

Sustaining the Commitment: *A Second Superintendents' Position Paper* *On Assessment and Accountability*

The 2003 report on “Renewing the Commitment: a Superintendents’ Position Paper on Assessment and Accountability” offered thoughts from superintendents who had worked together to analyze key challenges facing Kentucky education. The three fundamental beliefs of the first white paper remain sound:

- Kentucky’s assessment and accountability system, based on achieving and maintaining high academic standards for all students, must be maintained.
- Adequate financial support is needed if schools are to achieve the mandates of the Kentucky Education Reform Act and No Child Left Behind and reach proficiency for all schools and students by 2014.
- Kentucky must not compromise or diminish the high standards of learning that Kentucky students are expected to achieve when incorporating the federal No Child Left Behind (NCLB) requirements into its assessment and accountability system.

With a new governor, a new secretary and commissioner of education, major state fiscal challenges, and major assessment and accountability changes, a group of superintendents has joined in fresh discussion. From their work, this paper offers four core principles:

I. Kentucky student performance has improved since 2003, but the pace is not quick enough. To meet statewide goals by 2014, Kentucky must accelerate its work to create proficiency for all.

II. Kentucky educators must respond to recent assessment and accountability changes with effective instructional changes. Testing and accountability must be fundamentally stable for that to happen.

III. Kentucky must begin planning for student learning beyond 2014. A task force to consider strengthening Kentucky’s standards, testing, and accountability system should begin work now.

IV. Kentucky must provide adequate funding for schools to meet the 2014 goals and move forward beyond that, with a stronger state-level investment to complement local districts’ efforts.

As instructional leaders, the superintendents offer these thoughts in keeping with their professional focus on student achievement and quality instruction. Assessment and accountability are essential tools in the superintendents’ efforts to deliver for each and every Kentucky child.

The Pace of Student Progress

Recent evidence on what Kentucky students know and can do shows important growth. It also shows that major work must be done in the coming years to improve results more rapidly.

Commonwealth Accountability Testing System (CATS) Results

From 2003 to 2006, CATS indicated improving performance for all students and for groups that have historically faced achievement gaps. CATS Academic Index results use a 0-140 scale to sum up students' work in all Kentucky Core Content Test subjects, allowing rapid comparisons of results for disaggregated groups. An Index of 100 means that average student performance has reached the proficient standard for a full curriculum that includes reading, mathematics, social studies, science, writing, arts and humanities, practical living, and vocational studies.

For Kentucky elementary schools, Academic Index results moved up:

- From 74.2 to 83.8 for all students.
- From 59.5 to 69.6 for African-American students.
- From 65.5 to 75.9 for students in the free and reduced lunch program.
- From 58.2 to 70.1 for students with disabilities.

For Kentucky middle schools, Academic Index results moved up:

- From 68.1 to 74.0 for all students.
- From 49.0 to 56.9 for African-American students.
- From 56.3 to 64.4 for students in the free and reduced lunch program.
- From 41.3 to 52.9 for students with disabilities.

For Kentucky high schools, Academic Index results moved up:

- From 66.9 to 73.5 for all students.
- From 49.8 to 55.7 for African-American students.
- From 53.6 to 61.2 for students in the free and reduced lunch program.
- From 36.6 to 45.1 for students with disabilities.¹

2007 CATS results, though available, cannot be compared to these past scores because of major testing changes that will be discussed in more detail below.

Advanced Placement Results

Advanced Placement courses allow high school students to obtain college credit if they earn passing scores of 3, 4 or 5 on national AP tests. From 2003 to 2007, Kentucky public schools dramatically improved AP participation and passing rates:

- Students overall took 57% more tests, with 66% more passing scores.
- African-American students took 58% more tests, passing 86% more.
- Hispanic students took 161% more tests, passing 201% more.
- Asian students took 95% more tests, passing 91% more.
- Students of other backgrounds took 76% more tests, passing 75% more.²

ACT Results

ACT composite scores, used as a predictor of readiness to succeed in college, improved from 20.1 in 2003 to 20.5 in 2007 for Kentucky public school students.³

National Assessment of Education Progress (NAEP) Results

The National Assessment of Educational Progress allows Kentucky to compare its student performance to the nation and participating states. Compared to national average scale scores, Kentucky's most recent NAEP scale scores are:

- Ahead of the national average in science by a statistically significant margin, comparing Kentucky's fourth grade 158 to a national 149 and Kentucky's eighth grade 153 to a national average 147.
- In line with the national average in reading, comparing Kentucky's fourth grade 222 to a national 220 and Kentucky's eighth grade 262 to a national 260.
- In line with the national average in eighth grade math, comparing Kentucky's 279 to a national 280.
- Below the nation in fourth grade math, comparing Kentucky's 235 to a national 239.⁴

Kentucky's scale scores, with one exception, have also shown improvement in recent years:

- Up in fourth grade reading from 219 to 222 from 2003 to 2007.
- Down in eighth grade reading from 266 to 262 from 2003 to 2007.
- Up in fourth grade math from 229 to 235 from 2003 to 2007.
- Up in eighth grade math from 274 to 279 from 2003 to 2007.
- Up in fourth grade science from 152 to 158 from 2000 to 2005.
- Up in eighth grade science from 150 to 153 from 2000 to 2005.⁵

No Child Left Behind Results

Kentucky's reading and mathematics improvement since the passage of the federal No Child Left Behind Legislation stands out compared to other states. The Center on Education Policy used the most complete data collection available across states

in its 2007 report, *Answering the Question that Matters Most: Has Student Achievement Increased Since No Child Left Behind?* That report concluded:

Of the 22 states with sufficient trend data for three grade spans in reading and math, five states—Delaware, Kansas, ***Kentucky***, Louisiana, and Washington—demonstrated gains in both subjects and all three grade spans based on both the percentage proficient and effect size measures. In other words, these five states showed moderate-to-large gains according to all of the indicators collected for this study. [Emphasis added]⁶

The Pace Kentucky Needs In Future Years

While taking pride in the progress described above, the superintendents also recognize that the pace of improvement is not strong enough to meet Kentucky's goals.

Looking at CATS results, the Kentucky Department of Education reported in the spring of 2007 that, based on progress through 2006:

- 37% of Kentucky's schools will be on track to reach the full state target for student proficiency by 2014.
- Another 50% of schools will be on track to reach at least an 80, the score identified as strong enough to avoid qualifying for state sanctions.
- 13% of schools will be below the 80 mark and formally classified as in need of assistance from the state to strengthen their weak performance.⁷

CATS disaggregated results paint an even bleaker picture. A recent analysis of progress from 1999 to 2006 projected that Academic Index results would not reach 100 (meaning an average of proficiency across the tested subjects) until:

- 2016 for elementary school African-American students.
- 2027 for middle school African-American students.
- 2021 for middle school free and reduced lunch student.
- 2032 for high school African-American students.
- 2025 for high school free-and-reduced-lunch students.⁸

For students with disabilities, a similar projection suggests that middle school students would not reach 100 until 2023 and high school students until 2033.⁹

In other measures of student learning, Kentucky also cannot settle for current results. Instead, work must continue to:

- Raise the current 48% Advanced Placement passing rate.¹⁰

- Meet the new ACT college readiness benchmarks set by Council on Post-Secondary Education.¹¹
- Strengthen NAEP results to maintain American ability to compete with other developed countries.¹²

The superintendents are proud of Kentucky’s student performance accomplishments in recent years, but they see clearly that student achievement must still be raised substantially, and raised more quickly than in recent years.

The Challenges of Recent Assessment And Accountability Changes

Student Capacities

In keeping with the constitutional requirement that Kentucky have “an efficient system of common schools,” the General Assembly has specified that schools must allow all students to develop these capacities:

1. Communication skills necessary to function in a complex and changing civilization.
2. Knowledge to make economic, social, and political choices.
3. Core values and qualities of good character to make moral and ethical decisions throughout his or her life.
4. Understanding of governmental processes as they affect the community, the state, and the nation.
5. Sufficient self-knowledge and knowledge of his mental and physical wellness.
6. Sufficient grounding in the arts to enable each student to appreciate his or her cultural and historical heritage.
7. Sufficient preparation to choose and pursue his life's work intelligently.
8. Skills to enable him to compete favorably with students in other states.¹³

Seven of those capacities were specified by the Kentucky Education Reform Act of 1990, with the values and character capacity added by 2000 legislation. Together, these capacities provide the philosophical foundation for Kentucky’s educational system.

Kentucky's assessment system measures schools' success in delivering those capacities. Kentucky's accountability system uses CATS results to determine which schools are on track to meet statewide standards by 2014, which need to accelerate their improvement efforts, and which may need state assistance to correct major weaknesses. Educators and administrators are held accountable for their schools' progress in achieving these standards, an element that the superintendents strongly support.

Recent Testing Changes

Kentucky's goals for students have remained remarkably steady since 1990, and the superintendents applaud that consistency. However, the specifics of testing and accountability have undergone major changes since the 2003 White Paper, including:

- Revising and updating the Core Content statement of skills and knowledge to be assessed.
- Defining the Depth of Knowledge students may be asked to demonstrate in each part of that Core Content.
- Aligning high school Core Content with the American Diploma Project standards.
- Adding Kentucky Core Content Tests of Reading for students at the end of primary and in grades 5, 6, and 8.
- Adding Kentucky Core Content tests of Mathematics for students at the end of primary and in grades 4, 6, and 7.
- Changing Practical Living/Vocational Studies to an entirely multiple-choice test and giving it at grades 5, 8, and 10 rather than 4,7, and 10.
- Adding multiple-choice questions in Writing.
- Increasing the value given to multiple-choice items in Reading, Mathematics, Science, Social Studies, and Arts & Humanities.
- Starting the eighth-grade Explore and tenth-grade Plan tests in 2006-07.
- Requiring the ACT for eleventh-grade students starting in 2007-08.
- Changing the testing methods for students whose disabilities require an alternative assessment approach.
- Changing the relative value given to each tested subject in overall accountability, including increased weight on Reading and Mathematics

for elementary and middle schools and use of Explore, Plan, and ACT for middle and high schools.

In all but name, those testing and accountability changes amount to a new assessment system, requiring schools to reconsider each aspect of curriculum and instruction.

As schools work through the implications of those testing changes, they are also implementing other required changes, including:

- Meeting separate goals and consequences based on rates of student proficiency in Reading and Mathematics to implement the federal No Child Left Behind statute.
- Meeting separate, locally determined goals for addressing achievement gaps to implement the 2002 legislation known as Senate Bill 168.
- Expanding high school access to college-level courses, including AP classes, dual credit, and dual enrollment options to implement the 2002 legislation known as Senate Bill 74.
- Meeting increased graduation requirements starting with 2008-09 ninth-grade students, as required by a 2006 regulatory amendment from the Kentucky Board of Education.
- Adding support for students who fall short of high school or college readiness measured by Explore, Plan, effective with the 2006-07 results, as required by 2006's Senate Bill 130.
- Adding support for students who fall short of college readiness measured by ACT, effective with 2007-08 results, also required by Senate Bill 130.

Together, these changes constitute a massive change in what schools are asked to do and what superintendents and districts must help schools achieve.

Time for Schools to Deliver

To address those many changes, Kentucky educators are now hard at work to:

- Include the new Core Content in curriculum.
- Include the new Depth of Knowledge expectations in classroom standards.
- Plan effective professional development and instructional improvements in light of the new scores and requirements.

- Develop strategies to address individual student needs and insure that all succeed.
- Understand and implement each of the new requirements in ways that build higher student achievement.

A period of stability is essential for those classroom efforts. The many changes listed above mean that schools have much to understand and digest. The break in testing trend lines means that schools will need several years of data to get a clear picture of which efforts are successful and which need further adjustment.

The superintendents are dedicated to successful responses to the new Core Content, testing methods, accountability formulas and other mandates enacted in recent years. They caution that the changes now need time to have an impact on classroom practice. **They recommend that assessment and accountability remain stable from now until 2014 to allow schools to focus on meeting the strong current expectations.**

Some simple adjustments might be consistent with that overall stability, including:

- Removing redundant testing items in ways that allow the same standards to be assessed in shorter testing time.
- Supporting further flexibility from the federal government to align No Child Left Behind goals with the rest of Kentucky accountability, seeking options like giving each school its own baseline and goals and giving credit for moving students from novice to apprentice as well as from apprentice to proficient.
- Making further effort to ensure that writing portfolios are an appropriate element of ongoing instruction rather than a separate, disruptive undertaking. Professional development, model activities and other techniques are still needed to help teachers make writing part of regular learning.
- Promoting consistent attention to the full Core Content, rather than narrowing the curriculum to reading and mathematics. Because those two subjects are tested in every elementary and middle school grade, while other subjects are tested only once at each level, there may be a growing temptation to give the other subjects too little attention. Students need the full curriculum to prepare for adult citizenship and success.
- Providing additional tools for teachers to use in classroom judgments about how student work relates to state standards. Those resources for formative assessment in between official state tests are essential to support continuous adjustments in teaching strategies for individual students.

Use of National Tests

Commercially produced, standardized tests cannot measure how Kentucky's schools are delivering on the eight capacities that define what Kentucky's students must know and be able to do. Such tests are inadequate because:

- Capacity 1 deals with students' ability to communicate, but multiple-choice tests provide no gauge of students' capacity to communicate using their own words.
- Capacities 2, 4, 5, and 6 call for content that such tests rarely address, including students' preparation to make economic, social and political choices, participate in their governmental process, address their own health needs, and appreciate their artistic heritage.
- Capacities 7 and 8 set expectations for career choices and readiness for global competition that will increasingly depend on students grasp of major scientific theories and applications. Some commercial tests address application of scientific methods and ability to interpret data, but they do not evaluate the content and skills needed for an age when science, technology, and engineering are increasingly important.
- Kentucky's entire standards-based approach seeks to move all students to the needed level of performance, but commercial tests are generally designed to instead rank students compared to national norms arrayed in a bell-curve distribution.

No off-the-shelf test can replace CATS, because no off-the-shelf test measures what Kentucky schools must deliver for Kentucky students. In education, as in other pursuits, what is valued gets measured. And what is measured gets done. **The superintendents support continued use of testing methods that measure the capacities Kentucky seeks for its students, with national tests used for comparison purposes and included in accountability only where those tests address Kentucky Core Content.**

2014 and Beyond

Even as schools and districts strengthen their efforts to reach Kentucky's high goals by 2014, the superintendents are aware that schools must continue to improve in the years after that deadline. It will be appropriate to revisit the capacities and standards set for all students, to revise testing, and to set new accountability challenges. Around the state, ideas are already emerging. Without endorsing any of these ideas as definitely right, the superintendents seek an active role in exploring them and preparing Kentucky's next steps.

First, for the years after 2014, Kentucky should consider strategic revisions and additions to the knowledge and skills schools develop in all students, as stated in our Learner Expectations, Core Content for Assessment, and Program of Studies. Changes worthy of exploration include:

- Technology skills.
- World languages.
- Teamwork and communication skills for workforce success .

Second, Kentucky should explore at possible methods to strengthen our testing and accountability methods, including:

- Further use of high school end-of-course exams to ensure consistent levels of knowledge and focus on results rather than seat time.
- On-line testing to speed scoring and simplify paperwork.
- Testing methods that promote deeper focus on students' capacity for higher-order thinking.
- Testing methods and schedules that promote further attention to the capacities students need to become effective citizens and successful adults, reducing the risk that reading and mathematics will be emphasized at the cost of the rest of the curriculum.
- Longitudinal data that would allow schools to monitor student progress over time and more effectively evaluate the impact of their work
- Value-added approaches to improvement on students' past performance.
- Instructional strategies and other changes to meet the needs of students with disabilities and students with English as a second language.

This type of change can best be implemented with careful preparation, allowing time to study and evaluate ideas, build wide understanding, and pilot-test possible models in the years before 2014. If Kentucky begins work now, the changes can be made with that kind of thoughtful foundation, and schools can be challenged to deliver a new level of continuous improvement.

Accordingly, the superintendents submit that Kentucky should begin work in the very near future on identifying directions for education after 2014 and outlining the steps that would allow a smooth transition to that next generation of expectations. They ask for a substantial role in the work of a new task force charged with analyzing the issues outlined above and other proposals to take Kentucky's schools to even higher achievement in the years after 2014.

The Price of Proficiency

Delivering proficiency for every student will require skill, energy, and intensive attention to results. The superintendents recognize their special leadership responsibility for meeting those needs and take pride in the efforts being made in each of their districts. Delivering proficiency for every student will also require funding for key initiatives beyond what is currently available.

Effective Past Investments

Kentucky education has made good use of its current education resources. Michael Childress, Executive Director of the Kentucky Long-Term Policy and Research Center, recently noted that based on Kentucky's level of spending and the challenges faced by students from homes with relatively low incomes and levels of parental education, Kentucky's "educational output" is both "fairly high" and "better than expected."¹⁴

The Manhattan Institute has reported Kentucky as tied for fourth best in its School Efficiency Index. The authors of that report write of the top scoring states that "Students in these states had the highest levels of academic performance relative to their teachability and the state's education spending."¹⁵

The United States Chamber of Commerce, similarly, awarded Kentucky a B and ranked it 17th in the country for "Return on Investment," a measure comparing students scores on NAEP to education spending after controlling for poverty, student needs, and cost-of-living in each state.¹⁶

Continuing Needs

High quality preschool access makes a proven difference in students' later academic success. The 2006-08 state budget restored per-pupil funding to its 2000 level and expanded the number of low-income students eligible to participate.¹⁷ Kentucky must push on to make preschool available for families with up to 200% of poverty-level income.

All-day kindergarten provides an important start to student learning, but it is not supported by state funding formulas. Local school districts have made extraordinary efforts to fund and house these needed programs. Kentucky must now make this important service available statewide, funding both the programs and the needed facilities.

Reduced class size is important, especially in the early grades. Local school districts have made this need a priority: between 1994 and 2004, they lowered average class size for kindergarten through grade 3 from 23 to 20, and average class size overall

from 26 to 23.¹⁸ Kentucky must support a further reduction to allow the type of individualized instruction that allows all students to succeed.

Students with added challenges need added support, including those who have disabilities, who come from low-income homes, and who are learning English. Kentucky's school funding formula has long provided dollars based on disabilities and free-lunch eligibility, and recently included funding for the needs of English-language learners. However, each of those "add-ons" is well below the real costs of services to enable those students to succeed.¹⁹ Kentucky must provide funding in line with the real costs and needs.

A short school year deprives students of opportunities to learn available in most states. The 2006-08 budget, by moving Kentucky up from 175 to 177 school days, offered an important partial step. Kentucky must go further, reaching or exceeding the national standard of at least 180 days.

Dedicated teachers are the central force in helping students learn. For over a decade, Kentucky teacher salaries failed to keep up with inflation. The 2006-08 state budget provided raises that restore the 1994-95 buying power of the average salary.²⁰ To recruit and retain strong professionals for the future, Kentucky must move educators' pay up to competitive levels.

Benefits work with salaries to attract and keep an effective staff. The nationwide challenges of health-care and pension costs have had a major Kentucky impact: from 1992 to 2004, the entire after-inflation increase in state funding for P-12 education went to those costs. In the 2004-06 state budget, benefits costs ate up 67% of the after inflation P-12 funding increase. In the 2006-08 state budget, those costs consumed 24% of the total after-inflation addition to P-12 spending.²¹ Districts pay classified retirement costs directly, at a rate that jumped from 7.34 percent of classified payroll in 2003-04 to 16.17 percent for 2007-08, more than doubling that cost and requiring many districts to consider staffing cuts and other reductions.²² Kentucky must meet the health and pension challenges head-on to honor its responsibilities to teachers and other school employees.

State school transportation funding lost 6% of its buying power between 2003 and the 2008 school year,²³ even as fuel costs were soaring. Kentucky must meet this necessary cost.

School facilities must be funded at a level that allows districts to house expanded preschools and all day kindergarten, lower class size, and meet the other requirements of a 21st century education.

The Kentucky Department of Education provides essential help for schools and districts working to implement legal requirements and effective instructional initiatives. The Department plays an especially important role for schools with the weakest student performance, providing key support and intervention to help them get back on track. In recent years, the Department has sustained major losses in personnel and that missing

capacity weakens districts, schools, and classrooms. Kentucky must equip the Department to do its important work.

School Funding Efforts

Kentucky school districts have much lower funding than the national average, and the gap has grown in recent years. In 2000, Kentucky district per pupil funding was 84% of national average revenue per pupil. In 2005, it was just 79% of national average.²⁴

Without strong local efforts, the decline would have been much greater. After adjusting for inflation, local per pupil revenue increased by \$356 from 2000 to 2005, while state per pupil revenue declined by \$159. Local funding grew 14% in a period when state funding declined by 4%.²⁵

That pattern of local funding growth reaches back into the 1990s. From 1992 to 2000, local communities increased their inflation-adjusted contribution to per pupil funding by \$808 and 45%. In the same period, the state's after-inflation share grew only \$341 and 8%.²⁶

As already noted, the 2006-08 state budget improved on that picture, including:

- Restoring teacher salaries to past buying power.
- Replacing and upgrading school technology.
- Adding two learning days to the school calendar.
- Increasing preschool access for low-income students.

Although per-pupil numbers are not yet available, those state steps will translate into improved funding per pupil and will likely move Kentucky at least a little closer to what is spent in the rest of the country. After more than a decade when state funding grew only enough to meet costs of inflation and employee benefits, the current budget is a welcome change with increased support for Kentucky's students and schools.

Nevertheless, important work lies ahead to address the core needs described above: preschool, kindergarten, class size, students with added challenges, competitive salaries, dependable benefits, transportation, facilities, and Department capacity. From 1992 to 2006, local districts provided most of the growth in per-pupil funding, and did so with pride, but even their best efforts cannot meet the needs ahead. Similarly, while the 2006-08 budget made important contributions, it did not close the gaps that must be met. **The superintendents conclude that, along with continuing local efforts, state funding for public education must increase in the coming years to ensure the resources needed for excellence.**

Conclusion

After years of trailing the nation in educational achievement, Kentucky schools are making measurable progress toward excellence. Sustaining that forward movement will require lasting commitment on the part of the state's elected leaders, policymakers, educators and the public. The superintendents who worked on this white paper are committed to that effort and proud of the work being done in their districts to deliver for all Kentucky students. Together, they ask their fellow citizens to join in the work ahead on the four core principles found here:

I. Kentucky student performance has improved since 2003, but the pace is not quick enough. To meet statewide goals by 2014, Kentucky must accelerate its work to create proficiency for all.

II. Kentucky educators must respond to recent assessment and accountability changes with effective instructional changes. Testing and accountability must be fundamentally stable for that to happen.

III. Kentucky must begin planning for student learning beyond 2014. A task force to consider strengthening Kentucky's standards, testing, and accountability system should begin work now.

IV. Kentucky must provide adequate funding for schools to meet the 2014 goals and move forward beyond that, with a stronger state-level investment to complement local districts' efforts.

Superintendents Who Joined in Developing This White Paper

Tim Abrams, Henry County
Sheldon Berman, Jefferson County
Bryan Blavatt, Boone County
Dale Brown, Warren County
Mark Cleveland, Owen County
Mitch Crump, Meade County
Tim Eaton, Pulaski County
Tommy Floyd, Madison County
James Flynn, Simpson County
Joe Dan Gold, Morgan County
Larry Hammond, Rockcastle County
Tim Hanner, Kenton County
Linda Hatter, Casey County
Tim Heller, McCracken County
Bruce Johnson, Mercer County
Janice Lantz, Nelson County
Brady Link, Graves County

Aundrea Locke, Nelson County
Roger Marcum, Marion County
Ed McNeel, Corbin Independent
Earl Melloy, McLean County
Tim Moore, Mason County
Bob Rowland, Danville Independent
Mike Sander, Erlanger-Elsmere
Independent
Kim Shaw, Anderson County
Tom Shelton, Daviess County
Stu Silberman, Fayette County
Paul Upchurch, Oldham County
Teresa Wallace, Lincoln County
George Wilson, Monroe County
Diane Woods-Ayers, Campbellsville
Independent

The leaders listed above welcome the support of other superintendents, educators, and citizens. To be listed as a signatory, please send an e-mail indicating your support to Roger.Marcum@Marion.kyschools.us.

Notes

- ¹ Kentucky Department of Education, “Spring 2006 Kentucky Performance Report,” pages 5-10.
- ² Calculated from data in College Board, Kentucky Advanced Placement “Summary Report 2003” and “Summary Report 2007” spreadsheets.
- ³ Calculated from public school results provided by the Kentucky Department of Education.
- ⁴ National Center for Education Statistics, *The Nation’s Report Card: Science 2005*, pages 17 and 29; National Center for Education Statistics, *The Nation’s Report Card: Reading 2007*, pages 17 and 35; and National Center for Education Statistics, *The Nation’s Report Card: Mathematics 2007*, pages 17 and 33.
- ⁵ National Center of Education Statistics, cited above.
- ⁶ Center on Education Policy, *Answering the Question that Matters Most: Has Student Achievement Increased Since No Child Left Behind?* page 34 (released June 2007).
- ⁷ Kentucky Department of Education, “Progress toward Proficiency, based on 2006 Results” PowerPoint, (presented to the Kentucky Board of Education in April 2007).
- ⁸ Susan Perkins Weston and Robert Sexton, “Substantial but Not Sufficient: Kentucky’s Efforts to Build Proficiency for Each and Every Child,” page 15 (paper delivered at the Campaign for Education Equity’s November 2007 symposium on “Equal Educational Opportunity: What Now?”).
- ⁹ Calculated from data in the “Spring 2006 Kentucky Performance Report, cited above.
- ¹⁰ Calculated from College Board files, cited above.
- ¹¹ 13 KAR 2:020, Section 6, as amended in August 2007.
- ¹² Michael Childress, “The Effects and Cost Effectiveness of Educational Investments,” PowerPoint and oral remarks (presentation at the Kentucky Long-Term Policy and Research Center’s November 2007 conference on “Making Money Matter: Maximizing Student Achievement with Our Investments in Education.”)
- ¹³ The constitutional requirement is found in Article 183 of the Kentucky Constitution, while the legislative statement of required capacities is found in KRS 158.645.
- ¹⁴ Childress presentation, cited above.
- ¹⁵ Jay Greene and Greg Forster, “The Teachability Index: Can Disadvantaged Students Learn?” page 4 (Education Working Paper Number 6 for the Manhattan Institute, released in September 2004).
- ¹⁶ U.S. Chamber of Commerce, *Leaders and Laggards: A State-by-State Report Card on Educational Effectiveness*, page 68 (released February 2007).
- ¹⁷ Susan Perkins Weston and Stephen Clements, “A Glass Half-Empty or Half-Full: An Overview of the State School Funding Landscape in Kentucky, 1990-2000,” page 12 (paper prepared for the Prichard Committee for Academic Excellence, released November 2007).
- ¹⁸ Amy Watts, “Class Size in Kentucky,” page 1 (Policy Note 25 for the Kentucky Long-Term Policy and Research Center, released November 2007).

¹⁹ John Augenblick and Dale DeCesare, “A Review of the “Support Education Excellence in Kentucky” (SEEK) System,” (report prepared for the Kentucky Department of Education, released March 2006) The authors report that:

We reviewed the special need student cost weights generated in the ten most recent adequacy studies we conducted. This analysis finds that:

- For at-risk students, adequacy would require a weight range of anywhere from .25 to .60 depending on a variety of factors including district size.
- For LEP students, APA’s adequacy studies have identified cost weights ranging anywhere from approximately .40 to 1.25 with the same caveat.
- For children in special education, cost weights have ranged from approximately: .50 to 1.30 for mild; 1.25 to 3.00 for moderate; and 3.00 to 6.00 for severe.

²⁰ Weston and Clements, cited above, page 12.

²¹ Calculated from data in Weston and Clements, page 35.

²² Weston and Clements, pages 14 and 40-41.

²³ Calculated from data in Weston and Clements, page 35.

²⁴ Calculated from data in U.S. Census Bureau, *Public Elementary And Secondary Education Finances: 1999-2000*, page 11, and U.S. Census Bureau, *Public Education Finances: 2005*, page 11 (issued April 2007).

²⁵ Calculated from data in Marcia Seiler, Pam Young, JoAnn Ewalt, and Sabrina Olds, *2006 School Finance Study*, pages 13-15 (prepared as Legislative Research Commission Report No. 336, released December 2006), using an adjustment to December 2005 dollars.

²⁶ Calculated from data Seiler, Young, Ewalt, and Olds, cited above.