCE gains when the program was implemented.

Short-term indicators specific to reading are more positive.

- Periodic Language! progress reports from Language! vendor have shown average grade equivalence gains in fluency ranging from 9 months to 2 years each year from book to book (each year or semester) and gains in comprehension ranging from 4 months to 14 months book to book.
- The Gates-MacGinitie assessment in fall 2011 showed statistically significant improvement in average comprehension scores across the district, despite variation among participating schools.

Recommendations:

1. Revise structure of literacy interventions in middle and high school. New structure should be developed from review of full program evaluation data with a committee of representative principals, teachers, coaches, and directors. This review should consider notable progress points for particular groups of students, opportunities for improvement in execution and targeting, fidelity of implementation, district-wide support and financial investment.
2. Ensure that middle school and high school students receive the full grade-level course of language arts regardless of reading-specific intervention.
3. Expand Language! program evaluation prior to committee review to include deeper analysis of short-term reading-specific results to help target students in middle school.

School Scheduling Models

High School and Middle Schools Scheduling

Block scheduling was implemented in high schools in the mid 1990's in response to an increase in credit requirements for graduation. The objective of the "4X4" block schedule, consisting of four 90-minute periods per day (8 classes per year) compared to the previous 6-7 year-long classes, was to allow more opportunities to obtain required credits while also allowing for electives such as fine arts, advanced placement, and vocational courses. The added benefits of a block schedule were anticipated to be improved learning due to less fragmented experiences and fewer disruptions as well as more opportunities for individual acceleration or remediation and variety in teaching methods because teachers had more time in each period and for planning. The annual cost of high school block scheduling is approximately $4.6-5.8 million for the additional 89-112 teaching positions needed beyond the previous schedule.

Team scheduling was implemented in the middle schools, with a group of 100-125 students scheduled with a team of core content teachers. In this model, courses are taught year-round with a related arts block of 90-minutes that provides collaboration time for the core team teachers.

To determine the impact of block scheduling since its inception, we reviewed past evaluations, including reactions to the high school pilot in 1994, the comprehensive self-report by high schools in 1999, and the review presented to the school board in 2003, recent literature reviews, and longitudinal achievement data since 2003 from state report cards and the Knox County Schools data warehouse.

- The response has been overwhelmingly positive regarding preparation time for teachers.
- There has been a differential effect for student learning in particular courses in the 4X4 schedule.
  - Where benefits have been noted, they have referenced courses with "hands-on" components, such as laboratory, fine arts, and vocational/CTE.
  - Where specific concerns have been noted, they have referenced math and foreign languages and "tested" courses such as advanced placement, citing concerns about the reduced time on task (8100 minutes per semester versus previous 9100+ minutes per year) and difficulty in retention over a semester/summer break.
- Achievement data shows that the trend from 2003 through 2009 in the number of students passing Algebra I end-of-course (EOC) tests has declined every year, in contrast to EOCs in other high school courses, and in contrast to the percent of students proficient or advanced in math in middle school, which increased every year over the same time period. Of note:
  - Several high schools in Knox County have modified schedules since 2009.
  - The year-long schedule in middle school provides increased class time and daily instruction.

These findings suggest no reason to change the middle school schedule, but they do suggest high school students could benefit academically from a hybrid schedule. Therefore, we recommend:

1. Allow hybrid schedules in high school, with preference for maintaining 90-minute block or double periods for fine arts, CTE, and lab courses including science, and moving to year-long schedules for math, English, and social studies. A modified schedule should include at least seven courses per academic year to ensure that enough credits could be earned for graduation (22 required by state) and to maintain some room for electives.
2. Annual courses should be allocated a minimum of 50 minutes for instruction to increase time on task.
3. Explore ways to obtain additional time on task for struggling students in both middle and high school.
4. The literature emphasizes the importance of skills in master scheduling to allow students the appropriate opportunities. Therefore, we recommend a portion of any savings derived from changing schedules be devoted in the budget for targeted professional development and assistance to ensure that in every school, the personnel responsible for the master schedule have the appropriate skills for the complexity of the task.

5. Development of the success card components to track the number and type of credits a student has earned and flag the student if not on track to graduate.

Elementary School Block Scheduling and Educational Assistants

Elementary schools began to implement parallel block schedules in 2004-2005, with all schools migrating to parallel block by 2008-2009 with assistance from Excellence Through Literacy funding. The parallel block contains a period where students participate in related arts while teachers have common planning time intended to improve teaching through collaboration. The yearly cost of the additional related arts teachers for this purpose is approximately $2 million. Excellence Through Literacy also restored elementary teaching assistants to all schools, at an additional annual cost of approximately $380,000.

To determine whether these investments have resulted in a measurable impact on student reading and language arts skills, we looked at the change in normal curve equivalent (NCE) in Grade 3-5 reading/language arts achievement data. (If the average change in NCE is greater after implementation than before, then it could suggest a change in the trajectory of student learning.) The baseline NCE was reset with the new TCAP standards, so that year was not included in the analyses.

- The district-wide change in NCE in the 1-3 years after block implementation at each school was modestly positive compared to the 1-3 years before and including the first year of implementation. However, only 28 of the 49 elementary schools had a positive change in trajectory, diluting the significance of the district-wide results.
- The trajectory (change in NCE) for all Grades 3-5 from 2006 to 2008 was positive, while the change was essentially zero 2009-2011, resulting from first a drop then a rebound.
  - Grade 4 and 5 both followed this overall pattern, while Grade 3 has steadily declined.
  - A single cohort of students who were in 3rd grade in 2008-2009 and 5th grade in 2010-2011 shows an increase in NCE from 3rd grade to 5th grade.

Simply the availability of common planning time has not produced the magnitude of results that should be possible for professional learning communities (PLCs). Therefore, in concert with the findings noted for the Coaching Model, we recommend:
1. One of the well-defined roles of a coach should be responsibility for facilitating professional learning communities including assessment of quality to inform efforts to improve the usefulness of PLCs across the district.
2. To ensure that the coaching role is supported, build into the budget additional assistance for schools without assistant principals so that the temptation to tap coaches for these responsibilities will be mitigated. The skill level of the assistance should be matched to the school need.
3. To ensure focus, use existing formative data plus data from:
   - TEAM observations, which for the first time will provide district-wide K-2 information

- Kindergarten literacy assessments, which are now included in the data warehouse and for the first time provide district-wide basis for analysis from the students' earliest entry into the KCS.

4. Development of short-term progress measures that allow annual assessment of the effect of teaching assistants and the fidelity of implementation of the above recommendations to determine the feasibility of an effective parallel block model. With implementation of the common core curriculum (in K-2 in 2011-2012 and additional grades in future years), it will not be surprising to see variability in achievement data in the early years of implementation. However, if there is a decline in 3rd, 4th, and 5th grade in two straight years, and the progress measures do not show progress, at that point funding for parallel block (and possibly teaching assistants as well) could be repurposed toward root cause solutions.

5. Explore ways to obtain additional time on task for struggling students.

Instructional Coaching Model

The logic of instructional coaching is to provide school-based, job-embedded professional development for a community of teachers in order to raise the quality of teaching and learning across a school and build collective leadership to improve outcomes for students. Recent literature acknowledges that in order to see a measurable effect of coaching, strategic and monitored implementation is critical, particularly relationship-building, clearly defined roles and responsibilities, focus, and support.

The coaching model in the Knox County Schools (KCS) has been restructured every one to two years since 2006-2007 based on availability of funding and alternating between centralized content specialists and school-based generalists. The reporting structure has depended on the funding source, with school-based Title I coaches reporting to each principal, Project GRAD coaches reporting to Project GRAD, and district-wide coaches reporting to content supervisors. The role of all the KCS instructional coaches has included modeling lessons, accessing and interpreting data together with teachers and principals, participating in professional learning communities, helping to screen students for interventions, and conducting afterschool workshops. However, the time actually devoted to these core tasks has varied with the needs of the principal, so the day-to-day reality of a coach, particularly in elementary schools, has also included roles ranging from standardized test administrator to acting assistant principal in schools with no assistant principal.

These variations make a longitudinal analysis of elementary outcomes in reading and language arts impossible to interpret, except to say that the outcomes are varied and therefore not of the consistency or magnitude that would be expected from the size of the investment, which in 2010-2011 was upwards of $6 million. However, the reading/literacy coaches in middle and high school who were added through Excellence Through Literacy in 2007-2008 had a slightly more focused role in implementing interventions, and an analysis of the Gates-MacGinitie reading test of 9th grade students showed a statistically significant improvement in the 2011 versus the 2007 cohorts for schools that participated in both years. (See more analysis of the intervention in the Language! section.)

One area that demonstrates the potential impact of coaching when implemented well is elementary and middle school math. Math coaches were added in 2009-2010 through Title I and their coaching assignment remained stable into the next year. In 2010-2011, there was a supervisor each for elementary and secondary and a coordinated and focused strategy for site-based after-school professional development timed to the curriculum. As a result:

- 42 of 47 elementary schools increased % proficient/advance (as high as 17.1 percentage points)
- The KCS elementary math overall % P/A increased from 45.3% to 51.4%
- 13 of 14 middle schools increased % P/A (as high as 9.3 percentage points)
- The KCS middle school math overall %P/A increased from 40.7% to 44.6%.
- Mean NCE gain was significantly above the growth standard in all grades (from 1.8 to 4.9)
- Mean NCE gain for grades 4-8 was well above the state growth (+3.1).

The above findings lead to the following recommendations in order to achieve measurable results:

- Consistent model of a full-time coach in each non-TAP elementary school (or none at all if funding not available)
- Clear roles and responsibilities focused on professional development and learning communities
- Consistent school assignments to build relationships
- All coaches should have dual reporting lines to the content supervisor for district-wide coordination and support and the building principal to coordinate services and target support to areas of need within the prescribed coaching role.
- Addition of content supervisor where necessary to ensure feasible management
- Assessment plan with funding contingent on short-term quality measures and long-term outcomes.

Section IV: Benchmark Study

Overview

How school districts allocate resources to individual schools within the district varies widely and partially reflects the educational philosophy and priorities of the district. As part of this budget analysis plan, we determined that it would be helpful to assess our funding priorities against a benchmark district with similar demographics but better student outcomes to evaluate how funding and allocation decisions impact student performance. Our hypothesis was that differences in student outcomes can be explained by differences in either the level of funding or the priorities that are funded. Through this analysis, we hoped to provide additional data to either support or dispute our operational priorities.

Methodology

Initial efforts to find a comparison district were difficult due to the size and unique nature of Knox County. The Knox County Schools serves approximately 56,000 students over a large geographic area that encompasses urban, suburban and rural communities. Districts that were similar in size to Knox County were often more homogeneous in their student populations, and districts that had more heterogeneous student populations were not comparable to the KCS in terms of size. Therefore, we decided to benchmark individual schools against other demographically similar schools in the state that were achieving better outcomes. To that end, we identified three Knox County schools at each grade span that were performing at high, low and average levels. Using the Pearson website, we then identified demographically similar schools that outperformed our schools in either pure achievement or in both achievement and growth. A survey was sent to each of these schools electronically, with follow-up phone calls to acquire additional detail. From this sample of 10 high schools, 10 middle schools and 17 elementary schools, we received 12 responses (3 high schools, 2 middle schools and 5 elementary schools).

Findings

From examining the practices in place at schools across Tennessee which serve student populations similar to specific Knox County schools while achieving equally strong or better student outcomes, it is clear that certain factors tend to remain fairly consistent across schools. For example, class size and ratio of administrators to teachers remains within a consistent range at the schools that responded to the Knox County Schools questionnaire. But beyond these numbers, which are relatively easy to track, there are other similar themes that arose from gathering information from the respondent schools. In summary, these themes are:

1. In most schools, central office allocates the budget for school personnel based on student enrollment, and then the principal—often together with a team of teachers and others in the school---chooses who to hire, or who to recommend for the job with strong confidence that the superintendent would follow their recommendation. In all cases, the principal controls the school budget, apart from salaries/payroll, which comprises the biggest expenditure.
2. All schools discussed some level of effort to build in intervention time to support struggling students, address achievement gaps and increase student time on task. Many schools reported integrating intervention time into the school day, but most schools also mentioned the need to supplement the regular school days with before and after school tutoring time, as well as Saturday School for middle and high schools, so that students receive the targeted support they need.
3. All schools use formative assessment, although to varying degrees. Most schools report using the assistance of instructional coaches to maximize impact of formative assessment data as a tool to differentiate instruction, teach more effectively, and ensure that students meet learning objectives. A handful of schools discussed a commitment to a mastery-oriented model of teaching and learning, which they credit with improving student engagement and learning outcomes.

4. Principals described themselves as instructional leaders and school managers, and they acknowledged a tension that comes with balancing these two roles. Some principals mentioned the new state teacher evaluation as a challenge to this already difficult balance. Many principals emphasized the critical importance of hiring good teachers who are willing to learn continuously, work together, and push themselves to constantly improve. Finally, there was a clear theme of the importance of a positive school culture, including high expectations for students and teachers, accountability, collaboration, and respect.

Recommendations

1. Continue to provide principals with flexibility for staffing their schools via the budget allocation formula as long as decisions continue to lead to improved outcomes.
2. Continue to collect data to determine appropriate ratios of teachers, teaching assistants, administrators, counselors and clerical staff at all school levels.
3. Explore options for more time on task at all levels informed by an examination at the school level of the amount of time during the existing school day that students are not – but could be – engaged in learning.
4. Implement a full-day Kindergarten program.[10,11]
5. Identify strategies to extend time on task, particularly for struggling students.
6. Continue the use of formative assessments and build the ongoing costs into the general purpose budget as current grant funding expires.
7. Continue the use of the instructional coaching model per the recommendations for the initiative review.
8. Consider the time impact of the new teacher evaluation model for principals. Utilize the recommendations from the TEAM Task Force to address this and other ongoing issues related to TEAM implementation.

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[10] *Full-Day Kindergarten: Expanding Learning Opportunities*. Policy Brief, West Ed, April 2005.
[11] Weiss, A.M.D.G., & Offenberg, R.J. (2002, April). Enhancing urban children's early success in school: The power of full-day kindergarten. Paper presented at the annual meeting of American Educational Research Association, New Orleans, LA.

Section V: Themes and Recommendations

Several operational themes emerged from the return on investment analyses and are present throughout the recommendations provided in this report, specifically:

- The amount of time students are engaged in learning a subject and their level of expectations for themselves are directly proportional to academic outcomes.
- Clearly defined roles and skills matched to role can make or break an initiative.
- Outcomes of an educational initiative depend on fidelity of implementation. Fidelity of implementation requires consistency in focus and support. The level of focus and support depends on the level of leadership and investment.
- Appropriate data for decision-making requires an infrastructure and culture of assessment and accountability to investments from the outset.

Below is a summary of the operational recommendations associated with each of these themes, with rationale and highlights from the details provided in the initiative review section above. These recommendations are designed to maximize the return on our investment.

Time on Task and Student Expectations

- **Scheduling Models: Maintain current middle school schedule but allow hybrid scheduling in high school.** As indicated by previous evaluations, current literature and longitudinal math data for the KCS, high school 90-minute block or double periods are most appropriate for fine arts, lab (science), and CTE courses; but for math, English, social studies, and AP classes, annual schedules which provide continuity and cumulative time are more appropriate for retention and to cover the material in the necessary depth. Additional recommendations include a minimum of seven courses available per academic year and minimum of 50 minutes per class period to ensure enough credits could be earned for graduation (22 required by state) and to maintain some room for electives. Additional risks to manage include equitability in teacher planning, consistency across the district for mobile students, and variation in skills at master scheduling.

- **Excellence Through Literacy: Revise structure of literacy interventions in middle and high school. Ensure that middle school and high school students received the full grade-level course of language arts regardless of reading-specific intervention.** As illustrated in a thorough analysis of the outcomes of students after the Language! intervention in middle school and high school, while the reading-specific assessments have shown progress across the district, the reading/language arts standardized test scores and other outcome indicators for Language! students have stayed the same or significantly decreased, most plausibly due to the current structure of the program which requires only 30 minutes minimum of language arts in addition to the reading intervention. So the recommendations refer to an appropriate restructure to build on the reading successes and address the time-on-task deficits for language arts.

- **Magnet and Project GRAD: Increase academic rigor in magnet schools and continue Project GRAD scholarship program.** This recommendation is based on indicators of academic rigor by school, Project GRAD school graduate outcomes, analyses of successful magnet programs, and published literature and analysis by external organizations about the relationship of *student* expectations on student achievement. Specific recommendations to increase academic rigor include specific criteria for personnel selection and/or considering school reconstitution where necessary to ensure highly effective instruction and commitment to rigor, then providing the professional development resources necessary to ensure high quality learning that addresses issues such as curriculum and grading practices, impact of class size on student's expectations and quality of student-to-student learning, the skills and support of leadership, and the needs identified during the TEAM/TAP process. Further recommendations regarding student expectations include a targeted plan developed and executed by school leadership to integrate in-zone and magnet students and engage the community, with defined progress measures.

- **Benchmarking: Explore options for more time on task at all levels informed by an examination at the school level of the amount of time during the existing school day that students are not – but could be – engaged in learning.** Based on interviews with schools in Tennessee achieving better outcomes compared to matched schools in Knox County, successful schools each have a focus on maximizing time on task ranging from increasing the productivity in an existing day (for example, through transition time activities in elementary and strategies or walk-arounds to ensure teaching/learning bell to bell in middle and high schools) to more extensive efforts such as extended day, Saturday school, and full-day kindergartens.

Defined Roles and Appropriate Skills

- **Instructional Coaching Model and Excellence Through Literacy (Elementary): Clearly define a feasible set of coaching roles and responsibilities focused on professional development and facilitation of professional learning communities (PLCs).** While the investment was large for roles including the title of "coach", the time spent on activities directly related to professional development and sharing best instructional practices was considerably less, as the day-to-day activities of a coach have varied widely by the needs of the schools. So while pockets of success have been anecdotally attributed to coaches, any measurable effect has been diluted at a district-wide level by variation. Recent literature notes this as an issue in other districts as well, however the benchmarking study revealed that more successful matched school in Tennessee do still employ the instructional coaching model, and because there are pockets of success in Knox County as well – particularly in fidelity of implementation of Language! leading to improved reading skills and the successful targeted professional development strategies employed by elementary and middle school math coaches last year – the coaching model is still warranted. Therefore the recommendation is designed to maximize the outcomes of the investment by maximizing the amount of the investment applied to activities directly linked to the intended results, which first requires defining those activities.

- **Project GRAD: Discontinue academic components; for remaining PG math coaches, assess skills and match to the KCS instructional coaching model, where appropriate. If the Project GRAD partnership will be extended beyond the scholarship program in future years, define in the contract details of the activities and staff associated with the KCS dollars committed as well as a reporting structure that includes accountability to PG staff and principal.** Based on quantitative analysis of outcomes for Project GRAD students by their number of years in the program, the math component of Project GRAD is not currently a good match for the Knox County Schools on a district-wide basis. The classroom management component/ climate consultants might be appropriate at particular schools at the principal's discretion. In schools where Project GRAD has been perceived as beneficial, the PG staff have had the skills to provide assistance for the specific needs of the school, but in other schools the skills and services provided were not perceived as a match for needs. These recommendations are designed to ensure that any continued partnership with Project GRAD in the role of campus and family support will provide the most beneficial services that will match both school-level and district-wide needs and be executed at a level commensurate with the investment.

- **Block scheduling: Targeted professional development to ensure that in every high school, the personnel responsible for the master schedule have the appropriate skills for the complexity of the task.** Recent literature emphasizes the importance and complexity of master scheduling to maximize opportunities for students in a modified or hybrid block schedule.

- **Magnet: Develop specific criteria for staff selection and consider reconstitution where necessary to ensure highly effective education.** A comprehensive 2005 evaluation of magnet schools in Knox County compared to other states identified that the most successful magnet programs have defined the skills required by both administrators and teachers and hired/staffed accordingly. In Knox County, the proficiency rates at Maynard Elementary nearly doubled in the two years following reconstitution in 2002-2003, and the graduation rate at Fulton High increased from 60% to 81.4% in the two years following reconstitution in 2008-2009. Such a reconstitution in our failing magnet schools is needed in order to achieve their intended promise and outcomes.

- **Benchmark: Continue to provide principals with flexibility for staffing their schools via the budget allocation formula *as long as decisions have and continue to lead to improved outcomes.***

<u>Focus, Consistency, and Support</u>

- **Instructional Coaching Model:**
    - **Build into the budget additional assistance matched to need for schools that do not have assistant principals:** This will ensure that principals have the appropriate support so that instructional coaches can focus on their defined role and not be tapped for other responsibilities.
    - **Maintain a model of a full-time instructional coach in the elementary school and consistent school assignments.** If funding is not available for all schools to have instructional coaches, then some schools would not have a coach, and therefore a determination would need to be made for the priority of assigning coaches (with recommendation to include matching skills with need). Historically, the KCS has changed the assignment of coaches depending on funding to ensure that every school has at least some time with a coach. However, recent literature and feedback from principals, coaches, supervisors, and teachers emphasizes the need for a solid relationship between the coach and each teacher and the collective PLC, as well as the principal, in order for the coaching model to be received and effective. This extent of relationship-building takes time, and the fewer days a coach is in the building, the more school years it will take to build.
    - **Implement a supervisory structure for instructional coaches to report to content supervisors as well as principals to ensure district-wide coordination and support.** Historically, some coaches have reported to the principal and some to content supervisors, depending on the source of funding, which has contributed to the dilution of focus and ambiguity in roles.

- **Magnet: Develop rigorous and specialized curriculum for magnet focus offerings, and provide ample resources to support implementation.** Lack of a permeating commitment to magnet programs and a cohesive magnet school plan were identified in the 2005 evaluation as primary obstacles to the success of the Knox County Schools' magnet schools compared to other states' magnet schools. Therefore, a committed magnet program would include a full-time school-based magnet facilitator, additional teaching allocations, specialized curriculum, funds for materials and supplies and marketing, and oversight to ensure that resources are used as designated.

- **Staffing formulas:** It is important that the current staffing model be reviewed and adjusted each year to ensure that its philosophical underpinnings translate to rational allocations. Some areas to consider are the support and administrative differences between schools of equal size at different grade spans, as well as the manner in which poverty and instructional need are addressed in the formulas.

- **All present and future initiatives: Develop assessment plan including short-term fidelity/quality measures and longer-term outcome indicators and workload priorities.** A clear logic model of the investments associated with an initiative, the activities of the initiative and the expected short-term progress (including fidelity and quality) and long-term outcomes together with a means of tracking information that allows for periodic assessment of progress toward the goals are necessary to maintain focus and manage risks to outcomes. Risks include unfeasible management structures where oversight is critical to success, as in the case of 50 or more direct reports to a single supervisor, director, or principals with an expectation to mentor and support and manage as well as coordinate efforts across the district or school. The addition of one content supervisor in math in 2010-2011 (for a total of 1 elementary and 1 middle school) contributed to a focused strategy, coordinated communication, and measurably better outcomes in elementary and middle school. An instructional coaching focus on PLCs could pick up where principals have had to shift focus due to the time required to implement TEAM. In terms of staff workload, the recurring theme in feedback during this process is that the biggest risk to outcomes for the initiative is time to do them all, particularly with the advent of TEAM, so prioritizing or redistributing workload will at least coordinate efforts to maximize the likelihood of results even with limited resources.

Culture of Data Driven Decision-making (Quantitative and Qualitative)

- **All present and future initiatives: Develop *and execute* assessment plan as noted above, including collection of data/information from the outset and funding contingent on short-term quality and progress measures and project milestones for termination or expansion based on achievement of outcomes.** The execution of an assessment plan, including collection of the necessary information, is in itself a work effort and needs to be acknowledged in priorities. The quality or amount of appropriate data available directly impacted the ability to perform analyses and the utility of analyses for this return on investment project. To build capacity in analysis across the district so as not to create a bottleneck as the demand for analyses increases, the work for periodic assessment should be distributed across the stakeholders for the initiative. Note: Where data needs have been defined and a process developed for collection (with data entry often required at the school level), data back to 2005-2006 has been included in the data warehouse and used for the enclosed quantitative analyses.

- **Project GRAD: Develop in coordination with Project GRAD an analysis plan including agreed-upon structure and content for tracking and data collection regarding students in the scholarship program.** If the partnership is to continue beyond the scholarship program, include an expanded analysis plan with short-term progress and quality measures and expected long-term outcomes and annual funding contingent on milestones and quality of execution. In addition to the matching of services to need as noted above, a source of tension between the KCS and Project GRAD has been the transparency of analysis and accessibility of data to determine the impact vs. investment.

- **Middle and high school reading interventions: Convene a representative selection of principals, teachers, instructional coaches, and directors to review full program evaluation data for Language! and develop a data-driven course of action.** This is necessary to design the best intervention structure for students based on data and stakeholders with several years of experience with the intervention. It will also be an opportunity to build capacity for analysis and model data-driven decision-making, including consideration of notable progress points for groups of students, opportunities for improvement in execution and targeting, fidelity of implementation, district-wide support, and financial investment.

- **Elementary school scheduling model (parallel block) and instructional coaching: Ensure focus in elementary PLCs with coaches to facilitate and assess quality and continue to collect data to assess appropriate staffing ratios and the effect of full Excellence Through Literacy investment.** As recommended for all initiatives, develop short-term progress measures that allow annual assessment of the effect of teaching assistants and adherence to the roles according to pre-defined logic model and goals. As coaches facilitate PLCs, they should use an existing PLC rubric to assess quality and inform efforts to improve the quality and usefulness of PLCs across the district, as well as focus efforts according to needs identified through formative data plus data from TEAM observations and kindergarten literacy assessments (which are now in the data warehouse and for the first time provide a district-wide basis for analysis from the students' earliest entry into the KCS.) Formative assessments are used in all benchmarked schools so should be built into the long-term operational budget for the KCS. The feasibility of an effective parallel block model will be determined through the short-term progress measures and multi-year outcomes measures if developed as recommended. If goals are not met by the defined milestone point, the Excellence Through Literacy investment could be repurposed toward root cause solutions (many of which may be identified during the periodic assessments).

<u>**Conclusion**</u>

These recommendations and analyses support the broader priorities for more instructional time for students, enhanced instructional support for teachers, interventions for struggling students and enrichment opportunities for excelling students, consistently excellent magnet programs, and expanded performance pay to recruit and retain the very best educators. However, these priorities are simply not within reach of the Knox County Schools' current revenue structure and instructionally-focused budget. This analysis suggests that if the Knox County Schools wants to accelerate and enhance student growth and achievement and compete at regional, state and national levels, additional investment will be needed. Therefore, it is recommended that the district develop a five-year budget proposal that identifies priority areas for additional resources based on these findings and an assessment plan and progress measures that lead toward the anticipated impact on student achievement and attaining the district's ambitious goal of *Excellence for All Children*.

	2010-2011	2011-2012
Instructional Component		
Total of LEA Funding Calculations	$ 3,110,811,000	$ 3,180,964,000
Local Share Percentage	**30.00%**	**30.00%**
Local Share of the Total	$ 933,243,000	$ 954,289,000
Knox County Fiscal Capacity Index	8.08%	8.02%
Knox County Local Share	$ 75,406,000	$ 76,534,000
Knox LEA BEP Calculation	$ 172,030,000	$ 176,249,000
Knox County Percent Share of Knox LEA BEP	43.85%	43.42%
Nominal County Local Share	30.00%	30.00%
Additional Knox County Local Share		
Percentage	**13.85%**	**13.42%**
Dollars	**$ 23,831,000**	**$ 23,659,000**
Classroom Component		
Total of LEA Funding Calculations	$ 849,143,000	$ 866,933,000
Local Share Percentage	**25.00%**	**25.00%**
Local Share of the Total	$ 212,286,000	$ 216,733,000
Knox County Fiscal Capacity Index	8.08%	8.02%
Knox County Local Share	$ 17,153,000	$ 17,382,000
Knox LEA BEP Calculation	$ 45,540,000	$ 46,917,000
Knox County Percent Share of Knox LEA BEP	37.68%	37.05%
Nominal County Local Share	25.00%	25.00%
Additional Knox County Local Share		
Percentage	**12.68%**	**12.05%**
Dollars	**$ 5,773,000**	**$ 5,653,000**
Non-Classroom Component		
Total of LEA Funding Calculations	$ 1,668,791,000	$ 1,643,466,000
Local Share Percentage	**50.00%**	**50.00%**
Local Share of the Total	$ 834,396,000	$ 821,733,000
Knox County Fiscal Capacity Index	8.08%	8.02%
Knox County Local Share	$ 67,419,000	$ 65,903,000
Knox LEA BEP Calculation	$ 96,545,000	$ 95,190,000
Knox County Percent Share of Knox LEA BEP	69.86%	69.23%
Nominal County Local Share	50.00%	50.00%
Additional Knox County Local Share		
Percentage	**19.86%**	**19.23%**
Dollars	**$ 19,175,000**	**$ 18,308,000**
Total Additional Knox County Local Share	**$ 48,779,000**	**$ 47,620,000**

Appendix B: Review of Project GRAD

Introduction and Key Elements of the Initiative

In 2001, Project GRAD was introduced in 14 schools in the Knox County empowerment zone to address challenges facing students and schools in their progress toward higher education. There were five key elements of Project GRAD which at the time had shown results in Houston: a scholarship program, classroom management/discipline strategy for elementary and middle schools, Success For All reading curriculum in grades K-5, math curriculum in grades K-8, and campus and family support. By 2004-2005, Project GRAD Knoxville (PG) was fully implemented in 10 elementary, 2 middle, and 2 high schools. Project GRAD and the Knox County Schools have shared the costs of implementation. The 2010-2011 cost to the Knox County Schools for Project GRAD campus managers at each of 14 schools and campus and family support student advocates was $1.1 million, not including the additional effort of teachers and principals and volunteers in implementing the activities planned through Project GRAD and the half-salaries of two directors of social services and college access paid by Fulton High School. Below is a logic model linking the investment areas (the KCS and PG) to intended outcomes.

Project Grad Knoxville (PGK) Logic Model

INPUTS $\longrightarrow$		OUTPUTS $\longrightarrow$	OUTCOMES
Investments	**Activities**	**Reach**	**Intended Outcomes**
KCS: $1.1 million in 2010-2011 to PGK for Campus and Family Support (CFS)	Communities in Schools/ Campus and Family Support: Attend to truancy and family problems that prevent learning	14 schools in empowerment zones (inner city) - 10 elementary, 2 middle, and 2 high schools	Increased commitment to school and expectations for learning and college-going (higher culture of expectations , students and family)
PGK: Scholarship coordinators and $1000 per year per scholarship for qualifying students	College scholarships for high school students who opt in and complete PGK-defined requirements including summer institute	In 2011, 112 new graduates from Fulton High School and Austin East (~665 AE & Fulton graduates since 2005)	Students have greater commitment to graduation, ownership of their education, and better preparation for college
PGK: Climate consultants	Classroom management/discipline plan in all classes	All PGK schools	Orderly classroom envronment so teachers and students can focus on learning
PGK: Academic coaches	Academic programs for math (MoveIt) and formerly for literacy (Success for All, withdrawn ~2007)	All PGK elementary and middle schools	Math: Preparation for Algebra I (better preparation for college academics)
KCS: School personnel time for planning and implementation of all PGK activities			

Methods

Quantitative outcome indicators were reviewed by statistical comparison and trend analysis against implementation and school history. Academic data was available in the Knox County data warehouse (since 2005-2006) and prior data was obtained from state report cards. Scholarship recipient totals were provided by Project GRAD. The implementation timeline and other qualitative information were obtained from Project GRAD board minutes, the assessment plan from original implementation, two previous evaluations, feedback received over time from schools, and meetings with Project GRAD.

Findings and Analysis

Implementation Timeline
2001-2002: Scholarship and classroom management (CMCD[TM]) components implemented in all schools
2002-2003:
- Project GRAD fully implemented (pilot) in Maynard as **part of school reconstitution**
- Social services component of Project GRAD implemented in all schools
2003-2004: Project GRAD math curriculum implemented K-8
2004-2005:
- Project GRAD reading curriculum (Success for All) implemented K-5
- Project GRAD now fully implemented in all schools
2007-2008: Success for All discontinued by the KCS due to lack of outcomes
2008: Project GRAD cancelled CMCD[TM] contract and continued discipline component of Project GRAD with some elements of CMCD[TM] mixed with other research
Jan 2012: PG decides to discontinue academic curriculum, including funding for math coaches

As noted where relevant in the trend reviews below, since 2001 there have also been substantial leadership changes and accountability legislation changes which may have contributed substantially to improvements realized.

Academic Outcomes: Elementary

- A trend graph of Project GRAD schools versus non-Project GRAD schools shows achievement gap closure in math from 2003-2004 to 2008-2009, more than half occurring in the first year after implementation, which coincided with principal turnover in 6 of the 10 Project GRAD elementary schools and the advent of No Child Left Behind legislation, including subgroup accountability.
- Reading/language arts gap change from 2002-2003 to 2006-2007 was not significant, precipitating the discontinuation of the PG reading curriculum in the KCS.

Trend in % P/A 2003-2011: Project Grad vs. Non-PG Elementary
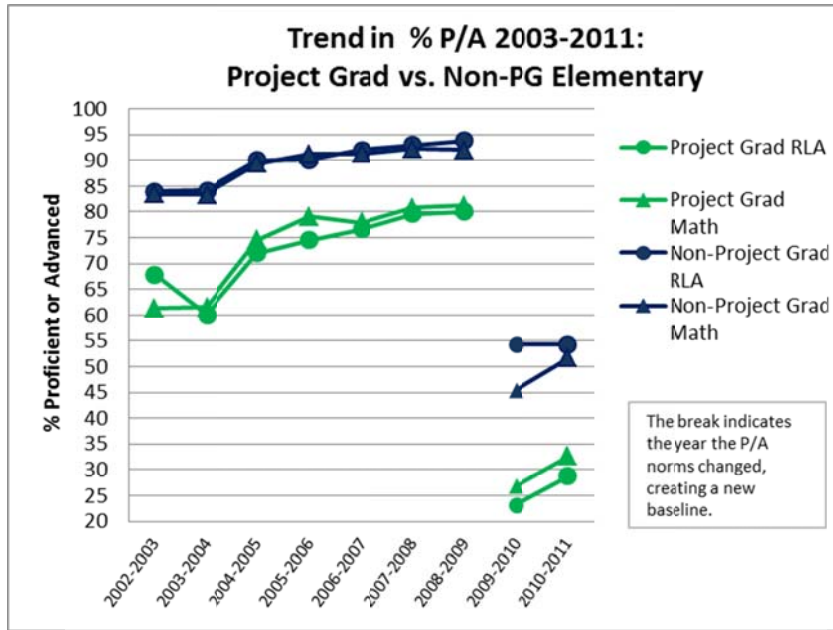
	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Gap PG vs. Non-PG RLA	16.1	24.2	17.9	15.6	15.3	13.4	13.7	31.2	25.5
Gap PG vs. Non-PG Math	22.1	21.8	14.8	12.0	13.4	11.4	10.8	18.5	19.1

- Trends graphs for each school provide more insight in the variation within the overall results:

Trend in % P/A 2003-2011: Christenberry Elementary vs. KCS

Legend:
- Christenberry RLA
- Christenberry Math
- KCS RLA
- KCS Math

The break indicates the year the P/A norms changed, creating a new baseline.

* = change in school principal

Trend in of % P/A 2003-2011: Dogwood Elementary vs. KCS

Legend:
- Dogwood RLA
- Dogwood Math
- KCS RLA
- KCS Math

The break indicates the year the P/A norms changed, creating a new baseline.

* = change in school principal

Trend in % P/A 2003-2011: Green vs. KCS

Legend:
- Green RLA
- Green Math
- KCS RLA
- KCS Math

The break indicates the year the P/A norms changed, creating a new baseline.

* = change in school principal

Trend in % P/A 2003-2011: Lonsdale vs. KCS

Legend:
- Lonsdale RLA
- Lonsdale Math
- KCS RLA
- KCS Math

The break indicates the year the P/A norms changed, creating a new baseline.

Trend in % P/A 2003-2011: Maynard vs. KCS

Legend:
- Maynard RLA
- Maynard Math
- KCS RLA
- KCS Math

The break indicates the year the P/A norms changed, creating a new baseline.

* = school reconstitution

Trend in % P/A 2003-2011: South Knoxville vs. KCS

Legend:
- South Knoxville RLA
- South Knoxville Math
- KCS RLA
- KCS Math

The break indicates the year the P/A norms changed, creating a new baseline.

* = change in school principal

Trend in % P/A 2003-2011: Sarah Moore Greene vs. KCS

Trend in % P/A 2003-2011: Spring Hill vs. KCS

- Trends for Project GRAD middle schools also show variation that coincide t with leadership changes.

Trend in % P/A 2003-2011: Vine vs. KCS

Trend in % P/A 2003-2011: Whittle Springs vs. KCS
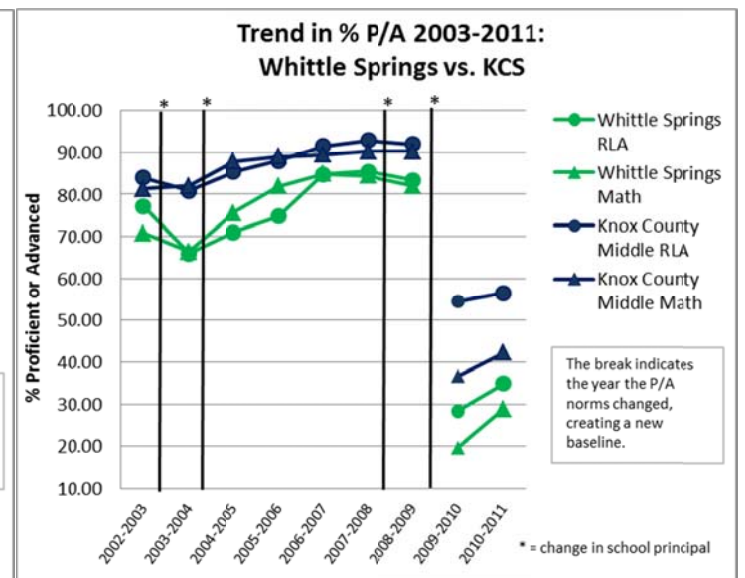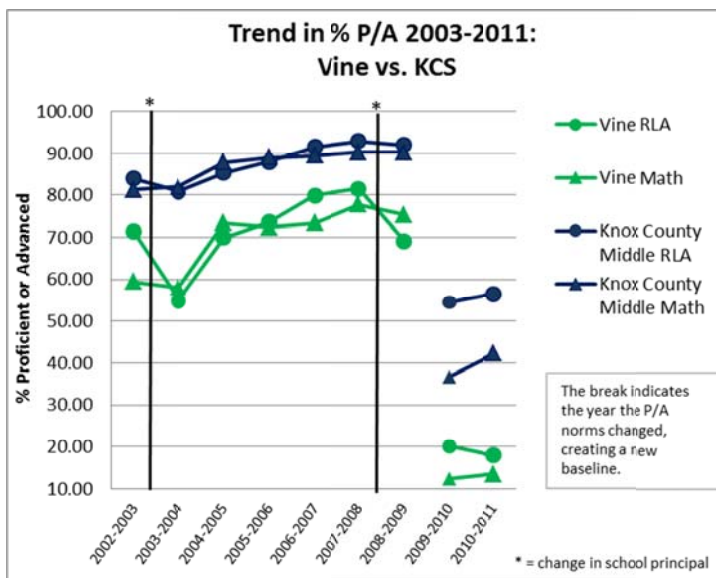
- An analysis of math TCAP for students who were in Knox County schools for grade 3-8 and specifically at a PG elementary school 2004-2006, 2005-2007 or 2006-2008 showed that two cohorts of students who went to a PG school for grades 3-5 and a non-PG school for grades 6-8 had greater growth from 3rd grade to 8th grade than those who went to PG schools for all 6 years; but in a third cohort, the opposite was true. These findings were statistically significant with a 95% confidence limit.
- In a year by year analysis, overall, PG students grew one years' worth of learning each year, but the **achievement gap** between students who were not in a PG school at all and who were in a PG school for 6 years **either stayed the same or grew**.

Classroom and Campus Environment

- There was an overall **improvement** in the number of elementary students with **discipline** infractions from 2005-2010, however there was variation from school to school and acknowledgement that success of any discipline strategies are **dependent upon leadership** commitment to execution, monitoring, and enforcement. There were no consistent discipline trends in middle or high school.
- The **Campus and Family Support (CFS)** and social services component of Project GRAD is highly school-specific with activities ranging from assistance with truancy to planning community engagement events.
- According to billing by Project GRAD, Campus and Family Support is the only component billed to the Knox County Schools. The bill in 2010-2011 was $1.1 million, not including the additional effort of teachers and principals and volunteers in implementing the activities planned through Project GRAD and the half-salaries of two directors of social services and college access paid by Fulton High School.
- The frequency of campus and community events range from monthly to bi-annual, and in the past two years at least have been designed based on interviews with school staff. Available records are not conducive to more detailed analysis.
- In feedback from schools over time, where Project GRAD's involvement is appreciated, it has been because of the additional assistance for understaffed needs. Where reluctance has been expressed, it has related to the accountability structure where Project GRAD staff in schools report only to Project GRAD leadership, as well as mismatches between the skill set of Project GRAD staff and school needs.

Academic Outcomes: High School

Project GRAD inclusion in elementary and middle school was intended to better prepare students for high school and beyond.

- On Algebra I end-of-course tests, for students who had been in Project GRAD schools for 3-7 years, a greater proportion scored basic or below basic than proficient or advanced.
- Algebra I end-of-course tests also showed that a greater percentage of students scored basic or below basic in the cohort of students who had been in PG schools for 6-7 years than in the cohort who had been in PG schools for only 3 years. These findings were statistically significant with a 95% confidence limit.
- The graduation rates have increased in the two PG high schools from 2006 to 2011. The majority of the change at Fulton High School has occurred since reconstitution of the school in 2008-2009; graduation rates there nearly doubled from 2008 to 2011.
- Approximately 20-30% of the senior class at Austin-East and Fulton have received PG scholarships each year.

PGK High School: Scholarships and Graduation Rates

Legend:
- Total # students in Grade 12 at PGK high schools
- PGK scholarships granted
- Graduation Rate Fulton
- Graduation Rates AE

New principals/school reconstitution

Drop-Out Rates

Legend:
- High:Fulton High School
- High:Austin East High School
- All KCS High Schools

| = new principals AE and Fulton
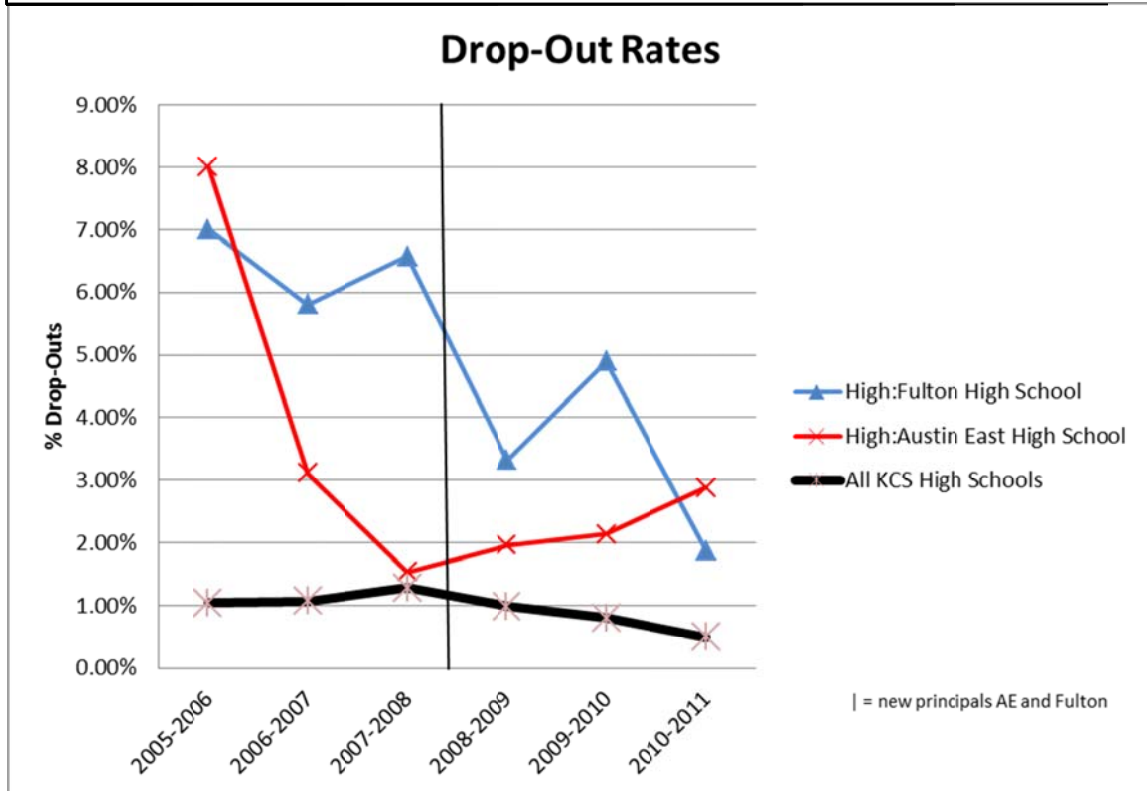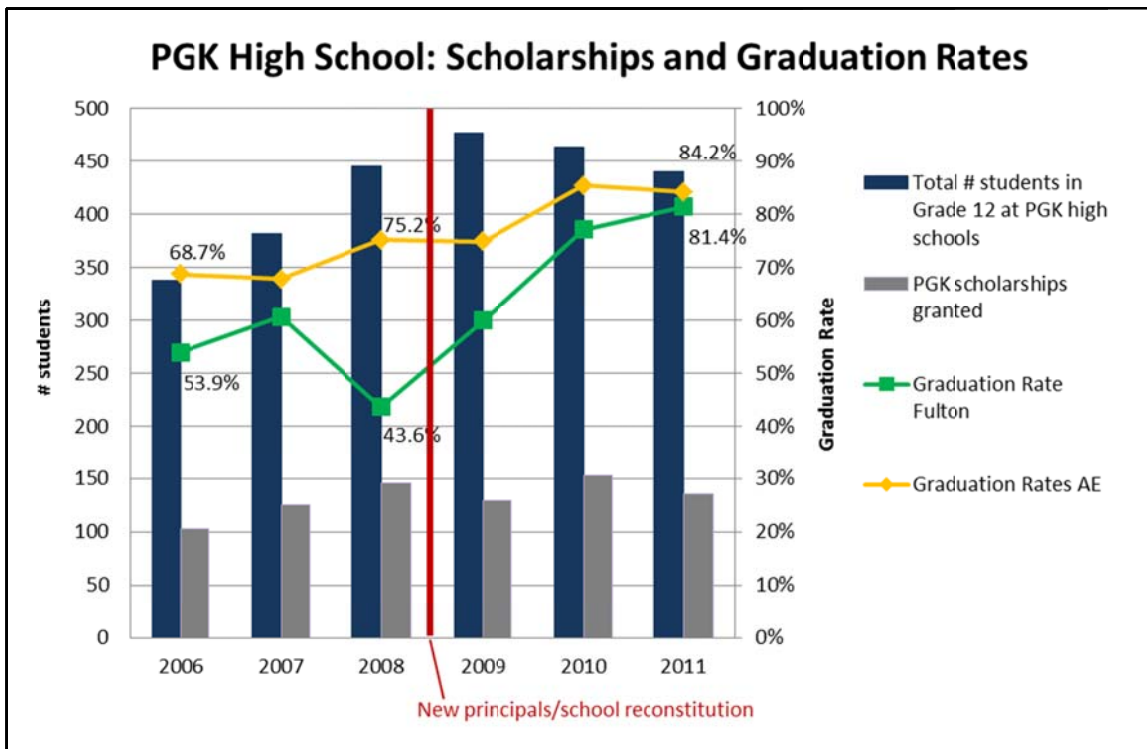
Post-Secondary Outcomes

- According to Project GRAD, of the 78 students in the Class of 2005 who received scholarships and went on to higher education, 22 had completed higher education as of May 2011.

Project Grad Scholarship Tracking

Legend:
- # graduates at PGK high schools (AE and Fulton)
- # of graduating class who opted in and are eligible for PGK scholarships
- # of scholarship-eligible who entered higher ed
- # of scholarship recipients who have completed higher ed as of May 2011
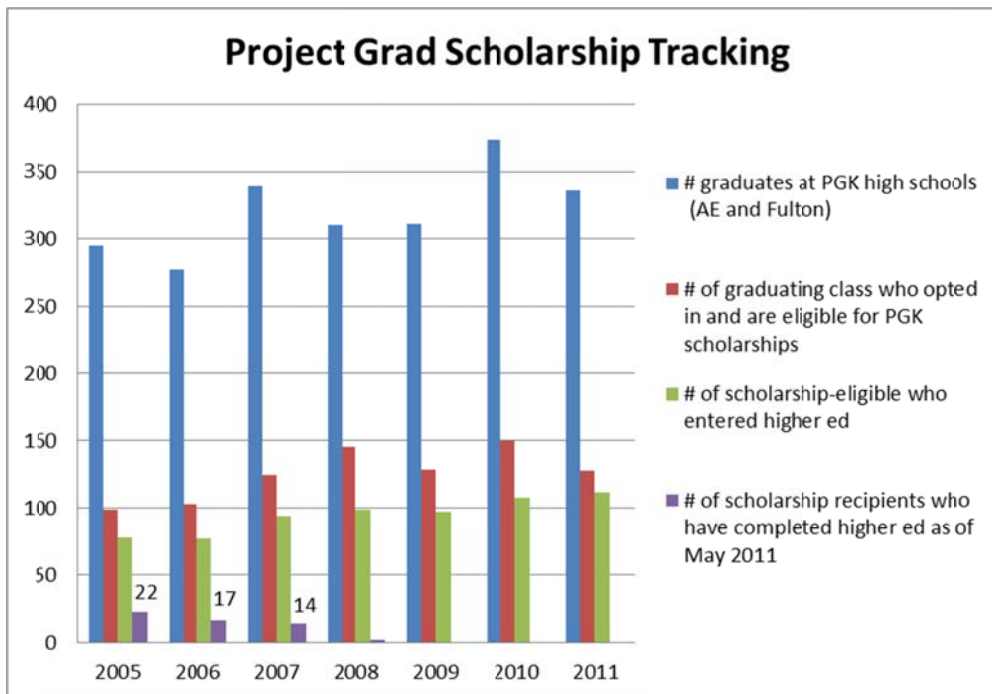
- Twenty-two (22) of 78 represents a rate of 28% of students who opted into the scholarship who completed higher education within 6 years. (The definition of higher education used by Project GRAD in these numbers is unknown at this time.)
- According to the National Student Clearinghouse, of the entire KCS class of 2005 who went on to an associate's or bachelor's degree program, 32.5% graduated within 6 years.
    - The same rate was slightly below 9% for all of Fulton High School graduates and slightly above 10% for Austin East High School graduates.
- The scholarship coordinators at Project GRAD in the last couple of years at least have continued to provide support to students while in college, arranging social gatherings with other PG alum and helping students to find academic services when needed.

Conclusions

The above analyses reinforce Project GRAD's decision to discontinue Project GRAD math. There is evidence to support continuation of the scholarship program, although more transparent tracking is needed to best analyze future outcomes. The remaining two pillars have had highly school-specific and varied implementation, and a number of schools would like to keep PG assistance provided they have some authority over the staff in their schools and matching of skills with need. However, for any future analysis (quantitative or qualitative) of activities and impact, there is a need for a clear articulation of the link between activities and intended results, quality and quantity expected, resources to be applied, and agreed-upon and transparent tracking.

Appendix C: Review of Magnet Programs

Introduction and Key Elements of the Initiative

Magnet programs were introduced in five Knox County schools in the 1990s with the original purpose of desegregating the schools in response to an Office of Civil Rights lawsuit. The lawsuit was subsequently settled, and the programs have continued through the past decade as an effort in school reform, encouraged by successful magnet schools in other states. The logic of magnet schools as a path to school reform is to provide specialized offerings that attract students from outside the school's normal zoning to enrich student-to-student learning and raise academic expectations and involvement within the school community.

Magnet Programs Logic Model

INPUTS →   OUTPUTS   → OUTCOMES

Investments	Activities	Reach	Intended Outcomes
Total magnet-specific allocation: $1.46 million annually for additional teaching positions and educational assistants, transportation and materials designated specifically for magnet programs	For students with special interests, provide viable school choice option to obtain specialty-specific learning/opportunities.	335 students from outside school zones in 2010-2011	Short-term: Attract students from outside the feeder pattern/zone
	Attract and create a diversified student body and school community	Through 2010-2011: 5 city schools (Austin-East High School, Beaumont Elementary, Green Elementary, Sarah Moore Greene Elementary, Vine Middle)	Original intent (1996): Desegregation per Office of Civil Rights lawsuit
			Current intent: Enrich student-to-student learning to raise academic expectations and involvement within students and families/school community
			Long-term: Improved academic outcomes for all students in the school

Methods

Information for this review was collected from previous Magnet Task Force notes, current magnet program coordinator analysis and presentations, information available to the public on the Knox County internet sites, literature review, and a comprehensive evaluation of magnet schools conducted in 2005. Quantitative analyses focused on indicators of academic rigor.

<u>Findings and Analysis</u>

There are clearly two important factors that influence the decision to attend a magnet school: the quality of the magnet offerings and the rigor of academic offerings. Perceptions are as important as reality in the decision.

Magnet Offerings
Below is a summary of the information easily accessible on a public website regarding magnet offerings at each of the five magnet schools:

- Beaumont Magnet Elementary and Honors/Fine Arts Academy
  - Learning Expedition program includes grade level trips to area museums three times every nine weeks, on-site lessons tailor-made from the KCS science and social studies curriculum on-site, followed by project-based works of art showcased quarterly at Exhibit Openings.
  - Fine arts curriculum includes instrumental and vocal music, visual and performing arts, and spring dance/drumming showcase with Vine and Austin East.
  - Honors Academy K-5 is comprised of accelerated classes in all core subjects areas. There is a focus on problem solving and project-based learning.
- Vine Middle Magnet Performance Arts Academy
  - After School Academy includes Dance Company (Modern and West African), West African drums, Art Honors Society, Orchestra, Band, Video Production, Lego League and Academic Programs.
  - Performances in 2010-2011 were a holiday concert and Kwanzaa assembly, Black History Month dance show at different schools, and the spring dance/drumming showcase with Beaumont and Austin East.
- Sarah Moore Greene Magnet Technology Academy
  - The focus on communications and media includes opportunities to use document cameras, digital cameras, video cameras, Active Boards, and to participate in Video Conferencing, video editing, and animation.
  - There is an onsite television production studio where students operate daily news broadcasts.
  - Students rotate once every six school days to the technology lab. In the instruction lab, students learn computer and software operations and programs that reinforce classroom skills. In advanced computer lab, students are exposed to various computer activities such as robotics, Claymation, Lego League and publishing.
  - There are two technology classes (grades K-2 and grades 3-5).
- Green Magnet Math and Science Academy
  - Students participate in a math lab and science lab one day per week.
  - Lab includes opportunities to explore, observe, predict, and write about experiences as they relate to the real world, partnered with Americorp and the Discovery Center.
  - Public class schedules show 30-35 min. of science/social studies per day.

- Austin-East Magnet High School
  - Performing Arts classes include technique, performance, and exhibition skills, ballet, modern dance, tap, West African dance and drumming, and training with guest artists.
  - Performances last year were the AE Dance Company "Voices" fall concert of student choreography and the spring dance and drumming showcase with Beaumont and Vine.

Academic Offerings

Even the perception of academic integrity can deter potential transfer students and their parents, regardless of the quality of the magnet offerings. For example, in one year 44 students withdrew applications for Beaumont when the state report card revealed that the school did not meet its "adequate yearly progress" (AYP) goals.

However, the absolute achievement levels in a magnet school do not necessarily reflect the actual academic *rigor* of the school. This is an ongoing struggle for the evaluation of magnet programs, because when used as a model for school reform, they are, of course, introduced in schools with lower academic achievement.

One indicator of academic integrity independent of absolute achievement is the significance of an "A"; is it an accurate indicator to students that they have learned what they need to know? In looking at grade point average (GPA) versus ACT scores for each high school, while in general students with higher GPA do score better on the ACT test, a GPA of 4.0 at Austin-East (AEHS) is reflected in only an average ACT score of 22, whereas at Farragut High School students with 4.0 on average score close to 30.

GPA and ACT Classes of 2010 and 2011

Another way of looking at GPA versus ACT is the percentage of students who have a GPA of 3.0 or better, which would generally be considered a good GPA, who achieved a composite score of 21 or better on the ACT, which is generally considered an indicator of college and career preparedness.

Top Grades vs. Milestone scores on Standardized Tests By School - ACT				
2009-2011 (High School, Final Grade)			ACT 21 or Better	
			No	Yes
Austin-East High	GPA 3.0 or Better	Yes	65.8%	34.2%
Bearden High	GPA 3.0 or Better	Yes	11.2%	88.8%
Carter High	GPA 3.0 or Better	Yes	34.6%	65.4%
Central High	GPA 3.0 or Better	Yes	24.7%	75.3%
Farragut High	GPA 3.0 or Better	Yes	7.4%	92.6%
Fulton High	GPA 3.0 or Better	Yes	46.9%	53.1%
Gibbs High	GPA 3.0 or Better	Yes	32.9%	67.1%
Halls High	GPA 3.0 or Better	Yes	24.4%	75.6%
Hardin Valley Academy	GPA 3.0 or Better	Yes	17.0%	83.0%
Karns High	GPA 3.0 or Better	Yes	29.9%	70.1%
Powell High	GPA 3.0 or Better	Yes	31.4%	68.6%
South-Doyle High	GPA 3.0 or Better	Yes	28.9%	71.1%
West High	GPA 3.0 or Better	Yes	17.6%	82.4%
Knox County	GPA 3.0 or Better	Yes	22.2%	77.8%

In a similar comparison for middle and elementary schools, the tables below shows the percentage of students who earned all A's or B's who achieved a level of proficient or advanced on the Tennessee Comprehensive Assessment Program (TCAP). The green highlighting indicates the schools with the higher percentages, and the red highlighting indicates the schools with the lowest percentages.

Top Grades vs. Milestone scores on Standardized Tests By School - TCAP Middle School			
2010-2011	**MATH** % of students with all A's and B's in **Math Department courses** who were Proficient or Advanced on **Math TCAP**	**READING/LANGUAGE ARTS** % of students with all A's and B's in **Reading and Language Arts Dept. courses** who were Proficient or Advanced on **Reading/Language Arts TCAP**	**SCIENCE** % of students with all A's and B's in **Science Department courses** who were Proficient or Advanced on **Science TCAP**
Bearden Middle School	80%	79%	81%
Carter Middle School	48%	60%	60%
Cedar Bluff Middle School	62%	83%	85%
Farragut Middle School	87%	89%	92%
Gresham Middle School	76%	82%	88%
Halls Middle School	61%	75%	83%
Holston Middle School	55%	76%	79%
Karns Middle School	74%	84%	92%
Northwest Middle School	50%	70%	71%
Powell Middle School	54%	72%	79%
South Doyle Middle School	46%	58%	73%
Vine Middle Magnet School	31%	34%	42%
West Valley Middle School	96%	92%	96%
Whittle Springs Middle School	50%	44%	56%
All Knox County Middle Schools	67%	76%	82%

Top Grades vs. Milestone scores on Standardized Tests By School - TCAP Elementary

2010-2011	% of students with all A's and B's who were Proficient or Advanced on TCAP		
	Math	Reading/ Language Arts	Science
A.L. Lotts Elementary School	86%	82%	91%
Adrian Burnett Elementary School	62%	57%	64%
Amherst Elementary School	81%	81%	82%
Ball Camp Elementary School	69%	80%	82%
Bearden Elementary School	78%	80%	83%
Beaumont Magnet School	89%	100%	100%
Belle Morris Elementary School	59%	49%	55%
Blue Grass Elementary School	81%	88%	88%
Bonny Kate Elementary School	78%	78%	87%
Brickey-McCloud Elementary School	85%	77%	88%
Carter Elementary School	63%	66%	72%
Cedar Bluff Elementary School	70%	73%	76%
Chilhowee Intermediate School	72%	81%	85%
Christenberry Elementary School	33%	37%	22%
Copper Ridge Elementary School	69%	72%	78%
Corryton Elementary School	76%	80%	83%
Dogwood Elementary School	52%	47%	35%
East Knox County Elementary School	61%	58%	55%
Farragut Intermediate School	85%	86%	91%
Fountain City Elementary School	58%	76%	68%
Gap Creek Elementary School	59%	85%	78%
Gibbs Elementary School	75%	65%	83%
Green Magnet Academy	57%	54%	46%
Halls Elementary School	78%	80%	84%
Hardin Valley Elementary School	77%	80%	86%
Inskip Elementary School	43%	47%	44%
Karns Elementary School	67%	76%	70%
Lonsdale Elementary School	NAV	NAV	NAV
Maynard Elementary School	NAV	NAV	NAV
Mooreland Heights Elementary School	61%	54%	64%
Mount Olive Elementary School	63%	73%	67%
New Hopewell Elementary School	73%	78%	84%
Norwood Elementary School	59%	64%	66%
Pleasant Ridge Elementary School	83%	81%	81%
Pond Gap Elementary School	NAV	NAV	NAV
Powell Elementary School	65%	63%	69%
Ritta Elementary School	73%	74%	80%
Rocky Hill Elementary School	76%	74%	85%
Sarah Moore Greene Magnet School	23%	30%	25%
Sequoyah Elementary School	98%	98%	100%
Shannondale Elementary School	69%	72%	84%
South Knoxville Elementary School	NAV	NAV	NAV
Spring Hill Elementary School	40%	41%	30%
Sterchi Elementary School	87%	90%	97%
West Haven Elementary School	61%	63%	63%
West Hills Elementary School	72%	77%	77%
West View Elementary School	NAV	NAV	NAV
All Knox County Elementary Schools	74%	80%	83%

Note: The elementary school data is informational, but not 100% clean:

-The students counted were those with data available for TCAP and no final grades that were C,D,F, incomplete, or unknown/no grade listed.

-Schools marked NAV are those with fewer than 10 student records in the database that met these criteria.

A summary of this one indicator of academic rigor shows that three of the KCS magnet schools have the lowest rigor in the school system.

**Percent of Students with all As and Bs in Core Courses
Who Scored Proficient or Better on Standardized Tests**
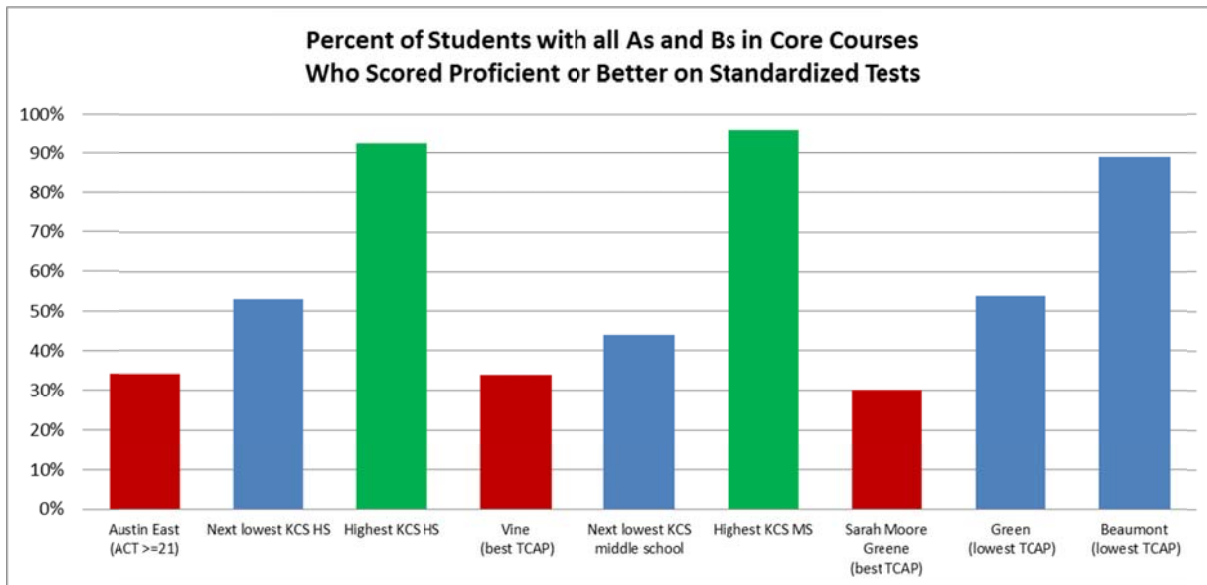
At Beaumont, student academic data shows a significant achievement gap between the students attracted from out of zone and students in zone, some of which might not be unexpected given the context of a school with an honors magnet program, but the magnitude of which suggests that , there is still significant work to do to become a consistently rigorous educational opportunity for all students.

What it takes to improve

According to a 2005 Knox County magnet evaluation and publications about other districts, many successful magnet schools and other successfully reformed schools have specific criteria for principal selection, and extensive, ongoing professional development for the teaching staff. According to school interviews conducted by SCORE Tennessee, turnaround schools have high expectations for students, which is manifest "not in what the administrators think they are doing, but in what the students say about what they expect of themselves".

Cost vs. Enrollment

The table below shows the enrollment history and 2010-2011 magnet-specific budget for each of the five zoned magnet programs.

Magnet Programs: Out-of-Zone Enrollment and Expenditures							
	2005-2006		2010-2011		5-year change			
	# of Out-of-Zone Magnet Students	% of Students Out-of-Zone	# of Out-of-Zone Students	% of Students Out-of-Zone	Change in # out-of-zone students	Change in percentage of out-of-zone students (2005 vs. 2011)	Total Magnet Budget 2010-2011	Total budget per out-of-zone student
Beaumont	75	17.12	155	28.7	80	11.58	$ 233,649	$ 1,507
Green	29	7.02	26	7.14	-3	0.12	$ 235,051	$ 9,040
Sarah Moore Greene	38	6.37	71	10.73	33	4.36	$ 237,509	$ 3,345
Vine	43	8.53	55	16.12	12	7.59	$ 174,761	$ 3,177
Austin-East	55	6.19	28	4.68	-27	-1.51	$ 314,837	$ 11,244

Conclusion

The current data confirm the findings from the 2005 evaluation that there is significant work needed both in magnet offerings and academic rigor as well as integration of transferred students and zoned students if magnet programs are to succeed in reforming schools in Knox County. This work could be modeled on the levels of rigor, commitment, and scrutiny present in magnet schools that have been successful in other states. Given the lengthy history and cost of magnet programs in Knox County, milestones for this work, progress review, and sunset dates if milestones cannot be met are warranted.

Appendix D: Summary of Language! Program Evaluation

Introduction and Key Elements of the Initiative

Language! is a reading intervention for students in 6th grade and above, implemented as a component of the Excellence Through Literacy initiative which was launched in 2008 in response to the high rate of students reading behind grade level across the district (measured on the Gates-MacGinitie test administered to 9th grade students in the fall of 2007). The structure of the program is to identify struggling readers and schedule them for the 90-minute Language! class which focuses on reading, with at minimum an additional 30 minutes of their schedule focused on language arts in middle school. The student would be assessed for progress each semester and continue in the program until reaching exit criteria (either by advancement to the final book level and/or reaching grade-level reading fluency and comprehension). If a student is not progressing sufficiently, he or she does not continue in the Language! program. Below is a logic model illustrating the investments, main activities, and intended outcomes of Language!.

Language! Logic Model

INPUTS →		OUTPUTS →	OUTCOMES
Investments	**Activities**	**Reach**	**Intended Outcomes**
~200 teachers (already employed) - 7 literacy coaches - Training and professional development	Assess students for placement & exit + professional reviews for each student each semester	Students scoring ≤ 35th percentile in reading ~6875 students in middle school 2007-2011 ~1280 students in high school 2007-2011	Students learn to read at grade level (fluency, comprehension, & writing skills) & gain confidence
	90-minute blocks for Language! and 30 minute regular reading/language arts for state performance indicators (SPIs)		Ability to learn increases for regular core curriculum, particularly R/LA
	~14.5 coach visits per teacher per year		
~200K per year, ~$2.4 million past for grades 6-12 component of Excellence Through Literacy		All MS and all HS	Students graduate better prepared for career or further education

Methods

Multiple outcome indicators have been analyzed to provide a range of perspectives in a thorough evaluation of the KCS students' outcomes after successfully completing the Language! program. Analysis included both comparisons of a student to his or her own growth trajectory before entry and after successful exit from the program and comparisons of Language! students to their peers (by grade and by achievement level). Multiple stakeholders were consulted during the design of the evaluation in the fall of 2011, prior to any review of data, to obtain agreement on the logic model and available outcome indicators.

Findings and Analysis

Below is a table summarizing the quantitative analyses in the Language! program evaluation.

Short-term outcomes	
Progress in reading fluency during program	Positive
Rate of successful exit from Language! Only book level *and* comprehension level Including completion of final book w/o comprehension	20-27% 24-50%
Average time from enrollment to exit	1.7 years
% of successful Language! students reading on or within one grade level per Gates-MacGinitie 2011 (9th graders only)	46%
Mid-term outcomes	
TCAP growth pre- and post-program (compared to self)	Negative change
TCAP growth post-program compared to grade level peers	Inconclusive
TCAP growth post-program compared to NCE level peers	Negative NCE change, but significantly less negative than lowest level peers
Change in GPA pre- and post- Language! (compared to self)	Negative, not statistically significant
Change in GPA compared to non-Language! students with baseline GPA ≤ 2.5	Non-Language! students had positive change, a statistically significant difference from Language! students
Absences and tardies	Increase
Long-term outcomes	
Explore/Plan/ACT average score gain between tests (2 points score gain approximates 1 year growth)	< 2 points
Score gains Language! vs. non-Language! students	Negative difference
Unintended Outcomes	
Non-Language! students' change in growth 5th vs. 6th grade when Language! program was in place in 6th grade	Positive change, statistically significant and increasing proportional to baseline NCE

While more detailed explanations and rationale for choosing each of the above data points will be included in the full program evaluation which is currently underway, this summary highlights that while there are demonstrable short-term successes, most long-term indicators for Language! students are negative. This disconnect is likely due largely to the minimal exposure to the language arts state performance indicators (SPI) in middle school, which is a consequence of the structure of the program *as implemented*. One unexpected positive outcome coincident with the implementation of the program in 6th grade has been a greater growth trajectory for students not in the program. This was postulated in a 2009 evaluation and confirmed with the current data.

Fidelity of Implementation

The program evaluation also included a fidelity analysis, to determine the feasibility of implementing the program on such a large scale. Only three schools (1 HS and 2 MS) were identified by multiple factors as having particularly low fidelity to implementation. The extent of consistency across the other schools has been attributed to the dedicated role of the middle and high school reading coaches.

- Short-term outcomes analyses were rerun excluding those three schools, and the exit rate was 24.8% compared to 23.5%. In terms of its functional significance, 1.3% of the Language! students in these three schools represents approximately 14 students who perhaps could have achieved grade level reading skills if the program had been implemented with greater fidelity in those schools.
- In the other schools, the largest variation was in the **quality of Language! teachers**. However, the proportion of strongly qualified teachers or weakly qualified teachers in Language! classes was essentially proportional to the entire teaching staff at the school.
- Another source of variation was the **treatment of SPI** due to concerns about TCAP scores. At one end of the spectrum were teachers who *enhanced* the Language! curriculum by incorporating state performance indicators throughout, while at the other end were teachers who *replaced* the Language! curriculum with TCAP and writing preparation as test time neared. This issue was more teacher-specific than a systematic issue across schools.

Targeting

One of the essential questions of the program evaluation was whether students could be better targeted to improve outcomes, so multiple data points were segmented by a variety of baseline measures. The data warrant further review to understand them properly in context, but there were a couple of noteworthy findings that need to be considered as well:

- GPA findings suggest that there were students enrolled in the program who were already academically average despite their reading deficits, according to teacher grading.
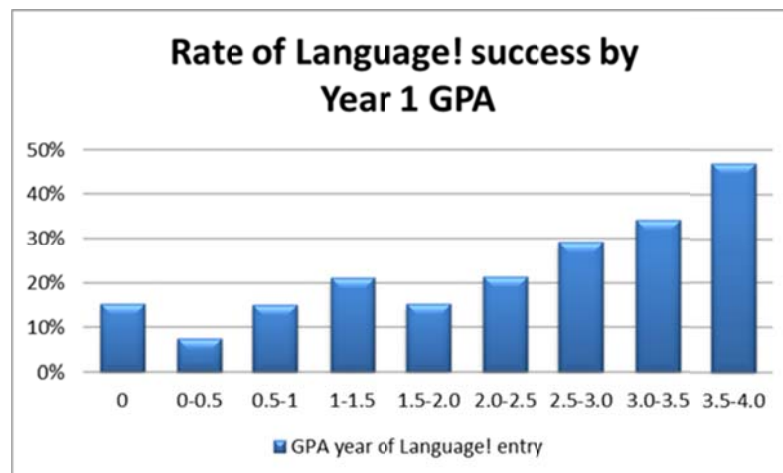
- The likelihood of reaching comprehension level in the 4th year of the program is low, confirming anecdotal reports that some students are so far behind that it is difficult for them to ever catch up, emphasizing the importance of support in elementary education. (The context of Language! within the Excellence Through Literacy initiative was for the program to be phased out as improvements in elementary reduced the need for interventions in middle and high school.)

Time from Language! Enrollment to Achievement of Exit Criteria
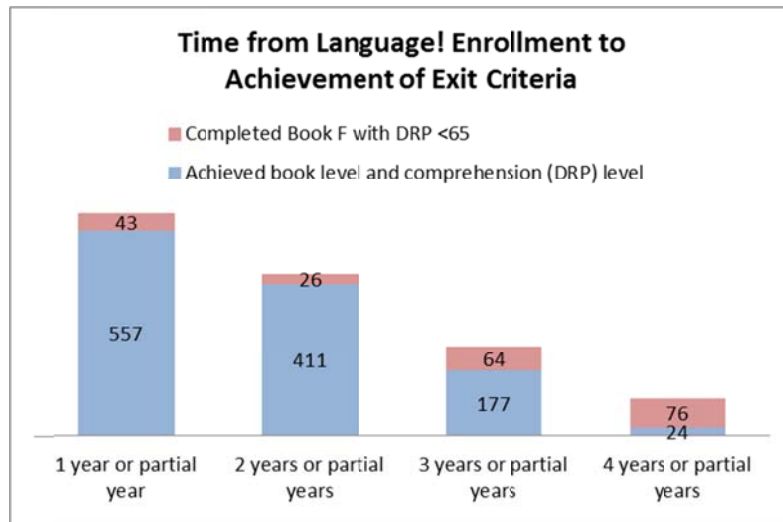
- According to the Gates-MacGinitie reading assessment administered to 9th grade students in the fall of 2011, there are still students both in Language! and not in Language! who are more than a grade level behind in their reading skills, so there is still a need for interventions in middle school. Also, the data suggest that a revision to the methods for identifying students for intervention may need to be revised, because there are some students who have deficits but have not been enrolled in the program.

	Not reading on grade, never in Language!		Not reading on grade after successfully completing Language!	
Total # students	775 (1/4 of all non-Language! students)		151 (3/4 of all successful Language! students)	
1 grade level or less behind	314	41%	41	27%
>1-2 grade levels behind	187	24%	33	22%
>2-3 grade levels behind	136	18%	39	26%
>3-4 grade levels behind	76	10%	31	21%
>4 grade levels behind	62	8%	7	5%
Average	1.74		2.04	

Distribution of grade level deficits for Language! vs. non-Language! students (Gates-MacGinitie Test, Fall 2011 9th grade students)

- In general, when students are in the program for more than a year, their growth on state performance indicators of reading and language arts (TCAP R/LA) declines. For students whose baseline normal curve equivalent (NCE) is already higher than 50, the TCAP results show a decline in NCE level even after only one year in the Language! program as designed. One possible exception are students whose Baseline NCE is in the lowest decile (a very small group).

Baseline Year NCE	Change in NCE Baseline to Year 1: Lang!	N	Change in NCE Baseline to Year 1: Non-Lang!	N	t-test prob	Change in NCE Year 1 to Year 2: Lang!	N	Change in NCE Year 1 to Year 2: Non-Lang!	N	t-test prob
1-10	19.5	19	29.7	9	0.00	0.4	19	-4.7	9	0.00
11-20	8.5	13	9.0	6	0.04	-7.2	13	-2.2	6	0.00
21-30	3.1	52	2.8	10	0.17	-5.0	52	-1.1	10	0.14
31-40	0.7	127	-0.1	35	0.01	-7.6	127	-4.6	35	0.00
41-50	-2.4	126	-0.9	131	0.33	-7.5	126	-2.2	131	0.00
51-60	-5.1	82	-2.1	374	0.00	-6.3	82	-4.0	374	0.10
61-70	-10.5	17	-5.1	624	0.00	-7.8	17	-2.6	624	0.39

Table 18b. Growth by NCE Group: Language! vs. non-Language! (Baseline/ Entry Year = 2008)

- Finally, on reading-only measures (not including language arts) as measured by the Language! program, periodic reports have consistently shown progress of students within the program:
  - Average grade equivalence gains in fluency ranged from 9 months to 2 years from book to book.
  - Gains in comprehension ranged from 4 months to 14 months from book to book.
  - Additional review of reading-only measures is currently underway in response to the confounding of the longer-term results as outlined above.

Additional Considerations

There are several ways to interpret the costs of the program, and these multiple perspectives should be considered in any cost-benefit analysis or re-design or comparison to other possible interventions:
  - The total costs of $1.3M up to $2.6M estimated for 8,155 participating students over 4 years is **~$159-$318 per participating student**
  - 1378 of these students have demonstrated short-term success, or a rate of ~**$943-$1741 per exited student**
  - Considering only those who reached comprehension level, or 1169 students, that is a rate of ~**$1112-$2053 per successfully exited student**
  - 44% of those scored within grade level on the Gates-MacGinitie, for a rate of ~**$2529-$4669 per successfully exited student confirmed by an external reading measure**

Conclusion

The possible long-term benefits of the Language! program are confounded by the structure of its implementation, therefore a restructure of the intervention design is warranted. However, there have been indicators of progress in reading-specific measures, so the data does not obviously lead to a recommendation for full abandonment of the program, particularly because the Gates-MacGinitie reading test administered in Fall 2011 shows that reading interventions are still needed across the district in middle school, and cost is a consideration.

The program evaluation was originally designed to review mainly long-term outcomes, but in light of the current results, it is being expanded to include more analysis of the short-term progress measures to inform the appropriate restructuring and targeting.

An informed restructure of reading interventions given the large scale of the need requires a review of all of the data and analyses (including progress points, differential outcomes, opportunities for better targeting, fidelity of implementation, and cost-benefit considerations) by experienced stakeholders including representative principals, teachers, instructional coaches, supervisors and directors.

At the very least, middle school and high school students need to receive the full grade-level course of language arts regardless of reading-specific intervention.

Appendix E: Review of Block Scheduling in High Schools and Middle Schools

<u>Introduction and Key Elements of the Initiative</u>

Block scheduling was implemented in high schools in the mid 1990's in response to a change in credit requirements for graduation and a movement across the nation to provide more focused learning and more planning time for teachers to improve the environment for teaching and learning. Below is a logic model for the "4X4" block schedule in high school, based on documentation and correspondence from the initial implementation in 1994-1995. Middle schools moved to year-round classes with a related arts block at the same time. The intention for these scheduling models was to improve learning time and increase teacher planning.

High School Block Scheduling Logic Model

INPUTS	OUTPUTS		OUTCOMES
Investments	**Activities**	**Reach**	**Intended Outcomes**
Annually ~$4.6-5.8 million for additional 89-112 teaching positions.	Semester-long classes, four 90-minute periods per day, for possible 8 total classes per year (vs. 6-7 year-long classes, 45-55 min. per day) For teachers, 3 periods to teach, 1 period to plan each day (vs. teach 5-6 periods, plan 1-2 periods)	All KCS high schools since 1990s, modifications present in several high schools since 2009	Ensure feasibility of meeting increased requirements for credits necessary to graduate (starting with freshman entering 1994-1995), including university prep or technical prep and increased opportunity to make up failed classes. Maintain opportunities in the schedule for electives (e.g., fine arts foreign language, 4th yr science & math,CTE, computer science, business, phys ed, Home ec, AP) in face of increased core credit requirements. Improve learning success with less fragmented experiences and fewer instructional disruptions and opportunity for more variety in teaching methods and individual acceleration or remediation.

<u>Methods</u>

This review included available information from past evaluations such as the reactions to the high school pilot in 1994, the comprehensive self-report by high schools in 1999, the review presented to the school board in 2003, recent literature reviews, and longitudinal achievement trends since 2003 with data extracted from state report cards and the Knox County Schools data warehouse.

Findings and Analysis

High Schools

In the **1999 evaluation** (self-reported by schools) comparing block to regular schedule in high schools, the response to the change to block scheduling was **mainly positive**, with the following breakdown:

- + Overwhelmingly positive regarding **preparation time** for teachers.
- + Particular benefits noted for **lab/"hands-on" classes, fine arts, vocational, and electives** (Austin-East, Bearden, Carter, Gibbs, Halls, South-Doyle)
- – Concerns expressed for **math and foreign languages**, particularly due to time to cover material in-depth, practice, and retain over a semester/summer break (Austin-East, Bearden, Carter, Gibbs, Halls, West). Bearden, Carter, and Gibbs also pointed out a reduction in time for supplemental reinforcement and engagement activities.
- – Expected benefit for **students who work at a slower pace** was the only intended outcome that earned less than 50% approval on a teacher survey. In addition, Bearden and Gibbs reported that students were failing more courses, and Carter, Halls, and South-Doyle commented specifically that block was more difficult for students needing extra help.
- +/- Polar opposite opinions about change in **student focus and productive time** during class. (There was professional development in the first year to help teachers with strategies for maximizing a 90-minute period, but this was not continued in subsequent years to keep up with teacher turnover.)
- ~ Anecdotes and available data were inconclusive about the effect on **relationship with students** and **discipline** after the first year of change.

A 2003 review for the school board confirmed the positive results above, recommending that the KCS:
- train new teachers and new hires in planning/teaching a 90-minute period
- "continue to look at master schedules to maximize learning opportunities"
- ensure that high quality teachers are placed in the basic level math courses in high school.

Recent literature overviews suggest similar findings in other school systems over the past two decades, with additional reports of increases in daily attendance, graduation rates, and GPA, attributed to block scheduling, as well as a concern about second semester achievement testing when students take a course in the first semester.
- Attendance increased in the KCS from 1995-1999, attributed to a time-for-time policy implemented the same year to address concerns that a single day absent on block would mean more material missed.
- Similarly, several KCS initiatives since 2003 and increased state accountability have focused specifically on increasing graduation rates.

Because the block schedule was not implemented with the specific intent of improving student achievement, reviews have focused on at minimum *maintaining* student achievement while improving the other outcomes.

Since 2003, there is one area where student achievement has not been maintained in the KCS:

- The percent of Knox County high school students passing the end of course (EOC) exam in Algebra I declined from 91% to 79% from 2003-2009, in contrast to the state EOCs and Knox County middle school math.
- In 1995 when block was first implemented, University of Tennessee math professors were concerned about a possible detrimental effect on math retention due to reduced class time: 180 classes of 55 minutes (total of 9900 minutes) vs. 90 classes of 90 minutes (total of 8100 minutes), offset only partially by reduced class transition time.
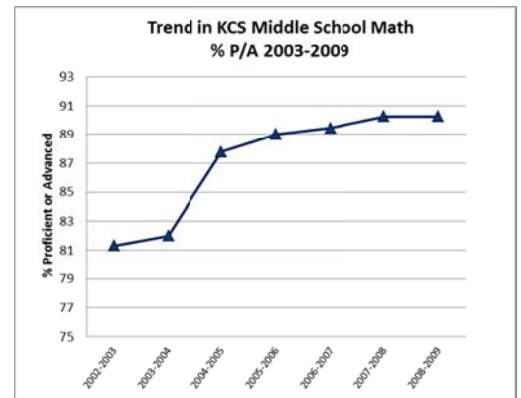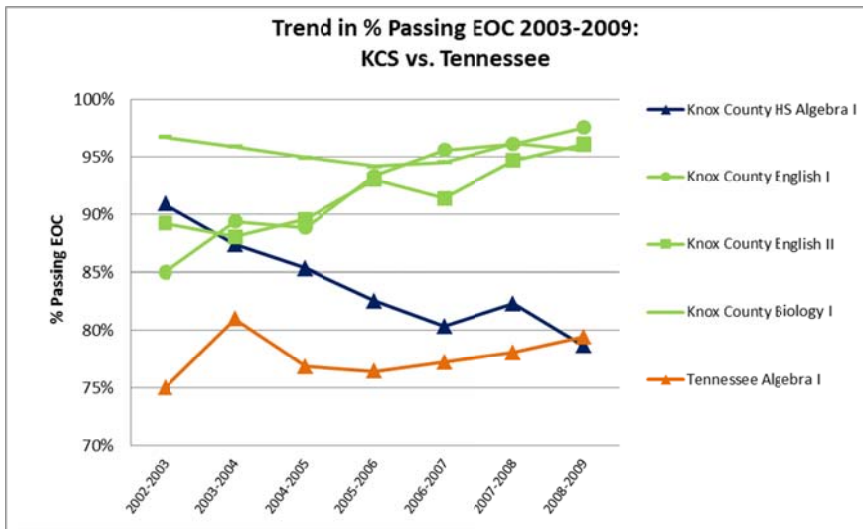
Middle Schools

- Recent overviews of similar scheduling models across the nation are more positive about outcomes for middle school than high school.
- The KCS middle school outcomes have increased over the time in Reading/LA as well as math.

Additional considerations

The following table outlines several implications comparing alternative schedules.

	Six Period	Seven Period	4x4 Block
Instructional Time	60 min/class x180 days	50 min/class x180 days	90 min/class x90 days
	10,800 mins=180 hrs per class	9,000 mins = 150 hrs per class	8,100 mins = 135 hrs per class
Plan Time	10,800 mins/60=180 hrs	9,000 mins/60=150 hrs	16,200 mins/60 = 270 hrs
"Efficiency"	Teach 5/6 = 83% efficiency	Teach 5/7 = 71% effic. Teach 6/7 = 85.7% effic.	Teach 3/4 = 75% effic.
Staffing	1,000 student school Students in 6 classes Teachers teach 5 with 1 planning period = approx. 48.66 teachers	1,000 student school Students in 7 classes, Teachers teach 5 with 2 plan or 1 plan w/ extra duties = 56.77 teachers (same as current MS, more than HS 4X4)	1,000 students Teachers teach 3 with 1 plan = 54 teachers
	5 classes x 30 students = 150 students/day/teacher	5 classes x 30 students = 150 students/day Teach 6 w/ 1 plan= 47.30 teachers, 180 students	3 classes x 30 students = 90 students/day
	KCS-wide:89 fewer teachers than 4X4 in HS ($4.6M)	KCS-wide: 112 fewer teachers than 4X4 in HS ($5.8M)	
	98 fewer positions that 7/5 in middle school ($5.1M)	115 fewer teachers than current MS schedule ($6.0M)	
Academic Impact	Earn fewer credits – 24 Much less dual enrollment, AP and elective opportunities	Earn fewer credits – 28 Fewer dual enrollment, AP and elective opportunities	More credits – 32 More dual enrollment, AP and elective opportunities

Any alternative would also need to address textbook allocations, pacing guides, and staff development.

Another consideration with respect to scheduling is the opportunity for students to retake failed classes that are needed for graduation (22 credits are required by the state; 4 less than the total offered is the requirement in the KCS.) This was one of the reasons cited in favor of the block schedule over the past two decades. With the use of technology, certain students who fail classes can recover their course credits after school through the Plato Web Learning Network, which is currently in place in the Knox County Schools.

Conclusion

For high school, the data suggest that outcomes could be improved by a hybrid schedule that addresses the differential needs of different courses, for example:

- A year-long schedule for math, foreign languages, English, and AP courses to provide sustained learning and additional time to cover material in depth. A minimum amount of 50 minutes per period would be necessary to increase the time on task from the current schedule.

- A semester-long block or double period for fine arts, CTE, and lab courses including science to provide additional time in each setting for hands-on and exploration activities as well as multiple opportunities to participate in those courses throughout high school.

Risks to manage in a hybrid or modified schedule include:
- Complexity of master scheduling to maximize student opportunities w/in staffing constraints
- Adverse effect on highly mobile students if schedule modifications are not consistent across the district
- Higher likelihood that students could reach 11th or 12th grade with too few credits to graduate, unless closely monitored.

For middle schools, the available academic data support maintaining the current schedule.

Appendix F: Review of Parallel Block Schedules in Elementary School

Introduction and Key Elements of the Initiative

Elementary schools began to implement parallel block schedules in 2004-2005, with all schools migrating to parallel block by 2008-2009 with assistance from Excellence Through Literacy funding. The parallel block contains a period where students participate in related arts while teachers have common planning time intended to improve teaching through collaboration particularly via professional learning communities (PLCs). The yearly cost of the additional related arts teachers for this purpose is approximately $2,000,000. Excellence Through Literacy also provided elementary teaching assistants at an additional annual cost of approximately $380,000.

Methods

To determine whether these investments have resulted in a measurable impact on student reading and language arts skills, the change in normal curve equivalent (NCE) in Grade 3-5 reading/language arts achievement data was analyzed. (If the average change in NCE is greater after implementation than before, then it could suggest a change in the trajectory of student learning.) Note: The baseline NCE was reset with the new TCAP standards, so that year was not included in the analyses.

Findings and Analysis

The elementary block was implemented in a staggered fashion from 2004-2005 to 2008-2009.
- The average change in NCE in reading in the 1-3 years* prior to and including block implementation at each of the schools was 2.2 vs. the change in NCE in the 2-3 years** following block implementation, which was 1.4, for a negative difference of 0.8, with a standard deviation of 2.1. (*=Available data, **=Not including the year the NCE was re-baselined)
- The average was comprised of 19 of the 49 (39%) of elementary school who had a positive change in the NCE trajectory.
- The following chart contains the changes in each school.

Change in Normal Curve Equivalent Before and After Parallel Block Implementation				
Elementary Schools	School year that block schedule was implemented	Average NCE change in the 1-3* years *after* block was implemented	Average NCE change 1-3** years before block+1st year of implementation	Difference	Positive Change?
Amherst	2004-05	1.1	5.0	-3.8	No
Beaumont	2004-05	2.5	3.9	-1.5	No
Belle Morris	2004-05	2.3	5.6	-3.3	No
Christenberry	2004-05	0.9	0.8	0.2	Yes
Dogwood	2004-05	0.5	3.1	-2.6	No
Green	2004-05	-0.4	4.7	-5.0	No
Inskip	2004-05	1.2	3.8	-2.6	No
Lonsdale	2004-05	1.1	2.9	-1.8	No
Maynard	2004-05	0.1	4.6	-4.5	No
Mount Olive	2004-05	3.6	5.4	-1.8	No
Sarah Moore Greene	2004-05	0.0	0.2	-0.2	No
South Knoxville	2004-05	1.4	0.0	1.4	Yes
Spring Hill	2004-05	1.6	2.9	-1.3	No
West View	2004-05	2.1	2.0	0.1	Yes
Ball Camp	2005-06	2.3	2.3	0.0	Yes
Carter	2005-06	2.2	2.1	0.1	Yes
East Knox County	2005-06	1.7	3.7	-2.1	No
Fountain City	2005-06	2.6	1.1	1.5	Yes
Halls	2005-06	1.7	0.9	0.8	Yes
Karns	2005-06	0.0	0.0	0.0	No
Norwood	2005-06	1.0	2.4	-1.4	No
Powell	2005-06	-1.9	3.8	-5.7	No
West Haven	2005-06	2.6	2.1	0.4	Yes
Adrian Burnett	2006-07	-0.6	3.5	-4.1	No
Chilhowee Intermediat	2006-07	2.2	2.7	-0.4	No
Mooreland Heights	2006-07	2.5	1.8	0.8	Yes
Pleasant Ridge	2006-07	3.8	4.7	-0.9	No
Pond Gap	2006-07	-0.2	2.1	-2.3	No
Ritta	2006-07	-1.3	4.1	-5.4	No
Sterchi	2006-07	3.1	3.9	-0.8	No
Sunnyview Primary	2006-07	0.5	0.1	0.3	Yes
West Hills	2006-07	3.0	2.3	0.6	Yes
Bearden	2007-08	0.8	1.1	-0.3	No
Copper Ridge	2007-08	6.2	3.0	3.2	Yes
Gibbs	2007-08	2.9	1.3	1.6	Yes
Hardin Valley	2007-08	-3.2	-0.9	-2.3	No
New Hopewell	2007-08	0.9	1.3	-0.3	No
Shannondale	2007-08	5.5	2.9	2.7	Yes
A. L. Lotts	2008-09	3.3	1.0	2.3	Yes
Blue Grass	2008-09	-1.2	0.3	-1.6	No
Bonny Kate	2008-09	-0.1	0.2	-0.3	No
Brickey-McCloud	2008-09	2.8	1.2	1.6	Yes
Cedar Bluff	2008-09	2.8	2.5	0.3	Yes
Corryton	2008-09	0.9	1.4	-0.5	No
Farragut Intermediate	2008-09	2.6	0.8	1.8	Yes
Farragut Primary	2008-09	0.0	0.0	0.0	No
Gap Creek	2008-09	-0.2	1.2	-1.4	No
Rocky Hill	2008-09	0.9	0.5	0.4	Yes
Sequoyah	2008-09	-0.2	0.0	-0.2	No
All KCS Elementary (average of averages)		1.4	2.2	-0.8	**19 schools**
				2.1	standard deviation

- By 2008-2009, all elementary schools were implementing parallel block with Excellence Through Literacy funding for additional related arts teachers to allow time for planning and PLCs.
  - The trajectory of all the KCS grades 3-5 from 2006-2008 was positive, while the change was essentially zero 2009-2011, resulting from first a drop in one year then a rebound the next. This could be the beginning of an upward trend; only future data will confirm.
  - The trajectory in grade 3 was different from Grades 4 and 5, and has been declining.

- A single cohort of students who were in 3rd grade in 2008-2009 and 5th grade in 2010-2011 shows an increase in NCE in all subjects, which could reflect less than possible growth in K-2 or a continuing acceleration from K-2 if students started far behind.
- Data is not available for K-2 for 2008-2011 that would distinguish between these possible explanations. However, kindergarten literacy assessments are included in the Knox County Schools data warehouse this year so subsequently can provide district-wide basis for analysis from the students' earliest entry into the KCS. The teacher observation data through the TEAM (and TAP) evaluations this year will for the first time provide district-wide data in K-2 that could guide PLCs in their focus and provide insight for the differences in grade level results.

Cohort of students who were in KCS 3rd grade in 2008-2009 and 5th grade 2010-2011

	2008-2009	2009-2010	2010-2011
RLA	52.81	53.02	55.76
Math	51.47	51.73	57.17
Science	51.25	52.08	53.38
Social Studies	52.98	53.92	56.8

Elementary NCE Reading/LA Trends

(Grade 3 All KCS, Grade 4 All KCS, Grade 5 All KCS, All KCS Grade 3-5)

The break indicates the year the NCE was re-baselined.
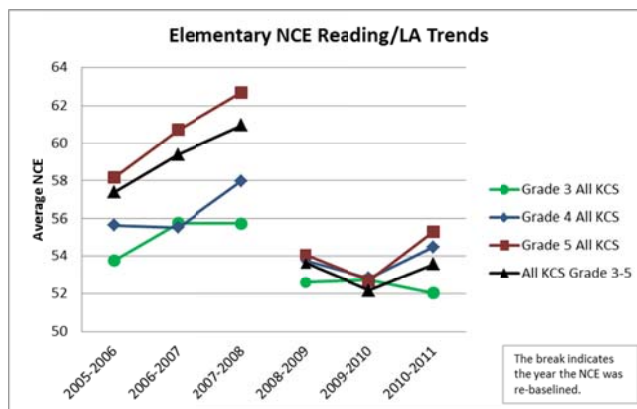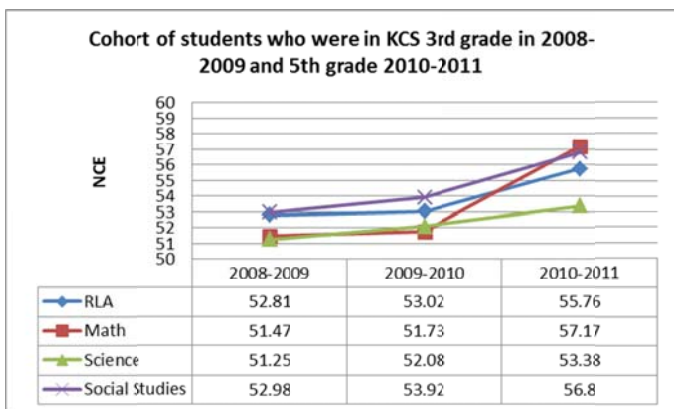
Additional Considerations

- Common Core curriculum is being implemented in K-2 this year, to extend to all grades in subsequent years prior to the first complete online PARCC assessments in 2014-2015.
- The Professional Learning Communities (PLCs) have not been assessed for quality of implementation in past years. Feedback from principals revealed that the oversight and guidance for the PLCs has fallen in priority behind TEAM observations in this first year of TEAM.
- Formative assessments are now being administered in Grade 2 as well as Grades 3-5.
- For the first time this year, the law requires demonstration of reading skills in the 3rd grade or a student may not be promoted to the next grade without intervention.

Conclusion

While additional data next year will provide more definitive information, it is clear that simply the availability of common planning time has not yet produced the magnitude of results that might be expected for the district-wide investment. However, with advent of common core, the legislative changes that increase the focus on K-2, and the availability of better information to guide quality PLCs, it does not seem advisable to restructure K-2 at this time. It is advisable to define the role of the teaching assistants, develop quality and progress measures for PLCs, use newly available data to understand past results and guide future practices, and articulate the link between these resources and activities and the expected elementary outcomes in order to assess the investment in the future.

Appendix G: Review of Instructional Coaching Model

<u>Introduction and Key Elements of the Initiative</u>

The logic of instructional coaching is to provide school-based, job-embedded professional development for a community of teachers in order to raise the quality of teaching and learning across a school and build collective leadership to improve outcomes for students. While Knox County has employed people with the title of "coach" since the 1990s, their actual daily functions (often not related to professional development at all) as well as the number of instructional coaches and reporting structure of the coaching model have varied widely.

<u>Methods</u>

The variation in implementation precluded a meaningful quantitative analysis of instructional coaching in aggregate. Longitudinal achievement data was plotted by school, but the lack of consistent information on how coaches were employed in each school prior to 2011-2012 made even differential trend analysis un-interpretable. So ultimately, this initiative review centered on segments of coaches and collections of qualitative information about the coaching model (historical and present) compared to publications about what a successful coaching model requires.

<u>Findings and Analysis</u>

The Role of an Instructional Coach

Tasks that are common to all of the KCS instructional coaches are:
- Modeling lessons
- Accessing and interpreting data together with teachers and principals
- Facilitating and attending school professional learning community (PLC) meetings
- Helping to screen students for interventions

The *extent* to which a coaches' daily work is devoted to these common tasks depends on the other duties that the coach was asked to perform for the school in ad hoc roles from administrative assistant to assistant administrator.
- Coaches have been keeping a task log in the last year but have voiced concern that they report on tasks they are *supposed* to do, but the log doesn't capture all they *end up* doing.
- Precedent has been set over many years that a coach is there to do whatever needs doing.
- Even when it has been communicated to coaches that their role should not include these ad hoc tasks, it is difficult for a coach to decline a principal's request while the coach is trying to build/maintain relationships, especially in schools where the principal has limited other help.
- In elementary schools, coaches often administer standardized tests because unlike middle and high schools, there is not a full-time guidance person to handle the task.

Seven (7) middle school literacy coaches were added in 2007-2008 as part of the Excellence Through Literacy Initiative. Their content-specific tasks have also included:

- Assisting with curriculum and instruction development at middle and high school levels in reading and language arts
- After school workshops (average of 2 per week)
- Reflecting on reading intervention assessments with teachers and recommending future placements for students
- In 2011-2012, reading coaches have also been tasked with providing system-wide reading support, limiting their school-specific activities.

System-wide coaches in all content areas also are involved with:
- Textbook adoption and lesson plans to align textbook with curriculum
- Review of writing portfolios
- Meetings with content departments in schools
- Individual time with struggling teachers (at principal's request or own observation)
- Providing suggestions and strategies where need is observed
- TEAM coaching strategies
- Maintaining department websites

Evolution of the Instructional Coaching Model

Based on brief interviews with a few of the current content supervisors and coaches, following is a timeline illustrating the types of changes that the coaching model has undergone since its inception.

Early to mid 90's:
- Specialized Reading coaches and Math coaches
- Allocation was originally by size of school then moved to need

Late 90s:
- Specialized coaches evolved into Curriculum Generalist (CIF)– expert in all areas
- Deployed by size of school

Early 2000s:
- Title IIa funds used for Math coaches (4 elementary, 1 MS)
- So, schools had CIFs and Math coaches

2006-2007 school year:
- HS Math coach added

2007-2008 school year:
- Addition of Reading coaches with Excellence Through Literacy
- At this point, most coaches had become content specific and served many schools

2008-2009 school year:
- Coaches became generalist again, based at only a few schools, with subject area of focus
- Coaching Universe created to support development of coaches
- Most elementary schools had a full-time coach
- No high school math coach

2009-2010 school year:
- High school math coach added back
- Additional math coaches hired through Title I

2010-2011 school year:
- All elementary schools had full-time generalist coach
- Widespread belief that this was the optimal year in terms of placement and development
    - Coaches got to know their teachers
    - Services and messaging was concentrated in one person, not diluted over many.
    - Coaches Universe brought coaches together and also principals.
    - Specialized gifted and talented coaches brought unique and necessary skills.

2011-2012 school year:
- Coaching positions reduced due to loss of stimulus funding
- Back to subject specific system-wide coaches to provide some coach time to each school
- Title I elementary schools could "purchase" full-time site-based coach; more than half did
- Non-Title I schools have 1-3 days per week each with a literacy coach, math coach, and gifted and talented coach.
- Fewer principals are attending Coaches Network or overseeing PLCs; time prioritized to TEAM.

Below is a representation of the *current* coaches' reporting structure. The numbers of coaches since 2009-2010 are included for reference, but it is important to note that for coaches in previous years, the reporting structure depended on the funding source for the coach.

Coaches' Reporting Structure (
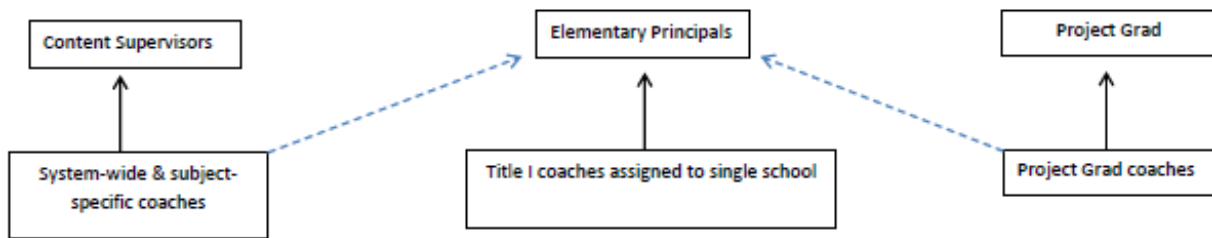
	'09-'10	'10-'11	'11-'12
Math K-5	4	4	4
Math 6-12	1	1	1
Math Title I (EM, MS, HS)	7	9	8
Early Literacy & Reading First	3	-	5
Reading K-5 & CIFs	34	33	20
Reading, LA & Literacy 6-12	14	11	9
Science	1	-	1
Social Studies	1	-	1
TOTAL	65	58	49

	'09-'10	'10-'11	'11-'12
CIF (Title I)	29	29	17

	'09-'10	'10-'11	'11-'12
Math	4	4	4

	'09-'10	'10-'11	'11-'12
SPED	18	17	32
GT	0	16	14.5

Other "Coaches" not included above
Climate Consultant (PGK)
Graduation Coach
Technology
ELA (1 MS, 1 HS)

There is scant evidence in recent literature of a *measurable* effect of instructional coaches on student achievement. However, anecdotal evidence lends support to the continuing logic of the model, and highlights that to achieve results that are measurable on a district level, merely the existence of coaches is not sufficient; there is a need for strategic and monitored implementation, particularly:

- **Time and environment to build relationships** with teachers, especially, but also with principals.
- **Clearly defined roles and responsibilities**: Defined not only for the coaches but for and with the principals, and including both the primary activities of a coach and the expected outcomes and progress measures that can be tied directly to the coaches' role.
- **Narrow focus:** Too wide of a focus is particularly dilutive to a coaching model because of the importance of relationship and credibility.
- **Support:** Support in the professional development of coaches is vital to their ability to assist teachers in growth. This may also mean supporting the principals in what they need so that principals do not need to rely on coaches for non-coaching tasks.

Reading Coaches

Following are graphs containing data for the normal curve equivalent (NCE) trends in elementary grades for the different cohort of students each year and then for only a cohort of students as they move from grade to grade. The implementation variations as noted above as well as the change in standards which resulted in a new baseline for NCE make these results difficult to interpret, except to say:

- Where there is an upward movement across grades in the past year, there is hope for a continuing upward trajectory in future years.
- Even given the change in standards, the magnitude of the upward recovery in 2010-2011 is minimal compared to the size of the investment, which in 2010-2011 was upwards of $6 million for elementary coaches.
- The reading/literacy coaches in middle and high school who were added through Excellence Through Literacy in 2007-2008 had a more focused role in implementing interventions than elementary, and an analysis of the Gates-MacGinitie reading test of 9th grade students showed a statistically significant improvement in the 2011 versus the 2007 cohorts for schools that participated in both years. (See more analysis of the intervention in the Language! section.)

Elementary NCE Reading/LA Trends

The break indicates the year the NCE was re-baselined.

Cohort of students who were in KCS 3rd grade in 2008-2009 and 5th grade 2010-2011

	2008-2009	2009-2010	2010-2011
RLA	52.81	53.02	55.76
Math	51.47	51.73	57.17
Science	51.25	52.08	53.38
Social Studies	52.98	53.92	56.8
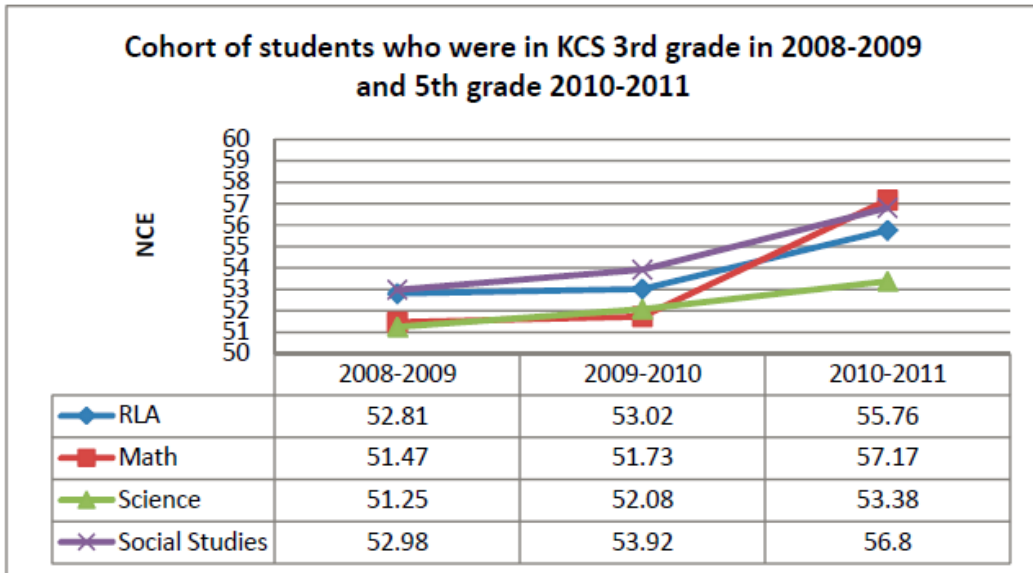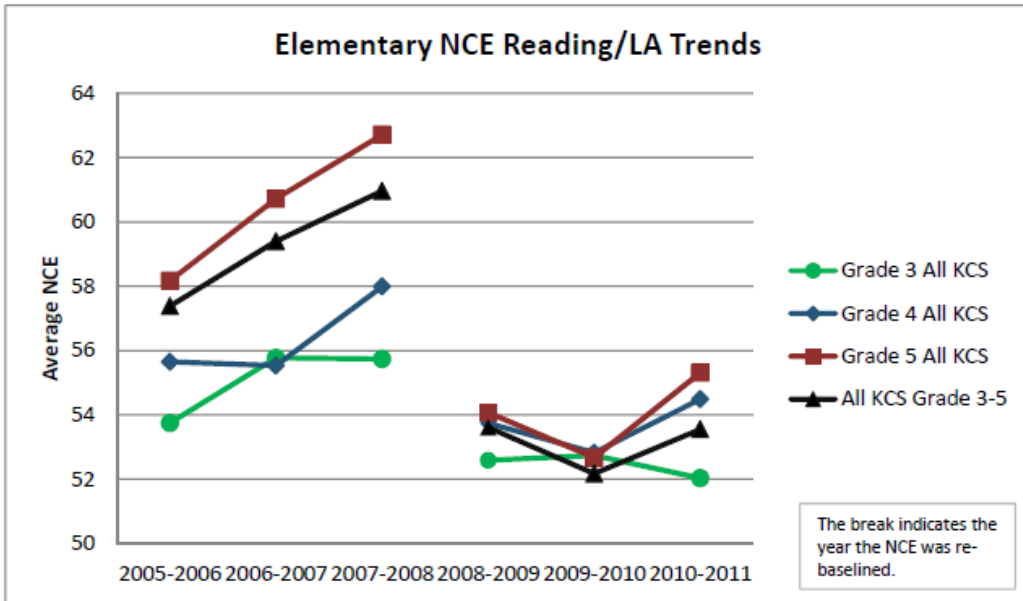
Math Coaches

One area that demonstrates the potential impact of coaching when implemented well is elementary and middle school math in the KCS. Math coaches were added in 2009-2010 through Title I and their coaching assignments remained relatively stable into the next year. Also, in 2010-2011, there was a supervisor each for elementary and secondary school math and a coordinated and focused strategy that aligned with literature-recommended elements of site-based professional development (PD) that reaches each teacher, focused professional development role that addresses real-time needs, and communication aligned across district.

The difference in outcomes from 2009-2010 to 2010-2011 were as follows:

- 42 of 47 elementary schools increased math percentage of proficient/advanced on TCAP (up to 17.1 percentage points)
- The KCS elementary math overall % P/A increased from 45.3% to 51.4%
- 13 of 14 middle schools increased % P/A (as high as 9.3 percentage points)
- The KCS middle school math overall %P/A increased from 40.7% to 44.6%.
- Mean NCE gain was significantly above the growth standard in all grades (from 1.8 to 4.9)
- Mean NCE gain for grades 4-8 was well above the state growth (+3.1).
- Anecdotally, high school math teachers have noted improvement in the preparedness of students entering this year, are adjusting lesson plans accordingly to improve value add (less need to repeat concepts addressed in middle school)

While another year of data is necessary to confirm whether this was a sustainable improvement or a recovery following adjustment to new standards, following are some specifics about the articulated strategy employed in 2010-2011 which lend credence to the former explanation.

- **Site-based PD that reaches each teacher**:
  - System-wide math coaches in Elementary (4 coaches) and Middle School (1 coach) provided multiple professional development (PD) sessions after school so all teachers could attend. (As opposed to previous PD for representatives during school day).
  - Allowed new reach to all teachers, particularly in elementary where math is taught at the same time for all teachers (by design per parallel block scheduling).
- **Focused PD role that addresses real-time needs:**
  - Identified skills needing most focus, used TCAP categorical data to find the weakest state performance indicators, surveyed teachers about the math content where they felt least comfortable, and later in the year made use of electronic math records and formative assessment data (Discovery Ed) to prioritize PD and track progress.
  - Delivered priority PD sessions focused on content areas with delivery timed to curriculum. (Previous PD focused on teaching methods, rarely driven by data or timed to curriculum.)
- **Role and communication aligned across district:**
  - Increased communication due to narrowed supervisor responsibilities (separate elementary and secondary supervisors) and a contact person at each school when coach was not present or principal not available. (Previously, one person was responsible for all elementary and secondary schools.)
  - Elementary supervisor concentrated on elementary needs and secondary supervisor concentrated on secondary needs, but coordinated strategies.
- **Plans for replicating success**
  - All math coaches (including Title I) report to system-wide supervisors this year (2011-2012).
  - Electronic math records and Discovery Ed has been in use all year 2011-2012 in middle schools and piloted during the second semester in some elementary schools.
  - Future TEAM evaluations to be used to identifying areas of focus for PD.

Conclusion

Based on the pockets of evidence available in Knox County and other districts, it appears that to achieve measurable results across a school system that would unequivocally justify the expense of the investment in an instructional coaching model, the following commitments are necessary:

- An allocation strategy that provides ample time to build relationships and provide comprehensive PD support for assigned schools;
- Consistent definition and implementation of roles and responsibilities;
- Short-term fidelity assessments the strategies are being implemented as designed and to assess the ongoing feasibility of the coaching model; and
- Articulation of the results expected (commensurate with resources available), with milestones and criteria for success or redirection of the investment.

Appendix H: Explanation of Normal Curve Equivalent (NCE)

Scores on standardized tests like TCAP are distributed in a typical bell curve, or normal curve. In a normal curve, 68% of students score within one standard deviation (σ) of the mean (34.13% on either side), and 95% of students score within two standard deviations.
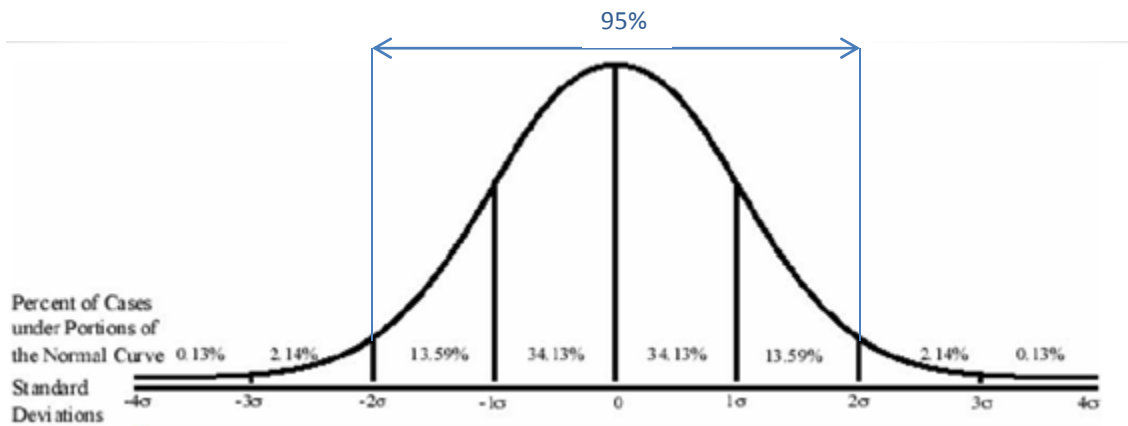
So, from the perspective of percentiles, the 75th percentile -- the point at which 75% of students score below -- is actually close to the center, within one standard deviation of the mean. If all the percentiles were displayed on a straight line, they would cluster in the middle, under the "bell".
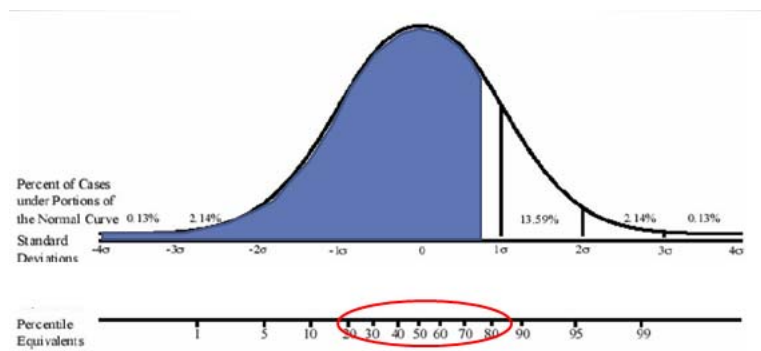
This means that a student moving 4 "percentiles" from the year before has different significance moving from the 95th to the 99th than moving from the 50th to the 54th percentile. However, there is value in being able to talk meaningfully about how far a student moved from year to year and to perform numerical calculations on that movement. Thus, "normal curve equivalent", or NCE, was conceived.

The normal curve equivalent is basically a straight line representation of normal distribution, with even spacing between segments. (So moving an NCE score by 4 means the same starting from 1 or 81.)

| Percent of Cases under Portions of the Normal Curve | 0.13% | 2.14% | 13.59% | 34.13% | 34.13% | 13.59% | 2.14% | 0.13% |

Standard Deviations: -4σ -3σ -2σ -1σ 0 1σ 2σ 3σ 4σ

Normal Curve Equivalents: 1 10 20 30 40 50 60 70 80 90 99

Percentile Equivalents: 1 5 10 20 30 40 50 60 70 80 90 95 99
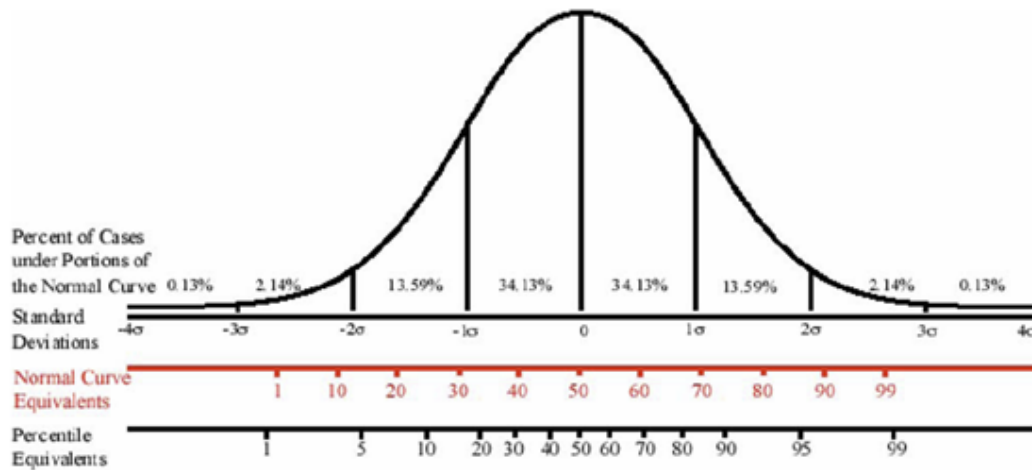
Another value of NCE for the purposes of determining "value added" is that the NCE line was built from a fixed baseline for comparison; it was created from the bell curve of the test takers in 2009, the first year the Tennessee performance standards changed. So an NCE score of 50 means the score was exactly the mean (average) of the 2009 test scores.

Appendix I: Glossary of Terms

100-90-90-90 – Located in the Knox County Schools' Strategic Plan, 100-90-90-90 states that:

- 100% of an entering freshman class will complete high school within four years
- 90% of those will graduate with a regular diploma
- 90% of those who graduate with a regular diploma will have taken the ACT exam
- 90% of those who have taken the ACT will have scored a composite 21 or higher

Achievement - Achievement grades are based on how well students performed on the TCAP assessments against the curriculum standards.

ACT - The ACT test is a curriculum- and standards-based educational and career planning tool that assesses students' academic readiness for college. A composite score of 21 or better is often considered an indicator of college and career readiness.

ADA – (Average Daily Attendance) – The total number of students in attendance on a given day at a school.

ADM – (Average Daily Membership) – The total enrollment at a school.

AP – (Advanced Placement) - college-level courses that a student can take in high school. Students can receive college credit for taking the courses, although not all colleges grant students college credit for the courses.

AYP – (Adequate Yearly Progress) - A measure of a school's or school system's ability to meet required federal benchmarks with specific performance standards from year to year.

BEP – (Basic Education Program) - the funding formula through which state education dollars are generated and distributed to Tennessee schools.

ED – (Economically Disadvantaged) – Students in schools determined to be eligible to participate in the Free or Reduced Lunch program under the National School Lunch Act. The National School Lunch Program (NSLP) is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day. The program was established under the National School Lunch Act, signed by President Harry Truman in 1946.

ELL – (English Language Learner) - Non-English speaking students.

EOC – (End-Of-Course) – Assessments for high school students that are criterion-referenced, multiple choice tests that measure Performance Indicators defined in the Tennessee Curriculum Standards.

First to the Top – Tennessee's branded education reform plan submitted in the federal Race to the Top competition. In 2010, the State of Tennessee was awarded more than $501 million in the federal government's Race to the Top competition for its bold and innovative education reform plan.

Fiscal Year – A budget year that begins on July 1 and ends on June 30.

General Purpose Fund – funding that pays for the day-to-day operations of the school system.

Free/Reduced Price Meals - These children are from families who meet certain income criteria making them eligible to receive free or reduced meals at school under the National School Lunch Act. (See more under "Economically Disadvantaged".)

Per Pupil Expenditure (Local, State and Federal) - Total current operating expenditures on a per pupil basis. Some examples are instructional materials, maintenance, and transportation.

Race to the Top – Created by the American Recovery and Reinvestment Act (ARRA), Race to the Top provides competitive grants designed to encourage and reward states that are implementing ambitious plans in education reform.

Report Card - The Tennessee Education Improvement Act of 1992 established accountability standards for all public schools in the state and required the Department of Education to produce a Report Card for the public to assess each year.

ROI – (Return on Investment) – A performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments.

TAP – TAP: The System for Teacher and Student Advancement is a revolutionary education reform that provides teachers with powerful opportunities for career advancement, ongoing job-embedded professional development, educator evaluation and performance-based compensation. TAP is now in place at 14 schools in Knox County.

TCAP – (Tennessee Comprehensive Assessment Program) - The TCAP Achievement test uses multiple choice questions that provide a measure of knowledge and application skills in various subject areas for grades K-8. The results of the TCAP Achievement Test provide valuable information regarding student's progress in Tennessee. The TCAP Achievement test is mandated for all students in grades 3-8. The test is not mandated for grades K-2; however, school systems may elect to test students in K, 1 and/or 2.

TEAM – (Tennessee Educator Acceleration Model) - The new teacher evaluation system that was introduced across the state of Tennessee in the 2012-2013 school year. The new system supports principals and teachers working together to ensure that students benefit from the best possible instruction every day. Through a combination of frequent observation, constructive feedback, measures of student learning and aligned development opportunities, TEAM offers both a holistic view of a teacher's effectiveness in the classroom as well as a structure and roadmap for improvement at every level of our system.

Title I - Federally funded programs in high poverty schools that target children with low achievement.

TVAAS (Value-Added) - Value-added measures student progress within a grade and subject, which demonstrates the influence the school has on the students' performance. This reporting provides diagnostic information for improving educational opportunities for students at all achievement levels.

Appendix J: Summary of Report Version Changes

Changes from 09 March 2012 draft to 13 April 2012:

- The table labeled "Per Pupil Expenditure Analysis" on page 26 was revised with more specific and comparable per pupil data. The conclusions were not affected.
- The table labeled "Change in normal curve equivalent before and after implementation of parallel block" and related text on pages 75 and 76 were revised to correct an inversion in the calculations. The conclusion was not affected.
- Typographical errors were corrected in punctuation, minor grammar, and formatting, including removal of blank page 28 (subsequent pages were renumbered accordingly).
- The Knox County Schools Central Office Addendum was attached as an appendix.

Appendix K: Central Administration Addendum

(see following pages)

CENTRAL ADMINISTRATION ADDENDUM

to the

KNOX COUNTY SCHOOLS

RETURN ON INVESTMENT REPORT

April 5, 2012

KNOX COUNTY SCHOOLS
RETURN ON INVESTMENT (ROI) REPORT
April 5, 2012

Central Administration Addendum

<u>Background</u>

In Tennessee, public education services are provided through a system of county and municipal school districts that are governed by locally elected Boards of Education. State statute provides for these boards to employ a Director of Schools or Superintendent to serve as the Chief Executive Officer and oversee the operation of the school district. In statute, regulation and Board of Education policy, the Superintendent is charged with the proper oversight of the required instructional and administrative functions of the school district, as well as with ensuring appropriate support for schools to carry out their educational mission.

Given the breadth of the federal, state and local statutory and regulatory requirements placed upon school systems, superintendents must establish an administrative support and oversight structure, tailored to their district's particular circumstances, which will allow the district to support and advance the education of the community's children as well as comply with pertinent laws and regulations. This administrative oversight and support structure is commonly referred to as the district office or central office. The central office serves to help facilitate the good and proper operation of the schools in the district, maintain compliance with federal, state and local mandates, and, most importantly, to ensure that high quality education is provided to our children.

The Knox County Schools central office is organized to oversee and support the district in two general areas: Curriculum and Instruction and Administrative Services. Curriculum and Instruction functions include the daily oversight and adherence to standards for a broad array of educational services and programs as well as the general administration of the district's 88 schools. Administrative services functions include finance, payroll, accounts payable, information technology and Human Resources operations as well as management of the district's transportation, facilities maintenance, construction, food service and security

operations. The Knox County Schools is a district of over 56,000 students with more than 90 separate and distinct sites spread over 500 square miles. The central office supervises instructional and support operations for the district and manages over 7,500 personnel with just over 200 supervisory, clerical, and technical staff members. This represents a total administrative overhead of about 2% of total positions.

Analysis

Historically, there has been much public discourse regarding perceptions of the Knox County Schools central office staffing, but much of the rhetoric has simply been inaccurate. In 2001, at the request of the Knox County Commission and the Knox County Board of Education, the firm of McConnell, Jones, Lanier and Murphy (MJLM) completed a management and performance review of the Knox County Schools central office. This analysis found that "the KCS' Central Office administration is understaffed when compared to its peers." MJLM went on to state that their research found the KCS spent less for administration than did any of its peer districts, and that the KCS administrative staffing level was 55% below that of the peer districts. The level of staffing observed by MJLM in 2001 is still consistent with the KCS' current central administration staffing.

KCS Central Office Positions
FY08-12

US DoE data shows KCS Central Office is lean compared to other top 100 school systems

KCS Central Office cut by more than 8% since FY2009
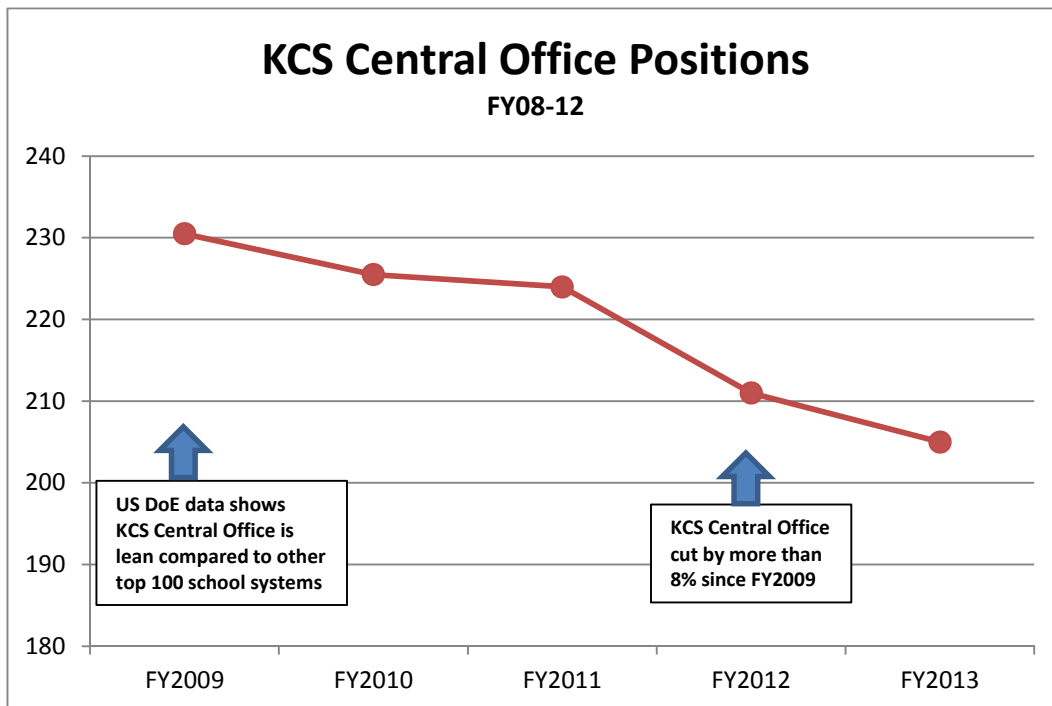
National studies show that the KCS central administration, as a percentage of overall staffing, is smaller than most comparable school districts.[1] According to the United States Department of Education's National Center for Education Statistics, among the 100 largest school districts in America (KCS is 74th) the Knox County Schools ranks seventh (7th) in the percentage of its budget that is dedicated to instruction and instructional support, and the district tied for 100th in the proportion of total positions committed to local education agency (school district) administration. Information from these reports is attached in Appendix A.

Since 2009, KCS has closely reviewed central office operations and administrative staffing, and has made significant reductions and adjustments to be more cost efficient. Over the past three fiscal years, the Knox County Schools has implemented budget reductions in all administrative and operational areas, with the intentional exception of school security and human resources. At the same time, the KCS has increased spending in only three other areas of the budget: instruction, instructional support, and debt service. Clearly, the school system is purposefully allocating funding to its highest priorities: activities that directly support classroom instruction and student learning.

In the FY12 budget, the KCS central administration experienced a significant budget reduction including more than a dozen position cuts in the central office. With this most recent slate of position reductions, we have now cut more than 8% of all central office positions since FY2009. The current administration and support staffing is Appendix B to this document.   As changes have been made in how learning is enabled and enhanced at the school level, the KCS has also reviewed how support, oversight and quality assurance at the central administration level is provided. While our central office is demonstrably lean as compared to peer districts, the KCS is committed to continuing to realize efficiencies in its supervisory and clerical infrastructure.

Over the last four fiscal years, the vast majority of the $14.7 million increase in the total operating budget experienced by the Knox County Schools has gone into Classroom Instruction

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[1] Allan Odden, Carolyn Busch, Financing Schools for High Performance (Jossey-Bass, 1998) pp.17-25 and the National Center for Education Statistics Data on staffing and budget for the nation's100 largest school systems.

and Instruction Support to support our central mission of effective education. Virtually all of the remaining additional funding was committed to satisfying scheduled Debt Service and other district level requirements. Cost cutting in the area of Administration has offset modest increases in the budgeted costs of Operations, Student Transportation, and Security. The illustration below graphically depicts these aggregated budget growth and reduction dynamics.

Operating Budget -- Net Growth by Area of Utilization -- FY 2009-2012 (millions)
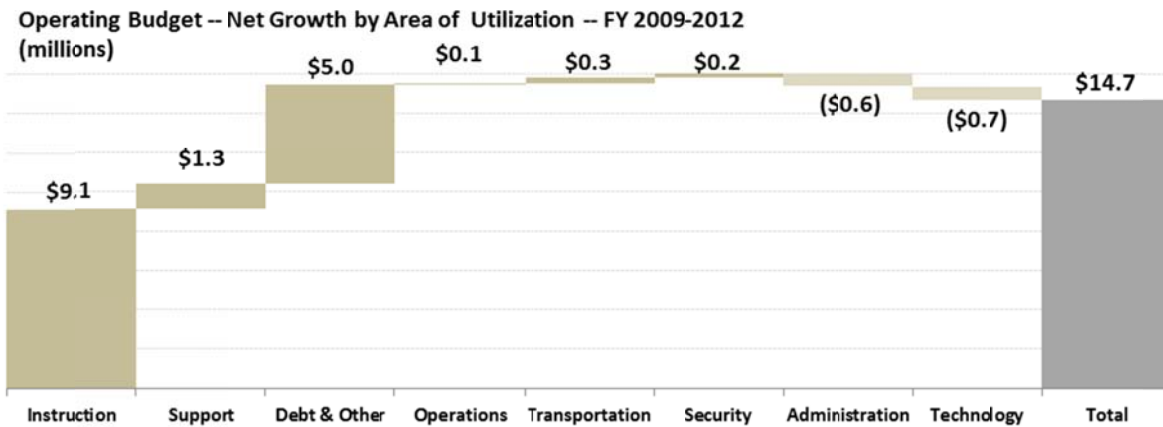
As part of our focus on redirecting district resources into the schools, during the four year period FY 2009 to FY 2012, the KCS spending for management and supervisory positions has also shifted from those in district-level administrative support areas to those in school locations. Spending budgeted for Principals, Assistant Principals, and Counselors have increased 6.7%, while the budget for Supervisors, Directors, and Superintendents has been cut by 8.9%.

This is graphically depicted in the illustration below.
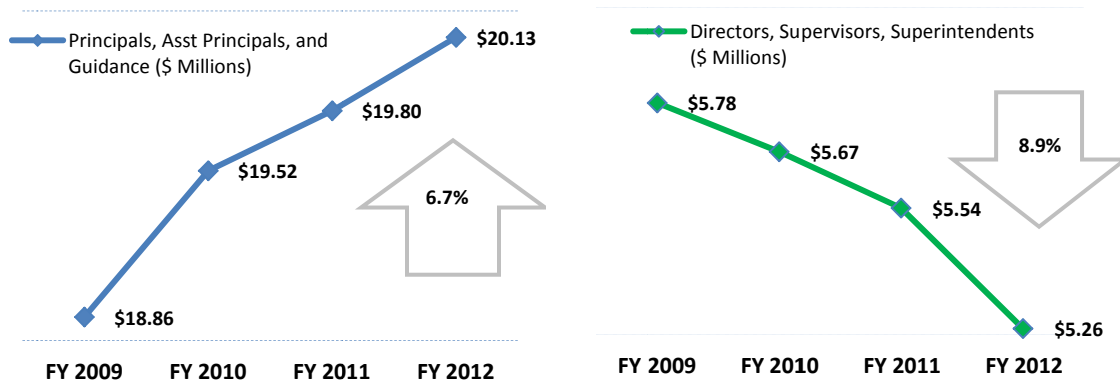
One of the predominant themes that emerged from the benchmarking research undertaken as part of the return on investment analysis project was that student outcomes depend on program and instructional fidelity, which depends on consistency in focus and support. This fidelity and consistency depends on leadership and appropriate investment. The Knox County Schools central administration's fundamental role is to provide the leadership and supervision that leads to fidelity and consistency in all classrooms and schools across the district. Given the comparative administrative resource levels between the KCS and peer districts, and the fact that the KCS has consistently been one of the higher performing large school systems in the state, the KCS central administration has been remarkably effective in its management and leadership.

While the Knox County Schools central office has been found to be a lean and flat organization compared with peer districts, the district is committed to continuous assessment and improvement in its organizational efficiency and effectiveness. The requisite staffing levels and skill sets to appropriately administer the school system will remain a focus of assessment as evidenced in the FY12 central office staffing reduction and reorganization.

Central Office Reorganization

In the summer of 2011, the central office was reorganized in an effort to more efficiently provide effective oversight and support to school administrators, teachers, and students. While a number of smaller organizational changes were made, the major reorganizational activities were confined primarily to the Human Resources and Curriculum and Instruction Departments.

Human Resources

Since 2009, two outside studies were completed that made recommendations concerning how our Human Resources Department could be organized to better support our school administrators and employees. The Central Office Review for Results and Equity (CORRE) was completed by the Annenberg Institute for School Reform at Brown University, and Michelle Boyers, an independent human resources analyst, also completed a review specific to our human resource operations. A human resource support design has been implemented to address the recommendations made in the reports issued at the end of both studies. The reorganization actions were generally budget neutral, and

included the following:

1. Consolidation of the benefits and employee relations functions under the human resources department in an effort to better coordinate this support function with the larger human resource operation. Previously this function had been part of the Knox County Schools Finance Department. Part of this action was also to reallocate resources to create a retirement manager and an investigation and discipline manager;

2. Creation of a human capital strategy function that is intended to address recruiting, induction, ensuring that we have the best possible talent in our classrooms, and focusing on capacity building and continuous instructional improvement;

3. Consolidation of human resources operations under a single supervisory chain to ensure that this function that is fully focused on staffing and day to day employee and administrator support activities.

Curriculum and Instruction

In 2011, the KCS administration looked closely at the alignment for support within the Curriculum and Instruction Department, and implemented some changes there as well. Perhaps the most significant organizational move was to align the Chief Accountability Officer (CAO) as a direct report to the Assistant Superintendent of Curriculum and Instruction with a coordinating relationship directly to the Superintendent. The CAO has direct supervision over all curriculum subject areas as well as federal programs, research, and testing. The reorganization also accomplished the following:

1. Aligned related arts and world languages under a single supervisor supported by subject area specialists in each of the arts, Physical Education/Wellness, English Language Learners and world languages.

2. Aligned the secondary school supervisory structure with that which is already in place for elementary schools by combining middle school and high school under a single director with support from a secondary education supervisor. This is an outgrowth of the recent work toward greater vertical alignment and coordination and this action is expected to enhance those efforts.

3. Created a position for an accountability specialist to expand the ability to evaluate programs and strategies as well as to provide direct support to schools and teachers.

These reorganization actions should allow sustained appropriate support with a reduced expenditure of resources in some areas while expanding and enhancing support in other areas, all while reducing the overall number of positions in our central office.

Conclusion

The Knox County Schools central office has been found to be a lean and efficient organization as compared with peer school districts. We have worked hard to ensure that the central office is an effective, efficient and appropriate structure to support and oversee the educational mission of the Knox County Schools. Additionally, the district is committed to continued assessment and improvement in its organizational efficiency and effectiveness. The requisite staffing levels and skill sets to appropriately administer the school system will remain a focus, and the central office structure and support to schools will be adapted to meet the needs of schools in the ever changing educational environment. We will continue to ensure the central office is best structured and efficiently resourced to enable and support high quality instruction in our classrooms which will help us to achieve our ambitious goal of *Excellence for All Children.*

Appendix A

Table 7. Total students, revenues, current expenditures, and current expenditures per pupil for the 100 largest public elementary and secondary school districts in the United States, by school district: Fiscal year 2008

	Name of reporting district	State	Total students (fall membership)[1]	Revenues by source [in thousands of dollars]				Current expenditures [in thousands of dollars]		Current expenditures per pupil	Instruction as % of total[3]
				Total	Federal	State	Local	Total current[2]	Instruction and instruction-related		
1	New York City School District	New York	$ 989,941	$ 19,885,693	$ 1,785,145	$ 9,335,189	$ 8,765,359	$ 17,742,868	$ 13,579,095	$ 17,923	76.53%
2	Polk County School District	Florida	$ 93,980	$ 1,250,657	$ 82,891	$ 611,812	$ 555,954	$ 1,017,453	$ 758,602	$ 10,826	74.56%
3	Alpine School District	Utah	$ 63,856	$ 428,596	$ 35,566	$ 256,479	$ 136,551	$ 327,145	$ 238,954	$ 5,123	73.04%
4	Cobb County School District	Georgia	$ 107,307	$ 1,157,791	$ 66,790	$ 450,898	$ 640,103	$ 1,011,702	$ 732,211	$ 9,428	72.37%
5	Shelby County School District	Tennessee	$ 46,918	$ 367,604	$ 20,894	$ 167,253	$ 179,457	$ 345,192	$ 245,592	$ 7,357	71.15%
6	Plano Independent School District 910	Texas	$ 53,683	$ 611,837	$ 21,894	$ 134,561	$ 455,382	$ 441,662	$ 310,495	$ 8,227	70.30%
7	Knox County School District	Tennessee	$ 54,490	$ 487,605	$ 43,208	$ 147,872	$ 296,525	$ 429,304	$ 299,791	$ 7,879	69.83%
8	Capistrano Unified School District	California	$ 52,390	$ 453,589	$ 23,800	$ 146,857	$ 282,932	$ 417,759	$ 291,451	$ 7,974	69.77%
9	Granite School District	Utah	$ 75,982	$ 505,372	$ 58,887	$ 289,476	$ 157,009	$ 412,839	$ 287,441	$ 5,433	69.63%
10	Brevard County School District	Florida	$ 74,369	$ 747,371	$ 51,979	$ 330,491	$ 364,901	$ 627,018	$ 436,342	$ 8,431	69.59%
11	Loudoun County Schools	Virginia	$ 53,961	$ 814,891	$ 19,645	$ 164,990	$ 630,256	$ 710,769	$ 494,280	$ 13,172	69.54%
12	Montgomery County Schools	Maryland	$ 137,717	$ 2,604,887	$ 93,751	$ 564,940	$ 1,946,196	$ 2,066,022	$ 1,433,552	$ 15,002	69.39%
13	Jordan School District	Utah	$ 85,651	$ 635,282	$ 45,641	$ 333,609	$ 256,032	$ 455,306	$ 315,908	$ 5,316	69.38%
14	Hillsborough County School District	Florida	$ 193,180	$ 2,068,665	$ 247,129	$ 1,034,236	$ 787,300	$ 1,613,384	$ 1,113,859	$ 8,352	69.04%
15	Arlington Independent School	Texas	$ 62,863	$ 537,280	$ 49,128	$ 215,190	$ 272,962	$ 482,911	$ 333,377	$ 7,682	69.03%
16	Palm Beach County School District	Florida	$ 170,883	$ 2,183,132	$ 138,401	$ 494,375	$ 1,550,356	$ 1,605,194	$ 1,106,702	$ 9,394	68.95%
17	Fresno Unified School District	California	$ 76,460	$ 838,633	$ 123,361	$ 590,206	$ 125,066	$ 768,663	$ 529,797	$ 10,053	68.92%
18	Santa Ana Unified School District	California	$ 57,061	$ 564,867	$ 69,466	$ 366,775	$ 128,626	$ 544,084	$ 374,976	$ 9,535	68.92%
19	Boston City Schools	Massachusetts	$ 56,168	$ 1,313,368	$ 91,360	$ 393,426	$ 828,582	$ 1,141,536	$ 784,842	$ 20,324	68.75%
20	Gwinnett County Schools	Georgia	$ 155,618	$ 1,764,516	$ 95,838	$ 789,298	$ 879,380	$ 1,489,304	$ 1,022,600	$ 9,570	68.66%
21	Cypress-Fairbanks Independent School District 9	Texas	$ 96,837	$ 792,371	$ 43,607	$ 314,951	$ 433,813	$ 691,201	$ 474,174	$ 7,138	68.60%
22	Howard County Schools	Maryland	$ 49,542	$ 805,247	$ 20,014	$ 234,350	$ 550,883	$ 688,449	$ 471,731	$ 13,896	68.52%
23	North East Independent School District 910	Texas	$ 62,181	$ 661,970	$ 33,815	$ 200,974	$ 427,181	$ 517,876	$ 354,183	$ 8,329	68.39%
24	Orange County School Board	Florida	$ 174,142	$ 1,974,283	$ 155,268	$ 726,790	$ 1,092,225	$ 1,524,737	$ 1,042,541	$ 8,756	68.38%
25	Lewisville Independent School District 902	Texas	$ 49,636	$ 495,986	$ 21,186	$ 136,820	$ 337,980	$ 401,301	$ 274,125	$ 8,085	68.31%
26	Garden Grove Unified School Dist	California	$ 48,669	$ 468,369	$ 41,967	$ 321,929	$ 104,473	$ 456,637	$ 311,884	$ 9,383	68.30%
27	Fairfax County Schools	Virginia	$ 165,722	$ 2,313,386	$ 87,266	$ 456,974	$ 1,769,146	$ 2,199,910	$ 1,501,261	$ 13,275	68.24%
28	Forsyth County-Winston Salem Schools	North Carolina	$ 50,907	$ 505,580	$ 45,335	$ 295,382	$ 164,863	$ 441,088	$ 300,815	$ 8,665	68.20%
29	Duval County School District	Florida	$ 124,740	$ 1,238,175	$ 106,117	$ 577,864	$ 554,194	$ 1,079,389	$ 735,878	$ 8,653	68.18%
30	Los Angeles Unified School District	California	$ 693,680	$ 9,551,053	$ 1,053,853	$ 6,660,389	$ 1,836,811	$ 7,878,168	$ 5,369,564	$ 11,357	68.16%
31	El Paso Independent School District 902	Texas	$ 62,123	$ 583,899	$ 87,626	$ 314,657	$ 181,616	$ 535,196	$ 364,400	$ 8,615	68.09%
32	Elk Grove Unified School District	California	$ 62,294	$ 596,705	$ 39,960	$ 396,509	$ 160,236	$ 532,880	$ 362,820	$ 8,554	68.09%
33	San Juan Unified School District	California	$ 47,400	$ 480,125	$ 40,410	$ 303,399	$ 136,316	$ 433,280	$ 294,438	$ 9,141	67.96%
34	Davis County School District	Utah	$ 70,323	$ 485,031	$ 40,386	$ 305,454	$ 139,191	$ 391,263	$ 265,596	$ 5,564	67.88%
35	Fulton County School District	Georgia	$ 86,225	$ 1,068,153	$ 45,181	$ 309,750	$ 713,222	$ 886,651	$ 600,606	$ 10,283	67.74%
36	Northside Independent School District 915	Texas	$ 86,260	$ 766,936	$ 57,934	$ 318,919	$ 390,083	$ 673,741	$ 456,378	$ 7,811	67.74%
37	Dallas Independent School District 905	Texas	$ 157,804	$ 1,613,014	$ 216,482	$ 473,768	$ 922,764	$ 1,457,429	$ 986,852	$ 9,236	67.71%
38	Chesterfield County Schools	Virginia	$ 58,969	$ 609,461	$ 24,364	$ 287,533	$ 297,564	$ 532,178	$ 359,722	$ 9,025	67.59%
39	Wake County Schools	North Carolina	$ 133,649	$ 1,264,960	$ 68,546	$ 691,684	$ 504,730	$ 1,030,073	$ 695,737	$ 7,707	67.54%
40	Dekalb County School District	Georgia	$ 100,273	$ 1,245,461	$ 83,281	$ 448,301	$ 713,879	$ 1,059,607	$ 715,201	$ 10,567	67.50%
41	Seminole County School District	Florida	$ 65,378	$ 633,500	$ 40,109	$ 297,872	$ 295,519	$ 529,379	$ 357,008	$ 8,097	67.44%
42	Clayton County School District	Georgia	$ 52,717	$ 567,961	$ 55,651	$ 264,392	$ 247,918	$ 485,152	$ 327,128	$ 9,203	67.43%
43	Corona Norco Unified School District	California	$ 51,322	$ 476,836	$ 26,997	$ 306,419	$ 143,420	$ 414,555	$ 279,180	$ 8,078	67.34%
44	Virginia Beach City Schools	Virginia	$ 72,477	$ 808,886	$ 61,932	$ 377,236	$ 369,718	$ 749,676	$ 504,471	$ 10,344	67.29%
45	Henrico County Schools	Virginia	$ 48,620	$ 474,941	$ 25,736	$ 220,878	$ 228,327	$ 420,874	$ 283,131	$ 8,656	67.27%
46	Cleveland City School District	Ohio	$ 52,954	$ 922,544	$ 127,424	$ 546,741	$ 248,379	$ 656,258	$ 440,940	$ 12,393	67.19%
47	City Of Chicago School District 299	Illinois	$ 407,510	$ 4,844,616	$ 808,902	$ 1,845,925	$ 2,189,789	$ 4,235,025	$ 2,843,497	$ 10,392	67.14%
48	Baltimore City Schools	Maryland	$ 81,284	$ 1,397,983	$ 162,776	$ 937,373	$ 297,834	$ 1,154,284	$ 774,067	$ 14,201	67.06%
49	Anne Arundel County Schools	Maryland	$ 73,400	$ 1,003,238	$ 45,951	$ 323,201	$ 634,086	$ 877,288	$ 588,165	$ 11,952	67.04%
50	Miami-Dade County Public School District	Florida	$ 348,128	$ 3,959,408	$ 427,479	$ 1,431,109	$ 2,100,820	$ 3,457,902	$ 2,315,134	$ 9,933	66.95%
51	Fort Bend Independent School District 907	Texas	$ 67,992	$ 571,456	$ 29,488	$ 252,517	$ 289,451	$ 519,209	$ 347,217	$ 7,636	66.87%
52	Long Beach Unified School District	California	$ 88,186	$ 914,366	$ 130,977	$ 660,542	$ 122,847	$ 850,615	$ 568,479	$ 9,646	66.83%
53	Garland Independent School District 909	Texas	$ 57,169	$ 482,310	$ 38,863	$ 247,658	$ 195,789	$ 436,329	$ 290,813	$ 7,632	66.65%
54	Osceola County School District	Florida	$ 52,742	$ 628,244	$ 44,158	$ 320,426	$ 263,660	$ 450,830	$ 300,320	$ 8,548	66.61%
55	Cumberland County Schools	North Carolina	$ 52,407	$ 458,835	$ 60,684	$ 288,445	$ 109,706	$ 401,361	$ 267,102	$ 7,659	66.55%
56	San Antonio Independent School District 907	Texas	$ 54,779	$ 541,408	$ 91,324	$ 298,733	$ 151,351	$ 473,536	$ 314,405	$ 8,644	66.40%
57	Broward County School District	Florida	$ 258,893	$ 2,874,695	$ 233,523	$ 1,132,545	$ 1,508,627	$ 2,339,595	$ 1,551,639	$ 9,037	66.32%
58	Memphis City Schools	Tennessee	$ 115,342	$ 1,119,814	$ 160,100	$ 441,915	$ 517,799	$ 1,024,956	$ 679,740	$ 8,886	66.32%
59	Volusia County School District	Florida	$ 64,488	$ 713,726	$ 51,040	$ 260,755	$ 401,931	$ 564,674	$ 374,448	$ 8,756	66.31%
60	Sacramento City Unified School District	California	$ 48,446	$ 545,693	$ 78,196	$ 345,913	$ 121,584	$ 486,908	$ 322,847	$ 10,051	66.31%
61	Katy Independent School District 914	Texas	$ 54,402	$ 508,389	$ 20,328	$ 218,887	$ 269,174	$ 413,816	$ 273,788	$ 7,607	66.16%
62	Brownsville Independent School District 901	Texas	$ 48,837	$ 473,510	$ 78,215	$ 322,296	$ 72,999	$ 422,879	$ 279,176	$ 8,659	66.02%
63	Pinellas County School District	Florida	$ 107,892	$ 1,211,026	$ 94,072	$ 454,583	$ 662,371	$ 966,587	$ 638,052	$ 8,959	66.01%
64	San Francisco Unified School District	California	$ 55,069	$ 668,282	$ 69,870	$ 258,139	$ 340,273	$ 534,762	$ 351,320	$ 9,711	65.70%
65	Cherry Creek School District 5	Colorado	$ 50,601	$ 493,657	$ 19,321	$ 203,803	$ 270,533	$ 432,943	$ 284,368	$ 8,556	65.68%
66	Jefferson County School District R-1	Colorado	$ 86,168	$ 858,375	$ 40,484	$ 346,754	$ 471,137	$ 714,118	$ 468,832	$ 8,288	65.65%
67	San Bernardino City Unified School District	California	$ 56,727	$ 797,791	$ 73,382	$ 657,628	$ 66,781	$ 553,930	$ 363,083	$ 9,765	65.55%
68	Pasadena Independent School District 917	Texas	$ 50,757	$ 464,800	$ 45,440	$ 264,859	$ 154,501	$ 400,615	$ 261,637	$ 7,893	65.31%
69	Baltimore County Schools	Maryland	$ 104,283	$ 1,518,801	$ 81,477	$ 644,803	$ 792,521	$ 1,263,668	$ 824,381	$ 12,118	65.24%
70	Prince William County Schools	Virginia	$ 72,988	$ 878,492	$ 34,356	$ 366,747	$ 477,389	$ 756,805	$ 492,558	$ 10,369	65.08%
71	Nashville Davidson County Schools	Tennessee	$ 73,715	$ 740,835	$ 78,816	$ 200,955	$ 461,064	$ 678,154	$ 439,516	$ 9,200	64.81%
72	Douglas County School District Re 1	Colorado	$ 52,983	$ 515,086	$ 11,217	$ 203,468	$ 300,401	$ 445,843	$ 288,892	$ 8,415	64.79%
73	Austin Independent School District 901	Texas	$ 82,564	$ 970,089	$ 85,664	$ 231,489	$ 652,936	$ 745,978	$ 482,385	$ 9,035	64.66%
74	Houston Independent School District 912	Texas	$ 199,534	$ 2,059,689	$ 267,705	$ 597,926	$ 1,194,058	$ 1,716,764	$ 1,106,808	$ 8,604	64.47%
75	Clark County School District	Nevada	$ 309,051	$ 3,111,868	$ 196,022	$ 852,790	$ 2,063,056	$ 2,486,063	$ 1,599,505	$ 8,044	64.34%
76	Guilford County Schools	North Carolina	$ 70,960	$ 716,338	$ 67,308	$ 382,482	$ 266,548	$ 605,653	$ 388,916	$ 8,535	64.21%
77	Washoe County School District	Nevada	$ 65,663	$ 618,949	$ 45,021	$ 208,833	$ 365,095	$ 537,291	$ 344,900	$ 8,183	64.19%
78	Charlotte-Mecklenburg Schools	North Carolina	$ 130,979	$ 1,345,133	$ 105,771	$ 690,492	$ 548,870	$ 1,062,880	$ 682,134	$ 8,115	64.18%
79	Hawaii Public Schools	Hawaii	$ 179,897	$ 2,541,703	$ 310,732	$ 2,154,313	$ 76,658	$ 2,122,779	$ 1,359,347	$ 11,800	64.04%
80	Pasco County School Board	Florida	$ 66,314	$ 713,902	$ 55,039	$ 378,537	$ 280,326	$ 557,214	$ 356,811	$ 8,403	64.03%
81	Omaha City School District 1	Nebraska	$ 47,763	$ 545,674	$ 88,496	$ 195,808	$ 261,370	$ 436,291	$ 279,029	$ 9,134	63.95%
82	Fort Worth Independent School District 905	Texas	$ 78,857	$ 725,234	$ 96,921	$ 316,310	$ 312,003	$ 679,641	$ 434,468	$ 8,619	63.93%
83	Anchorage School District	Alaska	$ 48,857	$ 650,738	$ 61,866	$ 394,410	$ 194,462	$ 611,450	$ 390,547	$ 12,515	63.87%
84	Greenville County School District	South Carolina	$ 69,444	$ 684,420	$ 55,081	$ 367,719	$ 261,620	$ 557,779	$ 355,470	$ 8,032	63.73%
85	San Diego City Unified School District	California	$ 131,577	$ 1,560,549	$ 144,969	$ 623,080	$ 792,500	$ 1,355,940	$ 863,079	$ 10,305	63.65%
86	Mesa Unified School District	Arizona	$ 73,044	$ 635,243	$ 55,855	$ 330,173	$ 249,215	$ 542,481	$ 344,356	$ 7,427	63.48%
87	Milwaukee City School District	Wisconsin	$ 86,819	$ 1,187,218	$ 186,192	$ 707,164	$ 293,862	$ 1,103,006	$ 697,993	$ 12,705	63.23%
88	Aldine Independent School District 902	Texas	$ 60,083	$ 559,919	$ 68,093	$ 304,002	$ 187,824	$ 497,157	$ 314,155	$ 8,275	63.19%
89	Columbus City School District	Ohio	$ 55,269	$ 910,711	$ 130,197	$ 341,345	$ 439,169	$ 718,622	$ 453,974	$ 13,002	63.17%

Table 7. Total students, revenues, current expenditures, and current expenditures per pupil for the 100 largest public elementary and secondary school districts in the United States, by school district: Fiscal year 2008

	Name of reporting district	State	Total students (fall membership)[1]	Revenues by source [in thousands of dollars]				Current expenditures [in thousands of dollars]		Current expenditures per pupil	Instruction as % of total [3]
				Total	Federal	State	Local	Total current[2]	Instruction and instruction-related		
90	Jefferson County School District	Kentucky	$ 95,871	$ 1,087,693	$ 114,025	$ 455,522	$ 518,146	$ 955,482	$ 601,987	$ 9,966	63.00%
91	Denver School District 1	Colorado	$ 73,053	$ 861,239	$ 93,657	$ 239,598	$ 527,984	$ 1,151,102	$ 724,476	$ 15,757	62.94%
92	Albuquerque School District	New Mexico	$ 95,965	$ 999,503	$ 87,819	$ 742,891	$ 168,793	$ 802,455	$ 504,779	$ 8,362	62.90%
93	Lee County School District	Florida	$ 80,541	$ 980,391	$ 67,054	$ 220,143	$ 693,194	$ 701,153	$ 440,066	$ 8,706	62.76%
94	Prince Georges County Schools	Maryland	$ 129,752	$ 1,926,633	$ 117,772	$ 1,039,575	$ 769,286	$ 1,757,026	$ 1,077,527	$ 13,541	61.33%
95	Mobile County School District	Alabama	$ 64,375	$ 618,181	$ 75,127	$ 376,648	$ 166,406	$ 582,585	$ 354,871	$ 9,050	60.91%
96	Detroit Public School District	Michigan	$ 107,874	$ 1,317,526	$ 168,009	$ 814,536	$ 334,981	$ 1,296,236	$ 752,375	$ 12,016	58.04%
97	Philadelphia School District	Pennsylvania	$ 172,704	$ 2,567,483	$ 311,595	$ 1,368,208	$ 887,680	$ 1,623,187	$ 937,052	$ 9,399	57.73%
98	Atlanta Public Schools	Georgia	$ 49,991	$ 869,896	$ 88,718	$ 162,938	$ 618,240	$ 675,668	$ 380,854	$ 13,516	56.37%
99	Tucson Unified School District 1	Arizona	$ 59,327	$ 545,561	$ 63,503	$ 271,967	$ 210,091	$ 471,360	$ 264,048	$ 7,945	56.02%
100	DC Public Schools	DC	$ 58,191	$ 1,224,312	$ 85,568	†	$ 1,138,744	$ 849,259	$ 450,537	$ 14,594	53.05%

† Not applicable.

[1] The student membership obtained from the Common Core of Data (CCD) fiscal district data collection may vary slightly from the student membership obtained from the CCD nonfiscal data collection.

[2] Total current expenditures include instruction, instruction-related, support services, and other elementary/secondary current expenditures, but exclude expenditures on capital outlay, other programs and payments to state and local governments, interest on long-term debt, and payments to private and charter schools.

[3] This column was added locally to be able to sort districts by percentage of budget spent on instruction.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "School District Finance Survey (F-33)," fiscal year 2008, Version 1a.

Table A-5.   Percentage distribution of full-time-equivalent (FTE) staffing types in public elementary and secondary schools in the 100 largest school districts in the United States and jurisdictions, by school district: School year 2008–09

Name of reporting district	State	Total FTE staff positions	Teaching	Instructional support	Guidance counseling	Library media staff	LEA[2] administration	School administration	Other[3]
Reporting districts[4]	†	**1,347,762**	**52.3**	**9.4**	**1.8**	**1.2**	**0.8**	**2.7**	**31.9**
Davidson County School District	TN	10,735	49.4	7.1	2.7	2.0	#	2.3	36.4
Memphis City School District	TN	12,636	57.0	9.2	2.3	1.3	#	3.2	27.0
Tucson Unified District	AZ	6,172	54.3	12.0	1.8	1.3	#	2.7	27.8
Baltimore City Public Schools	MD	11,517	50.7	12.5	1.3	0.9	3.9	4.1	26.6
Montgomery County Public Schools	MD	19,870	47.3	11.4	2.3	2.0	3.8	2.5	30.6
Anne Arundel County Public Schools	MD	9,235	53.5	8.9	2.2	2.8	3.1	3.2	26.3
Atlanta Public Schools	GA	6,968	54.0	14.0	1.7	1.3	3.1	2.7	23.2
Howard County Public Schools	MD	7,506	51.8	16.8	1.9	2.0	2.8	3.0	21.7
Houston Independent School District	TX	24,488	49.0	7.0	0.8	0.8	2.5	2.8	37.1
Baltimore County Public Schools	MD	14,187	51.7	7.5	2.1	1.3	2.5	3.1	31.8
Anchorage School District	AK	5,890	48.2	11.6	1.8	1.7	2.4	4.1	30.2
Albuquerque Public Schools	NM	13,304	49.2	17.6	1.7	0.7	2.4	2.6	25.7
Boston	MA	7,771	56.3	14.2	0.7	0.3	2.1	4.9	21.4
Prince George's County Public Schools	MD	18,292	48.5	8.6	2.1	0.9	2.1	3.3	34.6
San Bernardino City Unified	CA	4,748	55.6	8.3	2.3	0.1	1.9	2.2	29.6
Detroit City School District	MI	13,837	43.0	11.8	1.6	0.5	1.7	2.5	38.9
Duval	FL	12,812	62.2	9.3	1.8	1.1	1.5	3.2	20.8
Wake County Schools	NC	17,123	54.4	14.3	2.3	1.3	1.4	2.6	23.8
Clayton County	GA	7,983	46.6	10.8	1.4	1.6	1.4	3.4	34.8
Omaha Public Schools	NE	7,678	44.1	16.7	2.1	1.8	1.3	2.1	31.8
Denver County 1	CO	9,226	47.2	19.5	1.2	1.4	1.3	3.0	26.4
Lewisville Independent School District	TX	6,146	59.7	9.1	2.4	1.1	1.2	3.4	23.1
Garland Independent School District	TX	7,392	51.2	5.3	1.8	1.4	1.2	3.1	36.0
Dallas Independent School District	TX	20,358	53.7	8.8	2.0	1.5	1.2	2.5	30.3
San Antonio Independent School District	TX	7,338	45.3	12.4	1.8	0.9	1.1	2.3	36.1
Cypress Fairbanks Independent School District	TX	12,276	52.2	5.9	1.5	0.5	1.1	3.1	35.7
San Francisco Unified	CA	4,931	64.3	15.4	1.9	0.8	1.1	3.8	12.8
Hawaii Department of Education	HI	21,604	52.3	13.2	3.1	1.4	1.1	2.4	26.6
Jefferson County School District No R 1	CO	10,778	46.0	19.2	1.8	1.4	1.0	2.8	27.8
Conroe Independent School District	TX	5,842	52.8	7.4	1.9	1.2	1.0	3.6	32.1
Prince Wm County Public Schools	VA	10,419	36.9	10.8	1.7	1.8	0.9	2.0	45.8
Milwaukee School District	WI	10,861	47.5	18.5	0.6	0.4	0.9	2.8	29.2
Fort Worth Independent School District	TX	10,671	48.4	8.7	1.7	1.4	0.9	5.8	33.1
Fort Bend Independent School District	TX	8,898	48.9	6.4	1.5	1.4	0.9	4.5	36.2
Katy Independent School District	TX	7,249	54.0	8.7	1.4	1.4	0.8	2.8	30.8
Va Beach City Public Schools	VA	10,923	36.5	18.1	1.7	2.7	0.8	2.1	38.1
Aldine Independent School District	TX	8,350	49.6	12.2	1.9	0.8	0.8	3.6	31.1
Douglas County School District No Re 1	CO	6,757	46.4	20.6	1.3	1.5	0.8	2.6	26.9
Los Angeles Unified	CA	74,470	47.1	17.6	1.5	0.2	0.7	2.2	30.6
Henrico County Public Schools	VA	6,461	41.1	10.0	2.9	1.9	0.7	2.2	41.2
Chesterfield County Public Schools	VA	7,876	40.6	16.8	2.0	1.4	0.7	2.0	36.5
Granite District	UT	5,789	49.3	15.5	1.5	0.9	0.7	2.4	29.8
Charlotte Mecklenburg Schools	NC	18,437	50.5	12.1	1.4	1.0	0.7	2.4	31.9
San Diego Unified	CA	13,278	51.6	10.4	1.1	0.2	0.7	2.9	33.2
Davis District	UT	6,043	46.0	21.4	2.1	1.3	0.6	2.9	25.7
Palm Beach	FL	22,117	59.7	5.3	1.6	2.9	0.6	2.4	27.4
Lee	FL	9,469	53.2	8.2	1.5	0.9	0.6	2.6	33.0
Fairfax County Public Schools	VA	32,373	28.6	13.1	1.8	1.0	0.6	2.0	52.8
Arlington Independent School District	TX	8,105	50.3	11.8	1.7	1.1	0.6	4.8	29.9
Cobb County	GA	14,654	56.1	10.3	1.8	2.0	0.6	2.5	26.7
Polk	FL	13,993	53.9	11.1	1.6	1.5	0.6	2.1	29.2
Cherry Creek 5	CO	6,295	46.9	19.0	1.3	0.9	0.5	1.7	29.6
Volusia	FL	8,537	52.1	7.4	2.1	0.8	0.5	2.5	34.5
Austin Independent School District	TX	11,323	52.0	8.0	1.5	1.4	0.5	4.4	32.3
Dade	FL	38,954	57.5	6.1	2.4	1.4	0.5	2.5	29.6
Pasco	FL	9,709	52.3	8.8	1.8	1.0	0.5	2.0	33.5
Brownsville Independent School District	TX	7,436	44.7	11.0	1.9	1.4	0.5	3.3	37.3
Corona Norco Unified	CA	4,498	52.7	10.5	1.3	0.1	0.5	1.0	33.9
Alpine District	UT	4,738	53.2	14.9	1.4	1.6	0.5	2.3	26.1
Guilford County Schools	NC	10,437	48.8	13.9	2.2	1.5	0.5	2.2	31.0
Osceola	FL	6,672	46.7	10.4	1.4	0.8	0.5	1.7	38.5
Fulton County	GA	12,418	52.6	12.7	1.6	1.6	0.5	2.5	28.6
Brevard	FL	9,296	56.9	7.2	2.0	1.0	0.5	2.7	29.7
Sacramento City Unified	CA	4,147	55.9	6.8	0.7	0.3	0.4	2.7	33.3
Gwinnett County	GA	20,043	54.8	9.4	1.6	1.2	0.4	2.7	29.9
Mobile County	AL	8,455	44.6	9.6	1.5	1.9	0.4	2.3	39.8
Pinellas	FL	14,692	53.6	12.5	1.6	1.1	0.4	2.2	28.6
New York City Public Schools	NY	132,727	54.1	0.9	1.5	0.4	0.4	3.1	39.6
Dekalb County	GA	14,374	48.0	11.9	2.1	1.6	0.4	3.1	33.0
Orange	FL	21,875	50.2	9.0	1.4	0.8	0.4	2.0	36.2
Philadelphia City School District	PA	20,836	49.2	8.4	1.5	0.5	0.4	2.7	37.3
Puerto Rico Department of Education	PR	70,034	56.2	0.9	1.4	2.0	0.4	2.0	37.1

District	State							
Capistrano Unified	CA	3,951	57.2	9.4	0.7	0.2	0.4	2.1	30.1
Seminole	FL	7,695	58.7	7.6	1.5	0.9	0.3	2.6	28.3
Jordan District	UT	6,552	49.2	17.7	1.2	1.6	0.3	2.5	27.5
Broward	FL	31,048	60.3	5.0	1.9	1.5	0.3	2.1	28.9
Elk Grove Unified	CA	5,250	56.0	10.1	1.7	0.3	0.3	2.8	28.7
Jefferson County	KY	14,144	43.4	15.3	1.7	1.7	0.3	2.2	35.4
Mesa Unified District	AZ	7,600	49.4	17.1	1.4	1.2	0.3	1.7	28.9
Forsyth County Schools	NC	7,347	53.0	15.0	2.0	1.0	0.3	2.7	26.1
Santa Ana Unified	CA	4,189	61.6	6.1	1.4	#	0.3	2.6	28.1
Loudoun County Public Schools	VA	9,999	32.2	16.7	1.8	2.7	0.3	1.8	44.4
Cleveland Municipal	OH	7,995	44.8	9.1	0.9	1.3	0.3	2.5	41.2
Fresno Unified	CA	7,320	53.6	12.6	1.4	0.3	0.2	1.7	30.2
Long Beach Unified	CA	8,466	47.4	14.7	2.1	0.6	0.2	1.7	33.2
Pasadena Independent School District	TX	7,154	48.3	9.1	1.3	1.1	0.2	4.7	35.3
Cumberland County Schools	NC	7,607	49.1	15.6	2.1	1.4	0.2	2.5	29.1
City of Chicago School District 299	IL	25,485	84.4	1.2	3.1	1.4	0.2	5.2	4.4
Garden Grove Unified	CA	3,897	53.8	13.0	1.0	0.4	0.2	3.2	28.4
Columbus City	OH	7,131	44.7	10.7	1.6	1.6	0.2	2.6	38.5
Hillsborough	FL	25,893	54.0	8.5	1.7	0.9	0.2	2.4	32.3
Greenville 01	SC	6,132	74.1	13.6	2.8	1.7	0.2	3.4	4.3
El Paso Independent School District	TX	8,691	50.7	6.0	1.7	1.6	0.2	2.5	37.5
Washoe County School District	NV	3,903	88.7	—	4.1	0.6	0.2	4.3	2.1
Clark County School District	NV	17,823	86.1	—	3.1	1.7	0.1	3.9	5.1
Knox County School District	TN	6,966	55.0	12.5	2.4	1.7	0.1	2.7	25.6
North East Independent School District	TX	8,508	50.7	8.8	1.9	1.4	0.1	2.7	34.5
Northside Independent School District	TX	12,169	47.5	9.4	2.0	1.6	0.1	2.8	36.7
Plano Independent School District	TX	6,776	60.0	11.3	2.2	1.3	0.1	2.3	22.7
Shelby County School District	TN	5,483	54.4	11.3	2.4	2.1	0.1	3.2	26.6

See notes at end of table.

— Not available.

† Not applicable.

Rounds to zero.

[1] Full-time equivalent (FTE) is the amount of time required to perform an assignment stated as a proportion of a full-time position. It is computed by dividing the amount of time employed by the amount of time normally required for a full-time position. FTE is not a head count; for example, 2 half-time employees represent 1 FTE.

[2] LEA stands for "Local Education Agency" (a.k.a. "school district").

[3] Includes adminstrative and student support staff, such as data processing, health, and transportation.

[4] Totals do not include districts in which data were not available. Instructional support staff data were missing for two districts. Therefore, the percentage distribution of FTE staffing types for the 100 largest school districts may be affected.

NOTE: Data include all 50 states, the District of Columbia, Puerto Rico, four outlying areas (American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands), the Bureau of Indian Education, and the Department of Defense dependents schools (overseas and domestic). Detail may not sum to total because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency Universe Survey," 2008–09, Version 1a.

Appendix B

Position		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Administrator Totals		81.5	82	82	82	79.5	85.5	86.5	88.5	88.5	88	82
Support and Other Totals		No Data	No Data	138	133	130	137	No Data	142	137	136	129
Grand Total				220	215	209.5	222.5		230.5	225.5	224	211

Note - Data for most years is from the fall of the year. Data for 2011 is from March of 2012.

Position	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Superintendent	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Administrative Asst.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Assistant Superintendent	4.0	4.0	4.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Chief Accountability Officer									1.0	1.0	1.0
Chief of Security	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Chief of Staff									1.0	1.0	1.0
Chief Technology Officer					1.0	1.0	1.0	1.0	1.0	1.0	1.0
Coordinator	4.0	4.0	4.0								
Deputy Director										1.0	1.0
Deputy Superintendent				1.0	1.0	1.0	1.0	1.0			
Director/Executive Director	4.0	4.0	4.0	15.0	13.0	14.0	14.0	14.0	13.0	15.0	17.0
Senior Advisor, High Needs Schools									1.0	1.0	1.0
Specialist	14.0	14.0	15.0	15.0	14.0	18.0	18.0	18.0	17.0	16.0	17.0
Supervisor *	52.5	53.0	52.0	45.0	45.5	46.5	47.5	49.5	49.5	47.0	39.0
Totals	**81.5**	**82.0**	**82.0**	**82.0**	**79.5**	**85.5**	**86.5**	**88.5**	**88.5**	**88.0**	**82.0**
Enrollment (2nd Period Report)	52,560	52,450	53,019	53,652	53,222	54,411	54,516	55,526	55,839	55,961	56,807
Student to Administrator Ratio	644.9	639.6	646.6	654.3	669.5	636.4	630.2	627.4	630.9	635.9	692.7

* This number for 2011 includes one position that was vacant at the time the data was collected.

Knox County Schools
Central Office Adminstrative Positions
(2001 through 2011)

Position	2003	2004	2005	2006	2007	2008	2009	2010	2011
ACCOUNTANT	3.0	3.0	2.0	2.0	Data Not Available	2.0	2.0	2.0	2.0
ACCOUNTING CLERK	2.0	2.0	2.0	2.0		2.0	2.0	2.0	12.0
ACCOUNTS PAYABLE CLERK	6.0	5.0	5.0	4.0		5.0	4.0	6.0	
ACCOUNTING TEAM LEADER									1.0
ADM SECRETARY	84.0	82.0	76.0	80.0		74.0	76.0	71.0	44.0
ANALYST									1.0
BENEFITS CLERK	1.0	1.0	1.0	1.0		1.0	1.0	1.0	
BOARD EXECUTIVE ASST	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
COMMUNICATION SPECIALIST				1.0		1.0	1.0	1.0	
COMPUTER SPECIALIST	3.0	2.0	1.0			3.0	5.0	3.0	
CONSULTANT	5.0	4.0	5.0	3.0		4.0	4.0	7.0	8.0
DATA PROCESSING CLERK	1.0	1.0	1.0	1.0		1.0	1.0	1.0	
FACILITATOR - PROGRAM	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
FACILITATOR, WEB SERVICES	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
FACILITIES CONTRACT ADMINISTRATOR						1.0			
FACILITIES SITE MANAGER	1.0	1.0	1.0	1.0		1.0	1.0	1.0	
FIELD MANAGER, FOOD SVC	4.0	4.0	4.0	4.0		4.0	4.0	4.0	
GENERALIST, HUMAN RESOURCES									5.0
GEOGRAPHY INFO SYSTEMS SPECIALIST			1.0	2.0		2.0	1.0	2.0	2.0
GRANT WRITER				1.0		1.0	1.0	1.0	1.0
GUIDANCE COACH/COUNSELOR								1.0	
HUMAN RESOURCE SPECIALIST								2.0	
INSURANCE SPECIALIST/MANAGER	1.0	1.0	1.0	1.0		1.0	1.0	1.0	
LAYOUT AND DESIGN PRINT SERVICES	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
MANAGER *									12.0
MAIL ROOM CLERK	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
NUTRITIONIST				1.0		1.0	1.0	1.0	1.0
PAYROLL CLERK	4.0	5.0	6.0	6.0		7.0	7.0	7.0	
PROGRAMMER IT	3.0	3.0	4.0	4.0		3.0	3.0	2.0	
PSYCH EXAMINER	2.0	2.0	2.0	2.0		3.0	2.0		
READING COACH	1.0								
ROUTER	4.0	4.0	4.0	5.0		4.0	4.0	4.0	3.0
SAFETY ENGINEER	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
SAFETY OFFICER			1.0	1.0		1.0	1.0	1.0	
SCHOOL NURSE	2.0	2.0	2.0	2.0		2.0			
SIS HELP DESK	1.0	1.0	1.0	1.0		2.0	2.0	2.0	
SPECIALIST, ADMINITRATIVE									5.0
SPECIALIST, HUMAN RESOURCES									4.0
SPECIALIST, INFORMATION TECHNOLOGY									13.0
SPECIALIST, PUBLIC AFFAIRS									3.0
TEAM LDR IT	2.0	2.0	2.0	3.0		4.0	3.0	3.0	3.0
TEAM LEADER, HUMAN RESOURCES									
TECHNOLOGY ASSISTANT						1.0	1.0	1.0	1.0
TRANSPORTATION COMPLIANCE FACILITATOR				1.0		1.0	1.0	2.0	2.0
VOC. TEACHER	1.0	1.0	1.0	1.0		1.0			
XEROX KEY OPERATOR	1.0	1.0	1.0	1.0		1.0	1.0	1.0	
TOTAL	**138.0**	**133.0**	**130.0**	**137.0**		**140.0**	**136.0**	**136.0**	**129.0**

* This number for 2011 includes one position that was vacant at the time the data was collected.

Knox County Schools
Central Office Staffing for FY12

Annual Salary Range	Supt's Office	Asst. Supt.	Public Affairs, Family Engagement, Print Svcs.	Student Support Services & Special Education	Elementary &Secondary Education	Instructional/ Curricular Supervision	Federal Programs	Accountability	Human Resources	Transp. & Enrollment	Finance, Payroll, Accts. Payable	Security	Food Service	IT	Facilities/ Maint	Total
						Curriculum and Instruction					Administrative Services					
Over $112,000	1															1
$100-112K	2	2		3	3	1	1	1	3	1	1			1		19
$80-100K			3	10	5	14	1	3	1	2	3	1	1	4	3	51
$60-80K			2	9		6	1		1	1	1		3	6	3	33
$40-60K	3		3	4		2		1	4	2	8			8	3	38
Less than $40K	1		2	12	3	11	2	2	17	7	5		3	2		67
Total	7	2	10	38	11	34	5	7	26	13	18	1	7	21	9	209

Note: The data in this document is for filled positions and does not include two positions that wre vacant at the time the data was collected.

Knox County Schools
Central Office Staffing

	Headcount				Salaries for FY12			
	General	Federal	Cafeteria	All	General	Federal	Cafeteria	All
Central Office / District Administration								
SUPERINTENDENT	1.0	-	-	1.0	$ 222,800	$ -	$ -	$ 222,800
ADMINISTRATIVE ASSISTANT TO THE SUPERINTENDENT	-	-	-	-				-
ASSISTANT SUPERINTENDENT	2.0	-	-	2.0	221,072			221,072
CHIEF ACCOUNTABILITY OFFICER	1.0	-	-	1.0	104,536			104,536
CHIEF OF SECURITY	1.0	-	-	1.0	89,202			89,202
CHIEF OF STAFF	1.0	-	-	1.0	106,058	-		106,058
CHIEF TECHNOLOGY OFFICER	1.0	-	-	1.0	108,536			108,536
DEPUTY DIRECTOR	-	1.0	-	1.0		89,000		89,000
DIRECTOR / EXECUTIVE DIRECTOR	13.0	3.0	1.0	17.0	1,240,584	266,485	97,828	1,604,897
SENIOR ADVISOR	1.0	-	-	1.0	102,536	-		102,536
SPECIALIST	-	-	-	-	-			-
SPECIALIST SPED	-	6.0	-	6.0	-	461,907		461,907
SPECIALIST ACADEMIC	10.0	1.0	-	11.0	777,415	78,648		856,063
SUPERVISOR	34.0	4.0	-	38.0	2,958,431	382,947		3,341,378
	65.0	15.0	1.0	81.0	5,931,170	1,278,987	97,828	7,307,985
Central Office Support								
ACCOUNTANT	2.0	-	-	2.0	123,928	-		123,928
ANALYST	-	1.0	-	1.0	-	46,425		46,425
CLERK ACCOUNTING	12.0	-	-	12.0	468,644	-		468,644
CLERK MAILROOM	1.0	-	-	1.0	31,435	-		31,435
CLERK PRINT SERVICES	1.0	-	-	1.0	48,100	-		48,100
CONSULTANT	-	1.0	-	1.0	-	80,641		80,641
CONSULTANT SPED	3.0	4.0	-	7.0	185,405	235,986		421,391
ENGINEER SAFETY	1.0	-	-	1.0	32,512	-		32,512
FACILITATOR PROGRAM	1.0	-	-	1.0	56,805	-		56,805
FACILITATOR TRANSPORTATION	2.0	-	-	2.0	65,704	-		65,704
FACILITATOR WEB SERVICES	1.0	-	-	1.0	79,528	-		79,528
GENERALIST HUMAN RESOURCES	5.0	-	-	5.0	151,454	-		151,454
GUIDANCE COUNSELOR LEAD	-	-	-	-	-	-		-
MANAGER	8.0	-	3.0	11.0	446,442	-	190,095	636,537
NUTRITIONIST	1.0	-	-	1.0	66,595	-	-	66,595
ROUTER TRANSPORTATION	3.0	-	-	3.0	137,914	-	-	137,914
SECRETARY ADMINISTRATIVE	38.0	3.0	3.0	44.0	1,294,954	107,060	92,590	1,494,604
SECRETARY BOARD	1.0	-	-	1.0	47,795	-		47,795
SPECIALIST ADMINISTRATIVE	5.0	-	-	5.0	324,697	-		324,697
SPECIALIST GRANT WRITER	1.0	-	-	1.0	66,805	-		66,805
SPECIALIST HUMAN RESOURCES	4.0	-	-	4.0	141,195	-		141,195
SPECIALIST INFORMATION TECHNOLOGY	10.0	-	-	10.0	565,869	-		565,869
SPECIALIST INFORMATION TECHNOLOGY SCHOOL	3.0	-	-	3.0	164,485	-		164,485
SPECIALIST PUBLIC AFFAIRS	3.0	-	-	3.0	136,528	-		136,528
SPECIALIST TRANSPORTATION GIS TECHNOLOGY	2.0	-	-	2.0	79,040	-		79,040
TEAM LEADER ACCOUNTING	1.0	-	-	1.0	48,297	-		48,297
TEAM LEADER HUMAN RESOURCES	1.0	-	-	1.0	35,207	-		35,207
TEAM LEADER INFORMATION TECHNOLOGY	3.0	-	-	3.0	229,208	-		229,208
	113.0	9.0	6.0	128.0	5,028,547	470,112	282,685	5,781,344
	178.0	24.0	7.0	209.0	$ 10,959,717	$ 1,749,099	$ 380,513	$ 13,089,329

Note - The positions in this document are filled positions and do not include two positions that were vacant at the time this data was collected.