New Study Reveals Trends in Urban-School Progress
And Possible Factors Behind Improvement

2003-2009 National Test Results Analyzed

WASHINGTON, Nov. 21 -- A new study conducted by the Council of the Great City Schools and the American Institutes for Research shows that public schools in large cities produced statistically significant gains between 2003 and 2009 in fourth- and eighth-grade reading and mathematics on the National Assessment of Educational Progress (NAEP), considered the Nation's Report Card.

And the first of its kind analyses using NAEP data indicated that large-city schools demonstrated larger gains than public schools nationally in both fourth and eighth grades, as the nation’s urban schools are moving towards national averages.

Launched in 2007, the massive study -- Pieces of the Puzzle: Factors in the Improvement of Urban School Districts on the National Assessment of Educational Progress -- analyzed trend data of large school systems and 11 big-city school districts participating in the Trial Urban District Assessment (TUDA) that year.

The research, which was funded by the Bill & Melinda Gates Foundation, sought to identify and analyze why some big-city school districts made more progress than others on NAEP.

"We supported this research to see if gains in urban education over the years were indeed real, and to shed light on the factors leading to improvement," says Vicki Phillips, the Gates Foundation's director of education. “The results of this new report are an important step forward.”

"The findings in this study are encouraging, and suggest steps that might be required to accelerate progress and successfully implement the new Common Core State Standards," says Council Executive Director Michael Casserly.

In addition to determining whether the nation's big-city schools are making significant gains on NAEP and how these gains compared to the nation, the study also sought to identify which TUDA districts were making significant and consistent gains on the national test and what reforms and conditions helped explain these gains.
Three of the 11 districts studied-- Atlanta, Boston, and Charlotte -- stood out for making large and consistent gains or for showing high performance, and one district—Cleveland—served as a contrasting example of a school system without substantial progress on NAEP over the study period. All four systems were placed under the microscope for intense study.

"The study provides a much deeper and richer analysis of NAEP data from TUDA districts than has been done before," stresses Jessica Heppen, principal research scientist at the American Institutes for Research. "The results show that academic progress in urban school systems is complex but is happening -- both on average, when taking student background characteristics into account, and importantly, among historically underserved student groups."

**Progress of Student Groups**

Among African-American students, the study found significant reading gains in the Atlanta, Boston, the District of Columbia, Houston and New York City public school systems between 2003 and 2009 at the fourth-grade level. African American fourth graders in Austin also made significant reading gains between 2005, when the district was first tested on NAEP, and 2009. Atlanta was the only district to post significant gains in reading among African American students at the eighth-grade level.

In math, African American fourth graders in Atlanta, Boston, Chicago, the District of Columbia and New York City posted significant gains, while African American eighth graders posted significant gains in Atlanta, Boston, Charlotte, Chicago, the District of Columbia, Houston, Los Angeles, New York City and San Diego.

Among Hispanic students in big-city public schools, Boston and the District of Columbia saw significant increases between 2003 and 2009 in fourth-grade reading, and Houston and Los Angeles showed significant gains in eighth-grade reading.

Significant increases in math between 2003 and 2009 were seen among Hispanic fourth graders in Boston, Chicago, the District of Columbia, Houston, Los Angeles, New York City and San Diego and among Hispanic eighth graders in Boston, Chicago, the District of Columbia, Houston, Los Angeles and San Diego. Hispanic eighth graders in Austin made significant math progress between 2005 and 2009.

The report also contains detailed data on the progress of economically disadvantaged and limited-English proficient students and students from other racial and ethnic groups.

**Academic Strengths and Weaknesses**

In addition to analyzing trend data on the progress of individual student groups, the study also took a hard look at the nuts and bolts of academic achievement in reading, math and science by analyzing performance at the NAEP subscale and item levels.
It found, in general, that fourth-grade students in the TUDA districts were more likely to do better on NAEP’s “reading for literary experience” subscale than the “reading for information” subscale, and eighth graders did somewhat better on “reading for literary experience” than on either the “reading for information” or “reading to perform a task” subscales.

In math, fourth graders in TUDA districts appeared to score better in geometry and number properties and operations and less well in measurement, algebra and data. Eighth graders, in general, appeared to perform better in geometry and algebra and less well in number properties and operations, data, and measurement.

In science, fourth graders in TUDA districts performed somewhat better in the life sciences than in earth science and physical science, while the eighth graders appeared to do about equally in all three fields of science.

**Atlanta, Boston, Charlotte Stand Out**

The Atlanta Public Schools made significant and the most consistent improvements in reading during the study period at both the fourth-and eighth-grade levels on NAEP among the 11 TUDA school systems. Although a state investigation showed evidence of cheating in Atlanta on Georgia’s mandated state tests, an examination by federal authorities found no evidence of tampering with NAEP procedures or results.

Moreover, the magnitude of Atlanta’s reading gains were more than three times greater than those seen in the average large city school or by the nation at large.

Also, among the 11 TUDA districts, the Boston Public Schools made significant and the most consistent gains in fourth- and eighth-grade mathematics over the study period on NAEP, and the magnitude of Boston’s math gains were nearly three times greater than the average large city school or the nation.

Other big-city school districts posted gains as well, but the progress was mainly in one subject or one grade level, rather than the uniform improvements seen in Atlanta and Boston.

North Carolina's Charlotte-Mecklenburg Schools outperformed all other TUDA districts in reading and math at both the fourth- and eighth-grade levels—even after adjusting for student demographic and family characteristics. The school district also scored as high as or higher than national public school averages.

The Cleveland school system was the only district participating in TUDA that did not show significant gains on a consistent basis.

**Possible Factors Behind Progress**

The study also examined the alignment of the respective state standards in the four study districts (Atlanta, Boston, Charlotte-Mecklenburg, and Cleveland) and the NAEP frameworks to determine the degree of alignment in TUDA districts that did and
did not make progress on NAEP. In addition, case studies were conducted in the four selected districts to look at the instructional practices and other factors behind TUDA district progress on NAEP.

Results from the four-district sample did not indicate a clear relationship between the degree of alignment between the respective state standards and the NAEP frameworks and NAEP gains. Some districts made significant gains on the national test even when their state standards were not well aligned with NAEP, and, conversely, high alignment did not always result in greater gains.

Case studies of Atlanta, Boston and Charlotte, however, showed that their instructional practices differed substantially from Cleveland, which showed lower performance and weaker gains, in a number of important and concrete ways:

- **Leadership and Reform Vision** -- stable leadership and staff that was consistently focused on improving teaching and learning, and that unified the districts around a shared vision of instructional reforms.

- **Goal-setting and Accountability** -- clear, measurable goals districtwide that often exceeded state and federal educational targets, and mechanisms for holding school and district staff accountable for achieving goals.

- **Curriculum and Instruction** -- a common, high-quality curriculum that created a coherent instructional program throughout the district that paved the way for what students were expected to learn at each grade level.

- **Professional Development and Teaching Quality** -- quality instruction and professional development and supports to help principals and teachers meet instructional priorities.

- **Support for Implementation and Monitoring of Progress** -- support and oversight of districtwide reforms, refining them as needed over time, rather than constantly changing direction and practice.

- **Use of Data and Assessments** -- data systems for consistently monitoring instructional programs and identifying and targeting resources and interventions when needed, and arming principals and teachers with data tools to pinpoint student needs.

**Lessons Learned**

The three-year *Pieces of the Puzzle* research produced several lessons for urban school leaders to consider in advancing academic achievement.

"Many educators -- and the public in general -- assume that putting into place more demanding standards alone will result in better student achievement," Casserly points out, referring to the new Common Core State Standards. "But this study suggests that the higher rigor embedded in the new standards is likely to be squandered, with little
effect on student achievement, if the curriculum content, instructional materials, professional development and classroom instruction are not high quality and well-integrated.”

The study also indicates that structural reforms of a big-city school system are not likely to improve student achievement unless they are directly tied to the instructional program. The important lesson to urban school leaders is that governance, funding, choice, and other initiatives that often attract public and media attention are sometimes distractions to what actually results in higher achievement.

Other lessons from the study involve the importance of districtwide reforms, operating at scale and systematically rather than trying to improve one school at a time; accurately gauging a district’s stage in the reform process to inform the right mix of instructional strategies and interventions to improve student academic attainment; and how various strategic and tactical reforms fit together to produce progress in urban school systems.

The three-volume analysis can be accessed on the Council's web site at www.cgcs.org.

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The Council of the Great City Schools is the nation's principal coalition representing the large urban public schools.

The American Institutes for Research (AIR) is one of the largest behavioral and social science organizations in the world.