# RESEARCH

# RESEARCH DEPARTMENT OVERVIEW

# Research Department Overview
# Winter, 2021

## Overall Research Department Goals/Priorities

The goal of the research department is to conduct, facilitate and disseminate research that will provide guidance and support to the Council's member districts and other key stakeholders as they work to improve academic achievement and reduce achievement gaps in large urban school districts. The following reports and presentations will be available on our Research Department webpage: http://www.cgcs.org/Research.

## Update on Recent Completed Projects/Conferences

### *Weekly Covid-19 Research and Assessment Directors Conference Calls*

The Council of the Great City Schools began meeting weekly with Research, Evaluation, and Assessment Directors on March 24, 2020 to discuss key decisions and plans given the unprecedented national circumstances associated with Covid-19. CGCS thought it might be useful to provide a forum by which directors could talk in a safe space with colleagues across the country about how they are handling the research and assessment issues that have emerged as districts and states deal with COVID-19. We continue to discuss key issues that arise. Starting in October 2020, Zoom meetings have been scheduled every other Tuesday, at 1:00 PM EST. Recent questions for our conversations are listed below:

- What adjustments are you making in enrollment and budget projections for Fall 2021 given the changes in Fall 2020 enrollment? How are you planning to recruit students for Fall 2021 to ensure enrollment returns to pre-pandemic levels?
- What have you learned from fall research studies on fall grading outcomes? How are your districts addressing the declines in fall semester course grades?
- What changes have you made in your district-wide student assessment practices because of the pandemic? Do you anticipate changes continuing in the new school year?
- How is your district addressing instruction for students during this period, including English language learners and students with disabilities? Has your research team been asked to evaluate the impact of the closure/distance learning protocols on student learning outcomes?
- What guidance has your state provided about the impact of the school closures on your assessments?

- How are you supporting teachers and administrators with assessing student learning progress during school closures?
- How are you addressing grade-level promotion and graduation?
- How are you planning to assess student learning when school closures end?
- How are you planning to reopen schools?
- What are you asking students, staff, parents, and community members in your district surveys?
- What have you learned from your students, staff, parents, and community surveys?

### *COVID-10 Research and Assessment Publication*


As one of six COVID-19 publications released by the Council of the Great City Schools, a team of research directors from Portland, Indianapolis, Toronto, Charlotte-Mecklenburg, Dallas, Guilford County (Greensboro, NC), Tulsa, Milwaukee, Austin and the Council worked together to write *Ensuring a Data-Driven Approach to Reopening Schools after COVID-19: Recommendations for Research and Assessment*. The full report is provided below.

This document centers research departments as uniquely connecting many other divisions in the central office – curriculum, information technology, student support services, career and technical education, assessment, and facilities – and the data they collect often serve as the glue that holds district operations together. The publication helps define the vital role that research departments play in district operations and planning for reopening schools in the fall. The document specifically addresses how research and assessment can contribute to the reopening of schools in 2020 by:

- Informing Decisions on Programming, Policy, and Budget
- Evaluating District Initiatives
- Identifying Student, Staff, and Community Needs
- Addressing Equity Disparities for Students and Families
- Assessing Impacts on Student Learning Outcomes
- Evaluating Strengths and Weaknesses of Distance Learning Implementation
- Rethinking Policies and Protocols for Calculating Student Enrollment

- Rethinking Transportation and GIS Algorithms
- Temporarily Suspending External Research in Schools

### *2021 National Assessment of Educational Progress (NAEP)*

### *Trial Urban District Assessment (TUDA)*

CGCS has been working closely with the National Assessment Governing Board (Governing Board) to work through any issues and concerns with the administration of the 2021 National Assessment of Educational Progress (NAEP) Trial Urban District Assessment (TUDA). On June 29, 2020, Michael Casserly shared remarks that addressed the sentiments of the TUDA superintendents with the Governing Board. He responded to questions from board members regarding the pending decision to move forward with, or cancel, the 2021 assessment in January. The Council consistently urged the Governing Board to postpone the assessment to January 2022. The Governing Board decided at the July board meeting to proceed with the NAEP assessment in January. However, realizing the challenges of administering NAEP in January 2021, the Governing Board, the U. S. Department of Education, and the National Center for Education Statistics, which administers the assessment, asked Congress to grant a request to postpone the 2021 NAEP assessment to 2022. The language from the legislation granting this change is provided here:

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  SEC. 104. RESCHEDULING OF THE NAEP MANDATED BIENNIAL 4TH AND 8TH
      GRADE ASSESSMENT AND ALIGNMENT OF THE MANDATED QUADRENNIAL 12TH
      GRADE ASSESSMENT.
    (a) Current Assessment Administration Rescheduling.--
Notwithstanding any other provision of law and due to the public health
emergency declared by the Secretary of Health and Human Services under
section 319 of the Public Health Service Act (42 U.S.C. 247d) on
January 31, 2020, with respect to COVID-19--
        (1) the biennial 4th and 8th grade reading and mathematics
    assessments scheduled to be conducted during the 2020-2021 school
    year in accordance with paragraphs (2)(B) and (3)(A)(i) of section
    303(b) of the National Assessment of Educational Progress
    Authorization Act (20 U.S.C. 9622(b)) and, as practicable and
    subject to the discretion of the National Assessment Governing
    Board, the Trial Urban District Assessment, shall be conducted
    during the 2021-2022 school year; and
        (2) the next quadrennial 12th grade reading and mathematics
    assessments carried out in accordance with section 303(b)(2)(C) of
    the National Assessment of Educational Progress Authorization Act
    (20 U.S.C. 9622(b)(2)(C)) after the date of enactment of this
    section, shall be conducted during the 2023-2024 school year.
    (b) Future Assessment Administration.--In accordance with section
303(b)(2)(B) of the National Assessment of Educational Progress
Authorization Act (20 U.S.C. 9622(b)(2)(B)), the next biennial
assessments following the 2021-2022 administration, as authorized under
subsection (a), shall occur in the 2023-2024 school year and, as
practicable and subject to the discretion of the National Assessment
Governing Board, the next Trial Urban District Assessment following the
2021-2022 administration, as authorized under subsection (a), shall
occur in the 2023-2024 school year.
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### *Trial Urban District Assessment Advisory Task Force to the National Assessment Governing Board*

Given the 2017 expansion of the Trial Urban District Assessment (TUDA) program to 27 districts, the Council submitted a technical proposal to the National Assessment Governing Board (Governing Board) to establish a Task Force of local education leaders from TUDA districts. The Council was awarded a contract for a 24-month effort that included the creation, project management, and on-going coordination of the TUDA Task Force. The research team completed the final phase of the requirements for the contract in December 2019. The Council and the Governing Board have now entered into a new contract to continue task force activities for another three years.

The first Task Force provided feedback to the Governing Board, including recommendations on areas of policy, research, and communications related to the TUDA program. The Task Force helped inform, strengthen, and guide the Strategic Vision of the Governing Board and the evolution of the TUDA program. Perhaps the most significant accomplishment of the Task Force was the role of the Council and the group in the development of the new NAEP mathematics framework. Task force members and Council staff formally shared perspectives on the framework, NAEP assessment practices, NAEP national and local communication strategies, and several other topics.

The first meeting of the second Task Force was held on Tuesday, November 10, 2020. The meeting agenda and minutes follow the department overview.

## Update on On-Going Projects

### *Analysis of TUDA Performance and the Influence and Impact of Public Schools on Student Achievement and Urban School Districts*

In the spring of 2011, the Council research team published the study *Pieces of the Puzzle: Recent Performance Trends in Urban Districts – A Closer Look at 2009 NAEP Results (An Addendum)*. A portion of that report analyzed the National Assessment of Educational Progress (NAEP) performance of Trial Urban District Assessment (TUDA) performance while adjusting the district performance based on key background variables. The key background variables included race/ethnicity, special education status, English language learner status, free- or reduced-price lunch eligibility, parental education level (grade eight only), and a measure of literacy materials available in the home. The analysis compared the predicted NAEP performance (after controlling for the background variables) to the actual NAEP performance of the districts. The analysis allowed the Council to identify districts that were performing better than expected on the NAEP assessment and beginning to mitigate some of the effects of poverty and other background characteristics of students that typically suppress academic performance.

The lessons learned from that study have prompted the Council research team to replicate the analysis using data from the 2011, 2013, 2015, 2017, and 2019 administrations of NAEP reading and mathematics assessments in grades four and eight. This study not only identifies districts that continue to perform better than expected based on background variables, but when combined with the analysis of the 2009 data, district trends in performance can be examined which provide a very different picture of the changes in district effects over time. For example, Detroit has typically been one of the lowest performing TUDA district, and even when controlling for relevant background variables, Detroit performs lower than expected. However, this analysis revealed that Detroit is one of only a few districts that has made consistent progress on the NAEP assessment each year across multiple grades and subjects (grade eight reading and grade four math). The progress Detroit is making is all but lost in any other analysis of student performance in the district, but indicates that student achievement, though not where it needs to be, is improving. The Council has taken the additional step of applying Census poverty data at the school level to further illuminate the districts that are overcoming the effects of abject poverty and other demographic factors.

***Methodology***

For this analysis, the research team conducted a hierarchical linear modeling (HLM) analyses to estimate the performance of a district if its demographic profile, in terms of the selected student and school background characteristics, is the same as the average profile of all students across the country. The analyses put the districts on a more level playing field regarding these characteristics. Based on this HLM analyses (using student and school level data), we computed the expected performance of each district based on their profile in terms of the selected student background characteristics. We subtract the expected performance from the actual performance to calculate the "district effect." We then analyzed the changes in the district effects over the 2009, 2011, 2013, 2015, and 2017 NAEP administrations. We have now added data to the analysis from the 2019 NAEP administration that were released the last week in September 2020.

We revised how we handle what we found were anomalies in the data based on district changes in the identification of Free or Reduced-Price Lunch (FRPL) students. Table 1 illustrates the changes in the identification of FRPL students since 2015. In the Council's analysis, some districts have observed as much as 30 to 40 percentage point changes in the students identified. As a result, the credit that district's receive for educating students in poverty is underestimated and the district effects are subsequently underestimated as well. Consequently, we have incorporated a school-level free or reduced-price lunch rate that is estimated from the NAEP sample or the National Center for Education Statistics' Common Core of Data results.

Based on the NAEP district effect analysis, the Council selected six districts—Boston, Chicago, Dallas, Miami-Dade, San Diego and Washington, DC—that have made substantial progress overcoming the effects of poverty, language, and discrimination on student achievement for site visits. The team conducted site visits in Boston and the District of Columbia Public Schools in Spring 2018. We followed with site visits to Miami-Dade County, Chicago Public Schools, and San Diego Public Schools in the Fall 2018. The last site visit was completed in Dallas in February 2019. The team spoke with a broad cross section of central office and school staff about the factors that led to their success in raising student achievement—particularly with vulnerable student groups. A "counterfactual" district—one that has not demonstrated any growth among these student groups—will also be selected, and the team will visit this district to explore potential differences in practices between districts with varied outcomes.

Using our *Indicators of Success*, we will determine the level of common core implementation in these improving districts in order to investigate whether strong standards implementation work has made a difference in districts' ability to overcome the effects of poverty and language and raise student achievement. We will also explore a broad range of other factors that may have played a role in the achievement outcomes. Based on our findings, we will finalize our NAEP analysis and report by answering the question of how some districts were able to "beat the odds."

A draft report of the initial results of the study has been completed. A final formal report is provided in Achievement Task Force section of this report.

Table 1. TUDA Free or Reduced-Price Lunch Methodology, 2015 – 2019

| TUDA | NAEP 2015 | NAEP 2017 | NAEP 2019 |
|---|---|---|---|
| ALB | CEP-ALL | CEP-ALL | CEP-ALL |
| ATL | **Direct-Only** | CEP-ALL | CEP-ALL |
| CLA | CEP-ALL | CEP-ALL | CEP-ALL |
| CLE | CEP-ALL | CEP-ALL | CEP-ALL |
| DC | CEP-ALL | CEP-ALL | CEP-ALL |
| AUS | Direct-Plus | Direct-Plus | Direct-Plus |
| CHA | **CEP-ALL** | **CEP-Direct** | **Direct-Plus** |
| CHI | Direct-Plus | Direct-Plus | Direct-Plus |
| DAL | Direct-Plus | Direct-Plus | Direct-Plus |
| DEN | N/A | Direct-Plus | Direct-Plus |
| DET | Direct-Plus | Direct-Plus | Direct-Plus |
| FTW | N/A | Direct-Plus | Direct-Plus |
| FRE | Direct-Plus | Direct-Plus | Direct-Plus |
| GUI | N/A | **CEP-Direct** | **Direct-Plus** |
| HOU | Direct-Plus | Direct-Plus | Direct-Plus |

| | | | |
|---|---|---|---|
| JEF | Direct-Plus | Direct-Plus | Direct-Plus |
| LOS | Direct-Plus | Direct-Plus | Direct-Plus |
| MIL | N/A | Direct-Plus | Direct-Plus |
| NYC | Direct-Plus | Direct-Plus | Direct-Plus |
| PHI | **CEP-Direct** | **Direct-Plus** | **Direct-Plus** |
| SAN | Direct-Plus | Direct-Plus | Direct-Plus |
| BLT | N/A | Direct-Only | Direct-Only |
| DUV | Direct-Only | Direct-Only | Direct-Only |
| HIL | Direct-Only | Direct-Only | Direct-Only |
| MIA | Direct-Only | Direct-Only | Direct-Only |
| SHE | N/A | **Direct-Only** | **Direct-Only (CEP & Non-CEP schools)** |
| Boston | **CEP-ALL** | **Direct-Only** | **Direct-Only (CEP & Non-CEP schools)** |

### *Operations and Academic Key Performance Indicators*

The board of directors authorized the development of Operations Key Performance Indicators in 2002 and the Academic Key Performance Indicators in the 2014. Several teams of educators from Council member districts crafted a list of desired indicators for operations areas including business services, finance, human resources, and technology and academic areas including general core instruction, special education, and English language learners. The refined set of Academic Key Performance Indicators are designed to measure the progress among the Council's membership toward improving the academic outcomes for students and include the following:

- Ninth grade algebra completion
- Ninth graders failing one or more core courses
- Ninth graders with a GPA of B or better
- Number of high school students enrolled in advanced placement
- AP exam scores of 3 or higher
- Number of high school students enrolled in AP-equivalent courses
- Four-year high school graduation rate
- Five-year high school graduation rate
- Percent of students with 20 days or more absent from school
- Instructional days per student missed per year due to suspension
- Percent of students identified as needing special education
- Percent of students placed in each general education setting by percent of time

*Report.* The Council released the request for data for the operations key performance indicators, *Managing for Results in America's Great City Schools 2020*, and the academic key performance indicators, *Academic Key Performance Indicators 2020 Report*, in February. The deadline was originally set for late April 2020, but the research team extended the district deadline for submission to August 7, 2020 to allow districts flexibility

given their response to the coronavirus. We did not send reminders of the due dates to districts. Instead, districts who did not submit data in 2020 for one or both of the reports will be encouraged to submit data for 2020 and 2021 next spring. The request for 2021 data will be shared with district representatives on the first week of February.

### *Information Technology Update*

The Council's research team has developed the first edition of our Academic KPI dashboard. The Council currently collects over 1,000,000 data points and uses those data points to create over 200,000 calculations for our Academic KPIs. We created digital dashboards that visualize more data than previously available in the Academic KPI report. The dashboards allow for longitudinal comparisons for those districts who have submitted survey data across multiple years. Another feature of the dashboard is the ability for districts to compare themselves to peer groups. Peer groups are defined as those districts that have similar student demographics, i.e., district enrollment, FRPL eligibility, ELL status and race/ethnicity. Peer groups allow districts to compare themselves not only to *all* Council districts, but more specifically to Council member districts that share common demographics.

The Council research team is beginning to update the existing data dashboards for more functionality. The research team is unveiled a new Special Education dashboard in October 2020. Planned updates in 2021 include the creation of an English learner dashboard to visualize data specifically related to Els. Two examples of the Special Education dashboard are provided below (see Figures 1 and 2).

The Academic KPI dashboards are securely and confidentially available at EdWires.org.

We also relaunched and expanded EdWires.org, a Council-only web application for private online access to files and resources. With the launch is an easy and secure self-registration process: submit your district email address and enter the verification code that is sent to your email from "EdWires by CGCS". Only member district employees with a Council district email domain can log in. Once logged in, CGCS members have immediate access to the Academic KPI dashboards, shared documents from member districts, as well as the confidential KPI ID number for your member district.

In response to the COVID-19 pandemic, the Council created the "COVID-19 Resources" section on our private platform fileshare.edwires.org. This section allows districts to share information amongst themselves relating to the response to COVID-19. Documents include student, staff, and community surveys; parent and community engagement materials; documents on addressing learning loss from curriculum staff; operational considerations for reopening schools; special education documents; and much more. There are private workspaces for sharing sensitive information for district legal teams and for

superintendents. The technology team is working on the development of group discussion boards (Edwires Forums) expected to launch in early Spring 2021.

While the listserv is useful for mass communication, the Edwires forum will facilitate smaller discussions. On the forum, members can privately message each other for one-on-one discussions or post to job-alike groups. Members logged in to EdWires.org will be able to enroll in collaboration groups that match their job-alike function and professional interests, as well as task-oriented groups like task forces and working groups. The Council will continue to roll out new and useful improvements to EdWires.org as the memberships' needs evolve.

Figure 1. Sample Special Education Dashboard for Key Performance Indicators, 2017-18

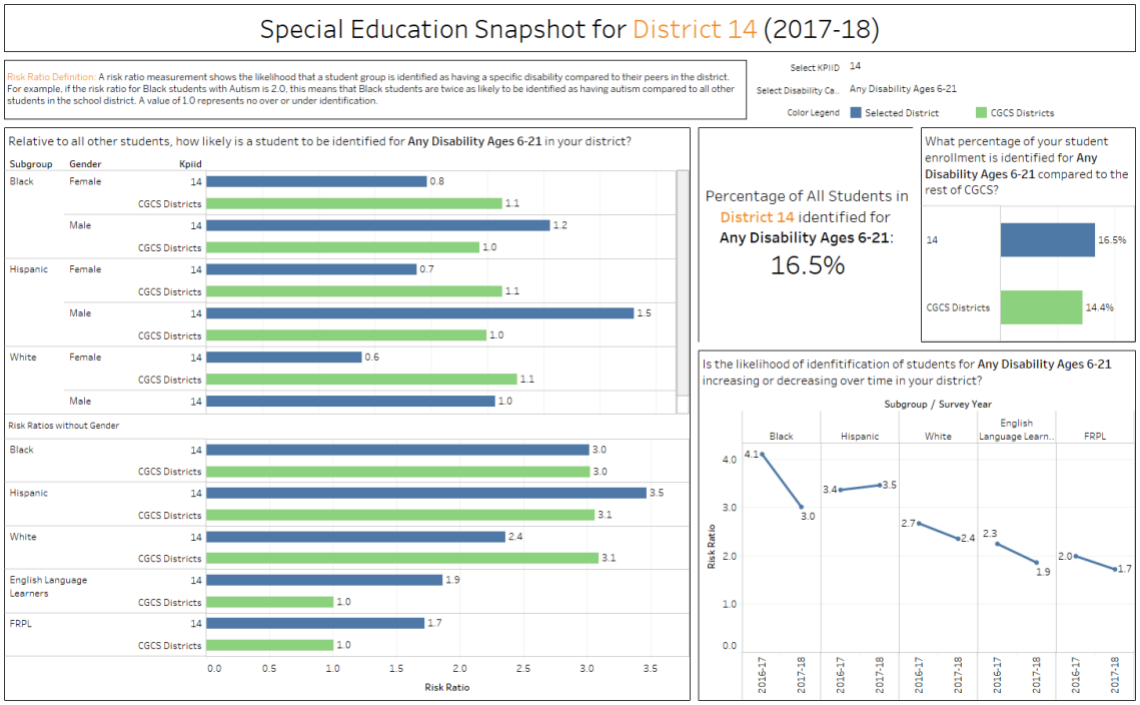
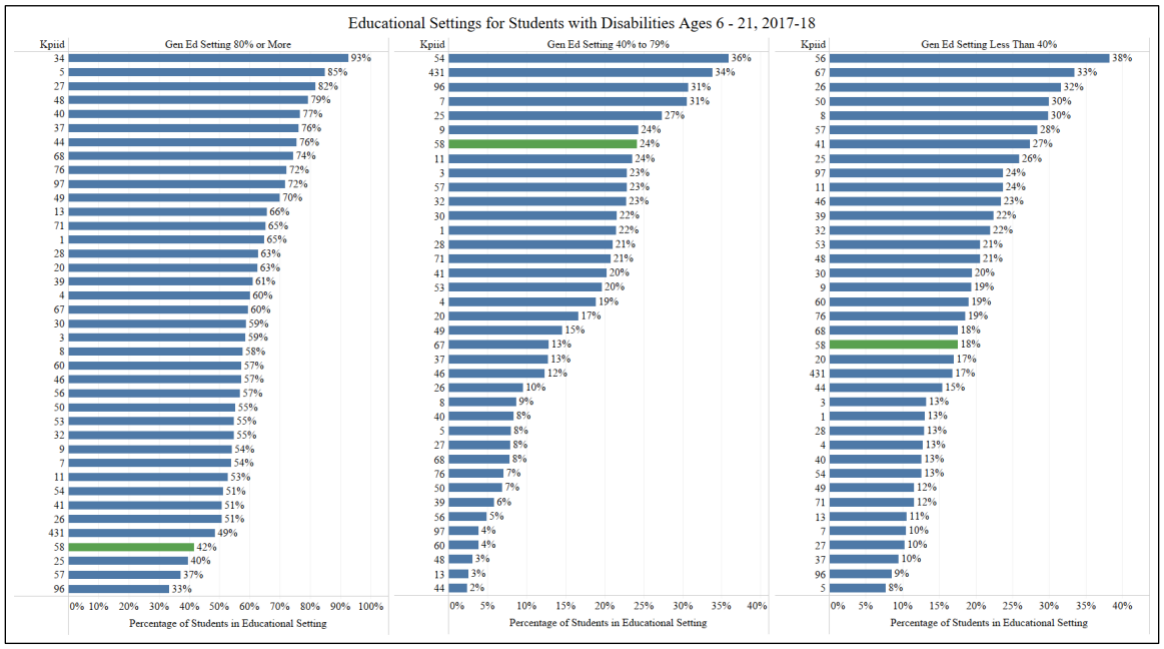


Figure 2. Sample Special Education – Educational Settings - Dashboard for Key Performance Indicators, 2017-18




## Update on New Projects

### *The Annie E. Casey Foundation, National Network of Education Research-Practice Partnerships, Council of the Great City Schools Literature Scan Project*

Over the past three months, school districts have faced unprecedented closures and changes to the school year because of the COVID-19 pandemic. These closures have forced school districts to reimagine instructional delivery to students and support for teachers through distance learning and technology. Already existing inequities, such as limited access to technological devices and the internet prior to the pandemic, have likely widened the digital divide between students with lower economic means. Moreover, the current economic environment will result in greater challenges to educational delivery for teachers and schools due to persisting barriers to financial stability.

The 2020-21 school year will present ongoing challenges, some that can be anticipated, and others that will not. The pandemic has forced district leaders to shift plans and thinking daily to maintain student safety and maximize learning opportunities. Over the next year, there will be an increased need for access to the most relevant research by district administrators, principals, and teachers to inform their decision-making and planning. For example, we have already witnessed a heightened demand for evidenced-based practices supporting the implementation of distance learning, including topics related to asynchronous, blended, and full-time distance learning. Given the increased digital divide, it is imperative that these practices include considerations for educating

students in poverty, students with special needs, English language learners, and students of color to help create equitable experiences across the country.

While there is an increasing demand for evidence, districts must still work through their daily challenges, limiting their ability to search for such evidence. Externally prepared literature scans that share evidence-based practices from peer-reviewed research will be critical to supporting evidence-informed decisions all districts will face. Both the Council of the Great City Schools (CGCS) and the National Network of Education Research-Practice Partnerships (NNERPP) are uniquely positioned to fulfill these needs.

Working collaboratively CGCS and NNERPP plan to leverage existing networks of researchers working in research-practice partnerships (RPPs) across the U.S. to produce 2-4 page literature scans on high-need topics identified by district research leaders currently participating in learning communities facilitated by CGCS and NNERPP. The scans will focus on recommendations to support students who are experiencing differential access to technology, and thus, exaggerating existing inequities. Moreover, we expect the scans to help district leaders translate theoretical research into practical, outside-of-the-box applications for traditionally marginalized students that will support the interruption of inequitable opportunities and potential injustices these students face. Because we anticipate these needs to evolve as districts re-open, we propose distributing the production of the scans over a 12-month period to follow the contours of challenges as they arise. Given these considerations, we expect to produce up to 17 literature scans during this 12-month period.

In particular, we plan to focus on two key deliverables:

1. Rapid turnaround literature scans: Using a previously shared literature scan from one of our colleagues at the New York City Department of Education as a key guide, we will produce up to 17 literature scans that will respond to critical evidence needs identified by our district research leader contacts. We anticipate the scans to be of direct utility to time-sensitive decisions that would benefit from evidence.

2. Engagement with district research leaders: Once the scans are completed, we will share them with district research leaders that are members of either CGCS or NNERPP to help support their engagement with the scans. For example, we plan to host learning webinars with these groups so that they may ask questions of each other, ponder the evidence collectively, and identify remaining gaps in their knowledge that may inform future scans.

### *RAND Corporation and CGCS American School District Panel (ASDP)*

The Council has partnered with the Rand Corporation to provide leaders with an opportunity to share their perspectives and contribute to decisions about education policy

and practice. The research team will survey leaders and staff from a representative panel of school districts across the country as well as conduct a complementary set of qualitative studies, following these districts over time to monitor trends.

The surveys will explore a range of district functions, such as curriculum and instruction, professional development supports, and services for students with disabilities. The research will examine district strategy, structure, policy, and practice, and will provide insight into how districts are changing to support school-level problem-solving.

The results of the first American School District Panel (ASDP) survey conducted in the fall were recently released. Over 55% of Council member districts completed the survey which inquired about their fall COVID-19 response. Two key findings are below, and you can find a summary of all the findings and explore the interactive data feature here.

**Key Findings**

- **Remote learning is here to stay**: Twenty percent of districts have already adopted, plan to adopt, or are considering adopting virtual school as part of their district portfolio *after* the end of the pandemic.
- **Concerns:** Three widely shared concerns rose to the top for district leaders for the 2020–2021 school year: disparities in students' opportunities to learn during the COVID-19 pandemic, students' social and emotional learning (SEL) needs, and insufficient funding to cover staff. Leaders ranked these three concerns topmost among a wide variety of school instructional and staffing matters.
- **Pandemic Support:** School district leaders reported that the U.S. Department of Education had the second-least amount of influence on their COVID-19 plans; state and local health departments had the most.

Many thanks to those of you who completed the survey and provided this timely and relevant data to inform education research and practice, especially in this unprecedented time. The second ASDP survey will be released in January 2021.

# TUDA TASKFORCE

# Council of the Great City Schools
# & National Assessment Governing Board
# Trial Urban District Assessment (TUDA) Policy Task Force
## Virtual Meeting
## Tuesday, November 10, 2020

# Agenda

| | Agenda Topic |
|---|---|
| 1:00 – 1:20 PM | Welcome and Introductions<br>*Lesley Muldoon, Executive Director, National Assessment Governing Board (Governing Board)*<br>*Michael Casserly, Executive Director, Council of the Great City Schools (CGCS)* |
| 1:20 – 1:30 PM | TUDA Task Force Background and Agenda Overview<br>*Ray Hart, Director of Research, CGCS*<br>*Laura LoGerfo, Assistant Director of Reporting and Analysis, Governing Board* |
| 1:30 – 2:10 PM | 2021 NAEP and Beyond<br>• Update on TUDA and the NAEP Administration<br>• TUDA Considerations for NAEP 2023<br>*Laura LoGerfo & Ray Hart* |
| 2:10 – 2:50 PM | Governing Board Policy Update<br>• NAEP Reading Framework Update<br>• NAEP Assessment Schedule<br>*Lesley Muldoon* |
| 2:50 – 3:00 PM | Key Topics for the Next TUDA Task Force to Consider<br>*Laura LoGerfo & Ray Hart* |
| 3:00 PM | *Adjourn* |

**TUDA Task Force Participants**

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Superintendent Lisa Herring
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**National Assessment Governing Board**
**Council of the Great City Schools**
**Trial Urban District Assessment Policy Task Force**

# Virtual Task Force Meeting Minutes

**November 10, 2019**

**Overview**

On Tuesday, November 10, 2019, the Trial Urban District Assessment (TUDA) Policy Taskforce met virtually via Zoom. The Task Force comprises ten high-level TUDA district staff members who were chosen based on their experience with the National Assessment of Educational Progress (NAEP) and reflect a geographic and demographic representation of urban school districts. As part of the National Assessment Governing Board's (Governing Board) continuing outreach efforts, the Governing Board contracted with the Council of the Great City Schools (Council) in September 2020 to form this Task Force, which is charged with providing district feedback and recommendations to the Governing Board on projects and NAEP policy.

**Task Force Meeting Attendees**

Michael Casserly
Executive Director
Council of the Great City Schools

Ray Hart
Director of Research
Council of the Great City Schools

Superintendent Robert Nelson
Office of the Superintendent
Fresno Unified School District

Superintendent Lisa Herring
Office of the Superintendent
Atlanta Public Schools

Theresa D. Jones
Chief Achievement & Accountability Officer
Baltimore City Public Schools

Monica Armenta
Executive Director, Communications
Albuquerque Public Schools

Alison Yoshimoto-Towery
Chief Academic Officer
Los Angeles Unified School District

Linda Chen
Chief Academic Officer
New York City Department of Education

Lisa Stooksberry
Deputy Executive Director
National Assessment Governing Board

Laura LoGerfo
Assistant Director (Reporting & Analysis)
National Assessment Governing Board

Dan McGrath
Branch Chief – Reporting and Dissemination
National Center for Education Statistics

Gina Broxterman
Statistician
National Center for Education Statistics

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Senior Communications Officer
Fort Worth Independent School District

Alicia Lacy-Castille
Assessment Manager
Houston Independent School District

Roseann Canfora
Deputy Chief of Strategic Communications
Cleveland Metropolitan School District

Jessica Lotz
Director of Research & Performance Management
Shelby County Schools

**Policy Issues**

Topics addressed by the TUDA Task Force include:

1) NAEP reporting process
2) NAEP schedule of assessments
3) NAEP contextual questions
4) Misuse and misinterpretation of NAEP data

During the first meeting, the following key policy issues were discussed:

| **Topic #1: NAEP Reporting Process** | |
|---|---|
| **Task Force Discussion and Input** | **Governing Board Follow-Up Activities** |
| Communicating NAEP results to the public.<br>• The Governing Board indicated that if NAEP 2021 does take place, no district results will be calculated or reported to the public. | |

∗ Denotes Task Force input for future Governing Board consideration

| **Topic #3: NAEP contextual questions** | |
|---|---|
| **Task Force Discussion and Input** | **Governing Board Follow-Up Activities** |
| • The Council staff inquired about questions on NAEP that may reflect student experiences during COVID-19. NCES indicated questions were added related to school and home experiences during the COVID-19 remote, hybrid, and in-person learning. Students may also be asked about their experiences navigating virtual learning. | |

| **Topic #4: Misuse and misinterpretation of NAEP data** | |
|---|---|
| **Task Force Discussion and Input** | **Governing Board Follow-Up Activities** |
| *Reporting future results.*<br>• Districts were concerned about the inherent bias in results if a 2021 sample was diluted by students missing the exam because of hybrid or fully remote learning status during the assessment window. | |

∗ Denotes Task Force input for future Governing Board consideration

The meeting adjourned 3:00 pm.

Respectfully submitted:

Ray Hart
Director of Research
Council of the Great City schools

# RAND COVID-19 SURVEY REPORT

RAND CORPORATION

Research Report

HEATHER L. SCHWARTZ, DAVID GRANT, MELISSA DILIBERTI, GERALD P. HUNTER, CLAUDE MESSAN SETODJI

# Remote Learning Is Here to Stay

## Results from the First American School District Panel Survey

U.S. school districts have taken widely varied approaches to reopening public schools for the 2020–2021 school year. The divergence stems from the highly localized approach to both schooling and addressing the coronavirus disease 2019 (COVID-19) pandemic and differences in COVID-19 transmission rates among communities.

To develop a national picture of school districts' needs and approaches to school reopening, the RAND Corporation fielded its first survey to the new American School District Panel (ASDP) from

### KEY FINDINGS

- About two in ten districts have already adopted, plan to adopt, or are considering adopting virtual schools as part of their district portfolio after the end of the COVID-19 pandemic. District leaders cited reasons related to student and parent demand for continuing various forms of online instruction in future years.
- Three widely shared concerns rose to the top for district leaders for the 2020–2021 school year: disparities in students' opportunities to learn during the COVID-19 pandemic, students' social and emotional learning (SEL) needs, and insufficient funding to cover staff. Leaders ranked these three concerns topmost among a wide variety of school instructional and staffing matters.
- School district leaders reported that the U.S. Department of Education had the second-least amount of influence on their COVID-19 plans; state and local health departments had the most.
- School district leaders diverged in terms of the degree to which they emphasized certain needs for the 2020–2021 school year. More leaders from focus districts than from nonfocus districts rated fundamentals (such as internet and technology access) as a greatest need. In contrast, more nonfocus district leaders rated student mental health and high-quality instructional resources as greatest needs.

September through November 2020. By offering traditional school district superintendents' and charter management organization (CMO) directors' views, we complement findings from four prior surveys of teachers and principals about their experiences navigating the COVID-19 pandemic.[1]

For simplicity, we refer to both of these types of local education agencies as *districts* and to both types of respondents as *district leaders* in this report. We use the term *focus districts* to refer to districts where at least 50 percent of students are Black or Hispanic/Latino or at least 50 percent of students qualify for free or reduced-price lunch. Remaining districts are *nonfocus districts*.

We hope that these findings will be useful to districts, state departments of education, education support providers, instructional content developers, policymakers, and researchers. We note that our findings are limited by a relatively small sample size, which constrains our ability to tease apart differences among types of districts. As a consequence, we only present overall responses and responses among focus and nonfocus districts. We will continue to grow the ASDP sample and field ASDP surveys in winter 2021 and in spring 2021.

In the rest of this report, we describe the American Educator Panels (AEPs), the profile of districts that participated in the survey, and the survey results, and provide a brief conclusion. The technical appendix includes our methods for survey analysis.

## About the American Educator Panels

The AEP consists of three standing panels of educators: the American Teacher Panel, the American School Leader Panel, and the ASDP. The AEP began in 2014 and expanded significantly during the 2016–2017 and 2017–2018 school years (Robbins and Grant, 2020). The ASDP is the newest member of the AEP, and it includes more than 375 districts. The American Teacher Panel, meanwhile, includes more than 25,000 teachers, and the American School Leader Panel includes more than 5,000 school principals.

We recruit AEP members using probabilistic sampling methods from the most-comprehensive lists of teachers, principals, and school districts that are available. Information about how we recruited ASDP panel members is available on the ASDP website (RAND Corporation, undated-a). The panels are designed to generate samples of sufficient size to facilitate national analyses and analyses of prevalent subgroups at the national level.

## The ASDP Survey Sample and Administration

The ASDP sample consists of K–12 public school districts and CMOs in the United States. Over 375 districts have agreed to participate in the panel. Survey eligibility was limited to district superintendents, CMO leaders, or their designees. The survey we fielded in fall 2020 covers the topics listed in in the following text box.

We developed this survey in consultation with our sponsor, the Bill and Melinda Gates Foundation, and our four project partners: the Center on Reinventing Public Education, Chiefs for Change, the Council of the Great City Schools, and Kitamba. The funder provided feedback on the survey research design; however, we maintained final editorial control on the survey items. The survey had an approximate administration time of five minutes and we fielded it from September 15, 2020, through November 11, 2020.

### Topics Covered in the ASDP Fall COVID-19 Survey

- Areas where districts need additional resources or guidance
- Anticipated challenges for the 2020–2021 school year
- Staff-related challenges
- Professional development
- Institutions, agencies, and personnel providing input and influence on plans for the 2020–2021 school year
- Approaches taken for the 2020–2021 school year

[1] Find key findings from teacher and school principal COVID-19 surveys from spring and fall 2020 at RAND Corporation, "American Educator Panels," webpage, undated-a.

**Abbreviations**

| | |
|---|---|
| AEP | American Educator Panels |
| ASDP | American School District Panel |
| CMO | charter management organization |
| COVID-19 | coronavirus disease 2019 |
| IEP | individualized education plan |
| PD | professional development |
| SEL | social and emotional learning |

We administered the fall 2020 COVID-19 survey at the same time that we recruited districts and CMOs to participate in the ASDP; after a district superintendent or their designee consented and completed the ASDP enrollment process, we immediately requested that they complete the fall COVID-19 survey as a next step.[2]

Of the 1,685 districts or CMOs that we invited to join the ASDP panel, 379 agreed to become members, which is a recruitment rate of 22 percent. The 379 panelists consist of 317 traditional public school districts and 62 CMOs, which collectively span across 45 states. Of the 379 districts or CMOs that agreed to be in the panel, 319 took our first survey, for a survey completion rate of 84 percent.[3] Table 1 provides weighted descriptive statistics for survey respondents. The weights, which are described following this report's conclusion, are intended to ensure that the sample reflects the national population of school districts.

[2] Further details about the creation of the ASDP are available at RAND Corporation, "American School District Panel," webpage, undated-b.

[3] The completion rate is calculated by dividing the number of completed surveys by the number of panelists invited to complete this survey; the denominator does not include screened-out panelists (who were deemed ineligible to participate). Completion rates do not include the recruitment rate when panelists were invited to join the ASDP.

> Public education will never be the same post–COVID-19. The pandemic has forced public education to adopt new practices on the fly, and many will become lasting changes to the way we do business. Flexible scheduling and virtual instruction are just two practices that will become a part of how we educate children.
>
> *Superintendent of a large, suburban school district*

## Findings and Survey Responses

In this section, we present district leaders' responses to each survey question. For each question, we present the full response in table form, and we illustrate some of the survey results in figures as well. Prior to each survey result table, we summarize some key findings about that survey question. As a reminder, *focus districts* have a student population that is at least 50 percent Black or Hispanic/Latino or where at least 50 percent of students qualify for free or reduced-price lunch. *Nonfocus districts* fall below these thresholds.

### Greatest Need for Additional Resources or Guidance in 2020–2021

Our first question on the survey was "As you consider how to support students this school year (2020–21), in which of the following areas does your district/CMO have the greatest need for additional resources or guidance?" Responses are reported in Table 2.

#### Key Findings About This Question

- Addressing students' SEL and mental health needs was the support that the highest proportion of district leaders—six in ten—identified as a greatest need. Both focus and nonfocus district leaders rated this as their greatest need.
- Beyond SEL and student mental health, focus and nonfocus district leaders diverged in the degree to which they considered other supports as top needs. For example, a higher proportion of focus leaders than nonfocus district leaders identified the provision of fundamentals, such as internet and technology access,

TABLE 1

Weighted Descriptive Statistics for Survey Respondents

| Survey Respondents | Percentage | | |
|---|---|---|---|
| | Sample, Unweighted | Sample, Weighted | Population |
| District enrollment size | | | |
| Small (Less than 3,000 students) | 50 | 72 | 73 |
| Medium (3,000 to 9,999 students) | 25 | 20 | 19 |
| Large (10,000 or more students) | 25 | 8 | 7 |
| Urbanicity | | | |
| Urban | 32 | 9 | 9 |
| Suburban | 29 | 25 | 25 |
| Town | 16 | 20 | 20 |
| Rural | 22 | 46 | 46 |
| Region | | | |
| Northeast | 12 | 21 | 21 |
| Midwest | 34 | 36 | 36 |
| South | 30 | 25 | 25 |
| West | 24 | 18 | 18 |
| Students eligible for a free or reduced-price lunch | | | |
| 0–24% | 15 | 21 | 24 |
| 25–49% | 31 | 36 | 36 |
| 50–74% | 30 | 30 | 28 |
| 75–100% | 24 | 14 | 12 |

NOTE: The ASDP sample consists of the 319 survey respondents, while the population sample consists of U.S. public school districts (approximately 13,000 districts) in the original sampling frame for ASDP recruitment. We obtained district and CMO characteristics from the Common Core of Data files; these data are from the 2018–2019 school year (National Center for Education Statistics [NCES], 2020). Weighted proportions were calculated using survey weights, which are calibrated to match national averages.

as a greatest need. Conversely, more nonfocus district leaders said that they have a great need for high-quality instructional resources that will meet the needs of all students.

- Very few leaders—one in 20—identified privacy concerns for teachers and students using online tools as a greatest need.

> Interestingly enough, we've responded to non-academic needs better than academic needs: i.e., meals, childcare, etc.
>
> *Superintendent of a large, urban district*

## Anticipated Challenges for 2020–2021

Our second question was "To what extent do you anticipate each of the following being a challenge for your district/CMO during this school year (2020–21)?" In Table 3, we present district leaders' responses to this question. Figure 1 depicts, in ranked order, the percentage of district leaders who identified each of eight topics as a moderate or significant concern.

### Key Findings About This Survey Question

- Disparities in students' opportunities to learn during COVID-19 was the most significant challenge among the eight topics we asked about for 2020–2021. Half of district leaders rated this a "significant challenge"—a much

TABLE 2

## Greatest Need for Additional Resources or Guidance

As you consider how to support students this school year (2020–21), in which of the following areas does your district/CMO have the greatest need for additional resources or guidance? (*n* = 319)

| | Weighted Percentage | | |
|---|---|---|---|
| Response | Districts/CMOs Overall | Focus Districts/ CMOs | Nonfocus Districts/CMOs |
| Providing specialized programming and support for English language learners | 12 | 15 | 9 |
| Providing services and instructional support (e.g., therapies, push in, pull out, resource rooms) as specified in students' Individualized Education Plans (IEPs) | 46 | 50 | 43 |
| Ensuring all students and teachers have access to the technology they will need to engage in remote learning | 35 | 44 | 28 |
| Ensuring all students and teachers have internet access | 31 | 40 | 23 |
| Providing high-quality instructional resources that will meet the needs of all students | 58 | 49 | 65 |
| Addressing students' social and emotional learning and mental health needs | 61 | 53 | 67 |
| Developing fair and instructionally sound policies for assessment and grading | 22 | 20 | 24 |
| Protecting privacy and safety of students and teachers who are using online tools | 5 | 5 | 5 |
| Managing enrollment changes | 19 | 20 | 18 |
| Other | 10 | 4 | 15 |

NOTE: Respondents were instructed to rank their top three needs. This table displays the percentage of respondents who ranked each need as one of their top three. Percentages will not sum to 100 percent.

higher proportion of leaders than for any other of the seven items.

- Only a quarter of district leaders deemed providing subsidized meals to students a moderate or significant challenge for this school year.
- Likewise, fewer than one out of every three district leaders deemed seat-time requirements a moderate or significant challenge. Those who did so tended to rate it a moderate challenge rather than a significant one.
- Consistent with focus district leader responses about their districts' greatest needs, a much-higher proportion of focus district leaders compared with nonfocus district leaders identified internet access as a significant challenge.

### Anticipated Staff-Related Hindrances to High-Quality Instruction and Other Supports to Students

Our third question was "Many districts/CMOs are experiencing challenges related to staffing as a result of COVID-19. For each of the following conditions, please indicate whether this is likely to occur in your district/CMO, and if so, whether it will hinder your district/CMO's ability to provide high-quality instruction and other supports to students." In Table 4, we present district leaders' responses to this question.

> We need a clear understanding and definition of when it is appropriate to shut down a campus or school district, due to COVID-19 cases and/or spread.
>
> *Superintendent of a small, rural school district*

TABLE 3

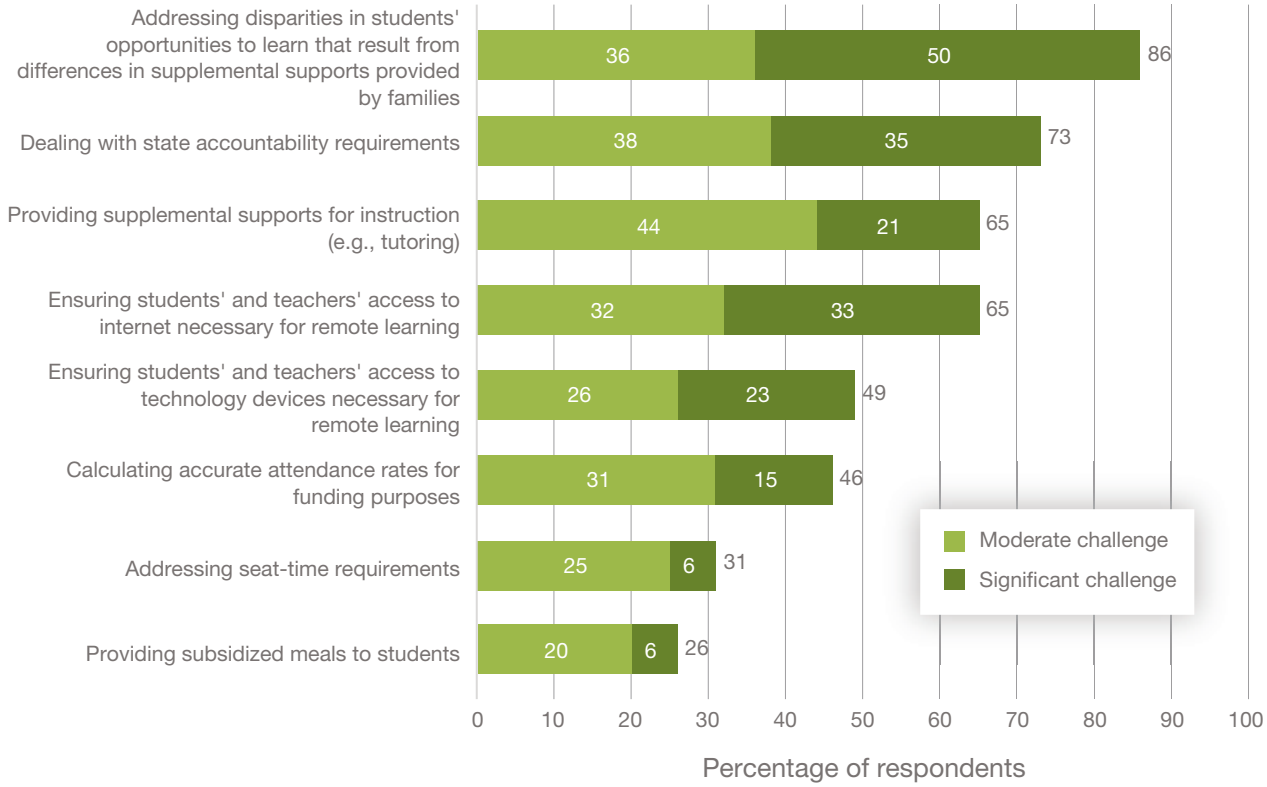
## Anticipated Challenges for 2020–2021

To what extent do you anticipate each of the following being a challenge for your district/CMO during this school year (2020–21)? (*n* = 317)

| | Weighted Percentage | | | |
|---|---|---|---|---|
| Response | Not At All | Minor Challenge | Moderate Challenge | Significant Challenge |
| Providing subsidized meals to students | | | | |
| Districts/CMOs overall | 35 | 39 | 20 | 6 |
| Focus districts/CMOs | 36 | 39 | 20 | 4 |
| Nonfocus districts/CMOs | 35 | 39 | 20 | 7 |
| Ensuring students' and teachers' access to technology devices necessary for remote learning | | | | |
| Districts/CMOs overall | 17 | 34 | 26 | 23 |
| Focus districts/CMOs | 17 | 40 | 19 | 25 |
| Nonfocus districts/CMOs | 18 | 30 | 32 | 21 |
| Ensuring students' and teachers' access to internet necessary for remote learning | | | | |
| Districts/CMOs overall | 5 | 31 | 32 | 33 |
| Focus districts/CMOs | 1 | 27 | 32 | 40 |
| Nonfocus districts/CMOs | 8 | 34 | 32 | 26 |
| Addressing seat-time requirements | | | | |
| Districts/CMOs overall | 30 | 39 | 25 | 6 |
| Focus districts/CMOs | 28 | 34 | 34 | 4 |
| Nonfocus districts/CMOs | 31 | 43 | 17 | 9 |
| Calculating accurate attendance rates for funding purposes | | | | |
| Districts/CMOs overall | 16 | 38 | 31 | 15 |
| Focus districts/CMOs | 6 | 36 | 42 | 16 |
| Nonfocus districts/CMOs | 24 | 39 | 22 | 15 |
| Dealing with state accountability requirements | | | | |
| Districts/CMOs overall | 4 | 22 | 38 | 35 |
| Focus districts/CMOs | 2 | 15 | 38 | 45 |
| Nonfocus districts/CMOs | 6 | 29 | 39 | 27 |
| Providing supplemental supports for instruction (e.g., tutoring) | | | | |
| Districts/CMOs overall | 4 | 31 | 44 | 21 |
| Focus districts/CMOs | 5 | 26 | 46 | 23 |
| Nonfocus districts/CMOs | 3 | 35 | 41 | 20 |
| Addressing disparities in students' opportunities to learn that result from differences in supplemental supports provided by families | | | | |
| Districts/CMOs overall | 0 | 14 | 36 | 50 |
| Focus districts/CMOs | 0 | 10 | 28 | 62 |
| Nonfocus districts/CMOs | 0 | 17 | 44 | 39 |
| Other | | | | |
| Districts/CMOs overall | 37 | 0 | 3 | 59 |
| Focus districts/CMOs | 57 | 0 | 4 | 39 |
| Nonfocus districts/CMOs | 30 | 0 | 3 | 67 |

FIGURE 1

Anticipated Moderate and Significant Challenges for School Year 2020–2021




## Key Findings About This Survey Question

- District leaders indicated that inadequate funding to cover staffing needs was the most significant hindrance to high-quality instruction in their district this school year, among the 11 staff-related challenges that we asked about. About four in ten district leaders reported inadequate funding to be a major hindrance.
- However, need for funding to support staffing needs differed across focus districts and nonfocus districts. A higher percentage of leaders in nonfocus districts (45 percent) rated inadequate funding to cover staff needs a "major hindrance" than did leaders from focus districts (31 percent).
- Need for a sufficient number of qualified instructional staff ranked second among district leaders' reports of staffing-related hindrances this school year. Similar percentages of focus and nonfocus districts rated this concern a major hindrance this school year.
- Few district leaders—about one in 20—anticipated that attrition among principals or central office staff will be a major hindrance this school year.

## Additional Professional Development Needs for Teachers

Our fourth question on the survey was "To what extent do teachers in your district/CMO need additional professional development, beyond what they've already received, in each of the following areas?" In

> A storm is coming when [the] state government realizes how empty its coffers are. We won't be able to pay our staff or keep the same staffing levels without significant support.
>
> *Chief executive officer of a CMO*

TABLE 4

## Staffing Challenges

Many districts/CMOs are experiencing challenges related to staffing as a result of COVID-19. For each of the following conditions, please indicate whether this is likely to occur in your district/CMO, and if so, whether it will hinder your district/CMO's ability to provide high-quality instruction and other supports to students. (*n* = 315)

| | Weighted Percentage | | | |
|---|---|---|---|---|
| Response | I Do Not Anticipate This | I Anticipate This, but Do Not Expect It to Be a Hindrance | I Anticipate This Will Be a Slight or Moderate Hindrance | I Anticipate This Will Be a Major Hindrance |
| High levels of attrition among teachers | | | | |
| Districts/CMOs overall | 28 | 38 | 20 | 13 |
| Focus districts/CMOs | 27 | 44 | 17 | 12 |
| Nonfocus districts/CMOs | 29 | 34 | 23 | 15 |
| High levels of attrition among nonteaching staff | | | | |
| Districts/CMOs overall | 30 | 36 | 22 | 12 |
| Focus districts/CMOs | 36 | 36 | 17 | 10 |
| Nonfocus districts/CMOs | 24 | 36 | 27 | 14 |
| High levels of attrition among principals or central office staff | | | | |
| Districts/CMOs overall | 66 | 20 | 8 | 6 |
| Focus districts/CMOs | 69 | 22 | 4 | 5 |
| Nonfocus districts/CMOs | 63 | 19 | 11 | 6 |
| Inadequate funding to cover staffing needs | | | | |
| Districts/CMOs overall | 8 | 24 | 30 | 39 |
| Focus districts/CMOs | 12 | 29 | 28 | 31 |
| Nonfocus districts/CMOs | 4 | 20 | 31 | 45 |
| Substantial numbers of teachers with a vulnerable health status | | | | |
| Districts/CMOs overall | 7 | 45 | 40 | 9 |
| Focus districts/CMOs | 8 | 42 | 41 | 9 |
| Nonfocus districts/CMOs | 6 | 48 | 38 | 8 |
| Substantial numbers of teachers who lack child care for their own children | | | | |
| Districts/CMOs overall | 9 | 40 | 40 | 11 |
| Focus districts/CMOs | 12 | 37 | 39 | 12 |
| Nonfocus districts/CMOs | 7 | 43 | 40 | 11 |
| Insufficient number of qualified instructional staff to cover all classes | | | | |
| Districts/CMOs overall | 16 | 28 | 30 | 26 |
| Focus districts/CMOs | 14 | 31 | 31 | 23 |
| Nonfocus districts/CMOs | 18 | 24 | 30 | 28 |
| Lack of clear guidance from the state about staffing | | | | |
| Districts/CMOs overall | 21 | 40 | 24 | 15 |
| Focus districts/CMOs | 26 | 37 | 26 | 12 |
| Nonfocus districts/CMOs | 17 | 43 | 22 | 18 |
| Revising work roles and job duties for teachers or other staff | | | | |
| Districts/CMOs overall | 9 | 41 | 34 | 16 |
| Focus districts/CMOs | 11 | 42 | 32 | 14 |
| Nonfocus districts/CMOs | 8 | 39 | 35 | 18 |

TABLE 4—CONTINUED

Many districts/CMOs are experiencing challenges related to staffing as a result of COVID-19. For each of the following conditions, please indicate whether this is likely to occur in your district/CMO, and if so, whether it will hinder your district/CMO's ability to provide high-quality instruction and other supports to students. ($n$ = 315)

| | Weighted Percentage | | | |
|---|---|---|---|---|
| Response | I Do Not Anticipate This | I Anticipate This, but Do Not Expect It to Be a Hindrance | I Anticipate This Will Be a Slight or Moderate Hindrance | I Anticipate This Will Be a Major Hindrance |
| Retaining enough social workers and other staff to address students' mental health needs | | | | |
| Districts/CMOs overall | 22 | 35 | 27 | 15 |
| Focus districts/CMOs | 25 | 34 | 27 | 14 |
| Nonfocus districts/CMOs | 20 | 36 | 28 | 16 |
| Need for mental health supports for teachers | | | | |
| Districts/CMOs overall | 2 | 41 | 38 | 20 |
| Focus districts/CMOs | 2 | 43 | 38 | 17 |
| Nonfocus districts/CMOs | 2 | 38 | 38 | 22 |
| Other staffing-related challenge not listed above | | | | |
| Districts/CMOs overall | 39 | 0 | 11 | 49 |
| Focus districts/CMOs | 43 | 0 | 7 | 50 |
| Nonfocus districts/CMOs | 35 | 0 | 17 | 48 |

Table 5, we present district leaders' responses to this question.

### Key Findings About This Survey Question

- Leaders reported high levels of professional development needs across the board, with a clear majority (68 percent or more) reporting moderate or great needs in all of the categories thst we asked about.
- The top-ranked professional development need among the six topics about which we asked was addressing students' social and emotional well-being. Nonfocus district leaders ranked this professional development need especially high, with 37 percent of nonfocus leaders deeming this professional development topic a great need.
- Following closely behind social and emotional well-being was professional development to help teachers address the needs of students with unfinished learning from COVID-19. For this type of professional development, it was leaders of focus districts that ranked this topic especially high; 38 percent of focus district leaders deemed this topic a great need.

## Sources of Influence on School Districts' COVID-19 Plans

Our fifth question was "To what extent did each of the following possible sources of input influence your district/CMO's plan for the 2020–21 school year?" In Table 6, we present district leaders' responses to this question.

### Key Findings About This Survey Question

- Three-quarters of district leaders said they looked to state and local health department guidance to a great extent to guide their operating plans for the 2020–2021 school year. District leaders reported that state and local health department guidance had more influence on their operating plans this year than any other source about which we asked.
- Conversely, the news media and guidance from the U.S. Department of Education had the least influence on districts' plans among

TABLE 5

## Professional Development Needs for Teachers

To what extent do teachers in your district/CMO need additional professional development (PD), beyond what they've already received, in each of the following areas? (*n* = 315)

| | Weighted Percentage | | | | |
|---|---|---|---|---|---|
| Response | No Need; Not Relevant to Our District | No Need; Teachers Have Adequate Access to PD in This Area | Minor Need | Moderate Need | Great Need |
| Using technology tools to provide high-quality instruction | | | | | |
| Districts/CMOs overall | 0 | 7 | 24 | 40 | 29 |
| Focus districts/CMOs | 0 | 9 | 27 | 35 | 29 |
| Nonfocus districts/CMOs | 0 | 6 | 21 | 44 | 29 |
| Developing remote lessons that are aligned with state standards | | | | | |
| Districts/CMOs overall | 0 | 8 | 24 | 40 | 28 |
| Focus districts/CMOs | 0 | 7 | 29 | 40 | 23 |
| Nonfocus districts/CMOs | 0 | 8 | 19 | 40 | 33 |
| Using assessment data effectively and appropriately | | | | | |
| Districts/CMOs overall | 2 | 8 | 22 | 48 | 20 |
| Focus districts/CMOs | 0 | 12 | 21 | 45 | 23 |
| Nonfocus districts/CMOs | 3 | 4 | 23 | 51 | 18 |
| Addressing students' social and emotional well-being | | | | | |
| Districts/CMOs overall | 0 | 3 | 14 | 51 | 32 |
| Focus districts/CMOs | 0 | 3 | 17 | 54 | 26 |
| Nonfocus districts/CMOs | 0 | 3 | 12 | 48 | 37 |
| Addressing the needs of students with unfinished learning | | | | | |
| Districts/CMOs overall | 0 | 3 | 18 | 47 | 32 |
| Focus districts/CMOs | 0 | 4 | 19 | 39 | 38 |
| Nonfocus districts/CMOs | 1 | 3 | 16 | 54 | 26 |
| Addressing the needs of students with IEPs and English language learners | | | | | |
| Districts/CMOs overall | 1 | 7 | 24 | 43 | 26 |
| Focus districts/CMOs | 0 | 5 | 23 | 47 | 25 |
| Nonfocus districts/CMOs | 1 | 8 | 24 | 40 | 27 |
| Other | | | | | |
| Districts/CMOs overall | 83 | 2 | 6 | 2 | 7 |
| Focus districts/CMOs | 93 | 3 | 0 | 2 | 2 |
| Nonfocus districts/CMOs | 69 | 0 | 14 | 3 | 14 |

the 14 information sources that we listed. District leaders report that both sources had far less influence than other sources that we inquired about, including parents, teachers, principals, local community members, the Centers for Disease Control and Prevention, and professional school associations.

- The one information source that leaders of nonfocus districts looked to for guidance to a greater extent than leaders of focus districts were other districts' COVID-19 plans. In contrast, leaders of focus districts looked more to guidance from their state education agencies.

## New Approaches to Schooling for 2020–2021

Our sixth question on the survey was "Have you considered adopting any of the following approaches for the 2020–21 school year?" In Table 7, we present district leaders' responses to this question, and in Figure 2 we present the top five new approaches that district leaders said they were using this school year.

### Key Findings About This Survey Question

- As might be expected because of the predominance of remote instruction this school year, district leaders have adjusted staff meetings to make them virtual. Almost half of district leaders have said that they have created virtual learning communities for staff during this school year.
- The second-most-common change that district leaders reported was changing approaches to instruction. About four in ten districts indicated that they are adjusting instructional time this school year and adopting flexible staffing models that adjust students' assignments to teachers.
- About three in ten districts were establishing partnerships to offer virtual instruction and adjusting teacher compensation and work rules.
- Some districts indicated that they would like to adopt new approaches this school year, but thus far lack the resources or flexibility to do so. For example, one in five districts would like to provide tutoring to students by engaging with outside organizations or nonteaching staff (for example, college students) but lack the resources to do so. Among the eight changes we proposed, tutoring was the one that the most districts wished to do but lacked sufficient funds to enact.

> The government at the state and federal level do not truly understand what schooling is like, and how the pandemic is affecting every aspect of operations.
>
> *Superintendent of a medium-sized, suburban district*

## Innovative Practices That Districts Anticipate Continuing After the COVID-19 Pandemic Has Passed (Open Response Field)

Our seventh question on the survey was "Did your district/CMO adopt any innovative practices in response to COVID-19 that you anticipate continuing in future years, even after the pandemic has passed?" Unlike the prior six questions, this was an open-ended question, and 233 respondents wrote in a reply. We coded these responses according using the methods we describe in the technical appendix. In Table 8, we present our district leaders' coded responses to this question.

### Key Findings About This Survey Question

- District leaders indicated that remote learning, in at least some form, will outlast the COVID-19 pandemic. One in five districts were considering, planning to adopt, or had already adopted a virtual school or fully online option, while about one in ten have adopted or are planning to adopt a blended or hybrid form of instruction.
- When district leaders mentioned reasons for remote instruction outlasting the COVID-19 pandemic, they highlighted wanting to offer students more flexibility, meeting parent or student demand, meeting the diversity of students' needs, and maintaining student enrollment.
- Establishment of a virtual school was the innovative practice that the greatest number of district leaders anticipated would continue in future years.

TABLE 6

## Input Influencing 2020–2021 School Year Plans

To what extent did each of the following possible sources of input influence your district/CMO's plan for the 2020–21 school year? (*n* = 313)

| Response | Weighted Percentage | | | |
|---|---|---|---|---|
| | Not at All | To a Small Extent | To a Moderate Extent | To a Great Extent |
| Guidance from the U.S. Department of Education | | | | |
| Districts/CMOs overall | 35 | 46 | 11 | 7 |
| Focus districts/CMOs | 34 | 43 | 12 | 11 |
| Nonfocus districts/CMOs | 36 | 49 | 11 | 4 |
| Guidance from the Centers for Disease Control and Prevention | | | | |
| Districts/CMOs overall | 3 | 11 | 37 | 48 |
| Focus districts/CMOs | 0 | 11 | 34 | 54 |
| Nonfocus districts/CMOs | 5 | 11 | 40 | 43 |
| Guidance from our state education agency | | | | |
| Districts/CMOs overall | 0 | 11 | 25 | 64 |
| Focus districts/CMOs | 0 | 7 | 21 | 72 |
| Nonfocus districts/CMOs | 0 | 14 | 28 | 57 |
| Guidance from state or local health departments | | | | |
| Districts/CMOs overall | 0 | 5 | 19 | 76 |
| Focus districts/CMOs | 1 | 6 | 14 | 79 |
| Nonfocus districts/CMOs | 0 | 4 | 24 | 72 |
| Professional organizations (e.g., Council of the Great City Schools, School Superintendents Association) | | | | |
| Districts/CMOs overall | 23 | 40 | 25 | 13 |
| Focus districts/CMOs | 21 | 38 | 27 | 13 |
| Nonfocus districts/CMOs | 24 | 41 | 23 | 12 |
| Our school board | | | | |
| Districts/CMOs overall | 4 | 21 | 30 | 44 |
| Focus districts/CMOs | 4 | 17 | 29 | 50 |
| Nonfocus districts/CMOs | 4 | 25 | 31 | 40 |
| National, state, or local political leaders | | | | |
| Districts/CMOs overall | 27 | 36 | 24 | 12 |
| Focus districts/CMOs | 20 | 42 | 30 | 7 |
| Nonfocus districts/CMOs | 34 | 31 | 19 | 16 |
| Leaders of other districts (e.g., by sharing model plans) | | | | |
| Districts/CMOs overall | 3 | 18 | 45 | 33 |
| Focus districts/CMOs | 4 | 19 | 51 | 26 |
| Nonfocus districts/CMOs | 3 | 17 | 39 | 40 |
| Principals in my district | | | | |
| Districts/CMOs overall | 2 | 9 | 40 | 49 |
| Focus districts/CMOs | 1 | 11 | 36 | 53 |
| Nonfocus districts/CMOs | 3 | 7 | 44 | 46 |

TABLE 6—CONTINUED

To what extent did each of the following possible sources of input influence your district/CMO's plan for the 2020–21 school year? (*n* = 313)

| Response | Weighted Percentage | | | |
|---|---|---|---|---|
| | Not at All | To a Small Extent | To a Moderate Extent | To a Great Extent |
| Teachers in my district | | | | |
| Districts/CMOs overall | 2 | 13 | 45 | 40 |
| Focus districts/CMOs | 2 | 10 | 44 | 44 |
| Nonfocus districts/CMOs | 2 | 15 | 46 | 36 |
| Parents/guardians in my district | | | | |
| Districts/CMOs overall | 1 | 24 | 45 | 30 |
| Focus districts/CMOs | 0 | 18 | 46 | 36 |
| Nonfocus districts/CMOs | 2 | 28 | 45 | 24 |
| Students in my district | | | | |
| Districts/CMOs overall | 8 | 39 | 35 | 19 |
| Focus districts/CMOs | 7 | 33 | 38 | 22 |
| Nonfocus districts/CMOs | 8 | 44 | 31 | 17 |
| Other members of the local community | | | | |
| Districts/CMOs overall | 10 | 56 | 26 | 8 |
| Focus districts/CMOs | 5 | 57 | 29 | 8 |
| Nonfocus districts/CMOs | 15 | 54 | 24 | 7 |
| The news media | | | | |
| Districts/CMOs overall | 69 | 23 | 6 | 1 |
| Focus districts/CMOs | 64 | 24 | 12 | 0 |
| Nonfocus districts/CMOs | 74 | 23 | 1 | 2 |
| Other | | | | |
| Districts/CMOs overall | 65 | 0 | 13 | 22 |
| Focus districts/CMOs | 65 | 1 | 14 | 19 |
| Nonfocus districts/CMOs | 64 | 0 | 11 | 26 |

Though the profoundly devastating impact of COVID marches on, I am heartened by the lessons we have learned as educators in this moment. What's most energizing to me is how we will continue to use the power of virtual instruction to disrupt barriers like staffing, space, and time to optimize student learning and experiences (and educator experiences, too).

*Chief executive officer of a CMO*

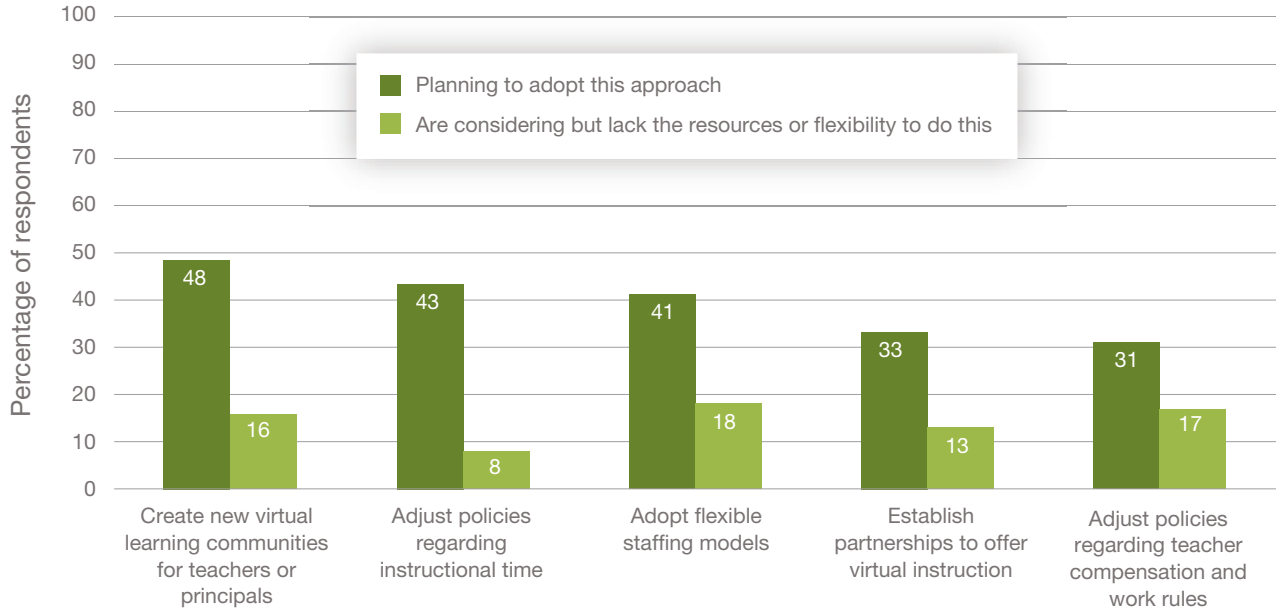
TABLE 7

## Approaches Being Considered for 2020–2021

| Have you considered adopting any of the following approaches for the 2020–21 school year? ($n$ = 313) | | | | |
|---|---|---|---|---|
| | Weighted Percentage | | | |
| Response | No | Yes, but We Lack the Resources or Flexibility to Do This | Yes, but We Opted Not to Because Other Options Are More Feasible | Yes, We Are Planning to Adopt This Approach |
| Establish partnerships with online education providers or other community organizations to offer virtual instruction | | | | |
| Districts/CMOs overall | 37 | 13 | 16 | 33 |
| Focus districts/CMOs | 32 | 11 | 19 | 39 |
| Nonfocus districts/CMOs | 43 | 16 | 13 | 28 |
| Provide tutoring to students by engaging with community organizations or hiring new nonteaching staff (e.g., college students, unemployed community members) | | | | |
| Districts/CMOs overall | 47 | 24 | 8 | 20 |
| Focus districts/CMOs | 45 | 19 | 7 | 29 |
| Nonfocus districts/CMOs | 49 | 29 | 9 | 12 |
| Work with community organizations to provide extra instructional space or other facilities-related resources | | | | |
| Districts/CMOs overall | 60 | 10 | 11 | 19 |
| Focus districts/CMOs | 55 | 10 | 8 | 26 |
| Nonfocus districts/CMOs | 64 | 10 | 13 | 14 |
| Adopt flexible staffing models, in which teachers provide instruction to students other than those who would be assigned to them if instruction were in person (e.g., supporting small-group instruction for another teacher's classes; teaching a larger group of students than would be feasible in person) | | | | |
| Districts/CMOs overall | 27 | 18 | 13 | 41 |
| Focus districts/CMOs | 21 | 19 | 15 | 45 |
| Nonfocus districts/CMOs | 33 | 17 | 12 | 38 |
| Create new virtual learning communities for teachers or principals | | | | |
| Districts/CMOs overall | 28 | 16 | 9 | 48 |
| Focus districts/CMOs | 25 | 15 | 4 | 55 |
| Nonfocus districts/CMOs | 30 | 16 | 13 | 41 |
| Adjust policies regarding minimum or maximum class size | | | | |
| Districts/CMOs overall | 53 | 16 | 8 | 22 |
| Focus districts/CMOs | 54 | 17 | 8 | 21 |
| Nonfocus districts/CMOs | 53 | 16 | 9 | 23 |
| Adjust policies regarding instructional time | | | | |
| Districts/CMOs overall | 41 | 8 | 7 | 43 |
| Focus districts/CMOs | 42 | 7 | 8 | 42 |
| Nonfocus districts/CMOs | 40 | 10 | 7 | 43 |
| Adjust policies regarding teacher compensation and work rules | | | | |
| Districts/CMOs overall | 43 | 17 | 9 | 31 |
| Focus districts/CMOs | 49 | 15 | 11 | 25 |
| Nonfocus districts/CMOs | 38 | 19 | 8 | 35 |

FIGURE 2

Top Five New Approaches Districts Say They Are Adopting in 2020–2021




## Anything Else the District Would Like to Relay About COVID-19 Response or Needs (Open Response Field)

Our final question was a general open-ended question that allowed district leaders the opportunity to reflect on the school year thus far, and share with us anything that they wanted researchers to know about their experiences. Specifically, we asked "If there is anything else you'd like us to know about how your district/CMO responded to COVID-19 or what you need to serve your students effectively, please feel free to share additional responses here." In Table 9, we present district leaders' responses to this question. However, the nature of this question led to a wide variety of responses, so these findings should be interpreted with some caution.

### Key Findings About This Survey Question

- District leaders volunteered both positive and challenging themes they wished us to know about in regard to their districts' responses to COVID-19. On the positive side, about two in ten leaders who responded to this question praised how their district is now offering more choices and flexibility for students as a result of COVID-19. Similarly, a little more than one in ten leaders described selecting instructional models that match to parent and student preferences.
- In terms of challenges, district leaders underscored their concern about insufficient funding, a top-rated challenge in a prior survey question. District leaders also indicated that a lack of clear and consistent guidance from local, state, and federal officials about when and how to reopen schools made their planning more difficult.
- District leaders also highlighted the shortage of substitute teachers, which is a concern also raised by principals in our fall 2020 COVID-19 survey (Diliberti and Kaufman, 2020).

TABLE 8

## Continued Use of Innovative Practices After COVID-19

Did your district/CMO adopt any innovative practices in response to COVID-19 that you anticipate continuing in future years, even after the pandemic has passed? If so, please briefly describe here. (*n* = 288)

| | Weighted Percentage | | |
|---|---|---|---|
| Practices | Total | Adopted or Planning to Adopt | Considering |
| Remote learning | | | |
| Remote instruction for individual students in specific cases (e.g., student illness) | 4 | 3 | 1 |
| Remote instruction for all students in isolated events (e.g., inclement weather days) | 8 | 3 | 5 |
| One or more stand-alone online courses (including summer school) | 1 | 1 | 1 |
| Blended or hybrid model | 10 | 9 | 1 |
| Virtual school or fully online option | 20 | 15 | 6 |
| Remote learning in some form | 7 | 6 | 2 |
| Instruction | | | |
| Modified curriculum and/or instructional practices | 4 | 3 | 0 |
| Personalized learning and/or independent study programs | 3 | 3 | 0 |
| Technology | | | |
| Learning Management System and/or digital learning tools/platforms | 9 | 9 | 0 |
| Distribution of technology devices and/or internet access | 7 | 7 | 0 |
| Scheduling | | | |
| Scheduling changes | 7 | 6 | 1 |
| Virtual meetings | | | |
| Virtual district administrative meetings and/or telework | 7 | 7 | 0 |
| Virtual teacher trainings or professional development | 4 | 4 | 0 |
| Virtual meetings with school community (e.g., parent-teacher associations, parent-teacher conferences) | 4 | 4 | 0 |
| Nonacademic support services (e.g., SEL programs, meals, transportation) | | | |
| Nonacademic support services (e.g., SEL programs, meals, transportation) | 2 | 2 | 0 |
| Health and cleaning practices | | | |
| Health and cleaning practices | 3 | 3 | 0 |

NOTE: Respondents' answers could have been matched to multiple themes. Of the 218 respondents whose written responses were analyzed, 81 provided responses that were matched to more than one theme or sub-theme. Some respondents felt confident that remote learning would persist into the future but were unsure about precisely what types of remote learning opportunities would be provided. Other respondents' answers did not provide enough information for researchers to clarify their responses into more specific categories.

## Conclusion

The following three topics rose to the top of traditional public school district and CMO leaders' concerns about their schools in the 2020–2021 school year:

1. District leaders were united in their concerns about addressing disparities in students' opportunities to learn during COVID-19. This was their top-rated challenge for the 2020–2021 school year among the eight challenges we listed on our survey. Eight out of ten nonfocus district leaders and nine out of ten focus district leaders rated this as a moderate or significant challenge.
2. Public school district leaders saw a sharp need to address students' SEL and mental health needs. Among the nine needs we asked about on the survey that—spanning topics from internet access and special education instruction to managing enrollment changes—student SEL was the topic that the

TABLE 9

## Anything Else the District Leader Wanted to Relay

If there is anything else you'd like us to know about how your district/CMO responded to COVID-19 or what you need to serve your students effectively, please feel free to share additional responses here. (*n* = 96)

| Category | Weighted percentage |
|---|---|
| Reported as a challenge | |
| Lack of clear and consistent guidance from officials | 7 |
| Equity | 1 |
| Staff mental health | 2 |
| Substitute teacher shortages | 9 |
| Helping students catch up | 2 |
| Access to technology and/or the internet | 8 |
| Funding | 11 |
| Health and safety equipment and COVID-19 data collection | 4 |
| Access to technology and/or the internet | 5 |
| Reported as a strength | |
| Funding | 3 |
| Health and safety equipment and COVID-19 data collection | 2 |
| Selecting instructional models that meet parent and student preferences | 13 |
| Meeting students' social and emotional needs | 1 |
| Delivering services, including meals, to the school community | 11 |
| Pride in how district staff are meeting challenges | 8 |
| Providing more choices and/or increased flexibility | 19 |

NOTE: Respondents' answers could have been matched to multiple themes. Of the 96 respondents whose written responses were analyzed, 16 provided responses that were matched to more than one theme or sub-theme.

greatest number of district leaders deemed a great need. It was ranked highest by both focus and nonfocus districts. Likewise, addressing students' SEL needs was leaders' most-needed professional development topic for teachers in 2020–2021.

3. A large share of district leaders reported being concerned about insufficient funding to cover staff needs. Almost half of nonfocus district leaders and almost one-third of focus district leaders identified insufficient funding as a major hindrance for providing high-quality instruction to students.

Beyond those three topics, districts diverged in the degree to which they prioritized certain needs and concerns. Leaders of focus districts expressed greater levels of concern about a lack of student and staff access to online instruction, unfinished student learning, opportunity gaps, and state accountability requirements. In contrast, leaders of nonfocus districts expressed greater levels of concern about students' mental health, standards-aligned and high-quality instruction during COVID-19, future funding shortfalls, and staff attrition.

Consistent with the fragmented federal approach that the United States has taken in response to the COVID-19 pandemic, school district leaders looked to state and local health departments, followed by state education agencies, for guidance. Tellingly, the news media—followed by the U.S. Department of Education—had the least amounts of influence on district leaders' COVID-19 plans, less influence than members of the local district community, parents, teachers, principals, and school professional

> Regardless of political or personal stance, all staff have worked to remain compliant with our risk-reduction practices. Teamwork has helped.
>
> *Superintendent of a small, rural district*

As leaders look down the road, about one in five anticipated that a fully remote learning option will be a permanent public school offering in the years ahead.

associations had. District leaders cited frustration with a perceived lack of leadership from the U.S. Department of Education and expressed a need for clear and consistent guidance about their operating plans.

As leaders look down the road, about one in five anticipated that a fully remote learning option will be a permanent public school offering in the years ahead. One in ten are considering or have adopted blended or hybrid instruction. District leaders highlighted these offerings as ways to meet the diversity of parental and student preferences and also as ways to retain student enrollment in their district.

Based on these findings and prior research, we offer the following two recommendations.

## Recommendation: Districts Need More Federal and State Funding to Redress Differences in Students' Opportunities to Learn During COVID-19 and to Prevent Cuts Below Pre–COVID-19 Funding Levels

Inadequate funding to cover staffing needs was district leaders' top-rated hindrance to instructional quality. However, a shortage of qualified instructional staff, which districts leaders also indicated was a hindrance, could impede districts' abilities to fully expend substantial infusions of new funding if it were provided. (Simply maintaining pre–COVID-19 levels could prevent large furloughs or layoffs.) If the federal or state governments were to increase school funding, partnerships with outside organizations offer a way to supplement school services, even if teaching staff remained limited. For example, about one-quarter of district leaders would like to offer tutoring to students via outside partnerships or using nonteaching staff (for example, college students) but lack the funding to do so. Furthermore, for the substantial number of districts where internet access and technology are still of concern, additional funding for nonlabor expenses could support essentials, such as needed investments to expand and maintain their technology infrastructure.

## Recommendation: With Federal Funding, States and Education Content Developers Should Develop Easily Accessed Coherent Instructional Systems for Online Instruction

Because remote learning is likely to persist for a substantial portion of students beyond the COVID-19 pandemic, public school districts need coherent, high-quality instructional systems for online instruction in academics and social and emotional learning. Prior research from pre–COVID-19 virtual schools provides warning signs; students enrolled in online schools have had poorer outcomes in math, reading, science, writing, and history achievement when compared with students in traditional schools (Ahn and McEachin, 2017; Center for Research on Education Outcomes, 2015; Fitzpatrick et al., 2020; Gill et al., 2015). The main cited reasons for this are: the use of instructional content that is unaligned to standards, spending the majority of instructional time on independent learning, a lack of online content with embedded modifications for students with disabilities, and a lack of accessibility of online content for English language learners (e.g., Gill et al., 2015).

Although the explosion of online content development during COVID-19 will likely improve the quality of online instructional materials, quality is still a top concern for school leaders this school year

and should remain at the top of the policy agenda as virtual and hybrid schooling become a permanent feature of U.S. school districts' portfolios. As highlighted in other RAND research (Kaufman, Thompson, and Opfer, 2016; Polikoff et al., 2020), teachers will be best able to deliver high-quality online instruction if they are supported by a coherent instructional system within their district or school. Components of a coherent instructional system include curriculum materials that are closely aligned with state standards and assessments (including tools within the curriculum to support special education and English language learners) and sustained professional learning opportunities that help teachers use their materials productively to meet student needs.

The federal government could allocate funding to states to support development of open online curriculum materials and platforms that are accessible to schools and districts. This would allow states to work with publishers that already have online curricula that are high-quality and standards-aligned and make that curricula accessible to schools and districts. Meanwhile, publishers need to quickly ramp up their online supports for quality instructional materials. Many materials that the independent organization EdReports has deemed high-quality are not as accessible as other materials, which impedes teachers' access and promotes the already common practice of teachers using self-created materials and other online materials that may be less aligned with standards.

Although the explosion of online content development during COVID-19 will likely improve the quality of online instructional materials, quality is still a top concern for school leaders this school year and should remain at the top of the policy agenda as virtual and hybrid schooling become a permanent feature of U.S. school districts' portfolios.

# Technical Appendix

## Survey Methods

### Method for Creating Sample and Survey Weights

We created weights to produce estimates that reflect the national population of public school districts in the United States. The weighting process accounts for the probability of selection of districts sampled for the survey, and for the probability that a district or CMO responded to the survey after receiving the invitation.

To create the weights, we multiplied the selection and participation probabilities and then calibrated them to reproduce the population distribution of public school districts and CMOs in the United States. The nonresponse adjustment is important to eliminate known sources of bias and ensure that the weighted sample matches the national characteristics of districts and CMOs nationally. This weighting approach is widely used for probability sample surveys (Deville and Särndal, 1992) and to adjust for nonresponse (Kott, 1996), including for such U.S. Department of Education surveys as the Teacher Follow-Up Survey (Goldring, Taie, and Riddles, 2014). The main analysis weights are the product of the following two interim weights:

1. **the sample selection weight:** This is the inverse probability of selection into the fall 2020 COVID-19 survey sample using a comprehensive list of K–12 public school districts. Large urban districts were oversampled because we included member districts of the Council of the Great City Schools and CMOs that were from a list provided by the Charter School Growth Fund.
2. **the survey response weight:** This is the inverse of the modeled probability of a district or CMO completing the COVID-19 survey.

We subsequently recalibrated the products of these weights as necessary. Recalibration ensures that the weights recover the population estimates after selection and nonresponse adjustments are applied. The sampling and weighting approach was designed to ensure a representative sample. We used the inverse of the selection probabilities ($p_{si}$) as the sample selection weight, where the selection probability of the districts was set to be proportional to the square root of the enrollment size of the district. We estimated the response weights by modeling the likelihood ($p_{ri}$) that a selected district or CMO would respond to the survey, conditional on district- or CMO-level characteristics (including enrollment size, geographic region, urbanicity, agency type, and free and reduced-price lunch eligibility). For parsimony, we used a variable-selection method to choose the model that best fits the data. We estimated the main weight as the product of the sampling selection frame weight ($1/p_{si}$) and the response weight ($1/p_{ri}$), as follows:

$$main\ weight = \frac{1}{p_{si}} x \frac{1}{p_{ri}}$$

Because there is no guarantee that this main weight will sum to the total of the population characteristics, the weight was calibrated again based on district- or CMO-level characteristics to obtain the final weight. If some of these final weights were extreme, we used a trimming process (at the 95th percentile) to reduce the outliers and the trimmed weights were reallocated for the population totals to remain the same after trimming.

In the main body of the report, we provide detailed tables showing survey responses from district and CMO leaders. Note that table results will not always sum to 100 percent because of rounding or because the questions are designed to allow for multiple selections (or no selection).

### Method for Coding Open-Ended Responses

At the end of the survey, we posed the two open-ended questions listed below. To analyze the responses, we uploaded the data for these two items into Dedoose, a qualitative analysis software. For each survey item, one analyst performed open coding of emergent themes and clustered them into coding schemes. For example, the analyst noted that many respondents indicated that they anticipated that some form of remote learning would persist into future school years. To analyze this theme, the

analyst developed sub-themes about the variants of online instruction (e.g., single online courses, virtual schools) to classify responses. The analyst worked with a second researcher to refine the coding scheme for each of the open-ended items. In the following paragraphs, we provide details about the coding scheme for each survey item.

Once the researcher had coded the open responses, we applied survey weights to present the prominence of each emergent theme. Weighted percentages are reported in Tables 8 and 9. However, these estimates should be interpreted with some caution; while our analysis captures repeated themes in respondents' answers, we do not know the prevalence of these themes among respondents who did not provide an answer to the open-ended survey items or who provided an incomplete answer. For example, a respondent might have mentioned that a new district grading policy was an innovative practice, but this does not necessarily mean that the same district is not also considering or adopting other new practices, such as remote learning on future inclement weather days. Therefore, these estimates should be interpreted with caution because they may underestimate the prevalence of some themes.

*Question 7: Did your district/CMO adopt any innovative practices in response to COVID-19 that you anticipate continuing in future years, even after the pandemic has passed? If so, please briefly describe here.*

In our survey, 288 respondents answered this question. Fifty-five respondents said *no*: their district was not adopting any innovate practices, while 233 respondents (or about 73 percent of the sample) said *yes* and provided a written response elaborating on the adoption of these practices. Of the 233 open-ended responses that we received, we discarded five because they were not substantive (e.g., "I don't know") or because they did not relate to the survey question posed. We classified another ten responses as a variant on the answer "too early to tell" and excluded them from further analysis.

The self-identified innovative practices mentioned in the remaining 218 responses fell into one or more of the following nine innovative practice themes: (1) remote learning; (2) instruction; (3) technology; (4) scheduling; (5) virtual staff meetings; (6) communication practices or platforms; (7) health and cleaning practices; (8) nonacademic support services; and (9) other. Several of these broad themes were broken down into sub-themes (see Table 8 for a complete list of themes and sub-themes). For example, within the remote learning parent code, we created sub-codes to identify different types of remote learning—e.g., remote learning targeted toward students in isolated cases (such as when a student is ill and cannot physically come into school buildings), stand-alone online courses, or a whole virtual school. At most, a respondent's answer matched to six innovative practice themes or sub-themes. (For the remote learning theme only, the researcher also noted any reasons the respondent gave for their district or CMO's decision to adopt or consider the practice.) For each innovative practice mentioned in respondents' answers, we also coded the practice as either *adopted or planning to adopt* or *considering*. We did this to distinguish the degree of district certainty about the adoption of the named practice. Because of how we worded the survey question, the researcher assumed that if respondents just listed practices in their survey response, it meant that the district had adopted (or was planning to adopt) those practices.

*Question 8: If there is anything else you'd like us to know about how your district/CMO responded to COVID-19 or what you need to serve your students effectively, please feel free to share additional responses here.*

On our survey, 120 respondents (or about 38 percent of the sample) provided a written response to this question. Of the 120 open-ended responses that we received, we discarded 23 because they were not substantive, and we discarded one off-topic answer. We analyzed the remaining 96 responses to identify themes. The nature of the question led to a wide variety of responses. We coded the responses according to one or more of the following 14 topics: (1) access to technology and/or the internet; (2) delivering services, including meals, to the school community; (3) student equity; (4) funding; (5) health and safety equipment and COVID-19 data collection; (6) helping students catch up; (7) lack of clear and consistent guidance from officials; (8) meeting students' social and emotional needs; (9) pride in district staff rising to meet the challenge of COVID-19; (10) providing

more choices and/or increased flexibility; (11) selecting instructional models that meet parent and student preferences; (12) staff mental health; (13) substitute teacher shortages; and (14) uncertainty about the future. Each response was also coded to indicate whether the respondent implied that this was a strength or a challenge for the district or CMO.

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## About This Report

This report provides additional information about the sample, survey instrument, and resultant data for a coronavirus disease 2019 (COVID-19) survey that was administered to superintendents and other district leaders in fall 2020 via the RAND Corporation's American Educator Panels. The results are intended to inform policy and education practice related to educators' and students' needs during the time of the COVID-19 pandemic.

This research was undertaken by RAND Education and Labor, a division of the RAND Corporation that conducts research on early childhood through postsecondary education programs, workforce development, and programs and policies affecting workers, entrepreneurship, and financial literacy and decisionmaking. This report is based on research funded by the Bill & Melinda Gates Foundation. We are grateful to foundation staff for their collaboration and feedback on our surveys and analysis. The findings and conclusions presented are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation. For more information and research on these and other related topics, please visit gatesfoundation.org.

If you are interested in using AEP data for your own analysis or reading other AEP-related publications, please email aep@rand.org or visit www.rand.org/aep. More information about RAND can be found at www.rand.org. Questions about this report or about the AEP COVID-19 surveys should be directed to dgrant@rand.org, and questions about RAND Education and Labor should be directed to educationandlabor@rand.org.

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# KANSAS CITY (MO) MEMO

Memorandum

TO: Margie Vandeven, Commissioner
Missouri Department of Elementary and Secondary Education

FROM: Michael Casserly, Executive Director
Council of the Great City Schools

SUBJECT: Performance of the Kansas City (MO) Public Schools

DATE: December 17, 2020

The Council of the Great City Schools was asked by officials at the Missouri Department of Elementary and Secondary Education (DESE) about the performance and progress of the Kansas City (MO) Public Schools. Council staff briefed DESE officials on December 1, 2020, about the data that the Council collected on its member urban school systems, including the Kansas City school district. This memo summarizes the data that the Council has on the school system.

The Council collects, analyzes, and maintains the following academic data on its members and has done so for about seven years—

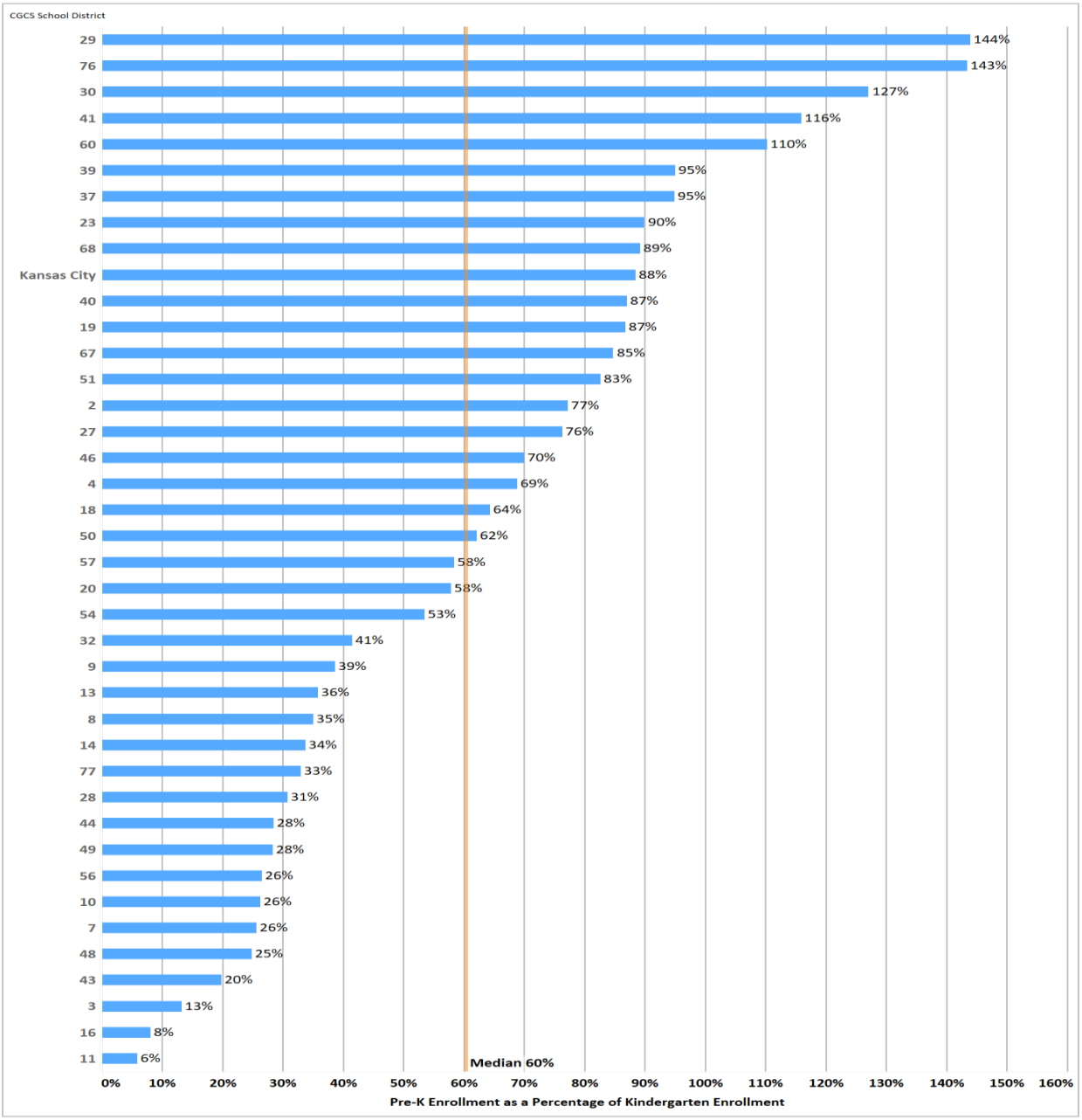
- Preschool enrollment as a percent of kindergarten enrollment
- Percent of 9th graders who failed one or more core courses
- Percent of 9th graders with B averages or better in all core courses
- Percent of students who successfully completed Algebra I or equivalent by the end of 9th grade
- Percent of secondary grade students who took one or more Advanced Placement (AP) courses
- Percent of all AP exam scores that were three or higher
- Attendance in grades 3, 6, 8, and 9
- Suspensions and instructional days lost to out-of-school suspensions
- Graduation rates.

Data on all variables are collected by race, gender, language status, disability status, and family income status. Reporting districts submit raw data and student counts, and the Council calculates all percentages, rates, and trends. Data are current through the 2018-19 school year and are collected in the same ways across all Council-member school systems to ensure the greatest degree of comparability across cities.

In addition to these data, the Council asked for raw data on Kansas City's last three years of i-Ready testing in reading and math since the state was unable to administer its summative tests at the end of the 2019-20 school year. And the Council compared Kansas City's state summative exam scores to St. Louis, which has already received state accreditation.

1) *Pre-K Enrollment as a Percent of Kindergarten Enrollment*. This measure provides a preliminary proxy measure of the size of a districts' pre-K program relative to its kindergarten enrollment. The current early childhood KPI divides the pre-K enrollment reported on the KPI data survey by the kindergarten enrollment. The indicator is important because it provides an initial look at the instructional background of students before they enter the formal school grading system. It is not a measure of performance per se, but it can help interpret changes in early grade student outcomes. Figure 1 below presents this data for 2018-19.

Figure 1. Pre-K Enrollment as a Percentage of Kindergarten Enrollment, 2018-19

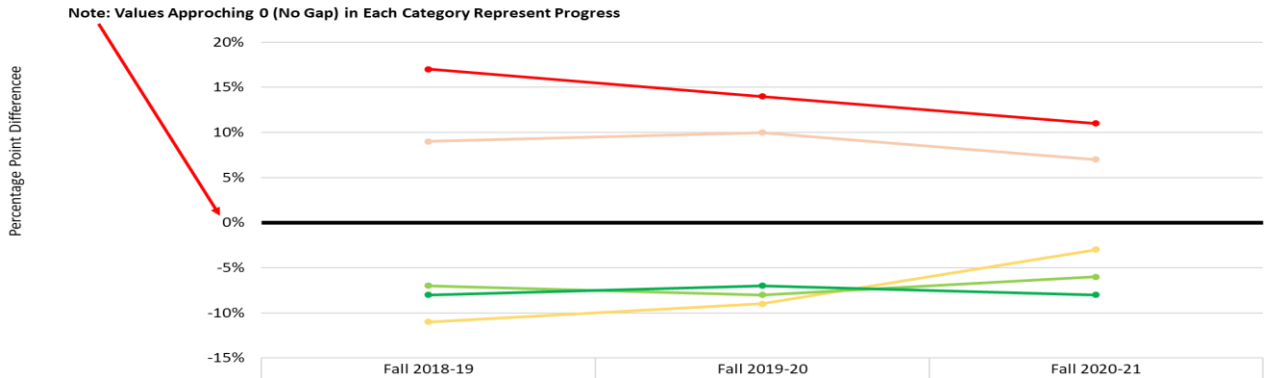


The data indicate that the pre-K enrollment in Kansas City (MO) was approximately 88 percent as large as its kindergarten enrollment. Nine city school systems had pre-K enrollments that were larger as a percent of the kindergarten enrollments, and 30 city school systems had pre-K enrollments that were smaller. This places Kansas City in the top tier of urban school systems on this variable, with participation rates comparable to those of Arlington (TX), Fort Worth, and Dayton (OH). The district's participation rate in 2014-15 was 53 percent.

2) *I-Ready Trends Compared to Urban School Students Nationally.* The Kansas City (MO) school district administers the i-Ready Computer Adaptive Assessment three times a year to students in grades K-8 to measure academic progress in reading and mathematics. The Council requested data from the school district and from Curriculum Associates, the publisher of i-Ready, to assess Kansas City's progress compared with the progress of other big city school systems nationally who administer the same test. The request yielded data for fall 2018-19, fall 2019-20, and fall 2020-21 on approximately 1.2 million students nationally each year. The Council was then able to measure the gap between Kansas City and other major urban school systems in the aggregate over time to see whether district progress was consistent with what we saw nationally, and whether Kansas City was closing the gap with other cities or widening that gap. Data were tracked on five variables: students who are three or more grade levels below expectations; students who are two grade levels below; students who are one grade level below; students who are on grade level; and students who are proficient or above.

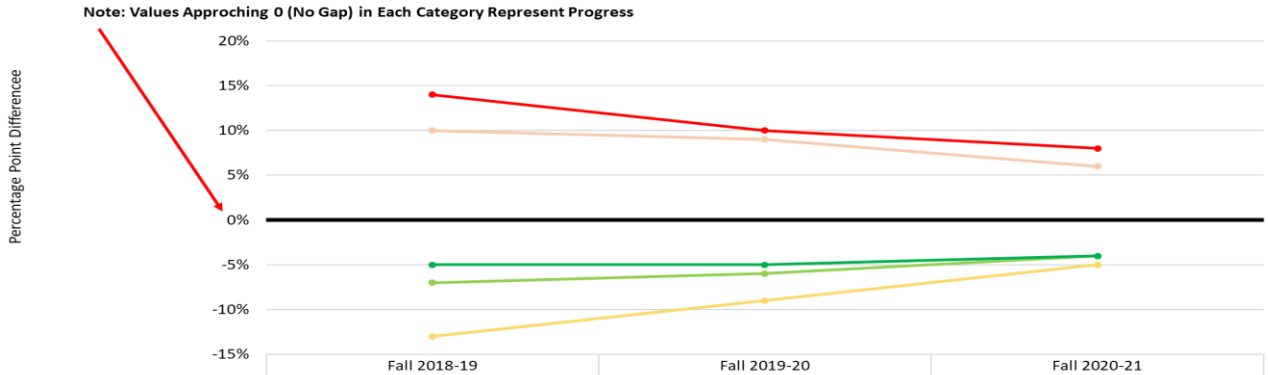
   The graphs below show trends in the gaps in reading and math between Kansas City and the nation's Great City School districts at each performance level. The data in reading show that Kansas City was able to reduce the gap with other large city school systems among students who were three or more grade levels behind from 2018-19, 2019-20, to 2020-21. In other words, Kansas City did a better job in reducing the numbers of its lowest-performing students in reading over this period than other big city school systems taking the same assessment. The same pattern existed among students who were two grade levels behind and one grade level behind. However, the gap between Kansas City and other big city school systems in students who were proficient remained largely the same over the period. Figures 2 and 3 on the next page show results in reading and math.

Figure 2. Percentage Point Change in Reading Gaps Between Kansas City and CGCS Districts on i-Ready Assessments between Fall 2018-19 and Fall 2020-21




| | Fall 2018-19 | Fall 2019-20 | Fall 2020-21 |
|---|---|---|---|
| 3+ Levels Below | 17% | 14% | 11% |
| 2 Level Below | 9% | 10% | 7% |
| 1 Level Below | -11% | -9% | -3% |
| Early On Level | -7% | -8% | -6% |
| Mid On Level or Above | -8% | -7% | -8% |

Figure 3. Percentage Point Change in Mathematics Gaps Between Kansas City and CGCS Districts on i-Ready Assessments between Fall 2018-19 and Fall 2020-21




| | Fall 2018-19 | Fall 2019-20 | Fall 2020-21 |
|---|---|---|---|
| 3+ Levels Below | 14% | 10% | 8% |
| 2 Level Below | 10% | 9% | 6% |
| 1 Level Below | -13% | -9% | -5% |
| Early On Level | -7% | -6% | -4% |
| Mid On Level or Above | -5% | -5% | -4% |

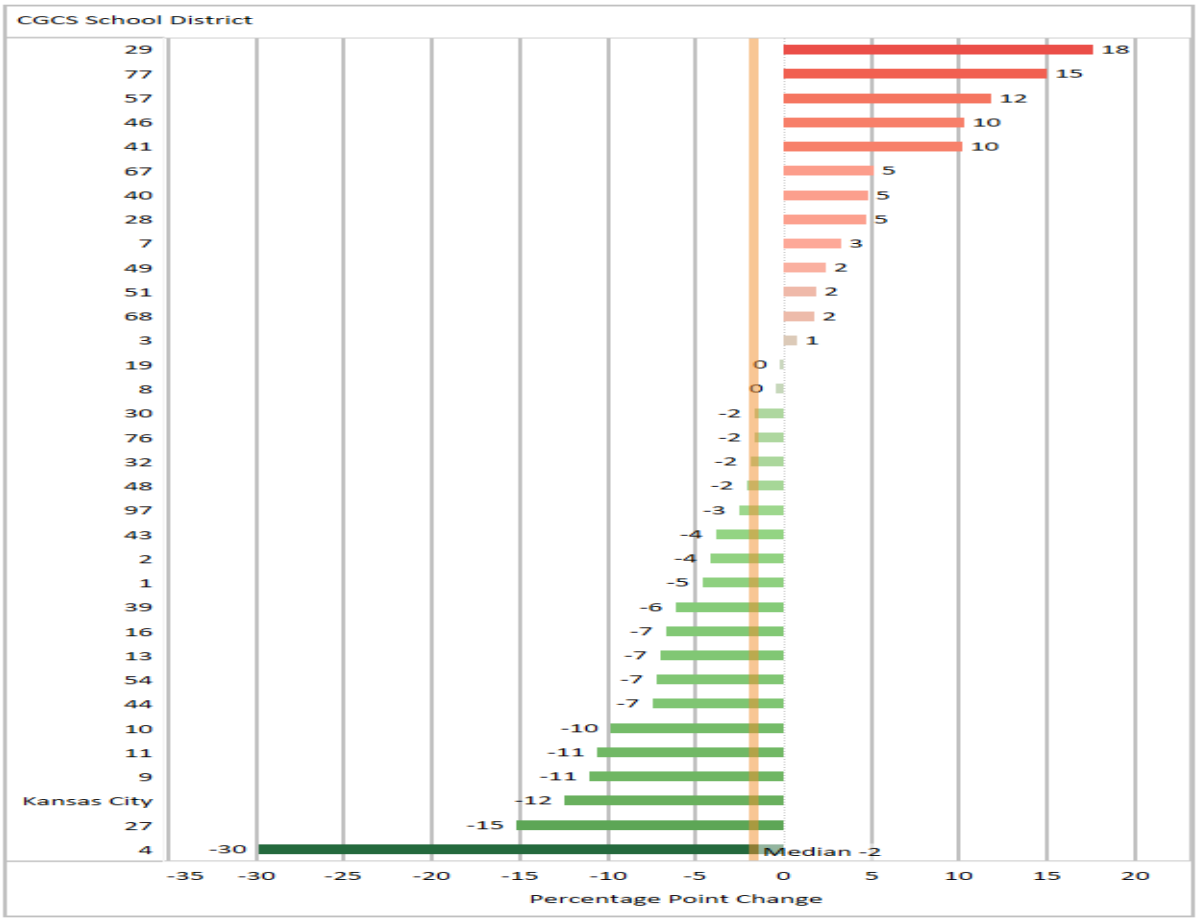
In general, the results in both reading and math suggest that Kansas City is improving the academic performance of its students—particularly its struggling students—faster than large city school systems nationally.

3) *Percentage of Ninth-Grade Students Who Failed One or More Core Courses.* This variable measures the percentage of ninth-grade students who have failed one or more core courses (mathematics, science, English language arts, or social studies) during the ninth-grade year. The indicator is based on research demonstrating the relationship between core course failures in the ninth grade and eventual high school graduation.

The data show that 37 percent of Kansas City (MO) ninth graders failed one or more courses in 2018-19. Some 13 city school systems nationally had higher rates and 25 had lower rates. Rates ranged from 55 percent to 12 percent—the median was 32 percent. The rate in Kansas City was most comparable to the rates in Arlington (TX), San Francisco, Los Angeles, and Cincinnati.

However, the rates in Kansas City have improved markedly over the past several years. In 2014, 51 percent of ninth graders failed one or more courses. Between 2015-16 and 2018-19, the percentage dropped from 49 percent to 37 percent—or 12 percentage points. This 12-percentage point decline in the number of ninth graders who failed one or more courses was the third largest improvement of all cities on which the Council had data (see Figure 4 below) and placed Kansas City in the top quartile of cities showing improvement on this variable. (The median improvement was two percentage points.) In addition, the improvements in Kansas City allowed the district to surpass Atlanta, St. Paul, Houston, Baltimore, Dallas, and Fort Worth in the overall city rankings on this variable. Finally, the ninth-grade course failure rate dropped by 15 percentage points among African American males and 15 percentage points among African American females, placing Kansas City in the top quartile of improving urban school districts across the nation.

Figure 4. Change in Percentage of Ninth Graders Failing One or More Courses between 2015-16 and 2018-19

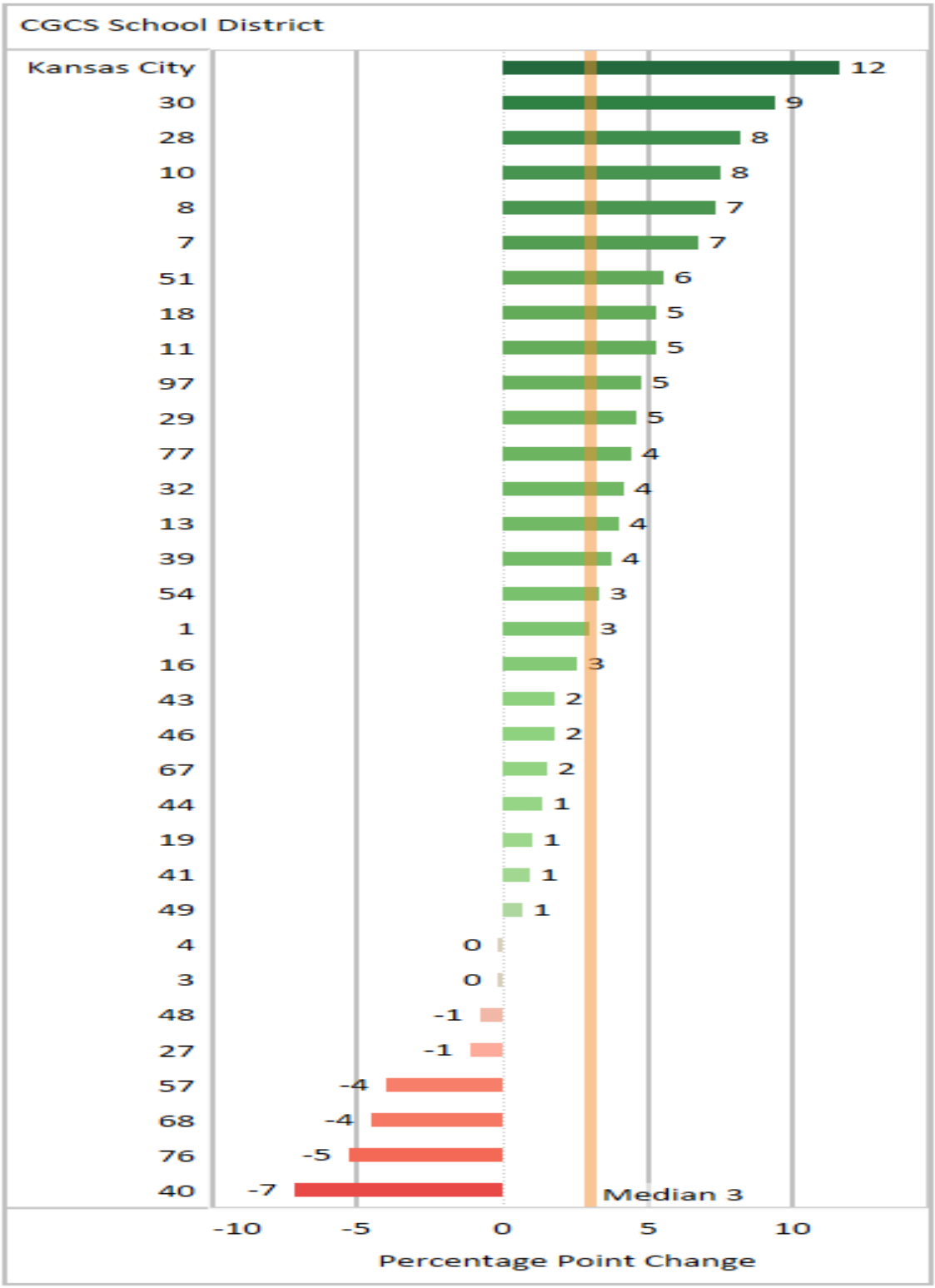


4) *Percentage of Ninth Grade Students with a B Average Grade Point Average (GPA) or Better in All Courses*. This variable tracks grades and trends in grades among ninth-grade students, which have been shown to be an accurate measure of overall performance. The Council did not collect data on this variable in 2014-15, but data on 2018-19 shows that 32 percent of ninth graders in Kansas City had a B average or better in all courses. The median across the Great City Schools was 43 percent, with nine urban school districts having lower rates and 29 having higher rates. Districts ranged from 65 percent to 11 percent. Kansas City's overall rate was most like those in the District of Columbia (one of the fastest improving urban school systems), New York City, and Fresno.

   Like the data on the numbers of ninth graders who had failed one or more courses, the Kansas City data on grade-point averages have improved markedly. Between 2015-16 and 2018-19, the percentage of ninth graders who had a B average or better improved from 20 percent to 32 percent—or 12 percentage points. This rate of gain was the largest of any urban school district in the country on which the Council has data. (See Figure 5 below.) This improvement allowed the district to surpass Norfolk, Detroit, Milwaukee, Cincinnati, and Cleveland on the overall rankings on this variable.

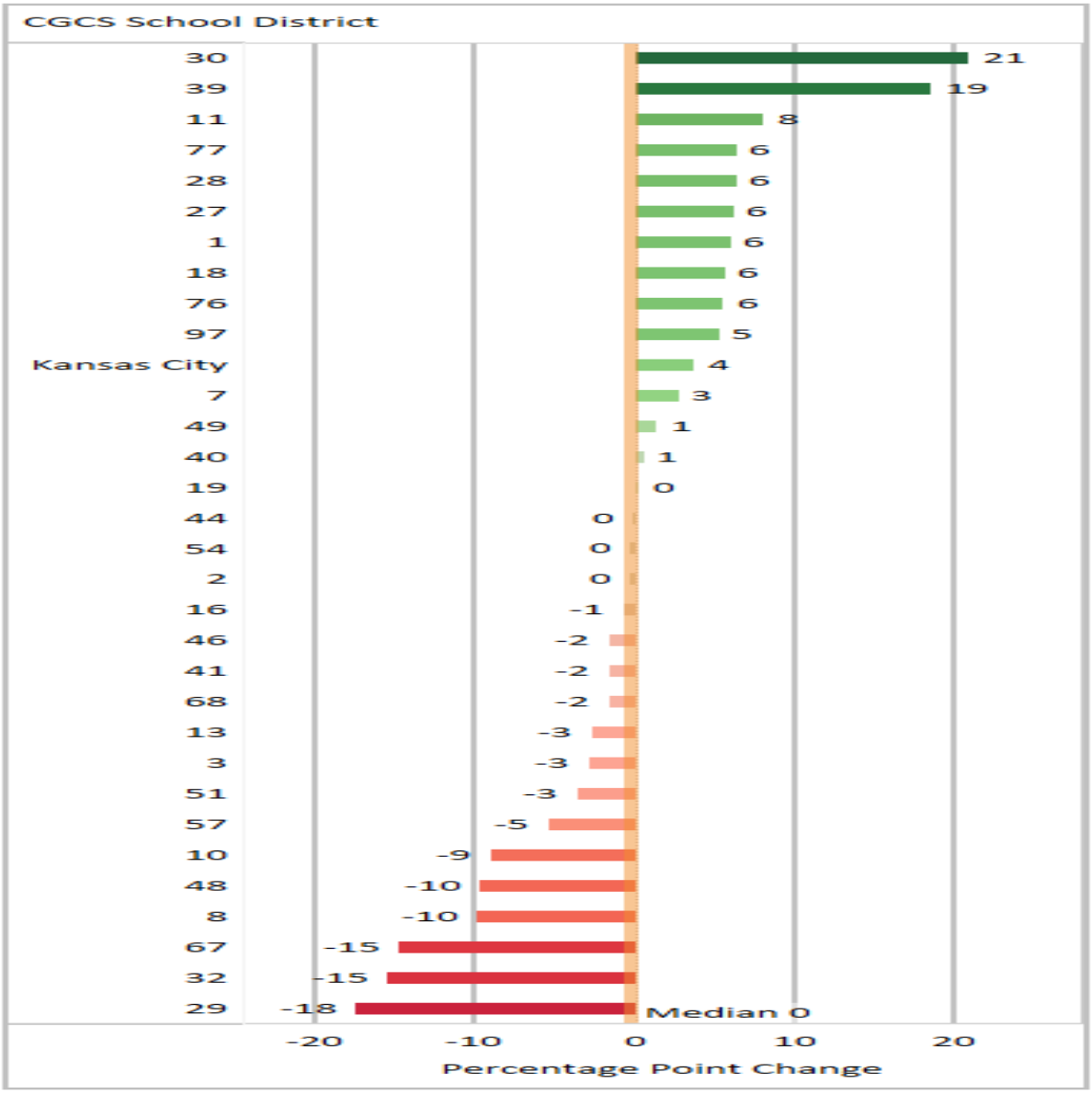
   Finally, the rates of improvement among African American males climbed by 5 percentage points between 2015-16 and 2018-19, while the rates among African American females jumped by 12 percentage points, Hispanic males by 6 percentage points, and Hispanic females by 12 percentage points. These gains place Kansas City in the top quartile of improvements in other urban school systems nationally on which the Council has data.

Figure 5. Change in Percentage of Ninth Graders with a B Average or Better between 2015-16 and 2018-19



5) *Percentage of Students Who Had Successfully Completed Algebra I or Equivalent by the End of 9th Grade.* This variable shows the percentage of first time ninth-grade students successfully completing Algebra I or equivalent by the end of grades seven, eight, or nine. The counts in each grade do not overlap or duplicate one another. Completion of this course has been shown to effectively predict graduation rates. In Kansas City (MO), the data show that some 63 percent of ninth graders in 2018-19 had successfully completed Algebra I or equivalent. Rates across the cities ranged from 88 percent to 30 percent. Kansas City had higher rates than 8 major city districts nationwide and lower rates than 30 large city school districts on which the Council has data. Kansas City's rate was most like rates in Wichita and New York City.

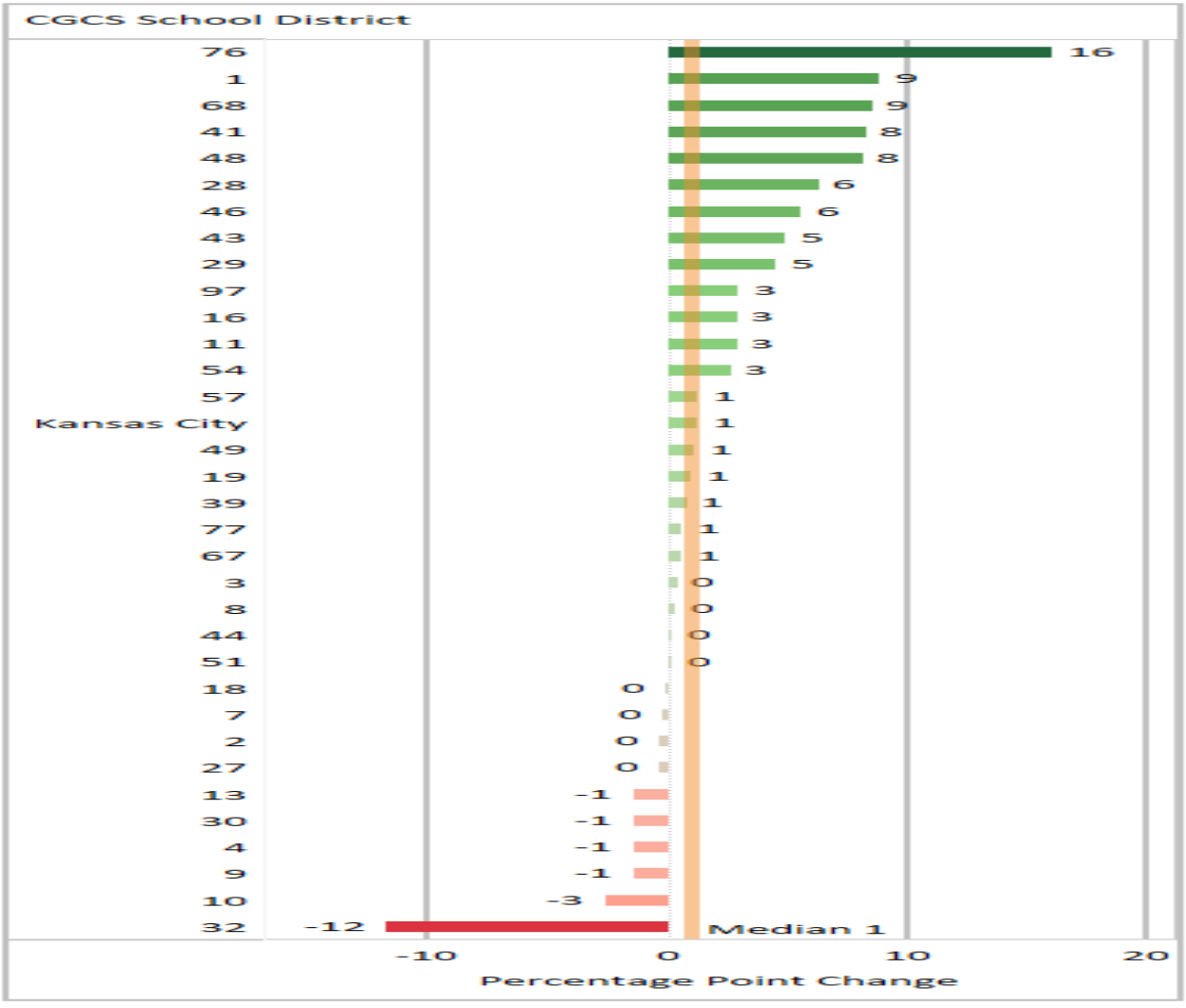
Figure 6. Change in Percent of Students Who Had Successfully Completed Algebra I by the End of Ninth Grade



However, like the other variables discussed so far, Kansas City has shown improvement. The percentage of students who had successfully completed Algebra I or equivalent improved from 50 percent in 2014-15 to 59 percent in 2015-16 to 63 percent in 2018-19. This 4-percentage point rate of gain (see Figure 6 on previous page) allowed the district to surpass Cincinnati, Dayton, Atlanta, Cleveland, and New York City on this variable between 2015-16 and 2018-19. Finally, the percentage of African American males who successfully completed Algebra I or equivalent between 2015-16 and 2018-19 grew by 6 percentage points and African American females increased by 8 percentage points—placing Kansas City in the top quartile of all cities in terms of improvement among African American students.

6) *Percentage Point Change in Secondary Students Who Took One or More AP Courses*. This variable compares district performance on advanced placement (AP) indicators, including the percent of secondary school students who took one or more AP courses and the percent of all AP exam scores by district that were three or higher, meaning that they qualified for college credit.

Figure 7. Percentage Point Change in Secondary Students Who Took One or More AP Courses between 2015-16 and 2018-19



The data on which the Council has data indicate that only 7 percent of the district's secondary-grade students had taken one or more AP courses in 2018-19, compared to 25 percent of secondary students in urban school districts across the country on which the Council had data. Kansas City's rates were like those in Richmond (VA), Memphis, Cleveland, Detroit, and Dayton. Data collected by the Council suggests that the percentage of Kansas City secondary students taking AP did increase by 1 percentage point between 2015-16 and 2018-19, which was the median improvement among all Great City School districts (see Figure 7). Hispanic males, however, improved by 2 percentage points over the period, and Hispanic females improved by 4 percentage points.

More recent data from the district indicates that the number of students taking AP, International Baccalaureate, or Dual Credit courses increased from 558 in 2017-18 to 680 in 2018-19, to 753 in 2019-20.

7) *Percent of All AP Examination Scores that Were 3 or Higher*. Data from the Council on this variable show that only 2 percent of AP tests taken in Kansas City in 2018-19 were passed with a score of 3 or higher, i.e., high enough to qualify for college credit. This was the lowest percent of all the major city school districts on which the Council has data. More recent data from Kansas City indicates that the number of AP exams passed with a score of 3 or higher improved from 9 tests (or 3.3 percent) in 2018-19 to 51 tests (or 23.6 percent) in 2019-20. If this trend holds up and all other city scores remain constant, then this improvement would rate as the second highest increase in the percentage of AP test scores that were three or higher and would allow Kansas City to surpass Milwaukee, Richmond (VA), San Antonio, and Cleveland in the percent of tests with scores of 3 or higher.

   This substantial gain in AP test scores in 2019-20 is plausible because of the major improvements in ninth-grade performance data over the last several years. Those students are now moving into more advanced coursework and helping to improve the district's overall graduation rate, which we will see next.

*8) Four-Year Cohort Graduation Rates.* Kansas City (MO) reported a four-year graduation rate of 71 percent in 2018-19, compared to the big-city school median of 83 percent. In general, the graduation rates in big city school districts in 2018-19 ranged from 92 percent to 65 percent. The 71 percent graduation rate in Kansas City in 2018-19 was comparable to those in Richmond (VA) and Baltimore.

   Kansas City's graduate rate has improved substantially over the last several years, however. In 2014-15, the district's graduation rate was 65 percent, one of the lowest of all Great City School districts. In 2015-16, the graduation rate rose to 68 percent and in 2018-19 to 71 percent. That rate of gain moved Kansas City past the District of Columbia, Oklahoma City, Milwaukee, and Baltimore. More recent estimates from the district indicate that the official graduation rate for 2020 may have improved again to 74.8 percent. This would move the district one notch up the rankings among all cities, and it would make the district one of the top ten big city districts with the largest gains in graduation rates (among those districts on which the Council has data).

9) *Comparisons of State Summative Test Results with St. Louis*. Finally, the Council examined results of the Missouri Assessment Program (MAP) by grade in both Kansas City and St. Louis between 2016 and 2019. (There was no state testing in the spring of 2020.) We compared reading and math trends in both cities with state results over the same period, although the test changed between 2017 and 2018. Results for grade 3 are shown in Figures 8 and 9 below and in all grades tested in Table 1 on the next page. In the two most recent years tested (i.e., 2018 and 2019), Kansas City improved faster in reading than either St. Louis or the state average. In addition, Kansas City showed a scale score that was 10.9 points higher than St. Louis, and it narrowed the gap with the state from 34.9 scale score points in 2018 to 28.2 points in 2019.

Figure 8. Results for the Missouri Assessment Program Reading Performance for Grade Three Between 2015-16 and 2018-19

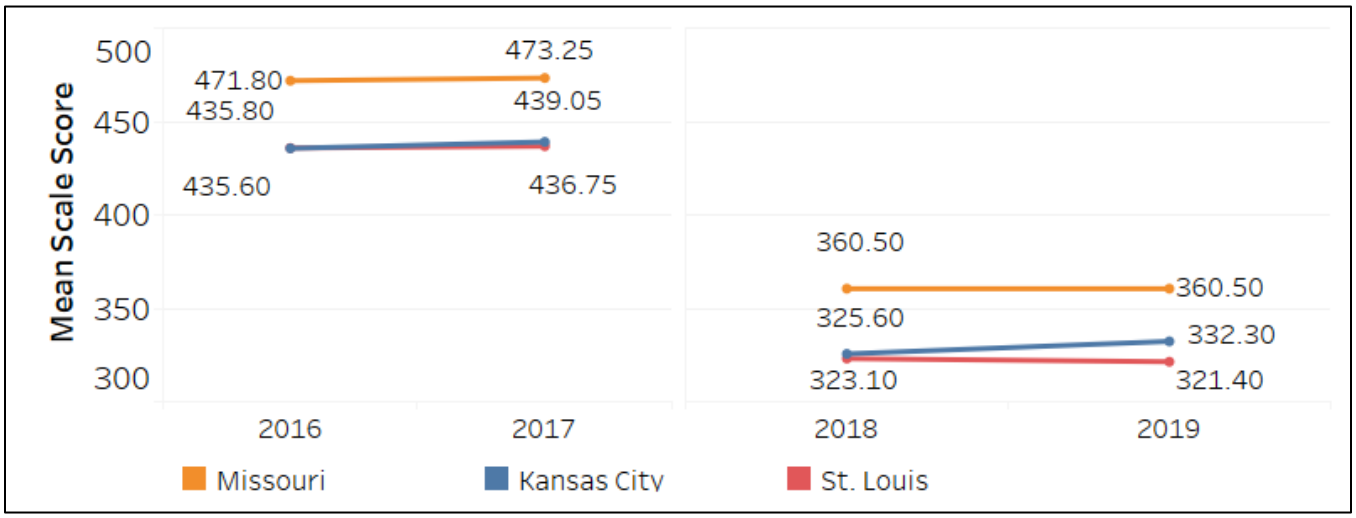
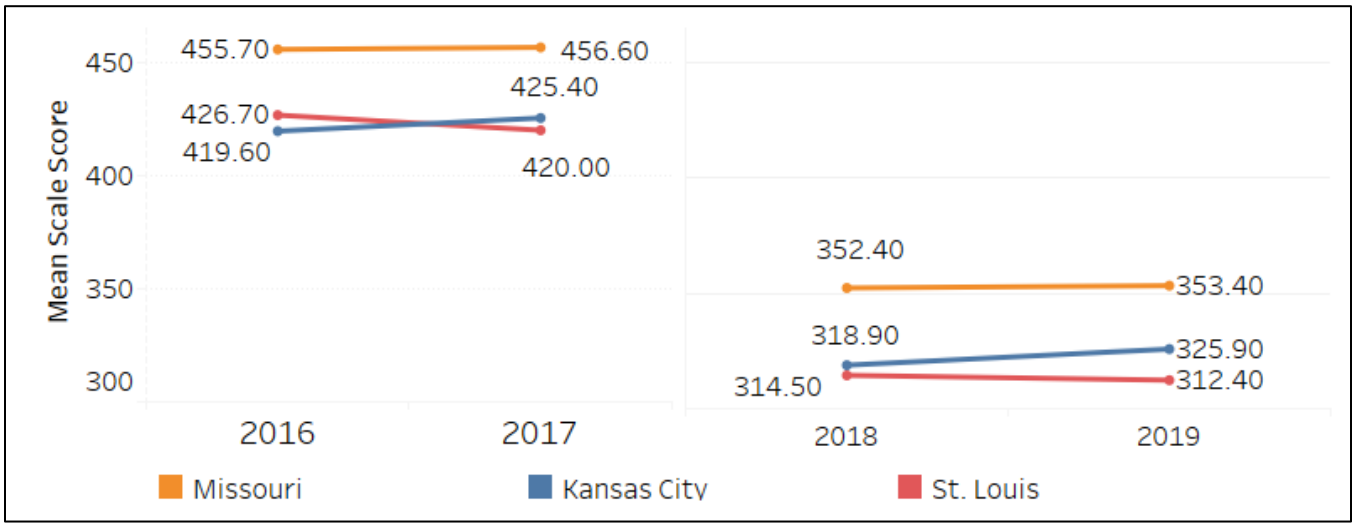



Figure 9. Results for the Missouri Assessment Program Mathematics Performance for Grade Three Between 2015-16 and 2018-19



Results were similar in math: Kansas City improved faster than either St. Louis or the state average. In addition, Kansas City showed a scale score that was 13.5 points higher than St. Louis, and it narrowed the gap with the state from 33.5 scale score points in 2018 to 27.5 points in 2019. The same general patterns also are seen between 2017 and 2018. Results for grades three through eight are shown in Table 1 below.

Table 1. Results for the Missouri Assessment Program Reading and Math Performance for Grades Three through Eight Between 2015-16 and 2018-19

| Grade/Subject | Subject | District | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|
| **Third Grade** | ELA | Missouri | 458.1 | 459.8 | 360.5 | 360.5 |
| | | Kansas City | 421.0 | 426.9 | 325.6 | 332.3 |
| | | St. Louis | 422.7 | 422.0 | 323.1 | 321.4 |
| | Math | Missouri | 455.7 | 456.6 | 352.4 | 353.4 |
| | | Kansas City | 419.6 | 425.4 | 318.9 | 325.9 |
| | | St. Louis | 426.7 | 420.0 | 314.5 | 312.4 |
| **Fourth Grade** | ELA | Missouri | 485.5 | 486.7 | 384.8 | 385.2 |
| | | Kansas City | 450.2 | 451.2 | 353.1 | 357.1 |
| | | St. Louis | 448.9 | 451.5 | 348.1 | 350.0 |
| | Math | Missouri | 481.9 | 483.0 | 376.7 | 378.5 |
| | | Kansas City | 440.1 | 438.0 | 343.9 | 347.3 |
| | | St. Louis | 444.1 | 436.4 | 338.7 | 337.3 |
| **Fifth Grade** | ELA | Missouri | 499.2 | 500.5 | 399.7 | 398.8 |
| | | Kansas City | 463.2 | 466.3 | 373.8 | 373.1 |
| | | St. Louis | 464.7 | 470.4 | 370.5 | 366.6 |
| | Math | Missouri | 499.9 | 501.1 | 399.7 | 398.6 |
| | | Kansas City | 469.5 | 470.4 | 376.5 | 375.8 |
| | | St. Louis | 472.9 | 476.8 | 376.8 | 370.5 |
| **Sixth Grade** | ELA | Missouri | 506.7 | 507.6 | 409.9 | 408.2 |
| | | Kansas City | 479.1 | 482.8 | 390.4 | 389.7 |
| | | St. Louis | 472.4 | 473.9 | 380.9 | 380.3 |
| | Math | Missouri | 507.1 | 507.1 | 405.7 | 407.6 |
| | | Kansas City | 477.6 | 479.4 | 386.3 | 390.9 |
| | | St. Louis | 475.5 | 468.5 | 375.7 | 377.6 |
| **Seventh Grade** | ELA | Missouri | 514.8 | 516.8 | 425.9 | 425.8 |
| | | Kansas City | 472.5 | 480.7 | 395.6 | 397.3 |
| | | St. Louis | 471.7 | 475.2 | 394.1 | 396.1 |
| | Math | Missouri | 514.6 | 516.2 | 418.8 | 417.3 |
| | | Kansas City | 478.0 | 480.0 | 381.5 | 381.8 |
| | | St. Louis | 475.3 | 474.0 | 380.6 | 376.2 |
| **Eighth Grade** | ELA | Missouri | 527.6 | 528.7 | 439.6 | 438.2 |
| | | Kansas City | 477.8 | 491.7 | 410.1 | 408.2 |
| | | St. Louis | 485.5 | 484.8 | 401.8 | 407.5 |
| | Math | Missouri | 515.0 | 516.9 | 440.6 | 439.9 |
| | | Kansas City | 466.6 | 468.9 | 389.3 | 394.9 |
| | | St. Louis | 480.9 | 478.6 | 401.9 | 406.6 |

Note: The MAP assessment changed between 2017 and 2018. While these scores are not directly comparable, trends prior to and after the change indicate relative changes in Kansas City's performance over time. Blue represents the old assessment and Green reporsents the new assessment.

In general, results on the state test in Kansas City and St. Louis are comparable—with a slight advantage to Kansas City. The point, however, is not that one district is doing better than another; the point is that Kansas City is not asking for special treatment from the state on the issue of accreditation. They are asking for the same consideration from the state afforded St. Louis for similar or better performance.

## Discussion

In the experience of the Council of the Great City Schools, trends like those described in this memo do not happen by accident. They are the result of deliberate action. In this case, it appears that Kansas City (MO) pursued a number of strategies to produce the gains it is seeing so far. First, when the superintendent arrived, he pursued a thorough audit of the school district's instructional program, financial operations, human resource operations, transportation systems, and food service operations. The audit, conducted by the Council of the Great City Schools, yielded 126 detailed recommendations based on research on how some urban school systems improve faster than others—64 of them in the area of instructional improvement.

The instructional proposals included steps the district could take in the areas of organizational structure, staffing, accountability, instructional programming and practice, curriculum and materials, English language arts, mathematics, school improvement planning, early childhood programming, gifted and talented education, professional development and capacity building, technology, English learner education, special education, discipline, and data and assessments. With these recommendations and the strong backing of the school board, the superintendent developed a strategic plan for the district and an overarching vision and theory of action for improvement, and aggressively pursued many of the proposals that the audit laid out.

A central part of this work involved strengthening the curriculum and boosting its overall efficacy, quality, and alignment with state standards. In addition, the district stepped up the quality of its professional development, strengthened instructional content and foundational skills in the early grades, increased the number of reading and math coaches, adopted a universal screener to identify needed interventions, created instructional walk-through and monitoring procedures, consolidated accountability documents to provide clearer expectations, improved academic department coordination, reoriented the work of principal supervisors around instruction, and increased the numbers of advanced placement courses and certified teachers.

Second, the district has aggressively partnered with the local business community, foundations, and community organizations to rebuild trust and coordination. These partnerships, in turn, allowed the school system to create its middle-college program and to fund programs like AVID and other efforts that helped strengthen the district's academic offerings. At the same time, district leadership went about the process of strengthening various family supports and communications.

Finally, the superintendent agreed at the outset of his tenure to be evaluated annually on a series of metrics that tracked district progress on the goals that it had set under the strategic plan. In the Council's experience, this seemingly simple step is critical to a district's focus on the attainment of its goals, especially its academic goals. In a recent set of case studies conducted by the Council on urban school

districts that had made significant gains in student outcomes, the organization found that such accountability and a school board's willingness to monitor progress on those outcomes were critical components in their improvement. Moreover, Kansas City went about the process of visiting and learning from other big city school systems that have made progress over the years.

To be sure, the Kansas City (MO) school district, its leadership, and staff have considerable work yet to do. Its indicators of performance are moving in the right direction, but like all school systems there are further improvements it can and should make.

The State of Missouri carefully monitors through its accreditation system multiple measures of school district performance. The purpose of this memo by the Council of the Great City Schools is to put Kansas City (MO) in a broader national context by comparing the school district not only to others in Missouri but to other urban school systems across the country with similar challenges and demographics. The results indicate that the school system has made substantial progress when compared to other major urban school systems across the country. This progress can be seen not only on indicators developed by the state, but it has made significant headway on a number of important metrics when compared to other major urban school systems across the country.

In the judgment of the Council, the Kansas City (MO) school system has earned full state accreditation. It appears that the district meets critical state criteria when measured over three years. And the improvements seen by the school system over the last several years stack up favorably with other big city school systems across the nation. In fact, the district is improving at a rate that is surpassing the performance of other big city school systems. In addition, the district has demonstrated stability in its direction and leadership that bodes well for its continued progress well into the future. Finally, state approval of district accreditation would provide an added incentive for the school district and the community to continue moving forward on behalf of Kansas City's schoolchildren.

# NAEP DISTRICT EFFECTS STUDY

# MIRRORS OR WINDOWS:

## How Well Do Large City Public Schools Overcome the Effects of Poverty and Other Barriers?

About the Council of the Great City Schools

The Council of the Great City Schools is the only national organization exclusively representing the needs of urban public-school districts. Composed of 76 large city school districts, its mission is to promote the cause of urban schools and to advocate for inner-city students through legislation, research, instructional support, leadership, management, technical assistance, and media relations. The organization also provides a network for school districts sharing common problems to exchange information and to collectively address new challenges as they emerge to deliver the best education for urban youth.

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# Mirrors or Windows: How Well Do Large City Public Schools Overcome the Effects of Poverty and Other Barriers?


2021

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**Mirrors or Windows: How Well Do Large City Public Schools Overcome the Effects of Poverty and Other Barriers?**

## Introduction

One of the most consistent and long-standing relationships in social science research is the one between poverty and student academic performance. In nearly every case, the evidence demonstrates that student achievement declines as poverty rises. At least as far back as the Coleman report (1966), research has suggested that poor students do not do as well in school as students whose parents are better off financially and educationally. More recently, a study by Reardon (2016) showed similar results and concluded that the gap between high- and low-income students may have widened between the 1980s and the early 2000s.

At the same time, education has been depicted by countless politicians, philosophers, scientists, and advocates as the ticket out of poverty. Education is thought to be society's main engine for smoothing out its inequities. In fact, Horace Mann once stated, "Education then, beyond all other devices of human origin, is the great equalizer of the conditions of men, the balance-wheel of the social machinery." To be sure, schooling aspires to level the playing field for rich and poor alike. Immigrant and native born. Commoner and blue-blood. But is it?

It is not likely that these two themes are true at the same time. Either schools help overcome the effects of poverty and other barriers or they reflect those inequities. Either schools serve to perpetuate society's inequities, or they serve to overcome them. Either schools work to level the playing field or they keep opportunity at bay. As noted, Chicago journalist Sydney Harris once asserted, "The whole purpose of education is to turn mirrors into windows."

Our question in this report is a straightforward one: Are urban public schools, which have the largest numbers and concentrations of poor students in the nation, mirrors or windows?

Do urban public schools overcome the effects of poverty and other barriers or do they simply reflect them? Do urban public schools do a better job at overcoming the effects of poverty on achievement than public schools generally? Do some urban public-school districts do a better job at overcoming these effects than other urban school districts? Who are they? Are urban school districts getting any better at overcoming these effects over time or are they producing the same results they have always produced? What is the difference between urban school districts that appear to be 'beating the odds' and those that are not progressing? What are these more effective urban school districts doing that other urban school districts are not doing? Finally, are there similarities among urban school systems that have not shown as much progress, and what are the lessons we might learn from them?

These are questions that are infrequently asked in the research or are not answered in a way that would give urban schools better guidance on what they need to be doing differently. Instead, most research is backward leaning in the sense that it helps explain why things in the past looked like they did. This study will lean forward, and it will attempt to show where to look for clues using differences in how school districts perform over time.

Why are these questions important? There are at least two reasons. One, the results may help us determine whether public education in the cities and nationally is a force for upward mobility. That is, does public education contribute to the expansion and strengthening of the middle class? Does it help lift people out of poverty and serve as a means for opportunity? This is critical because one of our national goals is to enhance the number of citizens in the middle class. It improves not only the quality of life for those individuals who are affected; it forms the backbone for the nation's overall economic strength. In addition, the results could inform our broader notions of equity and where and how we should bear down harder. If public education serves as a lever for some people or groups but not others, we should know that and act accordingly.

Second, the global pandemic has not only shuttered many public schools across the nation, particularly in our big cities, but it has also resulted in substantial unfinished learning for our students and has created the occasion by which we can rethink what works and does not work about how we organize and deliver public education. In other words, if public education is not producing the effects we want, then what rethinking and redesigning needs to be done to get better outcomes. This new analysis should help inform us about what does work—at least as well as it does—so we do not throw out what has proven to be effective, at least under the current system.

To conduct this analysis, the Council of the Great City Schools used data from the National Assessment of Educational Progress (NAEP) and looked at the effects of not only poverty but also language status, parental education, disability, literacy materials in the home, and race to answer many of the questions above. We predict statistically what results might be likely based on these variables, and we compare those predictions against actual results over six separate administrations of NAEP between 2009 and 2019.

In other words, we created a 'district effect' or 'value-added' measure using NAEP data to determine whether urban school districts are producing enough "educational torque" to overcome poverty and other long-standing effects to any degree and to ascertain how they are doing it. We also look at districts that are not making as much progress and discuss their commonalities. In these ways, we attempt to discern whether public education, urban public education, in particular, is a force for upward social mobility or whether it simply reflects and perpetuates the inequities that society creates. And it should help us define a path forward.

## Demographics of Large City and Not Large City Schools

Members of the Council of the Great City Schools educate disproportionately large numbers of the nation's students facing barriers to their educational success. The 76 cities whose school districts are members of the Council are home to about 17.4 percent of the U. S. population (56,863,400 of 326,474,013 est.). Their school districts enrolled some 7.8 million students in 2016-17 or about 15 percent of the nation's public elementary and secondary school enrollment.

This report primarily looks at the educational performance of Large City schools using data from the National Assessment of Education Progress (NAEP)[1]. In general, the Council's membership comprises the bulk of the Large City variable in NAEP, a variable that we use extensively in this report. Reading and math performance on NAEP are controlled statistically for relevant background variables summarized earlier, i.e., race/ethnicity groups, school-level national school lunch program (FRPL), Census poverty, students with disabilities (IEP), English language learners (ELL), literacy materials in the home, and parent education level for students in grade eight. Relevant background variables are defined in more detail in subsequent sections, but generally they were selected because previous research indicated that they consistently predict student outcomes.

Our analysis looks at two distinct, mutually exclusive, and not-overlapping types of schools We compare the results of NAEP test takers[2] in Large City schools with the results of test-takers not in Large City Schools. Students not in Large City Schools includes test takers in private schools and U. S. territories who take the NAEP assessment. Both categories include charter schools identified within the jurisdictions, but NAEP data on charter schools are not coded in a way that would allow one to determine which charters are governed by regular public-school districts and which ones are chartered and operated independently. Consequently, in this analysis, Large City and Not Large City schools include district-authorized charters, charters authorized by others, and independent charters.

[1] Definition of Large City

[2] The analysis uses test-takers in math in both fourth and eighth grades rather than test takers in English language arts, because the numbers of ELA test-takers is likely to be more skewed by testing exclusions related to English proficiency or disability status.

We start the analysis by looking at the student demographic characteristics of Large City schools and Not Large City schools. One should keep in mind that the demographics of school types in the fourth grade are slightly different from demographics in the eighth grade. Exhibits 1 through 5 summarize critical demographic characteristics of the two types of schools reported in the NAEP data for Large City and Not Large City schools.

Data in Exhibit 1 shows that Large City schools had an aggregate enrollment in 2019 that was 24 percent African American, 44 percent Hispanic, and 19 percent white. The percent of African American students in Large City schools declined from 27 percent to 24 percent over the period, while Hispanic students increased slightly from 43 percent to 44 percent. percent.)

Exhibit 1. Percentages of NAEP fourth grade math test takers by race and type of school, 2009 to 2019.

| | % Black | % Hispanic | % White |
|---|---|---|---|
| **Large City** | | | |
| **2009** | 27% | 43% | 21% |
| **2011** | 25% | 45% | 20% |
| **2013** | 24% | 44% | 22% |
| **2015** | 22% | 47% | 20% |
| **2017** | 22% | 46% | 20% |
| **2019** | 24% | 44% | 19% |
| **Not Large City** | | | |
| **2009** | 14% | 19% | 61% |
| **2011** | 14% | 20% | 59% |
| **2013** | 14% | 22% | 58% |
| **2015** | 14% | 22% | 56% |
| **2017** | 13% | 23% | 54% |
| **2019** | 13% | 23% | 53% |

Source: NAEP Data Explorer (NDE) based on NAEP reported demographics for mathematics.

By contrast, African American students made up about 13 percent of the fourth-grade enrollments of schools that were not in Large Cities in 2019. Hispanic students made up approximately 23 percent and white students made up about 53 percent. Between 2009 and 2019, schools outside the Large Cities became slightly more Hispanic and somewhat less white.

Exhibit 2. Percentages of NAEP fourth grade math test takers by FRPL-status, Language-status, and IEP status and type of school, 2009 to 2019.

| | % FRPL | % ELLs | % IEPs |
|---|---|---|---|
| **Large City** | | | |
| **2009** | 71% | 20% | 11% |
| **2011** | 74% | 22% | 11% |
| **2013** | 73% | 20% | 12% |
| **2015** | 74% | 21% | 13% |
| **2017** | 70% | 21% | 13% |
| **2019** | 68% | 20% | 14% |
| **Not Large City** | | | |

| | | | |
|---|---|---|---|
| **2009** | 43% | 8% | 12% |
| **2011** | 48% | 9% | 12% |
| **2013** | 50% | 9% | 13% |
| **2015** | 51% | 10% | 14% |
| **2017** | 47% | 9% | 13% |
| **2019** | 47% | 10% | 14% |

Source: NAEP Data Explorer (NDE) based on NAEP reported demographics for mathematics.

The NAEP data also show that the percent of fourth-grade students in Large City schools who were free and reduced-price lunch eligible in 2019 was 68 percent, down slightly from 2009. (Exhibit 2.) The percent of these students who were not in large cities was 47 percent in 2019, an uptick from 43 percent in 2009. In other words, the enrollment of FRPL students in 2019 was about 45 percent higher in Large Cities than in Not Large Cities.

In addition, NAEP data on fourth grade English Language Learners (ELLs) show that these students made up 20 percent of the enrollment in Large City schools in 2019, the same as in 2009. The enrollment in Not Large Cities was about ten percent ELLs in 2019, up slightly from 2009.

Finally, NAEP data in 2019 showed fourth grade students with Individualized Education Plans (IEPs) comprised some 14 percent of the Large City school sample, the same as the Not Large City sample. Both school types showed slight increases in their proportions of students with IEPs over the study period, 2009 to 2019.

Eighth grade NAEP data showed similar patterns to those in the fourth grade. African American students made up approximately 24 percent of students in Large Cities and 12 percent of students in Not Large Cities. Both settings showed drops in the percent of African American students. In addition, Hispanic students made up approximately 45 percent of the enrollments in Large Cities, compared to 22 percent in Not Large Cities. The percent of Hispanic students in both settings increased between 2009 and 2019.

Finally, white students made up about 19 percent of the enrollments of Large City schools in 2019, compared with 55 percent in Not Large Cities. The proportion of white students in both settings declined between 2009 and 2019.

Exhibit 3. Percentages of NAEP eighth grade math test takers by race and type of school, 2009 to 2019.

| | % Black | % Hispanic | % White |
|---|---|---|---|
| **Large City** | | | |
| **2009** | 26% | 42% | 22% |
| **2011** | 25% | 44% | 21% |
| **2013** | 25% | 43% | 21% |
| **2015** | 25% | 44% | 21% |
| **2017** | 21% | 45% | 21% |
| **2019** | 24% | 45% | 19% |
| **Not Large City** | | | |
| **2009** | 14% | 17% | 63% |
| **2011** | 14% | 19% | 60% |
| **2013** | 13% | 20% | 59% |
| **2015** | 13% | 21% | 58% |

| | | | |
|---|---|---|---|
| **2017** | 12% | 21% | 58% |
| **2019** | 12% | 22% | 55% |

Source: NAEP Data Explorer (NDE) based on NAEP reported demographics for mathematics.

At the eighth-grade level, the data also indicated that the portion of students who were FRPL-eligible was slightly lower than that at the fourth-grade level. (Exhibit 4.) About 66 percent of eighth graders in Large Cities were FRPL eligible in 2019, as were 43 percent in Not Large Cities. In other words, eighth grade students in Large Cities were about 53 percent more likely to be poor than students in Not Large Cities.

Exhibit 4. Percentages of NAEP Eighth grade math test takers by FRPL-status, Language-status, and IEP status and type of school, 2009 to 2019.

| | % FRPL | % ELL | % IEP |
|---|---|---|---|
| **Large City** | | | |
| **2009** | 66% | 12% | 11% |
| **2011** | 69% | 11% | 11% |
| **2013** | 69% | 11% | 12% |
| **2015** | 71% | 12% | 13% |
| **2017** | 65% | 12% | 13% |
| **2019** | 66% | 13% | 13% |
| **Not Large City** | | | |
| **2009** | 39% | 5% | 10% |
| **2011** | 44% | 5% | 10% |
| **2013** | 46% | 4% | 12% |
| **2015** | 48% | 5% | 12% |
| **2017** | 42% | 5% | 12% |
| **2019** | 43% | 6% | 13% |

Source: NAEP Data Explorer (NDE) based on NAEP reported demographics for mathematics.

In addition, the eighth-grade data indicate that the percentages of ELL students in Large City schools remained at about the same level (13 percent) between 2009 and 2019. (Exhibit 4.) Some six percent of students in Not Large Cities were ELLs in 2019, a level that was largely unchanged from 2009.

The percentage of eighth-grade students with IEPs in Large City schools in 2019 was 13 percent, about the same level as among fourth graders, but somewhat higher than 2009. (Exhibit 4.) The enrollments in Not Large Cities among eighth graders with IEPs was about 13 percent, an uptick from 2009.

Finally, we examined data on the education levels of parents of students in Large City and Not Large Cities. (Exhibit 5) The data on this NAEP background variable were available only on eighth graders, not fourth graders. The results of the analysis showed that the percent of Large City school parents who did not finish high school was about 10 percent in 2019, compared to approximately six percent among Not Large City parents. At the other end of the education scale, some 43 percent of Large City School parents were college graduates in 2019, compared with 57 percent among parents in Not Large Cities. In both settings, there were declines in the percentages of school parents who did not finish college and increases in the percentages of school parents who were college graduates.

Exhibit 5. Percentages of NAEP Eighth Grade Math Test-Takers Whose Parents Had Differing Levels of Educational Attainment, 2009 to 2017.[3]

| | % Did Not Finish High School | % Graduated High School | % Graduated College |
|---|---|---|---|
| **Large City** | | | |
| **2009** | 13% | 17% | 35% |
| **2011** | 12% | 17% | 37% |
| **2013** | 11% | 17% | 38% |
| **2015** | 12% | 17% | 38% |
| **2017** | 10% | 17% | 42% |
| **2019** | 10% | 16% | 43% |
| **Not Large City** | | | |
| **2009** | 7% | 17% | 47% |
| **2011** | 7% | 17% | 49% |
| **2013** | 7% | 16% | 50% |
| **2015** | 7% | 16% | 50% |
| **2017** | 6% | 14% | 57% |
| **2019** | 6% | 13% | 57% |

Source: NAEP Data Explorer (NDE) based on NAEP reported demographics for mathematics.

In sum, the NAEP data indicate that the demographics of Large City schools and Not Large City schools were substantially different from one another. Large City schools tended to be more predominantly African American and Hispanic than Not Large City Schools. In addition, Large City schools were more likely to have higher enrollments of poor students and ELLs. Finally, Large City Schools tended to have larger percentages of parents who did not finish high school and lower percentages of parents who had not graduated from college than Not Large Cities. The percentages of students with IEPs were similar in both settings, although there may be differences in the types and severity of disabilities between the two types of schools.

## Methodology

In 2010, the Council of the Great City Schools along with the American Institutes of Research analyzed the results of the National Assessment of Education Progress (NAEP) in a way that had not been done previously (Dogan, et al., 2011). The two prominent research questions of that study were:

1. How did urban districts participating in the Trial Urban District Assessment (TUDA) in 2009 compare to other districts when one controlled for relevant background variables?
2. How did urban districts participating in the Trial Urban District Assessment (TUDA) in 2009 perform, compared to their statistically expected performance based on relevant background variables?

To answer these questions, the study compared the performance of each district against other districts after adjusting for specified student background characteristics, i.e., race/ethnicity, special education status, English language learner status, eligibility for free- or reduced-price lunch under the National School Lunch Program, the highest level of education attained by either parent, and information on the availability of written materials and computers in a student's home. The analysis employed a methodology used elsewhere

[3] The variable is defined as "at least one parent."

in the literature (e.g., Braun, Jenkins, and Grigg, 2006). A regression analysis was conducted to estimate the "expected" performance of an urban district against a national sample of other public-school students controlling for variations in these demographic characteristics.

Next, each district's actual performance was compared to the expected performance for that district. The difference between the two (actual vs. expected) was called a "district effect." Positive effects indicated that the district was performing better than expected statistically and negative effects indicated that the district was performing below what was expected statistically.

A similar methodology using NAEP restricted-use data from 2009, 2011, 2013, 2015, 2017, and 2019 was used in this report. Comparable student background variables were used to calculate "adjusted" NAEP scale scores in TUDA districts using HLM analysis and make comparisons between actual and statistically expected scores. This study compared the performance of each district against other districts after adjusting for specified student background characteristics, i.e., race/ethnicity, special education status, English language learner status, the highest level of education attained by either parent, and information on the availability of written materials and computers in a student's home. However, to control for poverty, differences in school-level free or reduced-price lunch rates and the percentage of families in the school's zip code were included the HLM analysis.

In 2010, Congress, as part of the Healthy, Hunger-Free Kids Act, authorized the Community Eligibility Provision (CEP) to allow schools and local educational agencies (LEAs) in low-income areas to provide free breakfast and lunch to all students. The CEP program was available to a small group of states in July 2014 and nationwide in 2014 (School Year 2014-15). Table 1 shows that TUDA districts began to apply different methodology for identifying and reporting free or reduced-price lunch eligibility for students in 2015. As a result, the research team noted that different decisions regarding school lunch eligibility for students inhibited the comparability of calculated expected scores for districts across years. Further, the team found that using the traditional NAEP free or reduced-price lunch indicator in 2013, 2015, 2017, and 2019 significantly influenced the direction and magnitude of school district adjusted scores. Consequently, the research team applied two school-level variables to the analysis and removed the traditional student-level free or reduced-price lunch variable from the analysis. The variables included:

*Level 1 – Student Level Variables*

- **Race/ethnicity**

  In the NAEP files, student race/ethnicity information is obtained from school records and classified according to six categories: *White, Black, Hispanic, Asian/Pacific Islander, American Indian/Alaska Native,* or *unclassifiable*. When school-reported information was missing, student-reported data from the Student Background Questionnaire were used to establish student race/ethnicity. Using restricted NAEP data sets, we categorized as *unclassifiable* students whose race-ethnicity based on school-records was *unclassifiable* or *missing* and (1) who self-reported their race as *multicultural* but not *Hispanic* or (2) who did not self-report race information.

- **Special education status**

  Student has an Individualized Educational Program (IEP), for reasons other than being gifted or talented; or is a student with a Section 504 Plan.

- **English language learner status**

  Student is currently classified as an English language learner and is receiving services.

- **Parental Education**

  Highest level of education attained by either parent: *did not complete high school*, *graduated high school*, *had some education after high school*, or *graduated college*. This indicator is only available for grade 8 students.

- **Literacy Materials**

  The presence of reading materials in the home is associated with both socioeconomic status and student achievement. The measure reported in 2009 was based on questions in both grade 4 and grade 8 in the *Student Background Questionnaires*, which asked about the availability of computers, newspapers, magazines, and more than 25 books in the home. Between 2009 and 2015, the *Student Background Questionnaire* changed and a different combination of items was used to calculate a summary score of how many materials were present. In 2011, the items included the availability of computers, magazines, and more than 25 books in the home (newspapers were dropped as a survey item). In 2013, 2015, 2017, and 2019 the items included the availability of computers in the home, the availability of the internet, and more than 25 books in the home (magazines were dropped as a survey item). A summary score was created to indicate how many of these types of literacy materials were present in the home.[4]

*Level 2 – School Level Variables*

- **School free or reduced-price lunch eligibility rates**

  To level the influence of changing free or reduced-price lunch rates across districts, the research team chose to employ a school level, rather than a student level, school lunch indicator. Researchers did so by comparing the percentage of free or reduced-price lunch students reported in the National Center for Education Statistics Common Core of Data (CCD) files in the NAEP years prior to the CEP program and the NAEP reported free or reduced-price lunch percentages. When the values were within five percentage points of each other, researchers used the NAEP results for schools as the school level factor. However, for large discrepancies in the data (values well above or well below the 2012-13 school year), the CCD school lunch rate was used for the analysis.

- **School Zip Code Poverty Estimates – Percentage of Family Incomes Less Than $15,000 per year**

  As discussed later in this document, abject poverty has been shown to impair student academic outcomes. To further control for the influence of abject poverty across school districts, the research team incorporated the percentage of families making less than $15,000 per year in a school's physical zip code as a school level poverty factor. The zip code data was taken from the U. S. Census Bureau American Community Survey estimates for each of the NAEP assessment years.

Exhibit 6. Free or Reduced-Price Lunch Methodology Used by TUDA Districts, 2015, 2017, 2019

| TUDA District | NAEP 2015 | NAEP 2017 | NAEP 2019 |
|---|---|---|---|
| **Albuquerque** | CEP-ALL | CEP-ALL | CEP-ALL |
| **Atlanta** | Direct-Only | CEP-ALL | CEP-ALL |
| **Clark County** | CEP-ALL | CEP-ALL | CEP-ALL |
| **Cleveland** | CEP-ALL | CEP-ALL | CEP-ALL |
| **DC** | CEP-ALL | CEP-ALL | CEP-ALL |

[4] This summary score has been used for reporting NAEP background variables for several years and has been shown to be associated with students' achievement scores. (See for example, NAEP 1996 Mathematics Cross-State Data Compendium.)

| | | | |
|---|---|---|---|
| **Austin** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Charlotte** | CEP-ALL | CEP-Direct | Direct-Plus |
| **Chicago** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Dallas** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Denver** | N/A | Direct-Plus | Direct-Plus |
| **Detroit** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Fort Worth** | N/A | Direct-Plus | Direct-Plus |
| **Fresno** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Guilford County** | N/A | CEP-Direct | Direct-Plus |
| **Houston** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Jefferson County** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Los Angeles** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Milwaukee** | N/A | Direct-Plus | Direct-Plus |
| **New York City** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Philadelphia** | CEP-Direct | Direct-Plus | Direct-Plus |
| **San Diego** | Direct-Plus | Direct-Plus | Direct-Plus |
| **Baltimore** | N/A | Direct-Only | Direct-Only |
| **Duval County** | Direct-Only | Direct-Only | Direct-Only |
| **Hillsborough County** | Direct-Only | Direct-Only | Direct-Only |
| **Miami-Dade County** | Direct-Only | Direct-Only | Direct-Only |
| **Shelby County** | N/A | Direct-Only | Direct-Only (CEP & Non-CEP schools) |
| **Boston** | CEP-ALL | Direct-Only | Direct-Only (CEP & Non-CEP schools) |

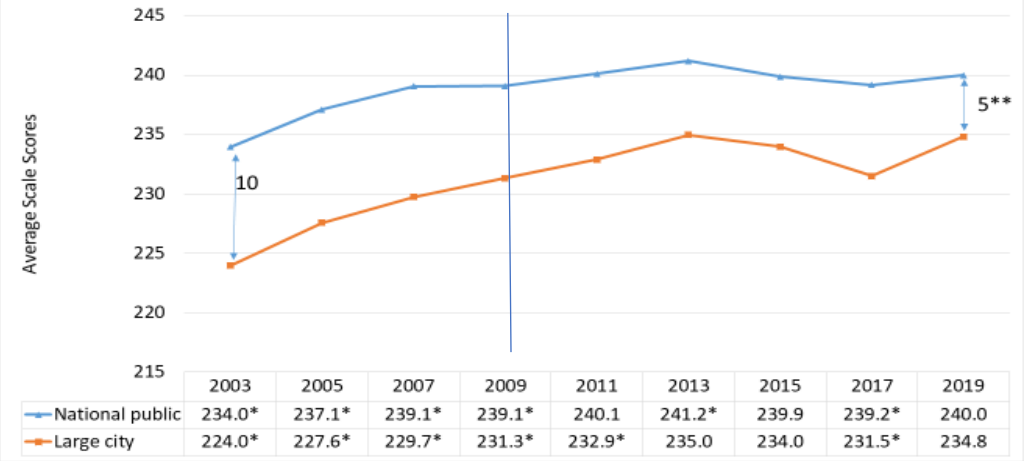
Source: National Center for Education Statistics, National Assessment of Educational Progress, 2019.

The reader should note that information on race/ethnicity, school lunch, and ELL and disability status come from the school and are available for all students. However, data on background characteristics for students who did not participate in NAEP are not available, i.e., excluded students or students who are not tested do not complete the *Background Questionnaire*. Therefore, data on *reading materials in the home* and *parent education* are only available for the tested populations. Consequently, the calculation of adjusted scores controlling for background characteristics was conducted on the reported sample only.

*Analysis of National Assessment of Educational Progress Data*

The Council of the Great City Schools initiated the Trial Urban District Assessment of NAEP in the fall of 2000. The initiative was piloted in 2002 in math. And in 2003, Large City schools participated in both reading and math assessments. The voluntary effort involves the over-sampling of students in each participating district to obtain a district-level estimate of reading and math performance in grades four and eight. Over the years, results on the assessment show that Large City schools have not only improved their performance but that they have improved faster than the nation at large, narrowing the gaps between the nation's urban schools and the national average. The remainder of our analysis begins with results from the 2009 testing. (See graphs below.)

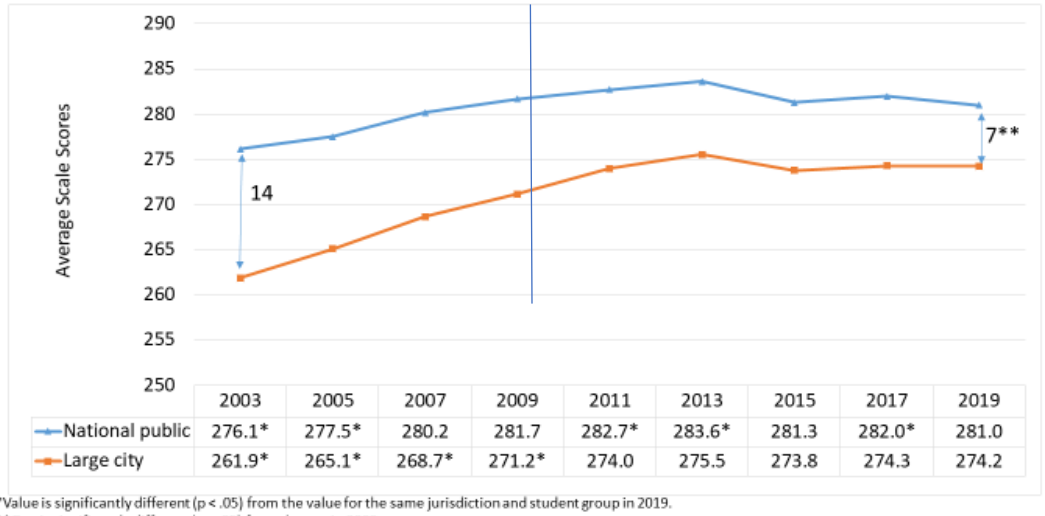
## Average Scale Scores on NAEP Mathematics in Grade 4 for Public School Students, 2003-2019




| | 2003 | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 |
|---|---|---|---|---|---|---|---|---|---|
| National public | 234.0* | 237.1* | 239.1* | 239.1* | 240.1 | 241.2* | 239.9 | 239.2* | 240.0 |
| Large city | 224.0* | 227.6* | 229.7* | 231.3* | 232.9* | 235.0 | 234.0 | 231.5* | 234.8 |

*Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2019.
**Gap is significantly different ($p < .05$) from the gap in 2003.

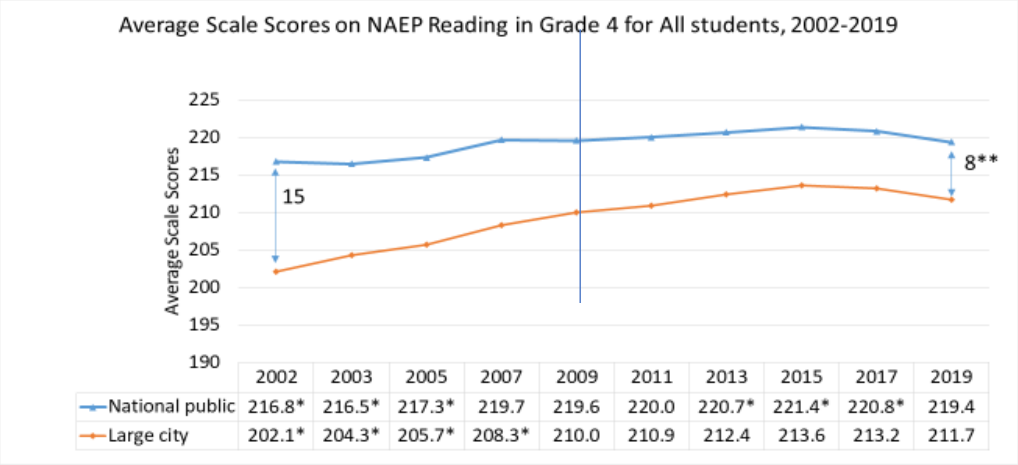
## Average Scale Scores on NAEP Mathematics in Grade 8 for Public School Students, 2003-2019




| | 2003 | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 |
|---|---|---|---|---|---|---|---|---|---|
| National public | 276.1* | 277.5* | 280.2 | 281.7 | 282.7* | 283.6* | 281.3 | 282.0* | 281.0 |
| Large city | 261.9* | 265.1* | 268.7* | 271.2* | 274.0 | 275.5 | 273.8 | 274.3 | 274.2 |

*Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2019.
**Gap is significantly different ($p < .05$) from the gap in 2003.

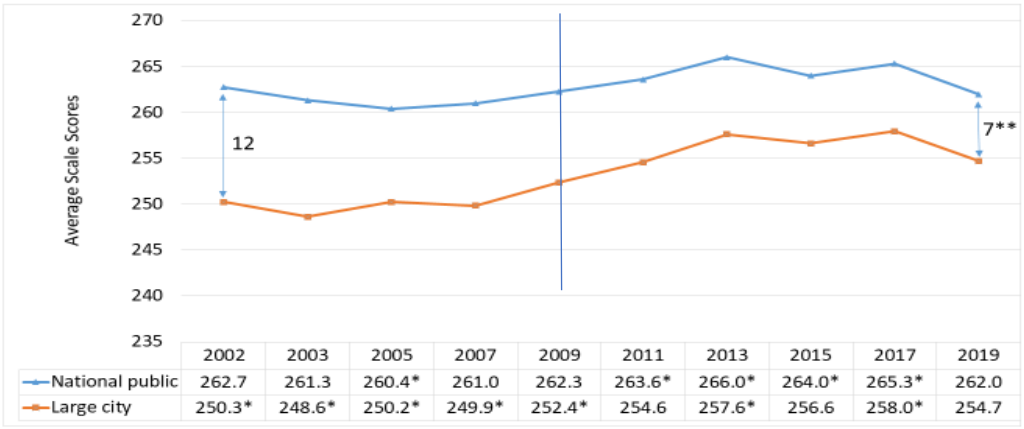
## Average Scale Scores on NAEP Reading in Grade 4 for Public School Students, 2002-2019




| | 2002 | 2003 | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|
| National public | 216.8* | 216.5* | 217.3* | 219.7 | 219.6 | 220.0 | 220.7* | 221.4* | 220.8* | 219.4 |
| Large city | 202.1* | 204.3* | 205.7* | 208.3* | 210.0 | 210.9 | 212.4 | 213.6 | 213.2 | 211.7 |

*Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2019.
**Gap is significantly different ($p < .05$) from the gap in 2002.

## Average Scale Scores on NAEP Reading in Grade 8 for Public School Students, 2002-2019




| | 2002 | 2003 | 2005 | 2007 | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|
| National public | 262.7 | 261.3 | 260.4* | 261.0 | 262.3 | 263.6* | 266.0* | 264.0* | 265.3* | 262.0 |
| Large city | 250.3* | 248.6* | 250.2* | 249.9* | 252.4* | 254.6 | 257.6* | 256.6 | 258.0* | 254.7 |

*Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2019.
**Gap is significantly different ($p < .05$) from the gap in 2002.

The analysis for this new study compared actual NAEP performance levels for Large City school districts and individual TUDA districts in 2009, 2011, 2013, 2015, 2017, and 2019 to predicted NAEP reading and mathematics performance (after controlling for the background variables outlined above) in grades four and eight. Comparisons were also made to Not Large City schools. The analysis allowed the Council to identify districts that were performing better than expected on the NAEP assessment and those who were performing under expectation. In other words, we could estimate over time whether Large City schools and others were getting better at mitigating the effects of poverty and other variables that typically suppress academic performance.

Exhibit 7 shows the actual performance for individual TUDA districts, Large City, and Not Large City schools, so the reader can see unadjusted results. Note that Albuquerque, Dallas, and Hillsborough County began participating in TUDA in 2011 and trends are reported on them for only five assessment cycles.

Duval County began participating in 2015 and the Milwaukee public schools did not participate in 2015. Clark County, Denver, Fort Worth, Guilford County, and Shelby County began in 2017 and only have calculations in two years.

Exhibit 7. Actual Scale Scores of TUDA Districts, Large City Schools, and Not Large City Schools, 2009 to 2019.

| | 2009 | | | | 2011 | | | | 2013 | | | | 2015 | | | | 2017 | | | | 2019 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Math | | Reading | | Math | | Reading | | Math | | Reading | | Math | | Reading | | Math | | Reading | | Math | | Reading | |
| Jurisdiction | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 | Grade 4 | Grade 8 |
| Albuquerque | - | - | - | - | 235 | 275 | 209 | 254 | 235 | 274 | 207 | 256 | 231 | 271 | 207 | 251 | 230 | 270 | 207 | 255 | 230 | 267 | 208 | 249 |
| Atlanta | 225 | 259 | 209 | 250 | 228 | 266 | 212 | 253 | 233 | 267 | 214 | 255 | 228 | 266 | 212 | 252 | 231 | 265 | 214 | 254 | 232 | 268 | 214 | 255 |
| Austin | 240 | 287 | 220 | 261 | 245 | 287 | 224 | 261 | 245 | 285 | 221 | 261 | 246 | 284 | 220 | 261 | 243 | 283 | 217 | 263 | 243 | 282 | 217 | 257 |
| Baltimore | 222 | 257 | 202 | 245 | 226 | 261 | 200 | 246 | 223 | 260 | 204 | 252 | 215 | 255 | 199 | 243 | 215 | 255 | 197 | 243 | 216 | 254 | 193 | 241 |
| Boston | 236 | 279 | 215 | 257 | 237 | 282 | 217 | 255 | 237 | 283 | 214 | 257 | 236 | 281 | 219 | 258 | 233 | 280 | 217 | 261 | 234 | 279 | 214 | 257 |
| Charlotte | 245 | 283 | 225 | 259 | 247 | 285 | 224 | 265 | 247 | 289 | 226 | 266 | 248 | 286 | 226 | 263 | 244 | 287 | 225 | 260 | 246 | 288 | 225 | 261 |
| Chicago | 222 | 264 | 202 | 249 | 224 | 270 | 203 | 253 | 231 | 269 | 206 | 253 | 232 | 275 | 213 | 257 | 232 | 276 | 211 | 259 | 232 | 275 | 208 | 253 |
| Clark County | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 230 | 272 | 213 | 258 | 235 | 272 | 216 | 256 |
| Cleveland | 213 | 256 | 194 | 242 | 216 | 256 | 193 | 240 | 216 | 253 | 190 | 239 | 219 | 254 | 197 | 240 | 214 | 257 | 196 | 237 | 218 | 253 | 196 | 242 |
| Dallas | - | - | - | - | 233 | 274 | 204 | 248 | 234 | 275 | 205 | 251 | 238 | 271 | 204 | 250 | 234 | 268 | 201 | 246 | 235 | 264 | 203 | 242 |
| Denver | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 229 | 272 | 214 | 258 | 235 | 275 | 217 | 257 |
| Detroit | 200 | 238 | 187 | 232 | 203 | 246 | 191 | 237 | 204 | 240 | 190 | 239 | 205 | 244 | 186 | 237 | 200 | 246 | 182 | 235 | 205 | 244 | 183 | 232 |
| D.C. (DCPS) | 220 | 251 | 203 | 240 | 222 | 255 | 201 | 237 | 229 | 260 | 206 | 245 | 232 | 258 | 214 | 245 | 231 | 262 | 213 | 246 | 235 | 269 | 214 | 251 |
| Duval County | - | - | - | - | - | - | - | - | - | - | - | - | 243 | 275 | 225 | 264 | 248 | 275 | 226 | 263 | 244 | 274 | 222 | 258 |
| Fort Worth | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 230 | 269 | 206 | 248 | 233 | 265 | 204 | 243 |
| Fresno | 219 | 258 | 197 | 240 | 218 | 256 | 194 | 238 | 220 | 260 | 196 | 245 | 218 | 257 | 199 | 242 | 221 | 255 | 203 | 244 | 224 | 254 | 204 | 242 |
| Guilford County | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 240 | 276 | 222 | 260 | 236 | 280 | 218 | 258 |
| Hillsborough County | - | - | - | - | 243 | 282 | 231 | 264 | 243 | 284 | 228 | 267 | 244 | 276 | 230 | 261 | 245 | 277 | 227 | 265 | 242 | 276 | 224 | 261 |
| Houston | 236 | 277 | 211 | 252 | 237 | 279 | 213 | 252 | 236 | 280 | 208 | 252 | 239 | 276 | 210 | 252 | 235 | 273 | 205 | 249 | 235 | 274 | 204 | 249 |
| Jefferson County | 233 | 271 | 219 | 259 | 235 | 274 | 223 | 260 | 234 | 273 | 221 | 261 | 236 | 272 | 222 | 261 | 233 | 271 | 221 | 261 | 232 | 273 | 214 | 258 |
| Los Angeles | 222 | 258 | 197 | 244 | 223 | 261 | 201 | 246 | 228 | 264 | 205 | 250 | 224 | 263 | 204 | 251 | 223 | 267 | 207 | 254 | 224 | 261 | 205 | 248 |
| Miami | 236 | 273 | 221 | 261 | 236 | 272 | 221 | 260 | 237 | 274 | 223 | 259 | 242 | 274 | 226 | 265 | 245 | 274 | 229 | 261 | 246 | 276 | 225 | 262 |
| Milwaukee | 220 | 251 | 196 | 241 | 220 | 254 | 195 | 238 | 221 | 257 | 199 | 242 | - | - | - | - | 216 | 254 | 195 | 245 | 215 | 252 | 190 | 240 |
| New York City | 237 | 273 | 217 | 252 | 234 | 272 | 216 | 254 | 236 | 274 | 216 | 256 | 231 | 275 | 214 | 258 | 229 | 275 | 214 | 258 | 231 | 273 | 212 | 254 |
| Philadelphia | 222 | 265 | 195 | 247 | 225 | 265 | 199 | 247 | 223 | 266 | 200 | 249 | 217 | 267 | 201 | 248 | 214 | 260 | 197 | 248 | 217 | 256 | 197 | 243 |
| San Diego | 236 | 280 | 213 | 254 | 239 | 278 | 215 | 256 | 241 | 277 | 218 | 260 | 233 | 280 | 216 | 262 | 237 | 283 | 222 | 264 | 240 | 283 | 223 | 266 |
| Shelby County | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 225 | 257 | 203 | 248 | 228 | 265 | 205 | 249 |
| Large City Schools* | 231 | 271 | 210 | 252 | 233 | 274 | 211 | 255 | 235 | 276 | 212 | 258 | 234 | 274 | 214 | 257 | 232 | 274 | 213 | 258 | 235 | 274 | 212 | 255 |
| Not Large City Schools‡ | 241 | 284 | 221 | 264 | 242 | 284 | 222 | 265 | 242 | 285 | 222 | 268 | 241 | 283 | 223 | 265 | 241 | 284 | 222 | 267 | 240 | 281 | 219 | 262 |

* Includes district-authorized charters
‡ Includes charters authorized by others and independent charters

The raw data show that Large City schools generally scored below Not Large City schools by between five and seven scale score points in 2019—depending on grade and subject. Individual TUDA school districts showed extensive variation.

However, comparing these results without statistically controlling for background variables is only one way to look at these data. For instance, comparing Detroit and Charlotte-Mecklenburg on raw scores clearly indicates that one scores higher than another, but they have vastly different demographics and quite different challenges. To sort out these distinctions and how they might mask how districts perform and whether they improve, we asked a series of research questions—

- Are Large City schools performing at the same level as, above, or below statistical expectations in reading and math on NAEP in fourth and eighth grades after adjusting for differences in demographic characteristics? In other words, do urban public schools overcome—to any degree—the effects of poverty and other barriers or do they simply reflect those characteristics?
- Are Large City schools getting better at overcoming these effects over time (2009, 2011, 2013, 2015, 2017, and 2019)? Which school districts appear to be overcoming these effects the most?
- Do Large City schools do a better job at overcoming the effects of poverty and other variables on achievement than schools outside the cities?
- Do some urban public-school districts do a better job at overcoming these effects than other urban school districts? Who are they?
- Are there any fundamental differences between urban school districts that overcome these effects compared with ones who do not?
- What are the urban school districts that seem to be overcoming these affects doing that other urban school districts are not doing? Are there common features of urban school districts that are not showing progress yet?

To answer these questions, this study compared the performance of each district or type of school against other districts and school types after adjusting for student background and school characteristics. A HLM analysis estimated the performance of a district or type of school had its demographic profile been the same as the average profile of all districts or jurisdictions in the nation using the NAEP restricted data set for each of the study years. The methodology to estimate the adjusted mean scores is based on a two-level, students and schools, HLM model. In the mixed effects model:

Let $y_{ijv}$ be plausible value[5] $v$ of student $j$ in district (or school type) $i$, and

$X_{ijk}$ be the demographic characteristic $k$ of student $j$ in district (or school type) $i$.

[5] Plausible values are imputed values that resemble individual test scores and have approximately the same distribution as the latent trait being measured. Plausible values were developed as a computational approximation to obtain consistent estimates of population characteristics in assessment situations where individuals are administered too few items to allow precise estimates of their ability. Plausible values represent random draws from an empirically derived distribution of proficiency values that are conditional on the observed values of the assessment items and the background variables. The random draws from the distribution represent values from the distribution of scale scores for all adults in the population with similar characteristics and identical response patterns. These random draws or imputations are representative of the score distribution in the population of people who share the background characteristics of the individual with whom the plausible value is associated in the data.

Assume the mean plausible value for student *j* in district *i*, $y_{ij\bullet}$ , can be expressed as a function of an overall mean achievement $\mu$ , a differential effect $\alpha_i$ associated with district (or school type) *i*, and differential effects $\beta_k$ associate with characteristic *k* of student *j* in district or school type *i*:

$$y_{ij\bullet} = \mu + \alpha_i + \sum \beta_k X_{ijk} + e_{ij} , \qquad [1]$$

where $\mu$ is the overall mean,

$\alpha_i$ is the district (or school type) *i* effect, and

$\beta_k$ is the effect of demographic characteristic *k* of student *j* in district (or school type) *i*.

Letting the subscript • indicate average, then the average scale score in district (or school type) *i* is expressed as

$$y_{i\bullet\bullet} = \mu + \alpha_i + \sum \beta_k \ X_{i\bullet k} + e'_i, \qquad [2]$$

Subtracting [2] from [1] we can estimate the analysis [3]

$$z_{ij} = y_{ij\bullet} - y_{i\bullet\bullet} = \sum \beta_k [X_{ijk} - X_{i\bullet k}] + e''_{ij} \qquad [3]$$

and obtain estimates of $\beta_k$ directly, without any contamination from $\alpha_i$ because $\alpha_i$ has been subtracted out before the analysis. With the estimates $\hat{\beta}_k$, we compute the average effect of the demographic characteristics of student *j* in district (or school type) *i*.

$$\hat{y}_{ij\bullet} = \sum \hat{\beta}_k [X_{ijk} - X_{\bullet\bullet k}] \qquad [4]$$

where $X_{\bullet\bullet k}$ is the overall mean of $X_{\bullet\bullet k}$.

The adjusted score, $y'_{ijv}$ is estimated by subtracting $\hat{y}_{ij\bullet}$ from each $y_{ijv}$:

$$y'_{ijv} = y_{ijv} - \hat{y}_{ij\bullet} \qquad [5]$$

The adjusted score, $y'_{i\bullet\bullet}$ is the critical statistic for the analysis. It is an estimator for $\mu + \alpha_i$, and we can estimate its standard error by the usual NAEP procedures. Note that $\mu + \alpha_i$ is the overall mean plus the effect of district (or school type) *i*. It is what the mean of district (or school type) *i* would be if the mean of all demographics in district (or school type) *i* were the same as the overall mean.

The hierarchical model used in the current study calculates this statistic by applying two Level 2 random factors and four mixed Level 1 factors. In the HLM model, rather than treating each student as varying from the overall mean plausible value, we estimate the mean of all student means for each school, noted below as $\gamma_{00.}$ The full HLM model is represented by:

$$y_{ij} = \beta_{0j} + \beta_{1j} X_{1j} + ... + \beta_{2j} X_{2j} + e_{ij}$$
$$\beta_{0j} = \gamma_{00} + \gamma_{01}(SCHOOLLN_j) + \gamma_{02}(LESS15K_j) + u_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11}(SCHOOLLN_j) + \gamma_{12}(LESS15K_j) + u_{1j}$$
$$\beta_{2j} = \gamma_{20} + \gamma_{21}(SCHOOLLN_j) + \gamma_{22}(LESS15K_j) + u_{2j}$$

Where SCHOOLLN is the school free or reduced-price lunch rate and LESS15K is the percentage of families in the school zip code with a household income less than $15,000 per year.

Next, the expected performance of each district and school type—based on the selected student background characteristics—was computed. Each district's actual performance was then compared to the expected

performance for that district or comparison group. The difference between the two was called a "district effect" or group effect. Significant positive effects indicated that a district or group was performing better than expected statistically, and significant negative effects indicated that the district or group was performing worse than expected statistically. The actual model for the analysis is:

*Level-1 Model*

$$MRPCM1_{ij} = \beta_{0j} + \beta_{1j}*(LITERACY_{ij}) + \beta_{2j}*(IEPNOT_{ij}) + \beta_{3j}*(LEPNOT_{ij}) + \beta_{4j}*(SRACEAA_{ij}) + \beta_{5j}*(SRACEH_{ij}) + \beta_{6j}*(SRACEASP_{ij}) + \beta_{7j}*(SRACEAI_{ij}) + \beta_{8j}*(SRACEMR_{ij}) + e_{ij}$$

*Level-2 Model*

$$\beta_{0j} = \gamma_{00} + \gamma_{01}*(SCHOOLLN_j) + \gamma_{02}*(LESS15K_j) + u_{0j}$$

Next, the expected performance of each district and school type—based on the selected student background characteristics—was computed. Each district's actual performance was then compared to the expected performance for that district or comparison group. The difference between the two was called a "district effect" or group effect. Significant positive effects indicated that a district or group was performing better than expected statistically, and significant negative effects indicated that the district or group was performing below what was expected statistically.

*Variance Accounted for by the HLM Analysis*

Exhibit 8 estimates the variance, or the R-squared value, explained by the background variables for each of the HLMs calculated on the *national* sample. The variances in the national sample ranged from a low of 0.2966 to a high of 0.3838. A recent presentation by Ward, Broer, and Jewsbury (2017) estimated explained variance at about 0.306 when using similar background variables. Their R-squared values were consistent with the values reported in this study.

Exhibit 8. Percent of variance ($R^2$) Explained by Relevant Background Variables for the Total NAEP Sample of Students (Public and Non-public) by Subject and Grade, 2009 to 2017

| $R^2$ Values for All Students in NAEP Sample by Grade and Subject | | | | |
|---|---|---|---|---|
| | Math | | Reading | |
| Year | Grade 4 | Grade 8 | Grade 4 | Grade 8 |
| 2009 | 0.2966 | 0.3530 | 0.3031 | 0.3471 |
| 2011 | 0.3198 | 0.3607 | 0.3390 | 0.3498 |
| 2013 | 0.3457 | 0.3733 | 0.3802 | 0.3712 |
| 2015 | 0.3367 | 0.3838 | 0.3777 | 0.3671 |
| 2017 | 0.3391 | 0.3754 | 0.3557 | 0.3552 |
| 2019 | | | | |
| Δ | +0.0425 | +0.0224 | +0.0526 | +0.0081 |

‡ Includes district-authorized charters, charters authorized by others, and independent charters

In addition to the significance of these variables in explaining overall NAEP results, the analysis suggests that the power of these variables in predicting results has increased over time. In each subject-grade combination, the R-squared value increases somewhat between 2009 and 2017.

*Limitations of this and similar analysis*

Several limitations in the current study—and other similar studies—should be mentioned. First, both the adjusted and expected performance numbers are estimates based on variables that research indicates affect student achievement. Some of these variables are beyond the control of educators and policy-makers even though they affect performance. Still, the purpose of this study was to determine the extent to which Large City schools were overcoming their effects.

Second, there may be other variables related to achievement that were not controlled for in this analysis. Some of these variables are not measured in NAEP, and possibly some are not measurable at all. A district effect is the product of our best estimate of whether a district or school type was performing differently than expected given its student profile on a limited number of variables measured in NAEP. We did not look at other background variables like spending levels in part because previous studies have not shown them to be as powerful in predicting performance as the ones we did choose. Still, there is room for additional analyses on such variables.

Third, comparing school types at any grade level ignores the fact that students may enter the formal educational process at very different achievement levels. Consequently, attempts to control for differences using various student characteristics or attempts to match students based on background variables will not always account for other differences that affect student achievement. For example, parents who enroll their children in Large City or Not Large City schools may have very different parenting practices. Research (e.g., Wilder, 2014; Jeynes, 2012; Hill & Tyson, 2009; Patall, Cooper, & Robinson, 2008; Senechal & Young, 2008; Jeynes, 2007; Erion, 2006; Jeynes, 2005; Jeynes, 2003; Fan & Chen, 2001) indicates that differences in parental involvement and expectations have a significant impact on student achievement, yet many studies, including this one, do not adequately account for these differences except to the extent that we look at parental education levels and literacy materials in the home.

Fourth, this study was not able to parse the differences between charter schools that were authorized by school districts, those that were authorized by other entities, and those that were entirely independent. NAEP does not code charter schools in a way that would allow analyses of this type.

Fifth, this analysis does not control for differences in such in-school variables as teacher experience or school size. Other studies have shown that these variables show little impact on difference between school types (see, e.g., Braun, Jenkins, & Grigg, 2006), although these variables may have effects in other types of analyses.

Finally, differences in concentrations of poverty are likely to affect comparisons as well. (See, for example, Orfield & Lee, 2005 for a discussion of concentrated poverty). This study attempts to explain some of this effect by looking at income levels within jurisdictions with Census data, but additional analyses are needed.

## Results of Analysis

This section answers study questions posed in the previous section. First, we look at "district effects" using the 2019 restricted-use NAEP data set. Second, we look at trends city-by-city and across cities using NAEP restricted-use data from 2009, 2011, 2013, 2015, 2017, and 2019. Third, we more carefully examine the poverty levels in cities whose school districts show district effects above and below what might be expected statistically. Fourth, we compare the performance of large city school districts to others.

*(a) Actual vs. Expected (Adjusted) Mean NAEP Performance*

Exhibits nine through 12 show the actual mean scale scores of districts and school types in 2017, the expected mean of the same groups after adjusting for relevant background variables, and the overall "district effect" of individual cities and various school types. Comparable tables for 2009, 2011, 2013, 2015, and 2017 are available in Appendix A. Again, the district effect is the difference between the actual performance and the adjusted performance. A positive effect suggests that the entity is scoring higher than one would

expect statistically given its demographic characteristics; a negative effect suggests that the entity is scoring lower than one would expect statistically given its demographic characteristics. Zero is the point at which an entity scores exactly what one would expect statistically—suggesting that the entity is more likely to reflect its demographic characteristics than overcome them.

In grade four reading (Exhibit 9), many individual TUDA districts—the focus of this study—nominally out-scored their expected performance in 2019 after adjusting for relevant background variables. Individual city effects ranged from a high of +18.56 in Denver to a low of -10.05 in Detroit. Overall, 20 of 27 cities (Atlanta, Austin, Boston, Charlotte-Mecklenburg, Chicago, Clark County, Cleveland, Dallas, Denver, the District of Columbia, Duval County, Fort Worth, Fresno, Guilford County, Hillsborough County, Houston, Miami-Dade County, New York City, San Diego, and Shelby County) on which there were NAEP data on grade four reading in 2019 had positive district effects; and 7 of 27 had nominally negative district effects.

Large City Schools had an aggregate positive effect of +1.77, compared to an aggregate effect of Not Large Cities of +1.05.

In grade 8 reading (Exhibit 10), Large City schools had a district effect of +1.57 in 2019 and individual cities varied from +12.36 in Boston to a low of -5.63 in Fresno. Overall, 17 of 26 cities (Atlanta, Austin, Boston, Charlotte-Mecklenburg, Chicago, Cleveland, Dallas, the District of Columbia, Duval County, Guilford County, Hillsborough County, Houston, Jefferson County, Miami-Dade County, New York City, San Diego, and Shelby County) on which there were NAEP data in 2019 had positive district effects; and 9 of 26 had negative district effects. (We could not calculate an effect for Denver.) Not Large City schools had an aggregate district effect of +0.59 in 2019.

Exhibit 11 shows that Large City schools had an effect in 2019 of +3.74 in fourth grade math and individual cities showed considerable variation. For instance, cities ranged from a high of +15.00 in Denver to a low of -8.72 in Detroit. Overall, 20 of 27 cities (Atlanta, Austin, Boston, Charlotte-Mecklenburg, Chicago, Clark County, Cleveland, Dallas, Denver, the District of Columbia, Duval County, Fort Worth, Fresno, Guilford County, Hillsborough County, Houston, Miami-Dade County, New York City, San Diego, and Shelby County) posted positive effects; and 7 had negative effects. Not Large City Schools had an aggregate effect in 2019 of +1.71. (See subsequent discussion of adjustments to fourth and eighth grade math scores based on effects of college and career-ready standards.)

Exhibit 12 shows that Large City schools overall had a positive effect, +4.70, in eighth grade mathematics, while individual cities varied from a high of +18.71 in Boston to a low of -9.27 in Fresno. Some 17 of 26 cities (Atlanta, Austin, Boston, Charlotte-Mecklenburg, Chicago, Cleveland, Dallas, the District of Columbia, Duval County, Fort Worth, Guilford County, Hillsborough County, Houston, Miami-Dade County, New York City, San Diego, and Shelby County) on which there were NAEP data in 2019 had positive district effects; and 9 of 26 had negative effects. The aggregate Not Large City effect in 2019 was +1.62.

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Exhibit 9. Grade Four Reading Actual Performance, Expected Performance, and District Effects in 2019

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 207.50 | 209.65 | -2.14 |
| **Atlanta** | 213.60 | 205.30 | 8.31 |
| **Austin** | 216.56 | 210.94 | 5.61 |
| **Baltimore** | 192.54 | 199.80 | -7.26 |
| **Boston** | 213.81 | 202.20 | 11.61 |
| **Charlotte** | 224.57 | 216.80 | 7.77 |
| **Chicago** | 208.45 | 205.71 | 2.74 |
| **Clark County** | 216.27 | 212.71 | 3.56 |
| **Cleveland** | 196.03 | 189.66 | 6.37 |
| **Dallas** | 202.71 | 199.83 | 2.88 |
| **Denver** | 216.87 | 198.30 | 18.56 |
| **Detroit** | 182.58 | 192.63 | -10.05 |
| **District of Columbia (DCPS)** | 214.43 | 205.52 | 8.91 |
| **Duval County** | 221.92 | 213.19 | 8.73 |
| **Fort Worth** | 204.04 | 199.64 | 4.40 |
| **Fresno** | 204.13 | 203.23 | 0.89 |
| **Guilford County** | 218.40 | 212.24 | 6.16 |
| **Hillsborough County** | 223.95 | 213.66 | 10.28 |
| **Houston** | 204.13 | 203.24 | 0.89 |
| **Jefferson County** | 213.70 | 214.73 | -1.03 |
| **Los Angeles** | 204.91 | 209.77 | -4.85 |
| **Miami** | 224.78 | 210.63 | 14.15 |
| **Milwaukee** | 189.64 | 200.00 | -10.36 |
| **New York City** | 212.04 | 209.14 | 2.90 |
| **Philadelphia** | 196.89 | 203.50 | -6.61 |
| **San Diego** | 222.57 | 215.72 | 6.84 |
| **Shelby County** | 205.26 | 204.93 | 0.33 |
| | | | |
| **Large City Schools*** | 211.66 | 209.90 | 1.77 |
| **Not Large City Schools‡** | 222.30 | 221.25 | 1.05 |

* Includes district-authorized charters
‡ Includes charters authorized by others and independent charters

Exhibit 10. Grade Eight Reading Actual Performance, Expected Performance, and District Effects in 2019

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| Albuquerque | 249.02 | 257.43 | -4.88 |
| Atlanta | 255.38 | 252.14 | 7.33 |
| Austin | 257.86 | 259.27 | 1.13 |
| Baltimore | 241.90 | 247.70 | -0.84 |
| Boston | 257.50 | 249.97 | 12.36 |
| Charlotte | 261.84 | 262.56 | 2.28 |
| Chicago | 252.75 | 254.32 | 3.83 |
| Clark County | 256.23 | 258.77 | -0.31 |
| Cleveland | 242.84 | 241.88 | 7.89 |
| Dallas | 242.07 | 239.75 | 4.36 |
| Denver | -- | -- | -- |
| Detroit | 231.79 | 239.75 | -3.73 |
| District of Columbia (DCPS) | 251.34 | 252.29 | 2.00 |
| Duval County | 258.14 | 261.78 | 2.61 |
| Fort Worth | 242.77 | 248.67 | -2.94 |
| Fresno | 242.71 | 252.71 | -5.63 |
| Guilford County | 258.28 | 261.31 | 0.69 |
| Hillsborough County | 260.64 | 261.70 | 4.80 |
| Houston | 248.78 | 252.02 | 1.64 |
| Jefferson County | 257.96 | 263.03 | 0.37 |
| Los Angeles | 248.45 | 256.98 | -4.32 |
| Miami | 261.96 | 257.26 | 6.70 |
| Milwaukee | 240.70 | 247.41 | -1.92 |
| New York City | 255.38 | 256.04 | 4.02 |
| Philadelphia | 243.13 | 250.64 | -3.35 |
| San Diego | 265.95 | 263.18 | 2.78 |
| Shelby County | 248.81 | 248.83 | 2.28 |
| | | | |
| Large City Schools* | 254.74 | 253.17 | 1.57 |
| Not Large City Schools‡ | 264.78 | 264.20 | 0.59 |

* Includes district-authorized charters
‡ Includes charters authorized by others and independent charters

Exhibit 11. Grade Four Mathematics Actual Performance, Expected Performance, and District Effects in 2019

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 229.83 | 230.97 | -1.14 |
| **Atlanta** | 231.56 | 226.34 | 5.22 |
| **Austin** | 242.74 | 232.00 | 10.74 |
| **Baltimore** | 216.47 | 221.91 | -5.44 |
| **Boston** | 233.76 | 224.38 | 9.39 |
| **Charlotte** | 246.26 | 236.72 | 9.54 |
| **Chicago** | 232.51 | 227.73 | 4.78 |
| **Clark County** | 234.58 | 233.62 | 0.95 |
| **Cleveland** | 217.70 | 212.35 | 5.35 |
| **Dallas** | 234.90 | 222.60 | 12.30 |
| **Denver** | 234.74 | 219.74 | 15.00 |
| **Detroit** | 205.44 | 214.16 | -8.72 |
| **District of Columbia (DCPS)** | 235.30 | 227.96 | 7.34 |
| **Duval County** | 244.15 | 232.72 | 11.44 |
| **Fort Worth** | 233.02 | 222.74 | 10.28 |
| **Fresno** | 223.99 | 223.69 | 0.29 |
| **Guilford County** | 236.11 | 232.94 | 3.17 |
| **Hillsborough County** | 242.23 | 234.03 | 8.20 |
| **Houston** | 235.33 | 225.64 | 9.69 |
| **Jefferson County** | 232.36 | 234.06 | -1.71 |
| **Los Angeles** | 223.63 | 230.37 | -6.74 |
| **Miami** | 245.82 | 231.09 | 14.74 |
| **Milwaukee** | 215.30 | 221.80 | -6.50 |
| **New York City** | 230.82 | 230.40 | 0.42 |
| **Philadelphia** | 217.17 | 224.92 | -7.74 |
| **San Diego** | 240.23 | 236.79 | 3.43 |
| **Shelby County** | 228.15 | 224.89 | 3.26 |
| | | | |
| **Large City Schools*** | 234.81 | 231.07 | 3.74 |
| **Not Large City Schools‡** | 241.72 | 240.01 | 1.71 |

* Includes district-authorized charters

‡ Includes charters authorized by others and independent charters

Exhibit 12. Grade Eight Mathematics Actual Performance, Expected Performance, and District Effects in 2019.

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| Albuquerque | 267.05 | 269.23 | -2.18 |
| Atlanta | 268.38 | 261.50 | 6.89 |
| Austin | 282.60 | 274.03 | 8.58 |
| Baltimore | 254.13 | 256.38 | -2.25 |
| Boston | 279.35 | 260.64 | 18.71 |
| Charlotte | 288.31 | 277.23 | 11.08 |
| Chicago | 275.59 | 263.98 | 11.62 |
| Clark County | 271.67 | 273.32 | -1.65 |
| Cleveland | 253.36 | 248.67 | 4.70 |
| Dallas | 264.46 | 253.72 | 10.74 |
| Denver | -- | -- | -- |
| Detroit | 243.94 | 247.23 | -3.28 |
| District of Columbia (DCPS) | 268.91 | 262.81 | 6.10 |
| Duval County | 274.33 | 271.72 | 2.60 |
| Fort Worth | 264.85 | 260.42 | 4.43 |
| Fresno | 253.88 | 263.15 | -9.27 |
| Guilford County | 280.35 | 274.69 | 5.66 |
| Hillsborough County | 276.70 | 272.94 | 3.76 |
| Houston | 274.11 | 262.51 | 11.60 |
| Jefferson County | 273.62 | 274.16 | -0.54 |
| Los Angeles | 260.99 | 268.31 | -7.32 |
| Miami | 276.40 | 269.74 | 6.66 |
| Milwaukee | 252.74 | 257.25 | -4.51 |
| New York City | 273.32 | 267.52 | 5.80 |
| Philadelphia | 256.42 | 261.33 | -4.91 |
| San Diego | 282.78 | 280.72 | 2.06 |
| Shelby County | 265.35 | 260.69 | 4.66 |
| | | | |
| Large City Schools* | 274.24 | 269.54 | 4.70 |
| Not Large City Schools‡ | 283.52 | 281.90 | 1.62 |

* Includes district-authorized charters

‡ Includes charters authorized by others and independent charters

*(b) Trends in Overcoming Poverty and Other Variables*

Exhibits 13 through 16 show the district effects for all TUDA districts across all five assessment periods (2009, 2011, 2013, 2015, 2017, and 2019) in grades four and eight, reading and math. These data are meant to answer the question about whether Large City schools were getting better at overcoming the effects of poverty, language, and other demographic variables or not.

In grade four reading, most cities had district effects that were above expectations, and several improved those effects between 2009 and 2019. In 2019, there were 20 cities that showed overall positive effects and 7 had negative effects. Of the districts with positive effects in 2019, 7 had improved since 2009--Atlanta, Chicago, Cleveland, the District of Columbia, Fresno, Miami-Dade County, and San Diego. Six other districts—Clark County, Denver, Duval County, Fort Worth, Guilford County, and Shelby County—had gains over differing testing periods ending in 2019. And five districts—Chicago, Clark County, Cleveland, the District of Columbia, and Fresno—moved from having a negative district effect in their first year of testing (whichever year that was) to having a positive one in 2019. (Exhibit 13)

In grade eight reading (Exhibit 14), 17 cities had positive effects in 2019. Of these cities, 12 showed larger effects in 2019 than in their initial year of testing—Atlanta, Boston, Cleveland, Dallas, the District of Columbia, Duval County, Guilford County, Jefferson County, Miami-Dade County, New York City, San Diego, and Shelby County. There were 9 districts with negative district effects in 2019. Of these districts, only two showed a larger positive effect in 2019 than in their initial testing year, even though they remained in negative territory—Detroit and Milwaukee. And only two districts—Jefferson County and San Diego--moved from below the zero line in 2009 to above it in 2019.

In grade four mathematics (Exhibit 15), 20 of the 27 TUDA districts performed better than expected in 2019. Twelve of these districts—Atlanta, Chicago, Clark County, Cleveland, Denver, the District of Columbia, Duval County, Fort Worth, Fresno, and Miami-Dade County, San Diego, and Shelby County—showed gains in 2019 over and above the effects in their initial testing year. Some 7 other districts had negative district effects in 2019. One district—Detroit--showed gains over and above their initial testing year—even though they remained in negative territory throughout the period. Four districts—Chicago, Cleveland, Fresno, and the District of Columbia—went from below the line to above the line between 2009 and 2019.

Finally, in grade eight mathematics (Exhibit 16), 17 of 26 TUDA districts performed better than expected in 2019. Of those, ten—Atlanta, Boston, Charlotte, Chicago, Cleveland, the District of Columbia, Duval County, Guilford County, Miami-Dade County, and Shelby County—had larger effects in 2019 than their initial testing year. In addition, 9 cities showed a negative district effect in 2019. Four of these districts (Baltimore, Detroit, Jefferson County, and Milwaukee) showed higher district effects in 2019 than in their initial testing year. No city moved from a negative district effect in 2009 to a positive one in 2019.

Overall, there were several notable trends. Cleveland, the District of Columbia, and Miami-Dade County posted gains in effect sizes in all four assessments (reading, math, fourth grade, and eighth grade). Chicago, for instance, showed improvements in three assessments (i.e., fourth grade reading and fourth and eighth grade math) from 2009 to 2019, as did San Diego. And several districts showed gains across two assessment areas. In addition, several districts went from a negative district effect in 2009 to a positive one in 2019 in at least one assessed area—Chicago, Cleveland, the District of Columbia, Fresno, Jefferson County, and San Diego.

(c ) *Influence of Abject and Concentrated Poverty*

An initial review of results after adjusting for relevant background variables indicated that they may not adequately control for poverty. The question emerged about whether the Free & Reduced-Price Lunch-eligibility measure used by NAEP sufficiently differentiated poverty levels or took adequate account of deep or abject poverty. The National School Lunch Act in 1946 created the modern school lunch program

though the U. S. Department of Agriculture, and about 7.1 million children were participating in it by the end of its first year, 1946-47. By 1970, 22 million children were participating, and by 1980 the figure was nearly 27 million. In 2012, more than 31.6 million children were participating in the National School Lunch Program.

The program provides free meals to eligible children in households with income at or below 130 percent of the federal poverty guidelines, and reduced-price meals to eligible children in households with income above 130 percent and at or below 185 percent of poverty. Unfortunately, as the number of participating students rose and the income categories remained the same, the lunch-eligibility data became less and less able to differentiate the very poor from the poor and near-poor.

The distinction between levels of poverty becomes important as we look at which districts are most able to overcome the effects of poverty and other barriers—and conversely, which ones have a more difficult challenge. Exhibit 17 shows the difference in abject poverty across districts. Later in this analysis, one will see that despite progress, districts like Baltimore, Cleveland, Detroit, Milwaukee, Philadelphia, and others with high levels of abject poverty seem to have a more difficult time rising above statistical expectations.

Using free and reduced priced lunch as a proxy for poverty has been an acceptable and frequently used measure in many research studies, but it has flaws. In fact, the measure has become increasingly challenging because of the new Community Eligibility Provision (CEP). The CEP is a meal service option for schools and school districts in low-income areas. A key provision of *The Healthy, Hunger Free Kids Act* (HHFKA, Public Law 111-296, December 13, 2010), CEP allows the highest poverty schools to serve breakfast and lunch at no cost to all enrolled students without the burden of collecting household applications. Instead, schools that adopt CEP are reimbursed using a formula (1.6 times direct certification) based on the percentage of students participating in other means-tested programs, such as the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF).

As a result, a school that may have 85 percent of its students eligible for free and reduced priced lunch will serve 100 percent of students. Obviously, the change has been important for ensuring that students have adequate nutrition, but the new provision has been problematic for researchers trying to measure poverty or use it in their analyses. The changes, for instance, have affected the ability to maintain trend lines in poverty levels and obtain accurate counts of students in poverty. Researchers have tried to use a combination of direct certification, census poverty data using geocodes, imputed variables, and prior information to determine a best metric, but the attempts have not always been fully successful.

Finally, poverty thresholds in the federal free and reduced-price lunch data do not vary by geography or economic cost living factors, although other adjustments can be made. They also do not count for students who are at or below the 100 percent poverty threshold. And poverty rates are compounded in cities where the costs of living vary (e.g., New York City vs. Des Moines).

The table below (Exhibit 19) shows income levels for TUDA districts according to bands of income below $50,000 annually, using Census income data for 2015. For the purposes of this analysis, abject poverty is annual income below $10,000. We also use that measure in combination with annual income below $50,000. Unfortunately, the Census data cannot be juxtaposed against all the NAEP variables used in this study.

Exhibit 13. Percentage of Households by Income Level in TUDA Districts, 2015

| | Less than $10,000 | $10,000 to $14,999 | $15,000 to $24,999 | $25,000 to $34,999 | $35,000 to $49,999 | Total Percent of Families |
|---|---|---|---|---|---|---|
| **Detroit City School District** | 21.7 | 10.2 | 16.9 | 12.7 | 13.6 | 75.1 |
| **Cleveland Municipal School District** | 20.5 | 10.6 | 17.1 | 12.5 | 13.5 | 74.2 |
| **Fresno Unified School District** | 11.5 | 9.4 | 16.0 | 13.4 | 14.5 | 64.8 |
| **Milwaukee School District** | 12.2 | 8.7 | 15.1 | 12.9 | 14.5 | 63.4 |
| **Philadelphia City School District** | 14.2 | 7.9 | 13.0 | 11.6 | 13.6 | 60.3 |
| **Fort Worth Independent School District** | 9.9 | 7.1 | 13.3 | 12.2 | 14.0 | 56.5 |
| **Baltimore City Public Schools** | 13.1 | 7.5 | 11.6 | 11.1 | 13.0 | 56.3 |
| **Dallas Independent School District** | 9.6 | 6.5 | 13.1 | 12.2 | 14.9 | 56.3 |
| **Miami-Dade County School District** | 10.6 | 6.8 | 13.3 | 11.1 | 14.1 | 55.9 |
| **Guilford County Schools** | 8.1 | 5.8 | 12.3 | 12.2 | 15.0 | 53.4 |
| **Shelby County School District** | 9.7 | 6.2 | 12.7 | 11.1 | 13.2 | 52.9 |
| **Houston Independent School District** | 9.1 | 6.4 | 12.8 | 10.8 | 13.3 | 52.4 |
| **Duval County School District** | 8.7 | 5.6 | 10.9 | 11.6 | 15.1 | 51.9 |
| **Albuquerque Public Schools** | 9.1 | 5.8 | 12.3 | 11.2 | 13.4 | 51.8 |
| **Atlanta City School District** | 12.8 | 6.3 | 11.1 | 9.4 | 12.0 | 51.6 |
| **Jefferson County School District** | 8.5 | 6.0 | 11.3 | 10.8 | 14.6 | 51.2 |
| **Chicago Public School District 299** | 11.1 | 5.9 | 11.6 | 10.0 | 12.4 | 51.0 |
| **Los Angeles Unified School District** | 7.9 | 6.9 | 12.0 | 10.5 | 12.8 | 50.1 |
| **Hillsborough County School District** | 7.7 | 5.4 | 11.3 | 10.6 | 14.3 | 49.3 |
| **Clark County School District** | 6.7 | 4.6 | 10.4 | 11.4 | 15.2 | 48.3 |
| **New York City** | 10.4 | 6.1 | 10.5 | 8.9 | 11.4 | 47.3 |

| | Less than $10,000 | $10,000 to $14,999 | $15,000 to $24,999 | $25,000 to $34,999 | $35,000 to $49,999 | Total Percent of Families |
|---|---|---|---|---|---|---|
| **Denver County School District 1** | 8.4 | 5.2 | 9.6 | 10.1 | 13.4 | 46.7 |
| **Boston School District** | 12.0 | 7.3 | 9.3 | 7.2 | 10.2 | 46.0 |
| **Austin Independent School District** | 7.9 | 4.5 | 9.3 | 9.6 | 13.6 | 44.9 |
| **Charlotte-Mecklenburg Schools** | 6.4 | 4.4 | 9.4 | 10.3 | 13.7 | 44.2 |
| **San Diego City Unified School District** | 6.3 | 4.9 | 9.0 | 8.5 | 12.2 | 40.9 |
| **District of Columbia Public Schools (DCPS)** | 10.2 | 4.2 | 7.4 | 6.7 | 9.6 | 38.1 |

What is clear from the data is that TUDA districts with NAEP scores in reading and math below expectations in 2015 in all four subject-grade combinations (reading, math, grade 4, and grade 8) also had unusually high poverty rates. See Exhibit 20. This suggests that districts with particularly low-income levels and high concentrations of such poverty are much less likely to produce a positive district effect in reading and math performance. (More on this in the case study section of this report.)

Exhibit 14. TUDA Districts with Negative District Effects in Four Areas and Their Abject Poverty Levels, 2019

| | District Effect in Grade 4 Reading | District Effect in Grade 8 Reading | District Effect in Grade 4 Math | District Effect in Grade 8 Math | Percent of Families below $10,000 | Percent of Families below $50,000 |
|---|---|---|---|---|---|---|
| **Detroit** | -10. 05 | -3.73 | -8.72 | -3.28 | 21.7% | 75.1% |
| **Milwaukee*** | -10.36 | -1.92 | -6.50 | -4.51 | 12.2% | 63.4% |
| **Philadelphia** | -6.61 | -3.35 | -7.74 | -4.91 | 14.2% | 60.3% |
| **Baltimore** | -7.26 | -0.84 | -5.44 | -2.25 | 13.1% | 56.3% |
| **Los Angeles** | -4.85 | -4.32 | -6.74 | -7.32 | 7.9% | 50.1% |

*District Effects data for 2013

By and large, this effect appears to apply to districts with populations with incomes below $10,000 annually of at least 10 percent and incomes below $50,000 of at least 50 percent. All districts in Exhibit 18, except Los Angeles, have these characteristics. At the same time, there are districts with both demographic conditions that have at least one or more positive district effects—Chicago, Cleveland, and Miami-Dade County. Interestingly, Chicago and Cleveland have gone from below the zero line to above it in at least two areas between 2009 and 2019—fourth grade reading and fourth grade math.

Figure 15. Trends in District Effects in Grade Four Reading by City, 2009 to 2019

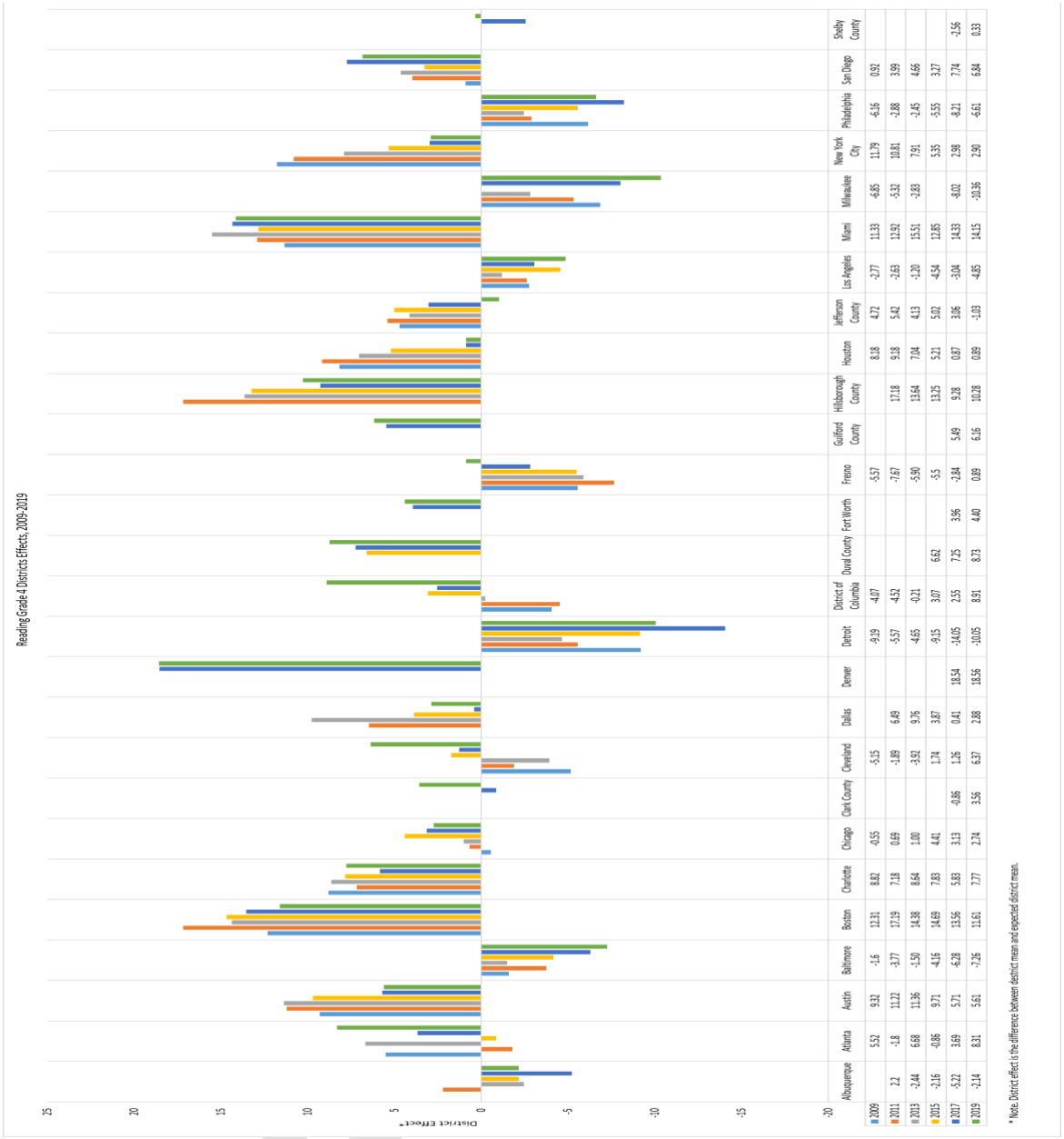


Figure 16. Trends in District Effects in Grade Eight Reading by City, 2009 to 2019

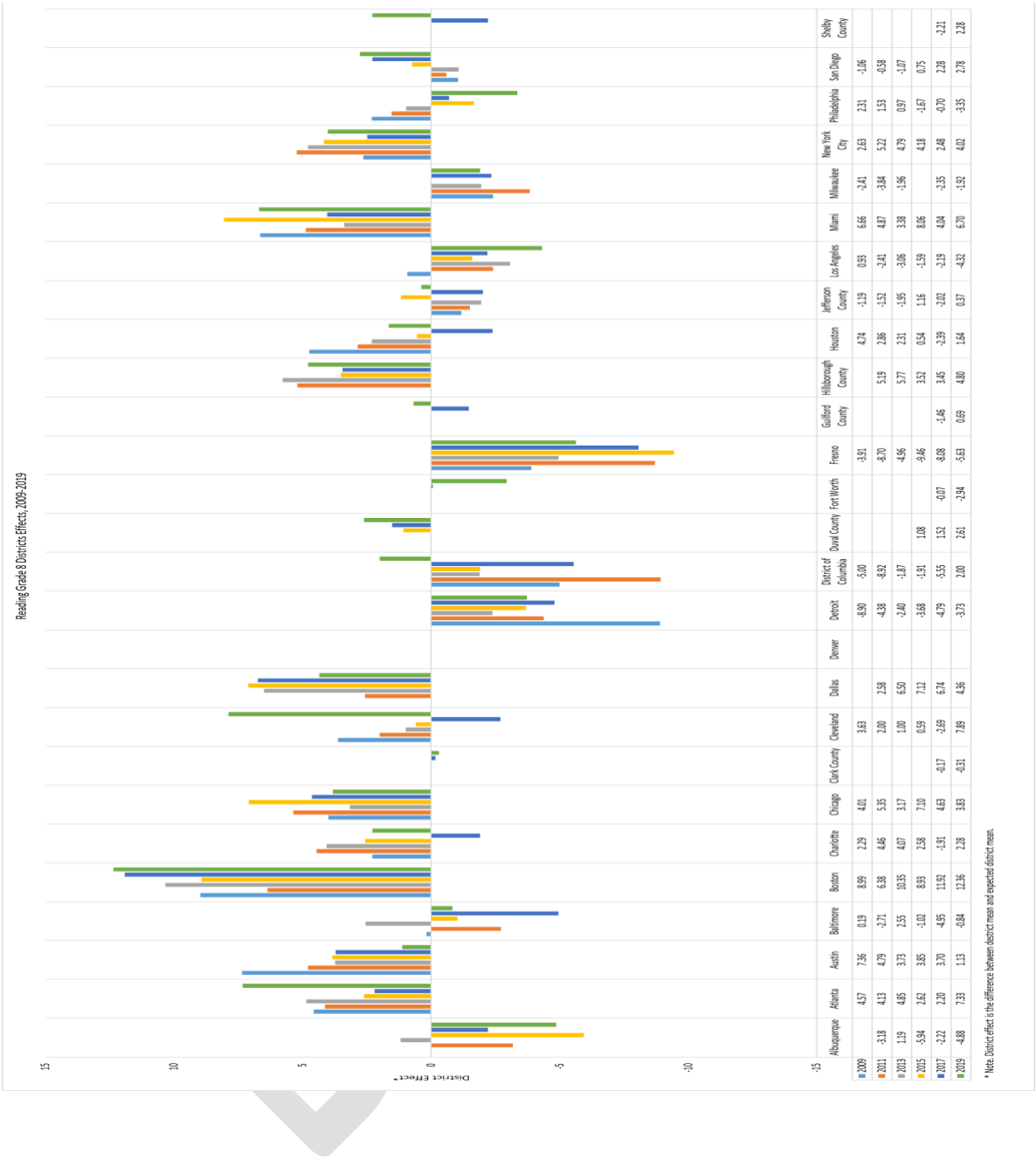


Figure 17. Trends in District Effects in Grade Four Mathematics by City, 2009 to 2019

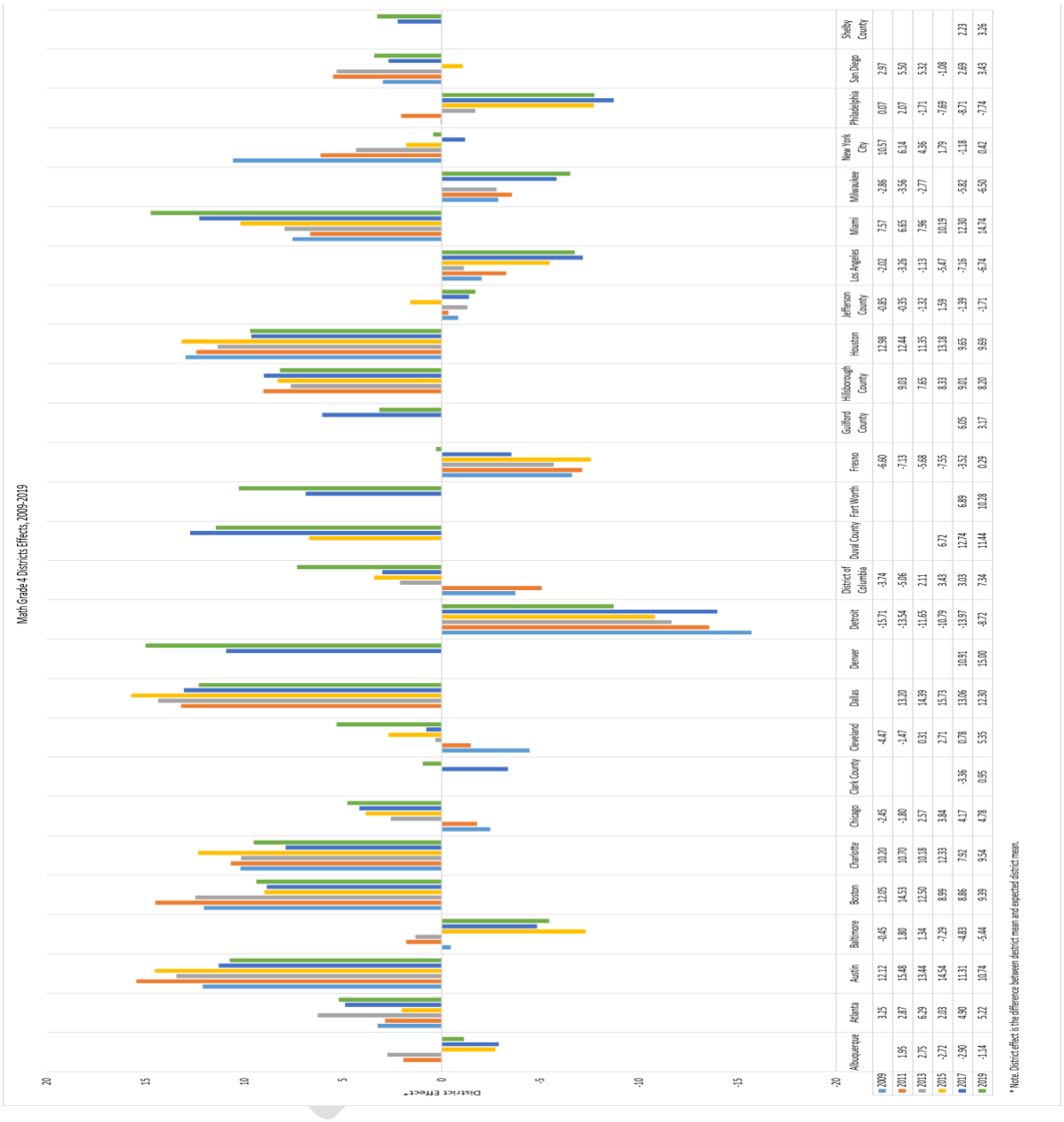
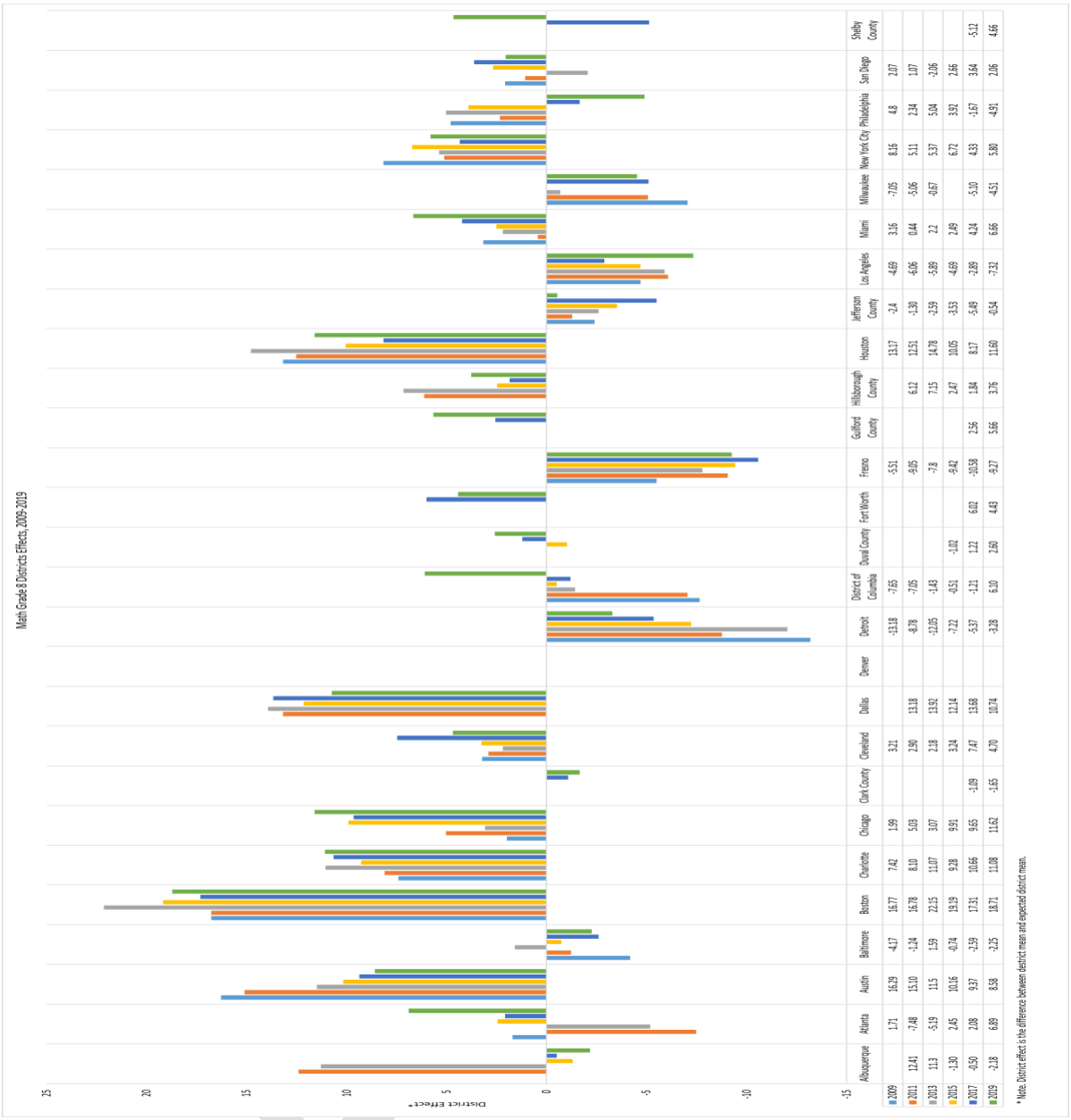


Figure 18. Trends in District Effects in Grade Eight Mathematics by City, 2009 to 2019



*(d) Raw Scale Scores vs. District Effects*

The following exhibits compares how the districts ranked with each other when looking at NAEP raw scores versus the "effects" that each district produced. The rankings were sometimes dramatically different. The tables also show the numbers of districts that produced an effect that was larger than the national average.

Ranking of TUDA Districts on 4th Grade Math Scale Scores and District Effects, 2019

| Raw Scale Score 2019 | District Effects 2019 |
|---|---|
| | |
| Charlotte-Mecklenburg (246) | Denver |
| Miami-Dade County (246) | Miami-Dade County |
| Duval County (244) | Dallas |
| Austin (243) | Duval County |
| Hillsborough County (242) | Austin |
| Not Large City (242) | Fort Worth |
| San Diego (240) | Houston |
| Guilford County (236) | Charlotte-Mecklenburg |
| Clark County (235) | Boston |
| Dallas (235) | Hillsborough County |
| Denver (235) | District of Columbia |
| District of Columbia (235) | Cleveland |
| Houston (235) | Atlanta |
| Large City (235) | Chicago |
| Boston (234) | Large City |
| Fort Worth (233) | Guilford County |
| Atlanta (232) | San Diego |
| Chicago (232) | Shelby County |
| Jefferson County (232) | Not Large City |
| New York City (231) | Clark County |
| Albuquerque (230) | New York City |
| Shelby County (228) | Fresno |
| Fresno (224) | Albuquerque |
| Los Angeles (224) | Jefferson County |
| Cleveland (218) | Baltimore |
| Philadelphia (217) | Milwaukee |
| Baltimore (216) | Los Angeles |
| Milwaukee (215) | Philadelphia |
| Detroit (205) | Detroit |

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Ranking of TUDA Districts on 8th Grade Math Scale Scores and District Effects, 2019

| Raw Scale Score 2019 | District Effects 2019 |
|---|---|
| | |
| Charlotte (288) | Boston |
| Not Large City (284) | Chicago |
| San Diego (283) | Houston |
| Austin (282) | Charlotte |
| Guilford County (280) | Dallas |
| Boston (279) | Austin |
| Hillsborough County (276) | Atlanta |
| Miami-Dade County (276) | Miami-Dade County |
| Chicago (275) | DC |
| Denver (275) | New York City |
| Duval County (274) | Guilford County |
| Houston (274) | Cleveland |
| Large City (274) | Large City |
| Jefferson County (273) | Shelby County |
| New York City (273) | Fort Worth |
| Clark County (272) | Hillsborough County |
| DC (269) | Duval County |
| Atlanta (268) | San Diego |
| Albuquerque (267) | Not Large City |
| Fort Worth (265) | Jefferson County |
| Shelby County (265) | Clark County |
| Dallas (264) | Albuquerque |
| Los Angeles (261) | Baltimore |
| Philadelphia (256) | Detroit |
| Baltimore (254) | Milwaukee |
| Fresno (254) | Philadelphia |
| Cleveland (253) | Los Angeles |
| Milwaukee (252) | Fresno |
| Detroit (244) | |
| | |

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Ranking of TUDA Districts on 4th Grade Reading Scale Scores and District Effects, 2019

| Raw Scale Score 2019 | District Effects 2019 |
|---|---|
| | |
| Charlotte (225) | Denver |
| Miami-Dade County (225) | Miami-Dade County |
| Hillsborough County (224) | Boston |
| San Diego (223) | Hillsborough County |
| Duval County (222) | DC |
| Not Large City (222) | Duval County |
| Guilford County (218) | Atlanta |
| Austin (217) | Charlotte |
| Denver (217) | San Diego |
| Clark County (216) | Cleveland |
| Atlanta (214) | Guilford County |
| Boston (214) | Austin |
| DC (214) | Fort Worth |
| Jefferson County (214) | Clark County |
| New York City (212) | New York City |
| Large City (212) | Dallas |
| Albuquerque (208) | Chicago |
| Chicago (208) | Large City |
| Los Angeles (205) | Not Large City |
| Shelby County (205) | Fresno |
| Fort Worth (204) | Houston |
| Fresno (204) | Shelby County |
| Houston (204) | Jefferson County |
| Dallas (203) | Albuquerque |
| Philadelphia (197) | Los Angeles |
| Cleveland (196) | Philadelphia |
| Baltimore (193) | Baltimore |
| Milwaukee (190) | Detroit |
| Detroit (183) | Milwaukee |
| | |

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Ranking of TUDA Districts on 8th Grade Reading Scale Scores and District Effects, 2019

| Raw Scale Score 2019 | District Effects 2019 |
|---|---|
| | |
| San Diego (266) | Boston |
| Not Large City (265) | Cleveland |
| Miami-Dade County (262) | Atlanta |
| Charlotte (261) | Miami |
| Hillsborough County (261) | Hillsborough |
| Duval County (258) | Dallas |
| Guilford County (258) | New York City |
| Jefferson County (258) | Chicago |
| Austin (257) | San Diego |
| Boston (257) | Duval County |
| Denver (257) | Charlotte |
| Clark County (256) | Shelby County |
| Atlanta (255) | DC |
| Large City (255) | Houston |
| New York City (254) | Large City |
| Chicago (253) | Austin |
| DC (251) | Guilford County |
| Albuquerque (249) | Not Large City |
| Houston (249) | Jefferson County |
| Shelby County (249) | Clark County |
| Los Angeles (248) | Baltimore |
| Fort Worth (243) | Fort Worth |
| Philadelphia (243) | Milwaukee |
| Cleveland (242) | Philadelphia |
| Dallas (242) | Detroit |
| Fresno (242) | Los Angeles |
| Baltimore (241) | Albuquerque |
| Milwaukee (240) | Fresno |
| Detroit (232) | |

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*(e) Effects of College and Career-Ready Standards*

One of the abiding questions that some observers have asked involves the effects of college and career-ready standards on NAEP results. This question has emerged because of the apparent slow-down in NAEP gains over the last several years, particularly in mathematics. To answer the question, the National Center for Educational Statistics conducted an analysis of differences in NAEP math content and the content of state assessments that were generally aligned with the standards.[6] The main research question was, "How would 2013, 2015, 2017, and 2019" mathematics grade 4 and grade 8 TUDA mean scores change if NAEP subscales were weighted according to the content focus of selected state assessments." Only TUDA districts in selected states were analyzed.

Results of the analysis showed that the reweighting of NAEP mathematics scale scores changed the means in grades 4 and 8 for the nine TUDA districts analyzed. (See Exhibits 17-18.)

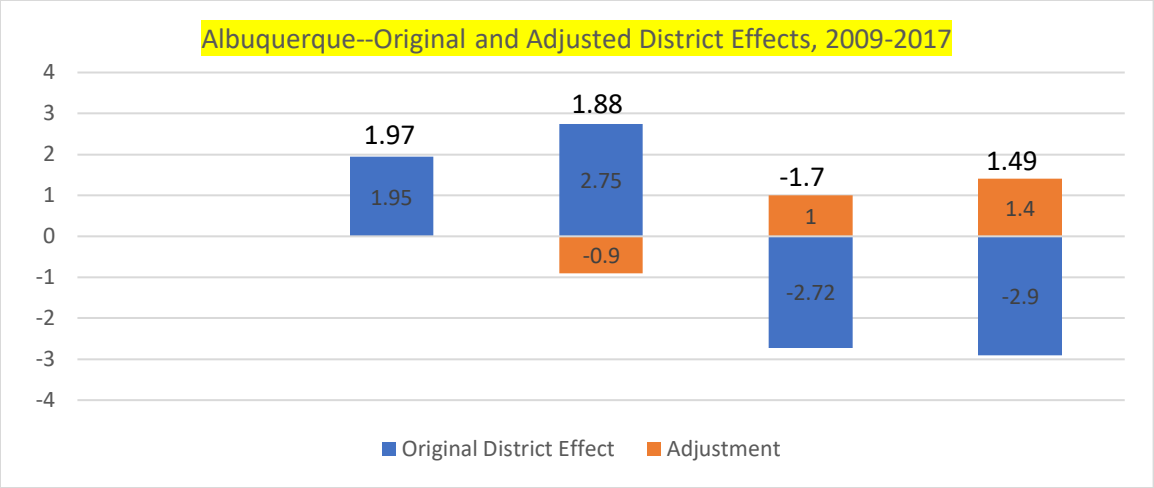
Exhibit 19. Reported and Reweighted TUDA Means for Grade 4 Mathematics by Year

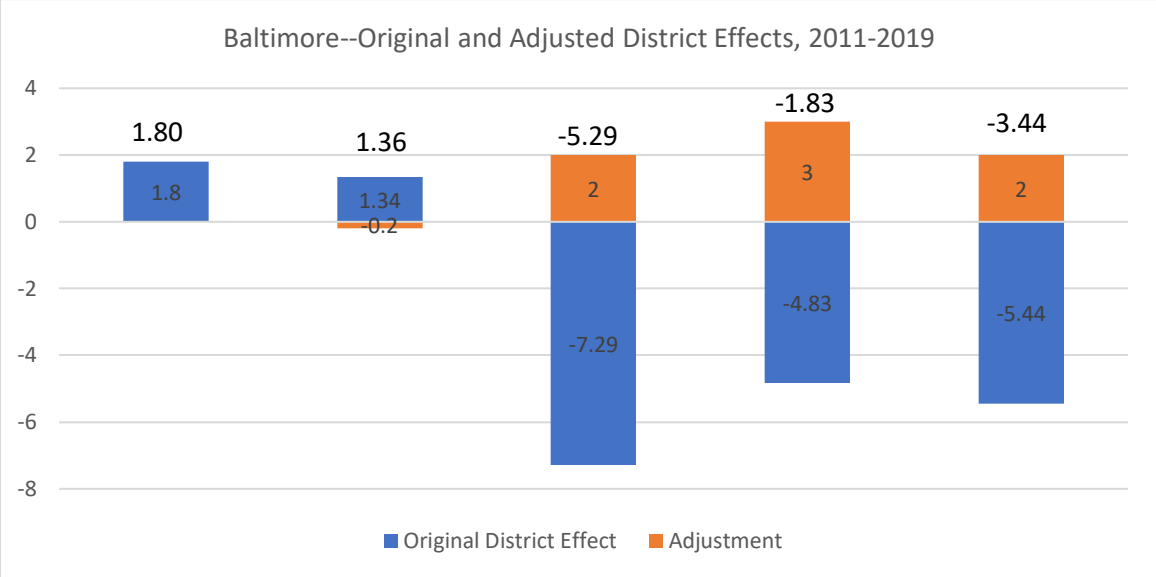
| | Reported Scale Score | | | | Reweighted Scale Score | | | |
|---|---|---|---|---|---|---|---|---|
| District | 2013 | 2015 | 2017 | 2019 | 2013 | 2015 | 2017 | 2019 |
| | | | | | | | | |
| Albuquerque | 234.5 | 230.6 | 229.8 | 229.8 | 233.6 | 231.6 | 231.2 | 231.2 |
| Baltimore | 222.9 | 215.0 | 215.3 | 216.5 | 222.7 | 217.0 | 218.3 | 218.5 |
| Boston | 236.9 | 235.5 | 233.3 | 233.8 | 237.4 | 236.6 | 234.5 | 234.8 |
| Chicago | 230.5 | 231.9 | 231.8 | 232.5 | 229.3 | 233.0 | 233.9 | 234.7 |
| Clark County | NA | NA | 230.2 | 234.5 | NA | NA | 231.8 | 236.9 |
| DC | 228.6 | 232.2 | 230.8 | 235.3 | 229.1 | 234.7 | 232.9 | 238.7 |
| Fresno | 219.7 | 217.7 | 221.4 | 224.0 | 222.1 | 220.5 | 226.0 | 227.1 |
| LA | 228.5 | 224.2 | 223.1 | 223.6 | 231.3 | 226.5 | 226.4 | 225.9 |
| San Diego | 240.9 | 232.8 | 237.4 | 240.2 | 242.8 | 235.2 | 241.0 | 244.2 |
| Median Diff. | | | | | 0.49 | 2.18 | 2.08 | 2.30 |
| Mean Diff. | | | | | 0.73 | 1.90 | 2.54 | 2.42 |

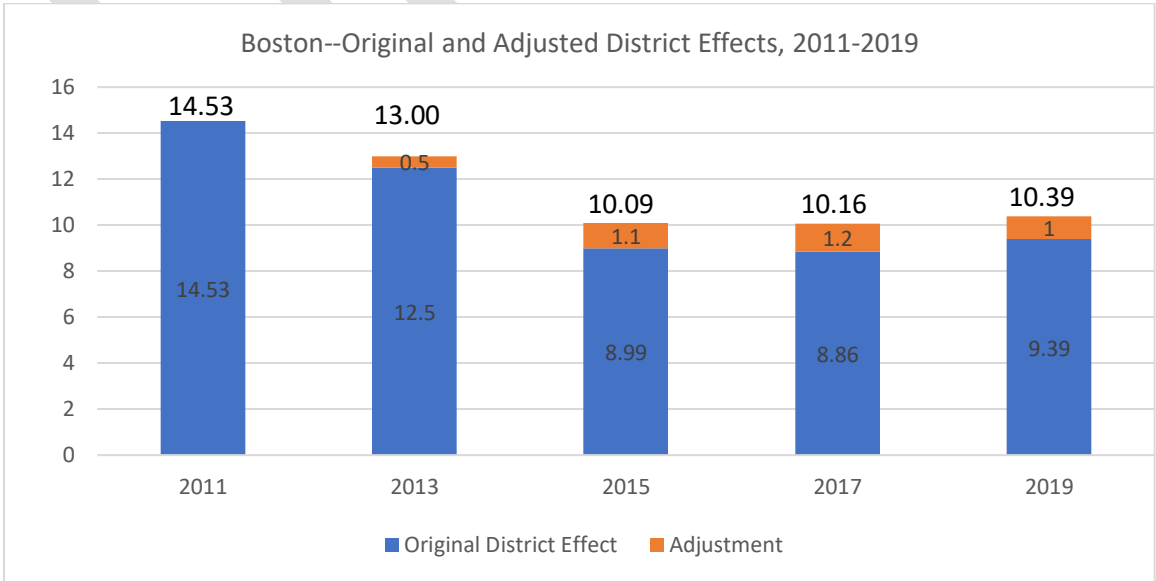
Exhibit 20. Reported and Reweighted TUDA Means for Grade 8 Mathematics by Year

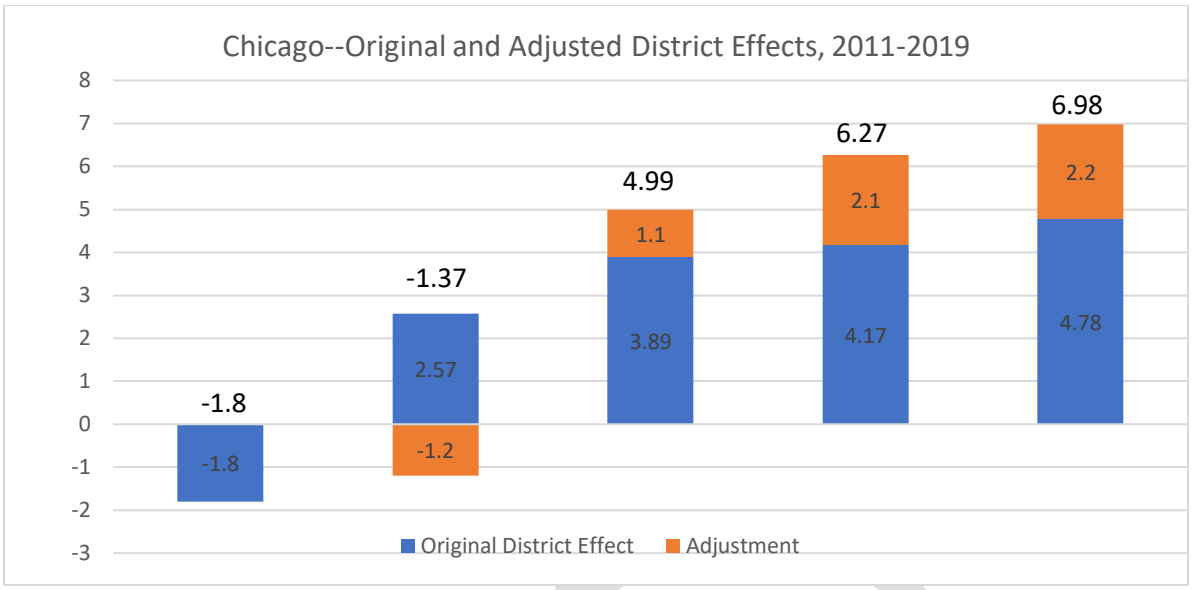
| | Reported Scale Score | | | | Reweighted Scale Score | | | |
|---|---|---|---|---|---|---|---|---|
| District | 2013 | 2015 | 2017 | 2019 | 2013 | 2015 | 2017 | 2019 |
| | | | | | | | | |
| Albuquerque | 273.8 | 270.7 | 269.6 | 266.8 | 274.2 | 271.0 | 270.4 | 267.8 |
| Baltimore | 259.8 | 255.2 | 255.5 | 254.1 | 260.0 | 255.2 | 255.9 | 255.0 |
| Boston | 283.1 | 281.1 | 279.7 | 278.8 | 283.4 | 281.9 | 280.6 | 279.7 |
| Chicago | 268.9 | 274.9 | 275.6 | 275.3 | 269.3 | 275.7 | 276.7 | 276.2 |
| Clark County | NA | NA | 272.2 | 271.6 | NA | NA | 273.8 | 273.5 |
| DC | 260.3 | 258.4 | 262.0 | 268.6 | 260.2 | 259.0 | 262.9 | 269.9 |
| Fresno | 259.7 | 256.9 | 254.6 | 253.5 | 261.9 | 257.6 | 256.3 | 254.9 |
| LA | 264.3 | 263.5 | 266.8 | 260.7 | 266.6 | 265.0 | 269.4 | 262.8 |
| San Diego | 276.9 | 280.4 | 282.8 | 282.6 | 278.7 | 281.9 | 284.2 | 284.7 |
| Median Diff. | | | | | 0.41 | 0.76 | 1.02 | 1.28 |
| Mean Diff. | | | | | 0.94 | 0.78 | 1.27 | 1.39 |

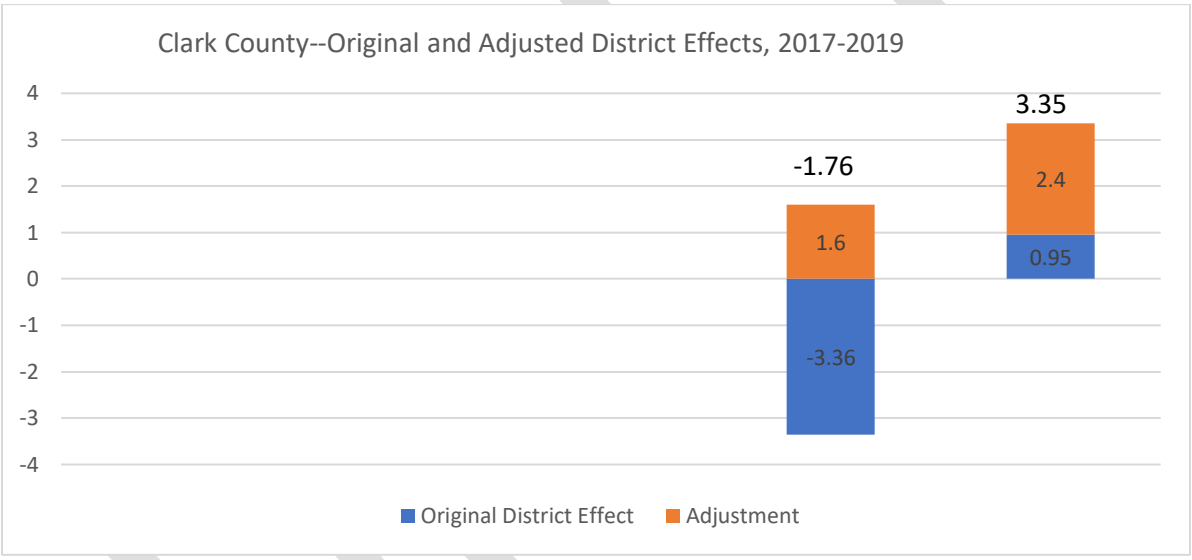
[6] *Appendix: Analysis of Recent NAEP TUDA Mathematics Results Based on Alignment to State Assessment Content*, National Center for Educational Statistics, 2019

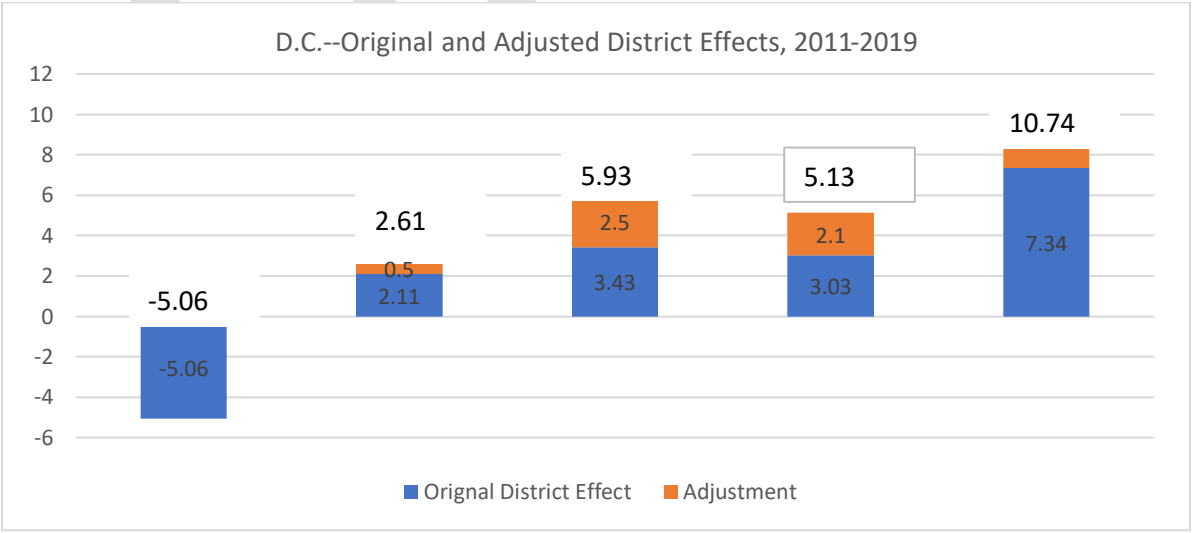

Albuquerque--Original and Adjusted District Effects, 2009-2017
4
3
2
1
0
-1
-2
-3
-4
1.97
1.95
1.88
2.75
-0.9
-1.7
1
-2.72
1.49
1.4
-2.9
Original District Effect
Adjustment

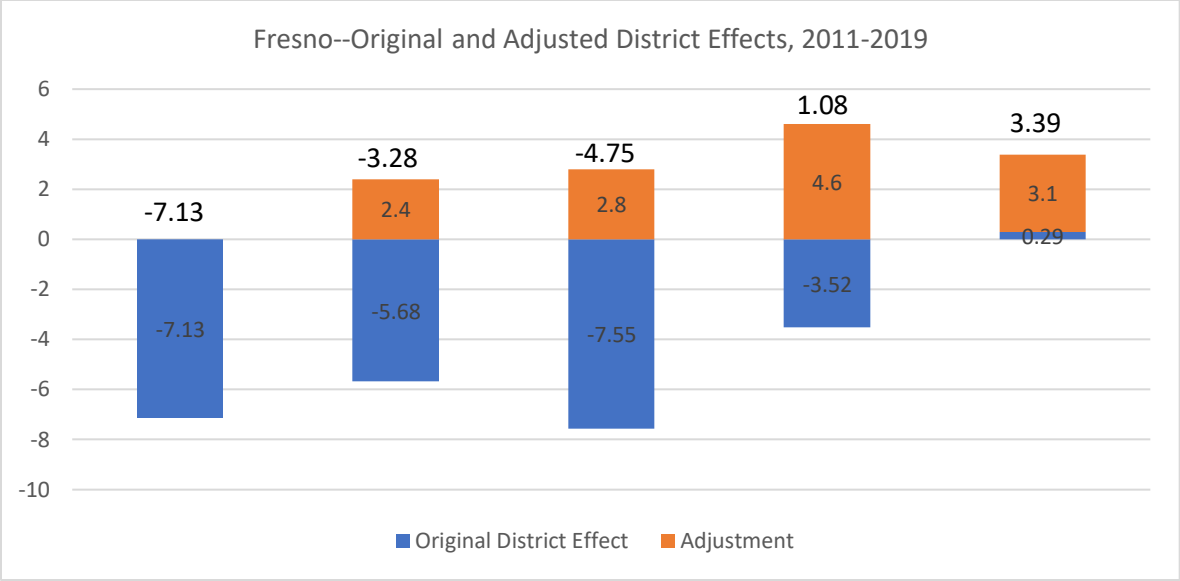

Baltimore--Original and Adjusted District Effects, 2011-2019
4
2
0
-2
-4
-6
-8
1.80
1.8
1.36
1.34
-0.2
-5.29
2
-7.29
-1.83
3
-4.83
-3.44
2
-5.44
Original District Effect
Adjustment

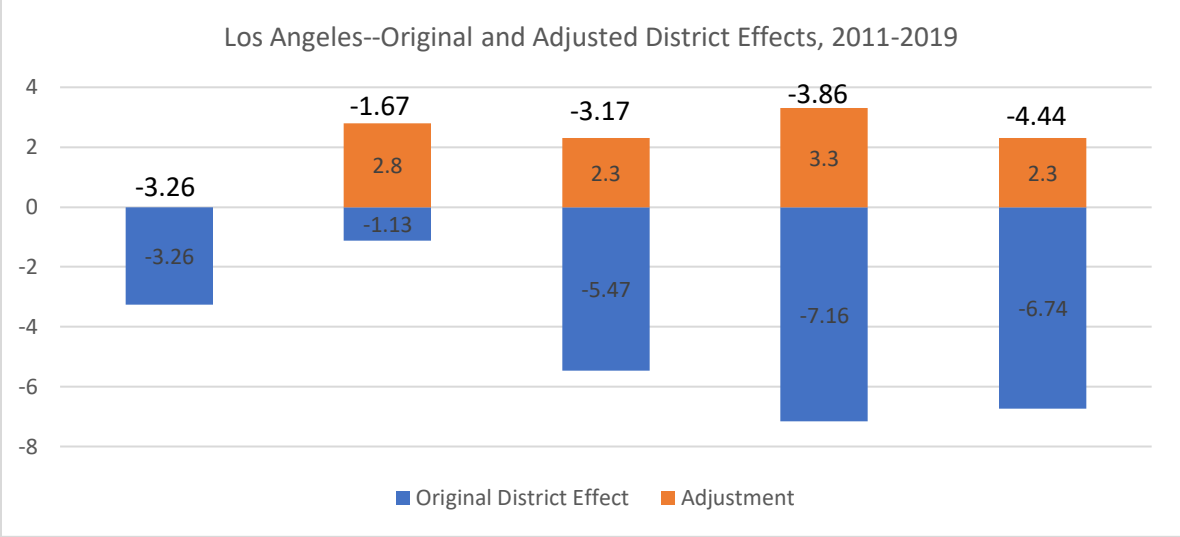

Boston--Original and Adjusted District Effects, 2011-2019
16
14
12
10
8
6
4
2
0
14.53
14.53
13.00
0.5
12.5
10.09
1.1
8.99
10.16
1.2
8.86
10.39
1
9.39
2011
2013
2015
2017
2019
Original District Effect
Adjustment

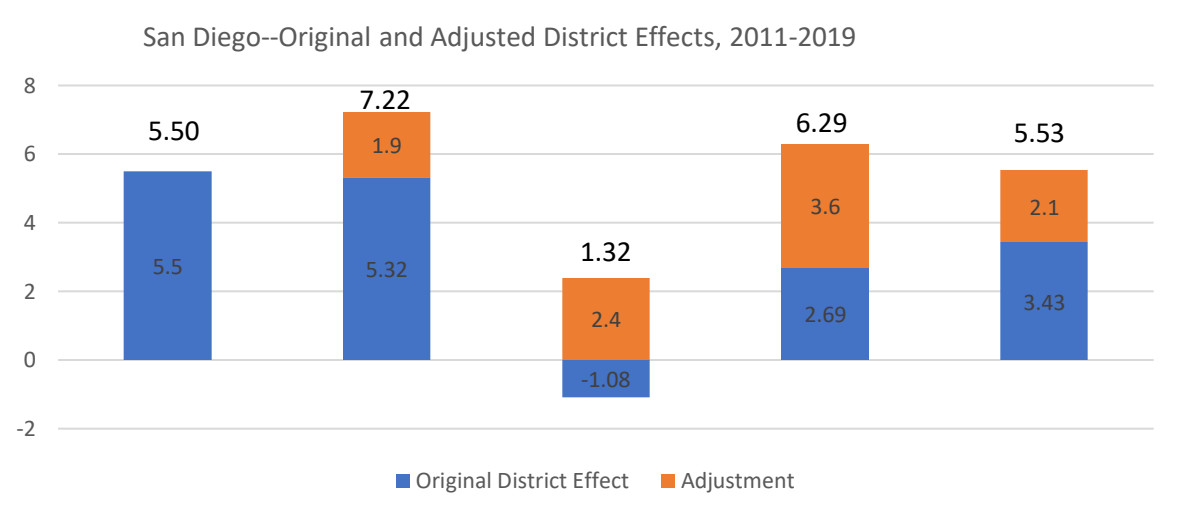

Chicago--Original and Adjusted District Effects, 2011-2019
8
7
6
5
4
3
2
1
0
-1
-2
-3
-1.8
-1.37
4.99
6.27
6.98
-1.8
2.57
-1.2
3.89
1.1
4.17
2.1
4.78
2.2
Original District Effect
Adjustment


Clark County--Original and Adjusted District Effects, 2017-2019
4
3
2
1
0
-1
-2
-3
-4
-1.76
3.35
-3.36
1.6
0.95
2.4
Original District Effect
Adjustment


D.C.--Original and Adjusted District Effects, 2011-2019
12
10
8
6
4
2
0
-2
-4
-6
-5.06
2.61
5.93
5.13
10.74
-5.06
2.11
0.5
3.43
2.5
3.03
2.1
7.34
Orignal District Effect
Adjustment


Fresno--Original and Adjusted District Effects, 2011-2019
6
4
2
0
-2
-4
-6
-8
-10
-7.13
-3.28
-4.75
1.08
3.39
2.4
2.8
4.6
3.1
0.29
-7.13
-5.68
-7.55
-3.52
Original District Effect
Adjustment


Los Angeles--Original and Adjusted District Effects, 2011-2019
4
2
0
-2
-4
-6
-8
-3.26
-1.67
-3.17
-3.86
-4.44
2.8
2.3
3.3
2.3
-1.13
-3.26
-5.47
-7.16
-6.74
Original District Effect
Adjustment


San Diego--Original and Adjusted District Effects, 2011-2019
8
6
4
2
0
-2
5.50
7.22
1.32
6.29
5.53
1.9
2.4
3.6
2.1
5.5
5.32
-1.08
2.69
3.43
Original District Effect
Adjustment

*(f) Comparing Large City and Not Large City School Trends*

This section examines how large city school districts participating in TUDA performed compared to Not Large City Schools. Results of the data analysis are shown in Exhibits 20 through 23. The results show several things. One, in 2017, the district effect was larger in Large City schools in three out of four areas—fourth grade reading, eighth grade math, and eighth grade reading. Only in fourth grade math did Not Large City Schools produce a larger district effect. There will be additional discussion of this in the next section.

Two, Large City schools showed uniform improvement in its district effects between 2009 and 2017 but more uneven trends between 2013 and 2017. Between 2009 and 2017, Large City schools did not show any gain or loss in its district effects in fourth grade reading. In fourth grade math, the district effects with Large City schools declined from +3.16 in 2009 to +1.57 in 2017. At the eighth-grade level in reading, the district effects among Large City schools improved from +0.52 in 2009 to +1.32 in 2017. And in eighth-grade math, Large City schools improved their district effects from +2.52 in 2009 to +3.61 in 2017. In other words, Large City schools have generally improved their ability to overcome the effects of the background variables measured in at least two out of four areas and held steady in one. It is also notable that Large City schools showed higher district effects than Not Large Cities in every grade, subject, and year except for fourth grade math in 2017.

While Large City schools almost universally showed larger district effects than Not Large Cities, the Not Large City schools also showed gains. In fourth grade reading, Not Large City schools improved their district effects from +0.45 in 2009 to +0.90 in 2017. In fourth grade math, Not Large Cities showed gains in their district effects from +1.21 in 2009 to +1.83 in 2017. In eighth grade reading, Not Large Cities improved their district effects from -1.00 in 2009 to +0.44 in 2017. And in eighth grade math, Not Large Cities showed gains in their district effects from +1.07 in 2009 to +2.19 in 2017.

In other words, Not Large City schools were more likely to reflect the demographic variables measured than did Large Cities but by 2017 both Large City schools and Not Large City schools in the aggregate were showing results that were at least somewhat better than statistically expected by 2017. This is a promising development for schools in both settings. Of note, however, is the sizable additional district effect that Large City schools have over Not Large City schools, except in fourth grade math. In fourth grade reading, the Large City schools have a district effect in 2017 that is 2.5 times greater than Not Large City schools; 3.0 times greater in eighth grade reading; and 1.65 times greater in eighth grade math.

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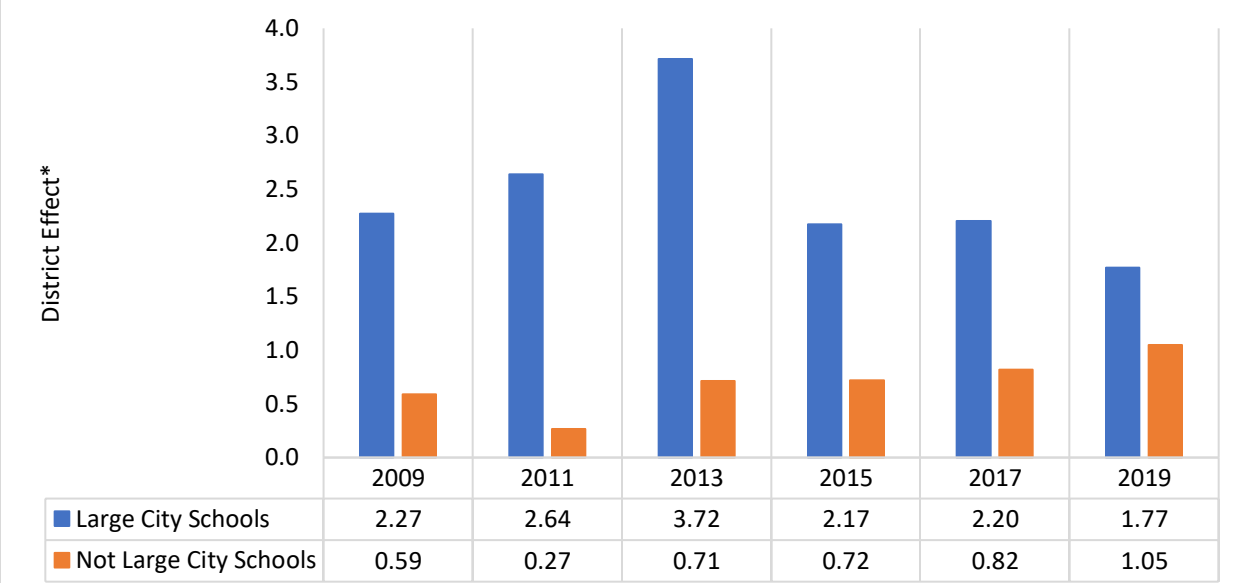
Exhibit 21. Trends in District Effects in Grade Four Reading on NAEP by School Type, 2009 to 2019



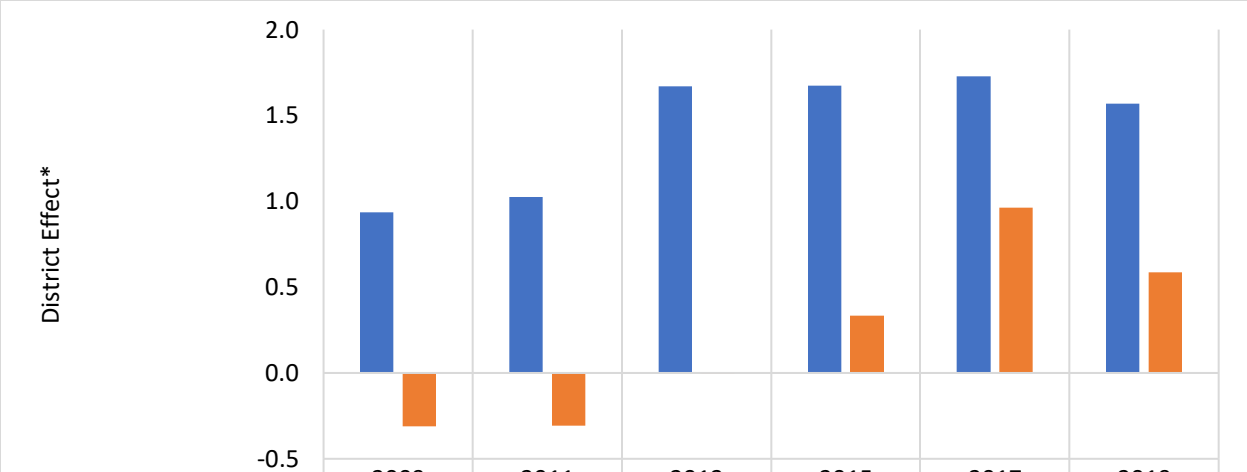

| | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 |
|---|---|---|---|---|---|---|
| Large City Schools | 2.27 | 2.64 | 3.72 | 2.17 | 2.20 | 1.77 |
| Not Large City Schools | 0.59 | 0.27 | 0.71 | 0.72 | 0.82 | 1.05 |

* Note. District effect is the difference between destrict mean and expected district mean.

*District effect is significantly different from zero.

⁑ Includes district-authorized charters, charters authorized by others, and independent charters

Exhibit 22. Trends in District Effects in Grade Eight Reading on NAEP by School Type, 2009 to 2019



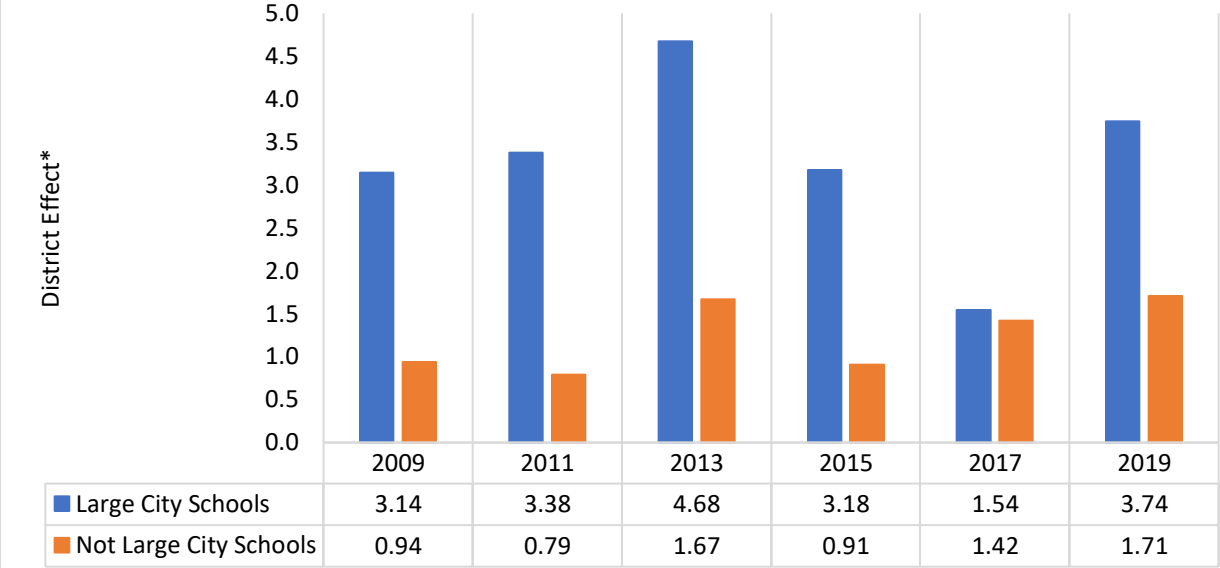

| | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 |
|---|---|---|---|---|---|---|
| Large City Schools | 0.94 | 1.03 | 1.67 | 1.67 | 1.73 | 1.57 |
| Not Large City Schools | -0.31 | -0.31 | -0.00 | 0.33 | 0.96 | 0.59 |

* Note. District effect is the difference between destrict mean and expected district mean.

*District effect is significantly different from zero.

⁑ Includes district-authorized charters, charters authorized by others, and independent charters

Exhibit 23. Trends in District Effects in Grade Four Math on NAEP by School Type, 2009 to 2019

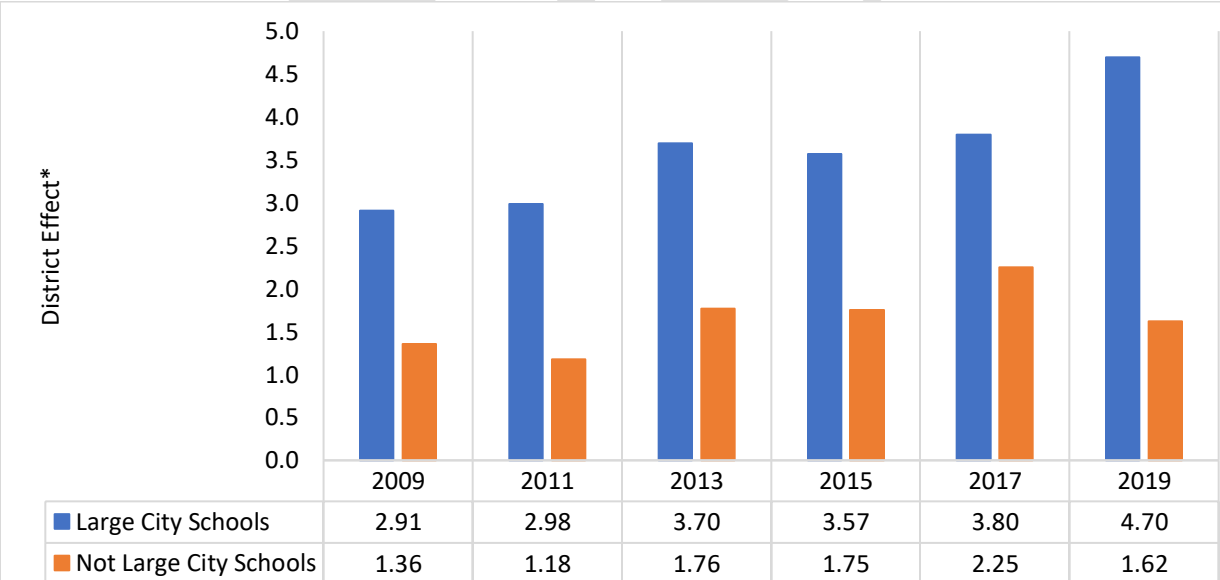



| | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 |
|---|---|---|---|---|---|---|
| Large City Schools | 3.14 | 3.38 | 4.68 | 3.18 | 1.54 | 3.74 |
| Not Large City Schools | 0.94 | 0.79 | 1.67 | 0.91 | 1.42 | 1.71 |

* Note. District effect is the difference between destrict mean and expected district mean.

*District effect is significantly different from zero.
⁑ Includes district-authorized charters, charters authorized by others, and independent charters

Exhibit 24. Trends in District Effects in Grade Eight Math on NAEP by School Type, 2009 to 2019




| | 2009 | 2011 | 2013 | 2015 | 2017 | 2019 |
|---|---|---|---|---|---|---|
| Large City Schools | 2.91 | 2.98 | 3.70 | 3.57 | 3.80 | 4.70 |
| Not Large City Schools | 1.36 | 1.18 | 1.76 | 1.75 | 2.25 | 1.62 |

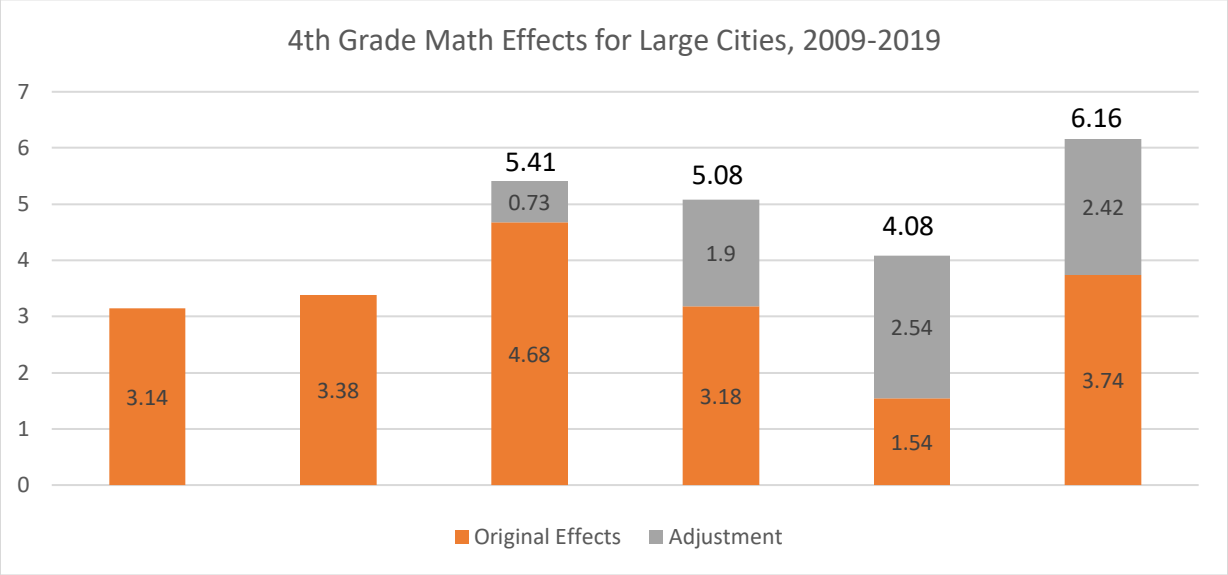
* Note. District effect is the difference between destrict mean and expected district mean.

*District effect is significantly different from zero.
⁑ Includes district-authorized charters, charters authorized by others, and independent charters

*(g) Combined District Effects and Median Adjustments*

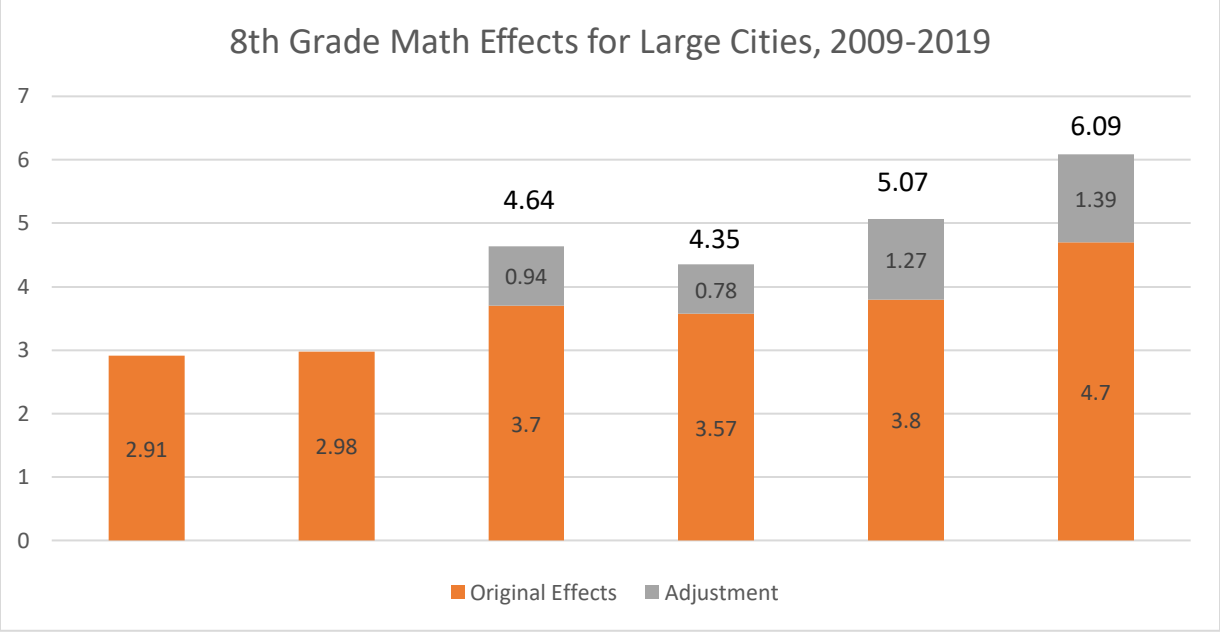
The combination of the aggregate district effects and the median adjustments to the effects allows one to see a clearer possible trend line in the performance of Large City schools. Large city schools saw their overall effects on fourth grade math improve steadily from 2009 through 2015 before dipping in 2017 and then rising again in 2019.

Exhibit 25. Combined District Effects in 4th Grade Math and Adjustments to Scale Scores




At the eighth-grade level, the possible trend line in math steadily improved between 2009 and 2017 once one took into account the adjustments to the scale scores.

Exhibit 26. Combined District Effects in 8th Grade Math and Adjustments to Scale Scores



**Case Studies: How Districts Improved**

Our next step was to go beyond identifying districts making outsized academic progress on NAEP to the *how*. How were some of these districts overcoming barriers and improving student achievement, and how can we apply these lessons more broadly? Are there approaches or strategies these districts are using that could inform the work of other major urban school systems?

To answer these questions, the Council embarked on a qualitative research effort to better understand the practices that might have driven the higher levels of performance and student growth observed in our statistical analysis. Between May 2018 and February 2019, the project team visited six districts: Boston Public Schools, Chicago Public Schools, the Dallas Independent School District, the District of Columbia Public Schools, Miami-Dade County Public Schools, and the San Diego Unified School District. Each of the districts were chosen for slightly different reasons, but all of them demonstrated results that were above expectations or results that showed substantial improvement between 2009 and 2017.

- Boston demonstrated consistent results in fourth and eighth grade reading and math that were well above statistical expectations in all areas. The district showed some fluctuation in scores between 2009 and 2017, but every year was significantly above expectations in both grades and subject areas.

- Chicago showed reading and math results in fourth and eighth grades that were above expectations in 2017. Moreover, Chicago was the only district that showed gains in district effects in all four grade/subject combinations. It was also one of the few districts that showed gains between 2009 and 2017 that went from below expectations to above. Performance at the eighth-grade level was consistently above expectations over the study period.

- Dallas showed reading and math results that were above expectations at the eighth-grade level. Notably, Dallas had unusually high rates of abject poverty compared to other city school systems that met or exceeded expectations.

- The District of Columbia had gains like those seen in Chicago. The district went from below expectations to above expectations between 2009 and 2017 in fourth grade reading and math. Results at the eighth-grade level were below expectations in both reading and math, but the district showed progress over the study period.

- Miami-Dade County also showed results that were above expectations in fourth and eighth grade reading and math in all years. The district demonstrated substantial gains in both subjects and grades over the study period.

- San Diego was one of the districts that showed gains from below expectations to above expectations in a grade/subject combination between 2009 and 2017. It also showed substantial gains in three grade/subject combinations. In 2017, San Diego was above expectations in all grades and subjects.

In addition, the team conducted multiple visits to a 'counterfactual' district. The Council selected this district to study based on its chronically low achievement and stalled progress. During the review, the Council team noted several clear contrasts between this district and the other six districts that helped put an even finer point on the patterns and practices we were observing in other sites. These contrasts were both striking and potentially informative for other districts seeking to address instructional challenges and make systemic improvements in teaching and learning. In addition, this report discusses commonalities across several districts whose results were below statistical expectations.

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After selecting these school districts, the Council's academic and research staff conducted site visits to each city. During each visit, the project team interviewed the superintendent, chief academic officer, director of research and assessment, director of professional development, and head of district turnaround efforts, as well as focus groups of curriculum staff and content area experts, coaches or other school support staff, principal supervisors, principals, and teachers. We reviewed organizational charts, strategic plans, professional development plans, and sample curriculum documents. In a handful of districts, we also visited schools and debriefed school and district leaders following our walk-throughs. Finally, the Council team analyzed an extensive array of data on each district, in addition to the data shown in the previous chapters, to better understand the nature and extent of district performance and improvement.

While the six case study districts had very different contexts and histories of reform, there were several common features and practices that appeared to be connected to the progress seen in student performance on NAEP across these cities. These shared factors included—

**Strong and stable leadership focused on instruction.**

The relative stability of leadership was cited as a key factor in the progress made by several of the site-visit districts. At a time of increasing leadership turnover in districts throughout the country, the relatively long tenures of superintendents in districts such as Miami, where Alberto Carvalho has been superintendent since 2008, and San Diego, where Cindy Marten has been superintendent since 2013, has enabled these districts to pursue a consistent and sustained reform agenda over the years.

In Dallas, Superintendent Michael Hinojosa's first term spanned six years, from 2005 to 2011. Coming on the heels of a string of relatively short-lived leaders, this period was referred to by staff as a time of "instructional healing" in which the district was able to refocus its attention on teaching and learning and find the momentum necessary to drive instructional reform. When Hinojosa then returned to Dallas as superintendent in 2015, his historical knowledge of the district enabled him to quickly regain this momentum and continue moving the work forward. Staff in the district now commonly refer to his first and second terms as "Hinojosa 1.0" and "Hinojosa 2.0."

We also observed that the impact of strong, longstanding leaders can affect a district for years. In Boston, staff still cite the impact of Tom Payzant's 11 years as superintendent, and the culture of accountability that was built during that time.

Moreover, many of the districts benefitted from the stability of their curriculum and instruction leaders. The tenures of Janice Jackson, chief academic officer and then CEO of the Chicago Public Schools; Brian Pick, chief academic officer in the D.C. Public Schools; Marie Izquierdo, chief academic officer of the Miami-Dade County Public Schools; Ivonne Durant, chief academic officer in Dallas; and Linda Davenport, math director of the Boston Public Schools serve as examples. The longevity of their instructional leadership teams has allowed these districts to maintain a consistent instructional approach and to build on this approach over time even when there were transitions in the superintendents of those districts.

It is important to note, however, that it is not simply the *stability* of leadership that has yielded academic improvements in these cities, because one can find TUDA districts in our analysis where superintendent tenures were relatively long (i.e., over three years) and student achievement did not improve. Leaders in districts that did improve, on the other hand, brought strength, primacy, and focus to their instructional programming for a sustained period and allocated the time and resources necessary to improve it.

In fact, districts like DCPS, Chicago, and Boston showed us that progress can be maintained and even accelerated despite leadership churn if a district sustains its focus on instruction and retains its broad

instructional strategy.[7] In DC, which had five chancellors over some 12 years, there was both consistency and intentionality in the sequencing of reforms. Starting with Michelle Rhee in 2007, the focus of the district's reform efforts initially was on human capital, accountability, and building an effective teacher corps. This helped to create an overall environment where there was a perceived "brain gain"—talented people coming into the district because they saw an opportunity to turn around a once-failing system. Rhee's deputy and then successor Kaya Henderson expanded on this teacher-centered reform agenda. The district had reached a point where it had weeded out many of its weakest teachers, so the next step was to further enhance the capacity of the remaining teachers by equipping them with the necessary curricular resources, guidance, and training. Over the Henderson years this focus expanded with school-based structures, new materials, and the content expertise necessary to help teachers effectively implement the district's curricular resources. In other words, while the work evolved, each subsequent leader approached the district's past efforts and successes as an important foundation for their work, all the while remaining focused on what was needed to further improve instruction. Chicago offers another similar story of a district that has sustained and advanced its reforms across multiple superintendents.

This idea of strong leadership being defined by a focus on instruction prompted another big-picture observation. While in some districts the board of education was a full partner with the administration in improving district instruction, effectively supporting and monitoring district efforts to boost student achievement; in other places, boards appeared to add little value. Where they were partners in the work, the board and the superintendent were largely on the same page about the district's instructional vision and theory of action, and the board provided effective oversight and accountability for meeting the system's academic goals. In other cases, school boards were too focused on their own internal divisions and agendas to accelerate (or even impact) the administration's work to boost student outcomes. In these instances, the boards can take credit for hiring effective CEO's, but can take little credit for the academic gains that those superintendents and their staff attained.

Finally, in each of the districts we visited, strong, instruction-focused leadership was nurtured not only at the central office, but throughout the organization with the empowerment and support of principals and principal supervisors. In fact, several of the case-study districts reported that their instructional visions and theories of action were built, in part, around *school leaders as the levers of change*. As conduits between the district and schools, principal supervisors—in particular—were increasingly seen as critical to ensuring the success of this approach.

For example, when asked about factors driving district progress in Chicago, staff throughout the organization cited the fact that there was "genuine principal leadership" in the district. But the district took a more strategic approach than just deploying strong school leaders and hoping for district transformation. Principals were empowered to make decisions that were right for their communities—a situation that has been in place in Chicago since the late 1980s—but the district ensured *via* its new network structure and Network Chiefs that principals were sufficiently supported, coached, and held accountable for results. In other words, Chicago used its network structure and principal supervisors to realign its organizational structure around the instructional focus it wanted to achieve.

Area Superintendents in San Diego also described a strong, hands-on relationship with principals, meeting with them regularly throughout the year to review school-wide progress and help determine goals. In our interviews with the district leadership team, they told us that they believed it was the support and oversight structure of the school system that allowed for their site-based approach to work (when it does not necessarily work in other districts). "We don't need top-down assessment to know if we are making progress because we have such a strong connection to schools through the Area Superintendents," they explained.

[7] This same lesson was learned some years ago in the Charlotte-Mecklenburg public schools, which had several superintendents but who all sustained the same overall academic theories of action.

Importantly, to ensure that principal supervisors are equipped to effectively advance school leadership and capacity in this way, their roles have been explicitly and intentionally redefined around instruction. Where in past years, principal supervisors oversaw a host of administrative and operational issues, these districts (and others across the country) have taken multiple steps (including narrowing spans of control, rewriting supervisor job descriptions, reallocating operational responsibilities to other staff or offices, and providing professional development in coaching) that fundamentally refocused their work with schools and principals around bolstering instructional effectiveness. In addition to Chicago and San Diego, Dallas, Miami, and the District of Columbia all did this to one extent or another.

**High standards and common instructional guidance and support**

It also appeared from our site visits that academic standards played a role in the improvement of some of the districts we examined. For instance, leadership of the Chicago and the District of Columbia public schools used the onset of college- and career-readiness standards to rethink and refocus their entire academic program. This was also at least partially the case with the Miami-Dade County schools.

The data suggest that there was also a distinctive "state effect" in places like Massachusetts, Florida, Texas, and North Carolina. Boston was a clear beneficiary of the state's historically high standards in addition to its own local efforts. This also appears to be the case in Miami, Hillsborough County, and Duval County. On the other hand, Dallas and other Texas cities did not adopt the academic standards that other states were putting into place, but they did make it clear what they wanted taught across their systems in ways that helped boost their overall academic performance.

This practice of better articulating what districts expected from their instructional programs was at the heart of their standards-based or curriculum reforms. Each of the districts we visited clearly communicated their instructional expectations at each grade level, including what high quality instruction and student work should look like. This was true regardless of whether they formally adopted the new standards or used a common district curriculum; all of them clarified their instructional expectations. For example, while San Diego does not have a traditional district curriculum, they do require each school to have a "Guaranteed Viable Curriculum"[8] that meets the district's requirements. They also lay out for schools the 'critical concepts' they expect to be covered at each grade level, and work with schools to develop units of study to ensure that this common understanding is employed in every classroom.

In another case, Miami-Dade County Public Schools provided teachers with detailed, standards-aligned pacing guides embedded with links to relevant instructional materials and resources. "*What* our children are going to learn is non-negotiable," explained an instructional leader in the district. But while the content was determined by the district, the "how" was left up to the classroom teacher, with more detail provided for those teachers who needed it. The district also provided a curated set of options in terms of instructional materials. This not only helped ensure the use of high quality, vetted materials, it also allowed the district to better support schools in using these materials. As one district staff member pointed out, "We can't support at scale if there is a cornucopia of materials."

Similarly, to drive instructional coherence and consistency in Dallas the central office releases instructional units every six weeks called Six Weeks at a Glance (SWAG). In addition to clearly laying out instructional expectations across core subjects over a six-week period, they are released six weeks *in advance* to allow teachers plenty of lead time to prepare. These units are accompanied by training sessions to provide teachers with a chance to dive into an upcoming unit, experience a modeled strategy, collaborate, and plan (although this training is on a voluntary basis). Teachers also can explore the SWAG and work through each unit in

[8] This concept was popularized by Robert Marzano in his book, "What Works in Schools" and refers to the pacing of how a curriculum is applied so that students can learn it. (Curriculum+opportunity-to-learn+time=A Guaranteed Viable Curriculum.)

their professional learning communities and have access to on-site coaching support and an online bank of videos of teachers using the lessons in classrooms.

Moreover, the district carefully monitors implementation through school and classroom visits, during which they look at whether a teacher is following the scope and sequence, what texts they have selected, and what strategies they are using with students. Since all district curriculum guidance and resources are online, lead staff members also have access to analytics that can tell them who is using the materials, what they are using, and which resources are used the most. Moreover, they field a user survey with every unit they publish and use the results and feedback they receive to further refine their guidance and support.

In DCPS, this unifying vision for instructional quality is referred to as "instructional oneness." The district provides principals with a clear picture—and even exemplars—of what high quality instruction should look like in the classroom. Teachers report getting more guidance than ever before. The teachers the Council team interviewed explained that in the past there had been a revolving door of textbooks and initiatives, with very little support or direction from the central office. Now, with the advent of IMPACT (the accountability system), LEAP (the district's teacher leadership development initiative), and resources such as an instructional video bank, they feel they understand the district's expectations and how to meet them.

In fact, DC is in the process of moving even more toward a centralized or normalized definition of its expectations for curriculum and instruction. In addition to a district curriculum, there are now required units of study and exemplars in each content area. As one instructional leader explained, while there was a shared district curriculum before, it looked drastically different from classroom to classroom and school to school. The district is therefore addressing this unevenness by ramping up the amount and content-specificity of its support for teachers.

Chicago is also moving toward a universal district curriculum, although schools will be able to opt out and use their own if they can show that it meets standards and is producing results. Like some of the other districts, the district provides schools with a curated set of instructional materials to choose from, and the guidance they need in selecting appropriate grade-level materials. The district has also created a "Knowledge Center"—an online clearinghouse with thousands of resources created by framework specialists. Unlike other online databases we have encountered, the district vets the materials that are posted to the Knowledge Center, ensuring that they are high quality and aligned to district standards.

This centralization of instructional expectations, resources, and guidance was described in more than one district as "autonomy with guardrails," and appeared to be based on the general acknowledgement that while pure site-based autonomy may work for some high performing districts with high capacity and experienced principals, it does not work for all districts and schools—and it does not always work everywhere or every time that systemic academic improvement is needed. This means that there needs to be greater definition, specificity, and support, as well as a norming of standards and instructional practice across all schools in a district to ensure higher quality and greater equity across a very mobile student body. At the same time, many districts grant increased autonomy to principals based on performance. Dallas, for example, defines their instructional approach as "managed instruction with earned empowerment." Chicago's approach is similar.

Moreover, although it is referred to here as "centralization," this standardization of instructional expectations is often described by central office staff as the district becoming more service oriented, and it has by and large led to greater support for schools in these districts. In Chicago, for example, staff report that "Supporting schools is our charge. Strategic planning revolves around the question, 'How is our work going to impact students/teachers?'" Another district leader pointed out that "the district's focus on what goes on in the classroom shouldn't be underestimated. Staffing, assignment, structure—ultimately what matters is what goes on in the classroom." The bottom line, in other words, was that empowerment without support, resources, and clear communication of district expectations will not drive growth on its own.

In fact, in San Diego, this service orientation led the superintendent to dismantle the two-sided structure of the system—operations vs. academics—in favor of a design that put principals at the center of the work. The message this structure was designed to convey was that everyone's chief responsibility is to support schools, principals, and teachers.

**Teacher/leader quality**

The strength of teachers and principals was another defining feature across the six districts, and the result of intentional district human capital strategies on the part of district leaders to boost the capacity of schools to make instructional improvements. In Boston, for example, high teacher pay likely contributes to both the high quality of teachers and low teacher turnover. In addition, the policy of mutual consent hiring (phased in around 2010) allowed school leaders more choice in selecting teachers, and it is credited with creating better matches between teachers and schools. In DCPS, as discussed previously, the first phase of the district's recent reform efforts was largely a human capital strategy, whereby weak teachers were removed and effective or potentially effective teachers were identified using the district's new evaluation system, IMPACT. The district subsequently transitioned into leadership development, although they acknowledge that this is an area they wish they had addressed earlier in the reform process.

The Chicago Public Schools, on the other hand, made the pivot toward a leadership development focus about eight years ago, putting them ahead of the curve. One of the most important changes they made was to introduce an additional layer of screening in addition to state certification to determine suitable principal candidates, who are then selected by parents and communities. This screening process has evolved over time, but it has remained a rigorous undertaking that requires candidates to present a portfolio of work, complete a written exam, and participate in a set of interviews where they are asked to respond to various scenarios and leadership challenges. According to district staff, this process has successfully raised the quality of the candidate pool, and it has enabled the district to imbed district-defined expectations, competencies, and beliefs about what makes a strong school leader into the selection process.

Similarly, in its human capital work Miami-Dade County first focused on strengthening its principal ranks and finding school leaders that reflected the district's priorities. The district also placed a special focus on the staffing and leadership of fragile schools. In the early phases of their reform work, the district identified effective teachers using a value-added measure charting progress over three to five years, and then recruited these teachers to work at struggling schools. They also moved other teachers out of these high-needs sites, at times using involuntary transfers.

Dallas's pay-for-performance model—the Teacher Excellence Initiative—also focuses on identifying the most effective teachers and paying them significantly more to work in high-need schools—specifically, the district's Accelerating Campus Excellence (ACE) schools. Moreover, the district mounted a systemwide effort to identify and deploy bilingual teachers as it built out its dual language model across the district.

In addition to these strategies aimed at recruiting, retaining, and effectively deploying high quality teachers and principals, many of the districts we visited focused on the development of teachers and future leaders. DCPS, for example, partners with outside organizations such as Relay Graduate School to support teacher candidate residencies in district schools, while Chicago established the Chicago Leadership Collaborative (CLC), a partnership between the district and leading principal development programs to create a pipeline of highly qualified leaders to meet the district's needs. Other districts, such as San Diego, also offer mentors to new principals, as well as providing teachers and vice principals with opportunities for growth and leadership roles at the school level.

In fact, Chicago's early focus on growing the leadership capacity of classroom, school, and network leaders has endowed them with a deep leadership "bench"— as evidenced by the fact that the district's current CEO, CAO, and many other chief positions have been filled internally with instructional staff who have

risen through the ranks and now bring a wealth of expertise and experience at multiple organizational levels to their roles as district leaders.

**Professional Development and Other Capacity Building Measures**

In addition to centralized curricular guidance and human capital strategies, the six study districts employed a variety of other strategies aimed at school-based capacity building. This can be seen, for example, in the reorientation of the role of principal supervisors (as discussed earlier in this chapter), as well as the widespread use of teacher leaders, school-based instructional leadership teams, building and network-level instructional coaches, and professional learning communities (PLCs) in most of the districts we visited.

School-based support structures such as instructional leadership teams and PLCs exist in many districts around the country. However, it is the level of intentionality and focus that really set the study districts apart. In Chicago, teachers described a transition during which they began getting clearer signals from the central office that school-level instructional leadership team meetings mattered, and schools became more accountable for selection, capacity building, and support of their teacher leaders. Chicago also employed PLCs and professional learning summits modeled after their common core implementation strategy of providing training and then employing teacher leaders to bring that training back to their buildings, providing site-based professional development tied to both school-level strategic plans and district strategic goals.

Miami-Dade County, meanwhile, hosts annual Synergy Summer Institutes, a week-long professional development course attended by teams of school staff. The institute is designed to provide these school leadership teams with the opportunity to study data together, reflect on current practices, identify the essential practices that should be sustained or enhanced during the upcoming school year, and take part in strategic planning to ensure continuous improvement at their school sites.

San Diego and Dallas had the most well-articulated PLCs we saw, which are closely monitored and supported by the district. In fact, in San Diego PLCs appear to have affected the whole culture of the school system and were cited by district and school staff alike as perhaps the most important factor driving the district's progress. As in Chicago, the evolution of PLCs was the result of intentional guidance and messaging from the central office. One principal, for example, described for the Council team the evolution of PLCs at her site from conversations about evaluation to sessions that are now devoted to collaborative problem-solving, providing her with an invaluable opportunity to work and learn alongside her teachers. According to district and school leaders, this structure helped the district drill down on Tier 1 instruction and its effectiveness.

Of course, just having PLCs in place is not enough to achieve instructional growth. Without clear guidance on what the district's expectations are for the time spent in PLCs and training on how to effectively lead collaborative, content-driven work sessions, PLCs in other systems often amount to glorified staff meetings rather than meaningful opportunities to improve teachers' instructional practice and build capacity at the school level.

Another unique and even somewhat counterintuitive strategy that serves to build school capacity in San Diego was the district's requirement that schools develop their own formative assessments. In past years when there was a district-mandated interim assessment, staff found that teachers would give it but not necessarily use the data. So, while this process took up a lot of schools' time to develop, they acknowledged that the process builds not only expertise, but ownership of formative assessment data where it was needed most. Of course, there were numerous guardrails in place. Area superintendents, for example, met with principals quarterly to review school-wide progress and help determine goals, and teachers received support in developing formative assessments through school-based instructional leadership team meetings, PLCs, and meetings with school and area leadership. The downside was that the district did not have the benefit

of aggregate assessment results over the course of the school year, but leadership concluded that its regular school and classroom monitoring gave them the information they needed.

In DCPS, LEAP (LEarning together to Advance our Practice) is another prime example of a district strategy for building school-based capacity. Through a weekly cycle of professional development in small, site-based, content-specific professional learning communities (LEAP Teams) led by content experts (LEAP Leaders), the district is aiming to develop on-the-ground expertise in teaching the DCPS Common Core-aligned curriculum.

In Dallas, meanwhile, principals and teachers cited the tremendous value of school-based support staff and structures such as Campus Instructional Coaches and Campus Instructional Leadership Teams (CILT) made up of principals, assistant principals, and core teachers. Yet while coaches and school-based instructional leadership teams were certainly not unique to this district, it is the level of support and structure that sets this district apart. The CILT teams in Dallas receive intensive, content-specific training with the academic department six times throughout the year to ensure that they are prepared to lead the learning at their respective campuses, while a corps of Instructional Lead Coaches serve as the "coaches of coaches," providing ongoing professional development and support for the campus-based coaches to ensure that the support that they, in turn, provide to teachers is consistent and aligned to the district's vision and standards for high-quality instruction.

Ultimately, the success of these capacity-building efforts was grounded in a common vision for instructional excellence, a clear set of expectations of what students should know and at what level of depth, and implementation that created ownership and buy-in among principals and teachers.

**Acting at scale**

Another similarity we observed across the case study districts was a shared belief that systemwide results could only come from systemwide change. Rollouts of reform initiatives, curricular materials, and programming (including implementation of college- and career-readiness standards) were therefore undertaken at scale in many – if not all— of these districts.

In Miami-Dade County, for instance, Superintendent Alberto Carvalho explained that he does not believe in pilots. His strategy for districtwide reform instead involved spending a lot of time planning, but then acting at scale to remove all vestiges of past practice. "If you want improvement at scale, act at scale (with deep planning)," he told the Council team. "The only way to overcome the gravitational pull of the status quo is to execute forcefully."

Of course, acting at scale took on many different dimensions across districts. In Miami-Dade County they phased in instructional reforms and new academic standards by grade level, but at scale across all schools. In Chicago, the rollout of the district's new literacy program was executed across the board, while in mathematics they adopted a grade six through eight "bridge."

Importantly, the Council team concluded after visiting each of these districts that it was not only the scale of the work that ultimately determined their success, but the level of coherence and support for these rollouts that made the biggest impact. In this way instructional reform initiatives or new curricula adopted districtwide benefit from the shared focus and effort of staff throughout the organization working together toward common goals and expectations. This unifying instructional vision was critical in places like DCPS as they rolled out districtwide initiatives from the Cornerstone Units to LEAP. Similarly, in Boston the rollout of a new concept-rich core math program in 2000 was undergirded by a unifying instructional philosophy and sustained support, professional development, and oversight for implementation over several years. As noted in the 2011 Council report *Pieces of the Puzzl*e, the district's reading reforms did not benefit from the unanimity of approach observable in the district's (later) work in math.

> "The district's literacy program, which was built around a Reading and Writing Workshop (RWW) model during the study period, appeared to be less well- defined and less focused than the district's math reforms. In addition, the study team noted from interviews with teachers and district leaders that philosophical differences at the central office level over approaches to literacy instruction contributed to a lack of coherence in reading instruction districtwide…For example, while the district used its Reading First grants to adopt a common reading program for 34 of its schools—Harcourt's Trophies— most Boston schools had their choice of reading programs, and some opted out of using any specific published series. These differences led to a greater unevenness in reading program implementation than in math, according to interviewees who were asked directly about why math gains outstripped reading progress."[9]

**Accountability and Collaboration**

In a point related to teacher and leader quality, the rollout of accountability systems was cited as a key lever for change across the six study districts. As mentioned previously, the IMPACT system in DCPS was the centerpiece of the district's human capital strategy for building a stronger teacher corps. In addition to helping identify effective and ineffective teachers, this practice of holding everyone—including principals, assistant principals, instructional coaches, etc.—accountable for student growth reportedly helped to focus everyone on the primary goal of supporting instruction and to building an overall culture of responsibility.

In Dallas, which was a pioneer in the use of value-added data, growth in the use of classroom and school effectiveness indices played an important role in driving shared accountability for student results. Like IMPACT, these measures were controversial at first as they provided a quantitative measure of teacher effectiveness based on student achievement data. However, over time they became more accepted since they compared students in each classroom to other similar kids in the district. The classroom and school effectiveness indices are now used in the district's evaluation instruments for teachers and principals, as well as in the district's pay-for-performance initiative (TEI, or the Teacher Excellence Initiative).

Similarly, the school accountability system in Chicago was often the first factor cited by school leaders and staff in the district's progress. Interviewees reported that the evaluation tools for both teachers and principals took a deep look at what was happening in classrooms and measure success in terms of student growth. These evaluation tools in turn helped to norm the work of teachers and to create high standards and clear expectations for instruction across schools. In fact, everyone in the district is evaluated in some measure on student growth, and this has helped build a sense of urgency and shared responsibility for student progress.

Interestingly, this culture of accountability that has been built across districts has come hand in hand with increased collaboration. Leaders and staff in several of the sites the Council team visited discussed an intentional shift from competition to teamwork—a shift that could be seen in everything from how principal supervisors worked together with the curriculum department and other central office departments to the practice of connecting principals and teachers across schools. In Chicago, for example, staff reported that collegiality in general across the organization has improved drastically—despite several teacher strikes. They have seen the vertical and horizontal exchange of information increase dramatically, and a shift toward more inclusive, cross-functional strategic planning. Staff at both the central office and school levels report that "everyone is accessible—everyone returns calls."

This service orientation has in turn nurtured an environment of sharing lessons learned and resources across schools. The network chiefs (Chicago's principal supervisors) see it as part of their job to create opportunities for collaboration and to promote cross-pollination between schools and networks. The

[9] *Pieces of the Puzzle: Factors in the Improvement of Urban School Districts on the National Assessment of Educational Progress*. Council of the Great City School, 2011

Council team heard the same thing in Washington, DC, where instructional superintendents see the systemic sharing of lessons learned and effective practices as a key part of their role, describing themselves as "facilitators of the learning principals do with one another."

In fact, the Council team observed that the role of principal supervisors—discussed earlier in this chapter—was a key mechanism by which many districts helped further accountability, communication, and collaboration districtwide. Despite differences in organizational structure from district to district, principal supervisors served as a conduit between the central office and schools, allowing districts to communicate district standards, instructional expectations, and priorities while helping to identify which school sites required additional support and what opportunities existed for greater collaboration and sharing of effective practices.

In all, accountability in these districts is being redefined in these districts away from the more mechanistic, administrative accountability that one saw under the No Child Left Behind Act towards one that was oriented around a shared culture of responsibility for improving student outcomes.

**Challenges as Opportunities**

One interesting characteristic that we observed across many of the districts was the resilience and resourcefulness each district demonstrated in the face of change, challenge, or adversity. In Miami-Dade County, for example, the economic crisis of a decade ago is credited by district leaders as having "opened the door" to a wave of instructional and operational reforms, including greater centralization of curricular guidance and resources to save on costs and support schools in the most effective and efficient manner.

This ability to respond constructively to new circumstances could perhaps be seen most clearly in the districts' responses to the adoption of new, rigorous academic standards in states across the country. Districts such as Boston, Chicago, Miami, and Washington D.C., for example, were among the earliest adopters of the Common Core State Standards or similar state-specific college- and career-readiness standards. San Diego even petitioned for a waiver from the California Standards Test (CST) so they could phase in the common-core-aligned SBAC (Smarter Balanced Assessment Consortium) ahead of other districts in the state.

Instructional leaders and staff at each site talked about seizing the opportunity provided by the standards to advance instructional coherence across the system. While some of these districts were already well underway in their instructional improvement efforts, the introduction of the common core or other college- and career-readiness standards helped these districts connect the work of supporting higher-quality instruction to assessment and evaluation. Interviewees also cited the value of the shared work and learning that came as staff throughout the organization unpacked and implemented the instructional shifts that the standards prescribed. In fact, the process of adopting districtwide standards was commonly described as having helped "even out" the support provided to teachers and principals across networks, as everyone worked to get onto the "same page" in terms of both common core content and pedagogy.

In each school district we visited, the successful implementation of college- and career-readiness standards was dependent on communication and close collaboration between the school management structure, the curriculum staff, and leaders at the central office. These districts worked cross-functionally to support implementation through multi-pronged strategies involving professional development, curriculum guidance and materials, instructional reviews, data reporting, and teacher and principal evaluation. Of course, standards alignment has not always led to student gains in other districts, and in one district leader's opinion this is because there is often not enough investment of time, effort, and resources in the implementation process. Progress, in other words, is not a function of declared alignment to rigorous standards, but of alignment in practice, which requires sustained monitoring and support to ensure that instructional changes made at the systems level reach all classrooms.

**Support for struggling schools and students**

Finally, some districts may have seen gains in part because of an explicit emphasis on support for struggling students, English learners, and students with disabilities. In Chicago, the district's implementation of multi-tiered systems of support (MTSS) and its efforts to support the examination of student-level data and the use of these data to inform strategies were likely factors in their progress on NAEP. In Miami, principals reported becoming more deliberate in their approach to reaching struggling students, as well as the increased use of disaggregated data and the development of strategies, interventions, and support based on understanding how different students learn.

The San Diego Unified School District has developed a particularly robust focus on individual students and the examination of student work. This is the result of a districtwide effort undertaken some years ago to study the experiences of struggling students at their schools and to identify what it revealed in terms of instructional and support needs. A significant part of the time teachers and administrators spend conducting school and classroom walk-throughs and in professional learning communities is now spent discussing individual students, looking at student work, and using these data to design lesson plans around the specific needs of the lowest performing students in each classroom for every lesson.

As compared to this somewhat common focus on struggling students, the Council team found that districts varied much more in their approach to struggling schools and school turnaround efforts. DCPS, for example, did not articulate a clear school turnaround strategy, instead focusing its efforts on programming and instruction systemwide—along with an effort targeted on African American male students.

In contrast, Dallas, the district in this study with the highest concentration of students in extreme poverty, has a particularly strong focus on resource allocation based on equity. The district uses an "intensity of poverty" index based on census block data to identify schools with particularly high needs, looking not only at poverty but generational poverty. A common sentiment echoed in conversations with staff throughout the organization was that "schools that need more should get more—in time, treasure, talent," and this could be seen in the district's emphasis on ensuring that struggling schools serving high numbers of poor students, African American students, and English learners received increased levels of campus-based support, additional resources, and effective teachers and principals.

A primary example of this resource allocation strategy in Dallas was the district's Accelerating Campus Excellence (ACE) initiative. The ACE initiative targeted the district's most historically failing schools—i.e., those with five years or more of not meeting state accountability requirements—and provided them with intensive additional resources that included strategic staffing (paying the most effective teachers to work at these schools *via* the district's pay-for-performance model TEI); prescriptive, data-driven instructional practices; increased monitoring and feedback; schoolwide systems for Social Emotional Learning; extended learning time; and investments in school and classroom upgrades.

In addition to this school-based strategy, Dallas also has a robust effort to improve the academic performance of its African American students, particularly its male students. The effort encompasses a combination of early childhood participation, staff diversification, strategic partnerships, single-gender schools, an African American studies program, mentoring, and enhanced instruction, along with other initiatives. The Dallas superintendent is held explicitly accountable on his annual evaluation for progress with these students. The district also has a parallel effort focused on Mexican American students.

In San Diego, meanwhile, the district identifies its highest needs schools as "focus schools." Oversight for these schools is distributed evenly—each area superintendent has six focus schools. And although district staff report that focus schools have the same level of autonomy as other sites, they also report spending more time at these schools, conducting more classroom walkthroughs, and working intensely with them in developing and sustaining their 'Guaranteed Viable Curriculum' and ensuring that the district's 'critical concepts' are covered at each grade level.

Miami also cites its focus on "fragile" schools—and the alignment of resources to meet student needs at these sites—as one of the main pillars of its district improvement strategy. In addition to deploying the most effective teachers and leaders to these schools, the district directs greater support and resources to these sites.

Moreover, Miami employs the unique strategy of pairing its support for struggling schools with its school choice initiative. Roughly 72 percent of Miami-Dade County students are now involved in a choice program of some sort, and students have over 1,000 choice options. Their approach, as described to the Council team, is to support struggling schools by increasing student engagement using niche programming. In other words, these schools and programs are designed specifically to appeal to parents, students, and communities, and district staff refer to this strategy as "demand-driven reform and innovation."

Like Miami-Dade County, Dallas also uses choice schools and programs to meet the needs of struggling schools, as well as to incentivize parents to remain in the district. There are currently waiting lists at each of the district's 25 P-TECH (Pathways to Technology Early College High School) and ECHS (Early College/Collegiate High Schools) campuses, and the district offers a range of other choice options, including over 50 two-way dual language schools and over 30 magnet school programs.

Finally, Miami also focuses efforts on its African American male students in a way that is like Dallas and the District of Columbia.

**Community Investment and Engagement**

Another notable feature of many of the school districts we visited was the active engagement and investment of community organizations, educational groups, foundations, businesses, and local colleges and universities—particularly in Boston, Chicago, and Miami.

Boston Public Schools, in particular, benefits from having a high concentration of educational institutions located in the city. School and district staff alike cited investments made in after- school and summer enrichment opportunities for area students as an important factor in students' progress and sustained achievement. One district leader estimated that some 80 percent of Boston students have benefitted from some sort of outside investment. This high concentration of colleges and universities also means a plethora of training programs and residencies for teacher candidates.

In Chicago there were similar investments in after-school activities and programs for kids. In addition, the school district's relationship with the University of Chicago Consortium on School Research ensures that district staff and leadership have access to a wealth of data on Chicago schools, and was cited as a key factor in helping the district sustain its commitment to its new accountability system, which was initially met with both internal and external resistance.

Miami also has an impressive array of community partners that the system relies on to provide support. The district has arranged hundreds of organizations and companies to provide summer intern opportunities for students, including offerings ranging from the American Dental Center to the Miami Arts & Academics Youth Summer Camp. The Miami-Dade County Public Schools also has a vast array of other community partners like the First National Bank of South Miami, American Airlines, and the Mexican American Council to provide support services.

While these partnerships and investments were critical sources of support and resources for city schoolchildren, what was equally important is that these districts were intentional about the investments made in – and on behalf of – their schools. Programs were vetted to ensure that they were consistent with district objectives and approaches, and staff dedicated time and focus to coordinating and connecting these investments so that schools were not overwhelmed with redundant programming or mixed messaging on district instructional priorities.

**A Counterfactual District**

Although the counterfactual school district that the Council examined does not participate in TUDA, the Council's hands-on work with the district took place over roughly the same period as the team was conducting other site visits for this study. It should be noted that the purpose of the Council's multiple visits to this district—to provide technical assistance to a district that was struggling—was different from the research-driven visits made to Miami, Chicago, Boston, Washington D.C., San Diego, and Dallas. Since this time, the school district has hired a new superintendent and implemented several of the Council's recommendations to improve its programming and support for schools. Nonetheless, during the period of the study the team noted several clear contrasts—most notably in the areas of capacity building, instructional focus, and accountability—between this district, which has seen low and largely stagnant student achievement in recent years, and those that had seen growth. There are also likely parallels between this district and some of the urban school districts that were shown in our statistical analysis to fall below expectations.

*Instructional Focus*

Unlike the clear instructional vision and strategic, sequenced reforms we observed in the other districts, the counterfactual district appeared to lack a coherent strategy or working theory of action for improving student achievement districtwide or for moving failing schools out of that status. Although the district had a document called, "Theory of Action for Change, 2014," the Council team saw little evidence that it substantially drove the work of the district, and during the initial visit staff members that the team interviewed could not describe what the district's strategy was for improving academic performance.

Perhaps because of this imprecise instructional vision the district lacked the focus the other districts demonstrated on developing strong Tier 1 programming. Instead, the district was focused disproportionately on interventions with its lowest 25 percent of students. These interventions were ill-defined and differentially applied from school to school and from area to area within the district, and they were not evaluated for effectiveness. This strategy appeared to be done to garner extra state accountability points, but in doing so the district was missing an important segment of students—those between the lowest 25 percent and proficiency—and so even as an intervention strategy it was failing to move schools out of "failing" status. Moreover, it was undermining support for effective Tier 1 instruction to boost student achievement.

The district did employ learning walks, as we saw in other districts, but these appeared to be focused more on observing student engagement, classroom climate, and procedures than on the content and rigor of instruction. This contributed to the district's inability to monitor and improve the quality of instruction. In addition, the results of the walk-throughs did not appear to be used beyond the school to inform broader patterns of systemic needs or to improve districtwide strategies. In other words, the Council team saw no evidence that walk-through data were aggregated across schools, feeder patterns, or regions to inform broader systemwide improvements in curriculum, interventions, or professional development. The lack of district coherence was further evidenced by the fact that district network leaders each had a different set of strategies and plans for improving student achievement based only on their individual areas of expertise or experience. There also did not appear to be any districtwide resources or exemplars to guide instructional administrators and teachers about the level of rigor and student work expected in specific grade levels and content areas.

*Capacity building*

Perhaps the most conspicuous difference between the counterfactual district and the other districts we visited was in the area of capacity building. Whereas other districts invested time, energy, and focus on human capital strategies aimed at building up the quality of teachers and leaders, the counterfactual district made several decisions that ended up diluting the quality of their people, creating inconsistencies in the

district's instructional expectations, and limiting their capacity as a school system to support schools. For example, some years ago the school district's leadership decided to dismantle the school system's curriculum department in favor of outsourcing key instructional functions, like the development of curriculum materials, guidance, and some local testing activities. This not only left them beholden to outside vendors and responsible for an annual subscription fee for access to their own instructional materials, but it also deprived staff of the critical learning and capacity-building process of developing curriculum and providing instructional support and guidance to their own schools.

The district was working to re-establish its curriculum office when the Council team arrived, but the impact of this past decision was still evident. In our work with districts over the years we have observed that the strength of district staff and instructional leadership is critical to a school system's ability to adapt to challenges and move the system forward academically. So, while none of the districts we visited were immune to controversy or leadership turnover, this district was less equipped than other districts to weather the various upheavals it was facing.

Moreover, despite this history and severe funding shortages, the counterfactual district continued to rely heavily on outside vendors to provide materials and support services. While all the districts we visited worked with outside vendors in some capacity, leadership and staff in the other case study districts explicitly cited a move away from "buying stuff to fix our problems," focusing their efforts and scarce funding instead on building internal capacity and investing in people. In the counterfactual district, however, the team ultimately concluded that the district's unusually high rates of teacher and staff turnover were likely due to the general lack of support for teachers, which is typically the reason why teachers leave. Moreover, while most of the other districts were intentional in their efforts to recruit and hire high quality teachers and leaders, this district lacked any sort of a teacher or leader pipeline program and the human resources department had delegated its primary function— identifying and hiring qualified teachers—to principals.

*Accountability*

A third main area of contrast between the counterfactual district and the other six study districts was in the area of accountability. Staff in each of the other districts spoke at length about a cultural shift toward shared accountability—a shift often founded on quantitative measures of student growth that held staff *throughout the organization* responsible for student progress. At the time of the Council's visit to this district, however, the district lacked any mechanism for holding personnel responsible for improving student academic outcomes. The personnel evaluation instrument that the district used was the Educator and Administrator Professional Growth System, which was the instrument endorsed by the State Department of Education as the framework for teacher and administrator evaluations. Principals, for example, were evaluated on five domains and 19 total elements. Each of these domains and elements included examples of evidence that could be used to demonstrate where principals were on a four-point evaluation scale, but none of the examples included actual student outcomes. The district's teacher evaluation systems also did not include concrete measures of student outcomes or progress. The district's procedure for evaluating central office administrative staff also graded performance across a series of domains and elements—none of which involved measures of districtwide student outcomes or their improvement.

This lack of accountability also marked the counterfactual district's relationship with its partners and vendors. On the other hand, staff in Miami-Dade County, for example, look at return-on-investment for all supplemental materials purchased and implemented by the district. Moreover, a set of district-developed 'Essential Questions' are sent to all vendors, who are required to show usage data and data on how they have met the promises and objectives they set out to accomplish. If they do not meet these criteria, the district does not renew the annual contract. Vendor accountability for results in the counterfactual district, conversely, was nearly non-existent.

*Historical and Racial Context*

In addition to issues of abject poverty, discussed earlier in this report, issues related to race, the historical legacy of discrimination, and urban investments may also inform the student performance levels analyzed and presented here. To be clear, the counterfactual district is not unique in this respect, but indicative of a history shared by cities across the country. This pattern is also found in Baltimore, Detroit, Milwaukee, and Philadelphia. In these and many other American "legacy" cities, African American communities were subject to sustained legal isolation, oppression, and a lack of investment that left many of these communities, which made up large segments of their respective cities, without the social and economic capital they needed to support educational progress.

The segregation and "redlining" of many African American communities in these cities over considerable time made it increasingly difficult for individuals of color to buy homes, borrow against the value of their homes, or start businesses or improve their properties. The result in many places was that owner occupancy was reduced, property values were lowered, housing quality slipped, and racial segregation increased. Many of these communities also saw the exit of grocery stores, gas stations, movie theaters, and banks that further isolated the communities and lowered the quality of life. In sum, the lack of investments in these cities left their communities without the wherewithal to compete with other better endowed locations.

This context clearly took a toll on schools in these communities and cities. The reduction in property values alone reduced the financial investment in schools; increased jobless rates meant that families were unable to provide the educational tools that many other families would have taken for granted; and violence that may have become endemic in some places made for learning climates that were suboptimal.

The names of the neighborhoods affected from city-to-city differed, but the effects were the same. Whether it was the Fairfield neighborhood in Baltimore; Forest Park in Detroit; Triangle North in Milwaukee; or Strawberry Mansion in Philadelphia, the systematic deprivation of resources and investment in these and other neighborhoods left schools and other institutions that residents rely on unable to serve and support them.

In this context, the inability of districts to make academic gains, demonstrated by district effects in 2017 that were substantially below what might be expected statistically, is hardly surprising. The track record of other major city school systems who share some of this same history suggests that more time is needed for the improvement process to take root. City school districts like Cleveland and Memphis, which have demographic characteristics like these four other cities but have been pursuing their current reform efforts for a longer period, have shown improvements over the years. Atlanta and the District of Columbia, moreover, have sustained their reform initiatives for even longer and both show substantial gains on the National Assessment of Educational Progress. This suggests that gains are possible once the right leadership and supports are in place. But it takes longer than a couple of school years to address the effects of centuries of accumulated oppression and disenfranchisement.

Time alone, of course, will not be sufficient, but in combination with the right set of improvement strategies like those outlined earlier in this report, sustained effort may be what these districts need to show gains.

DRAFT

## Discussion and Conclusions

The ability of the nation's large urban school districts to overcome poverty, discrimination, language barriers, and other challenges is critical in the struggle to guarantee all students access to educational and social opportunity. It is therefore important, as urban educators, to examine the extent to which urban public schools are "beating the odds"—prevailing over these inequities to raise student achievement, rather than simply reflecting or perpetuating the opportunity gaps that exist across the country.

It is clear from our analysis that large city school systems are, in fact, doing a better job outpacing projected achievement and growth—i.e., adding value to the education of its students—compared to schools generally. Some big city school systems are more successful in this than others, but urban public schools in general are producing results that are greater than statistical expectations.

To be sure, not every urban school district that is beating the odds has followed the same path. We have observed different theories of action, varying approaches, and seemingly contrasting programming. These districts also present us with a wide array of different political, historical, and organizational contexts. Boston, for example, has benefitted from being in a high-performing state with consistently high standards. It has also seen mostly stable leadership over the years, retained their teachers longer than many districts and built their instructional capacity, worked to turn around some of it lowest-performing schools, and created and sustained a high-quality math program across the entire system.

Dallas has also benefitted from relatively stable leadership and clear academic goals and has built an accountability system based on those goals. In addition, Dallas has centrally defined its curriculum and instructional expectations, boosted professional development around those expectations, created performance incentives, built professional learning communities, focused on schools with cross-generational poverty, adroitly used its dual-language programming as both a parental incentive and as an instructional improvement strategy, and relied on exacting data to inform progress.

Miami-Dade County used many of the same strategies that one sees in Dallas. The district has enjoyed unusually long and successful leadership. It centrally defined its curriculum and instructional expectations and employed an "earned autonomy" theory of action. Like Dallas and Chicago, it acted at scale to get improvements at scale. Miami-Dade County also created a "value-added" system to identify its best teachers and incentivize them to teach in the most difficult schools. Moreover, the district expanded its Advanced Placement offerings, melded its choice offerings with its school turnaround efforts, developed strong lesson plans, boosted early-childhood programming, and used a very strong data system to boost performance.

In San Diego, the strategy looked substantially different. The district's leadership had not been stable until recently. It created a "leading from the middle" theory of action with no district chief academic officer or centralized curriculum, but it does have very well-articulated instructional expectations and one of the best-developed professional learning community systems we have ever seen. Those PLC's are long-standing and critical to the district's ability to boost staff capacity and set expectations for instructional quality.

In Chicago, the district used the onset of college- and career-readiness standards as a galvanizing event to rethink the quality of its instructional program and worked relentlessly on their district, regional, and school-based leadership to build a more coherent academic program. It also used professional learning communities, a longer school day, and a more centralized instructional program designed around the standards. Like other large urban districts like Boston, Dallas, and Miami-Dade County, Chicago implemented its reforms at scale in a staged manner that avoided isolated pilot programs. In addition, the system relied on good data systems and partnerships with external research groups to inform what was working and what was not, and it bolstered its overall accountability systems.

Finally, the District of Columbia used a mayoral takeover in the same way that Miami-Dade County used their extraordinary budget cuts and Chicago used new college- and career-ready standards as galvanizing events. The district used the work of two chancellors back-to-back to create leadership stability and pursued reforms in two differing stages: one devoted to human capital and the second defined around instructional excellence. It also created a more centralized instructional program and a clear set of high-quality academic expectations around which it built its professional development and instructional coaching. Unlike other districts that saw major gains, D.C. did not emphasize work in its lowest-performing schools or have a robust data system by which to inform progress at a tactical level. On the other hand, the district enhanced the quality of its instructional program and its teaching force in ways that many others did not.

The counterfactual district that Council staff examined had few if any of the strategies or reforms that the more successful districts had. Its leadership had been unstable and weak; its organizational structure was incoherent; it had no system of accountability; its instructional program was poorly defined and did not clarify for teachers what was expected; and it had no way to enhance the capacity of its people to do the work. At the same time, the counterfactual district shared many of the same historic dynamics that other major city school systems struggling to get traction under their reforms show.

The findings from this report suggest several conclusions. One, any analysis of NAEP--or other student achievement results--that does not take into consideration the effects of poverty, race, ELL status, disability status, literacy materials in the home, and family education levels is likely to produce incomplete results and an only partial understanding of student attainment. The background variables used in this analysis explain around forty percent of the differences in student achievement scores on NAEP and provide substantial context to the results. Other variables, like the historic context of the cities, are not as measurable but surely as important.

Two, the data suggest that efforts to account for the effects of poverty using student-level free or reduced-price lunch may fall short of capturing the full impact of abject and concentrated poverty on academic outcomes. In addition, the free and reduced-price lunch data reported by various outlets is becoming substantially unstable and unusable. Researchers should be very careful in using those data without first questioning their stability over time. Moreover, it is clear from this analysis that districts with large percentages of students living in households with annual incomes below $10,000 and $50,000 face a more difficult set of challenges than other urban school systems in producing a "value-added" effect that is higher than statistical expectations.

Three, several TUDA districts demonstrated consistently that they were overcoming the influence of identified student background characteristics on achievement. Atlanta, Austin, Boston, Charlotte, Chicago, Dallas, Denver, Hillsborough County, and Miami-Dade County were among the districts that consistently out-performed expected levels.

Four, the data are clear that Large City schools—in the aggregate—are producing results on NAEP that exceed statistical expectations. Moreover, the data are clear that Large City schools are now producing results that generally exceed the ability of Not Large City schools to overcome the effects of the measured background characteristics.

Five, the data suggest that Large City Schools in half of the subjects/grades tested have gotten better at overcoming the effects of the background variables over time. In one subject/grade, there was no movement, and in one subject/grade combination there was slippage—fourth grade math.

Six, we wanted to put the changes in urban school performance in context, because we were unclear about whether the results urban schools were producing were better or worse than anyone one else. Does this mean that urban public schools have higher results than the average public school across the nation? No. The typical public school across the nation has higher NAEP scores than do the Large City schools. But the results do suggest that Large City schools do a better job of overcoming the effects of poverty, language,

discrimination, disability, and differences in family education than the average school does. Put another way, urban public schools appear to produce greater instructional torque than does the typical school. We suspect that this may be because these districts have been working to improve their academic performance for some time in ways that the average school system has not. Not only were urban schools the target or focus of much of the nation's efforts to reform schools, but they also took the lead on such issues as academic standards, accountability, curriculum reform, and many other initiatives.

We should be clear that none of the improving districts we have described in this report have reached the promised land. Much of their reforms are a work in progress. And while there were some key similarities among the districts we studied, there was no single, shared strategy or formula that can be definitively tied to their gains. If there was a "secret sauce," it was that these districts used varying theories of action, strategies, and programs to do one fundamental thing: improve the quality of instruction in their classrooms. This central endeavor was often aided by stable leadership, clear curricular expectations, aligned organizational structures, defined and shared accountability systems, and capacity-building mechanisms. But each of these components were employed in the service of improving instruction—something we do not always see in other districts.

This central finding is like the results of two previous studies conducted by the Council on why and how some urban school systems improve faster than others. This new study asks a more complicated set of questions than do those earlier studies, but the results are remarkably consistent. Large City schools have not overcome the barriers before them entirely, otherwise results would be even higher, but the data in this study suggest that Large City schools are doing a better job of overcoming the effects of poverty and potentially moving students out of that status and into the middle class than most schools.

Knowing why and how these urban school districts produce the effects they do are important not only because the answers help tell us whether our schools are effective to some degree in overcoming inequities and building and sustaining the nation's middle class, the results also help inform us about strategies that might be useful as we rethink public education in the wake of the global pandemic. It is critical that we know what is behind the improvements, so we do not focus on the wrong things. There are likely to be any number of proposals for reinventing and reimagining public education, so it is important to know what has worked or not worked so far. This should help us ask more critical questions and to sort out what might be retained or enhanced to improve overall achievement and to strengthen equity.

Over the last decade, large city school districts have narrowed the achievement gap with the nation at large, but what is new here is that urban public schools are doing a better job of overcoming the effects poverty, English language proficiency, and other factors that often limit student outcomes. To be sure, there is a great deal of work to be done, but urban public schools are doing a better job of laying a strong foundation for the next phases of urban school reform and further opening the windows of opportunity rather than simply mirroring the inequities that students too often face.

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## Appendices

## Appendix A

### District/Jurisdiction Actual Scaled Score, Expected Scaled Score, and "District Effects" for 2009, 2011, 2013, 2015, and 2017

Exhibit A-1. Grade Four Reading Actual Performance, Expected Performance, and District Effects, 2009

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Atlanta** | 209.16 | 203.64 | 5.52 |
| **Austin** | 220.35 | 211.03 | 9.32 |
| **Baltimore** | 201.99 | 203.60 | -1.6 |
| **Boston** | 215.02 | 202.72 | 12.31 |
| **Charlotte** | 224.51 | 215.70 | 8.82 |
| **Chicago** | 202.19 | 202.74 | -0.55 |
| **Cleveland** | 193.75 | 198.90 | -5.15 |
| **Detroit** | 187.27 | 196.46 | -9.19 |
| **District of Columbia (DCPS)** | 203.46 | 207.53 | -4.07 |
| **Fresno** | 197.28 | 202.85 | -5.57 |
| **Houston** | 211.39 | 203.21 | 8.18 |
| **Jefferson County** | 219.43 | 214.70 | 4.72 |
| **Los Angeles** | 197.41 | 200.18 | -2.77 |
| **Miami** | 221.16 | 209.83 | 11.33 |
| **Milwaukee** | 196.02 | 202.87 | -6.85 |
| **New York City** | 216.81 | 205.02 | 11.79 |
| **Philadelphia** | 195.18 | 201.35 | -6.16 |
| **San Diego** | 212.83 | 211.91 | 0.92 |
| | | | |
| **Large City Schools*** | 210.04 | 207.77 | 2.27 |
| **Not Large City Schools□** | 222.82 | 222.23 | 0.59 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

Exhibit A-2. Grade Eight Reading Actual Performance, Expected Performance, and District Effects, 2009

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Atlanta** | 249.95 | 245.38 | 4.57 |
| **Austin** | 261.63 | 254.27 | 7.36 |
| **Baltimore** | 245.90 | 245.72 | 0.19 |
| **Boston** | 257.78 | 248.80 | 8.99 |
| **Charlotte** | 259.92 | 257.63 | 2.29 |
| **Chicago** | 249.50 | 245.49 | 4.01 |
| **Cleveland** | 242.60 | 238.96 | 3.63 |
| **Detroit** | 233.32 | 242.22 | -8.90 |
| **District of Columbia (DCPS)** | 241.26 | 246.25 | -5.00 |
| **Fresno** | 240.11 | 244.02 | -3.91 |
| **Houston** | 252.21 | 247.47 | 4.74 |
| **Jefferson County** | 258.56 | 259.75 | -1.19 |
| **Los Angeles** | 244.39 | 243.46 | 0.93 |
| **Miami** | 260.94 | 254.28 | 6.66 |
| **Milwaukee** | 241.70 | 244.11 | -2.41 |
| **New York City** | 253.15 | 250.53 | 2.63 |
| **Philadelphia** | 247.39 | 245.08 | 2.31 |
| **San Diego** | 254.89 | 255.95 | -1.06 |
| | | | |
| **Large City Schools*** | 252.80 | 251.86 | 0.94 |
| **Not Large City Schools□** | 266.15 | 266.46 | -0.31 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

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Exhibit A-3. Grade Four Mathematics Actual Performance, Expected Performance, and District Effects, 2009

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Atlanta** | 225.35 | 222.10 | 3.25 |
| **Austin** | 240.46 | 228.34 | 12.12 |
| **Baltimore** | 222.21 | 222.65 | -0.45 |
| **Boston** | 236.23 | 224.18 | 12.05 |
| **Charlotte** | 244.94 | 234.74 | 10.20 |
| **Chicago** | 221.88 | 224.33 | -2.45 |
| **Cleveland** | 213.48 | 217.95 | -4.47 |
| **Detroit** | 199.76 | 215.46 | -15.71 |
| **District of Columbia (DCPS)** | 219.99 | 223.73 | -3.74 |
| **Fresno** | 218.93 | 225.53 | -6.60 |
| **Houston** | 235.79 | 222.81 | 12.98 |
| **Jefferson County** | 232.83 | 233.68 | -0.85 |
| **Los Angeles** | 221.90 | 223.92 | -2.02 |
| **Miami** | 236.34 | 228.77 | 7.57 |
| **Milwaukee** | 219.93 | 222.78 | -2.86 |
| **New York City** | 237.47 | 226.90 | 10.57 |
| **Philadelphia** | 221.57 | 221.50 | 0.07 |
| **San Diego** | 236.30 | 233.32 | 2.97 |
| | | | |
| **Large City Schools*** | 231.32 | 228.17 | 3.14 |
| **Not Large City Schools□** | 241.14 | 240.20 | 0.94 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

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Exhibit A-4. Grade Eight Mathematics Actual Performance, Expected Performance, and District Effects, 2009

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Atlanta** | 259.52 | 257.81 | 1.71 |
| **Austin** | 287.55 | 271.26 | 16.29 |
| **Baltimore** | 257.64 | 261.81 | -4.17 |
| **Boston** | 280.45 | 263.68 | 16.77 |
| **Charlotte** | 282.77 | 275.35 | 7.42 |
| **Chicago** | 263.88 | 261.89 | 1.99 |
| **Cleveland** | 256.00 | 252.80 | 3.21 |
| **Detroit** | 238.95 | 252.13 | -13.18 |
| **District of Columbia (DCPS)** | 251.87 | 259.52 | -7.65 |
| **Fresno** | 258.76 | 264.27 | -5.51 |
| **Houston** | 276.89 | 263.73 | 13.17 |
| **Jefferson County** | 271.28 | 273.68 | -2.4 |
| **Los Angeles** | 258.73 | 263.42 | -4.69 |
| **Miami** | 273.05 | 269.89 | 3.16 |
| **Milwaukee** | 251.80 | 258.86 | -7.05 |
| **New York City** | 274.73 | 266.57 | 8.16 |
| **Philadelphia** | 264.80 | 260.00 | 4.8 |
| **San Diego** | 280.38 | 278.31 | 2.07 |
| | | | |
| **Large City Schools*** | 271.59 | 268.68 | 2.91 |
| **Not Large City Schools□** | 285.01 | 283.65 | 1.36 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

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Exhibit A-5. Grade Four Reading Actual Performance, Expected Performance, and District Effect, 2011

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 208.92 | 214.94 | 2.2 |
| **Atlanta** | 211.62 | 207.25 | -1.8 |
| **Austin** | 223.63 | 214.08 | 11.22 |
| **Baltimore** | 200.50 | 206.97 | -3.77 |
| **Boston** | 217.00 | 201.83 | 17.19 |
| **Charlotte** | 224.19 | 218.25 | 7.18 |
| **Chicago** | 203.27 | 205.38 | 0.69 |
| **Cleveland** | 192.54 | 195.62 | -1.89 |
| **Dallas** | 203.66 | 200.17 | 6.49 |
| **Detroit** | 191.00 | 196.76 | -5.57 |
| **District of Columbia (DCPS)** | 201.02 | 207.16 | -4.52 |
| **Fresno** | 194.27 | 204.05 | -7.67 |
| **Hillsborough County** | 230.83 | 215.08 | 17.18 |
| **Houston** | 213.04 | 206.33 | 9.18 |
| **Jefferson County** | 222.79 | 218.10 | 5.42 |
| **Los Angeles** | 200.60 | 206.00 | -2.63 |
| **Miami** | 221.01 | 210.26 | 12.92 |
| **Milwaukee** | 195.49 | 202.29 | -5.32 |
| **New York City** | 216.39 | 207.89 | 10.81 |
| **Philadelphia** | 198.75 | 202.93 | -2.88 |
| **San Diego** | 215.41 | 213.41 | 3.99 |
| | | | |
| **Large City Schools*** | 210.89 | 208.25 | 2.64 |
| **Not Large City Schools□** | 223.05 | 222.78 | 0.27 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

Exhibit A-6. Grade Eight Reading Actual Performance, Expected Performance, and District Effects, 2011

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 254.33 | 257.51 | -3.18 |
| **Atlanta** | 252.66 | 248.52 | 4.13 |
| **Austin** | 261.95 | 257.16 | 4.79 |
| **Baltimore** | 246.61 | 249.31 | -2.71 |
| **Boston** | 255.14 | 248.76 | 6.38 |
| **Charlotte** | 264.90 | 260.44 | 4.46 |
| **Chicago** | 253.19 | 247.84 | 5.35 |
| **Cleveland** | 240.51 | 238.51 | 2.00 |
| **Dallas** | 247.65 | 245.08 | 2.58 |
| **Detroit** | 237.03 | 241.41 | -4.38 |
| **District of Columbia (DCPS)** | 237.99 | 246.91 | -8.92 |
| **Fresno** | 238.32 | 247.02 | -8.70 |
| **Hillsborough County** | 264.51 | 259.31 | 5.19 |
| **Houston** | 252.81 | 249.95 | 2.86 |
| **Jefferson County** | 259.94 | 261.46 | -1.52 |
| **Los Angeles** | 246.59 | 249.00 | -2.41 |
| **Miami** | 260.06 | 255.19 | 4.87 |
| **Milwaukee** | 239.04 | 242.88 | -3.84 |
| **New York City** | 255.09 | 249.87 | 5.22 |
| **Philadelphia** | 247.43 | 245.90 | 1.53 |
| **San Diego** | 256.76 | 257.34 | -0.58 |
| | | | |
| **Large City Schools*** | 254.94 | 253.91 | 1.03 |
| **Not Large City Schools‡** | 267.17 | 267.48 | -0.31 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

Exhibit A-7. Grade Four Mathematics Actual Performance, Expected Performance, and District Effects, 2011

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 235.47 | 233.52 | 1.95 |
| **Atlanta** | 228.14 | 225.27 | 2.87 |
| **Austin** | 245.39 | 229.91 | 15.48 |
| **Baltimore** | 225.59 | 223.79 | 1.80 |
| **Boston** | 237.24 | 222.71 | 14.53 |
| **Charlotte** | 246.86 | 236.16 | 10.70 |
| **Chicago** | 223.76 | 225.56 | -1.80 |
| **Cleveland** | 215.82 | 217.29 | -1.47 |
| **Dallas** | 232.83 | 219.63 | 13.20 |
| **Detroit** | 203.17 | 216.71 | -13.54 |
| **District of Columbia (DCPS)** | 221.82 | 226.88 | -5.06 |
| **Fresno** | 217.74 | 224.87 | -7.13 |
| **Hillsborough County** | 243.33 | 234.30 | 9.03 |
| **Houston** | 237.04 | 224.60 | 12.44 |
| **Jefferson County** | 235.24 | 235.60 | -0.35 |
| **Los Angeles** | 223.26 | 226.52 | -3.26 |
| **Miami** | 235.51 | 228.86 | 6.65 |
| **Milwaukee** | 219.55 | 223.11 | -3.56 |
| **New York City** | 234.46 | 228.32 | 6.14 |
| **Philadelphia** | 225.31 | 223.24 | 2.07 |
| **San Diego** | 238.94 | 233.44 | 5.50 |
| | | | |
| **Large City Schools*** | 232.90 | 229.52 | 3.38 |
| **Not Large City Schools**□ | 242.08 | 241.29 | 0.79 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

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Exhibit A-8. Grade Eight Mathematics Actual Performance, Expected Performance, and District Effects, 2011

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 275.11 | 262.71 | 12.41 |
| **Atlanta** | 265.99 | 273.47 | -7.48 |
| **Austin** | 287.38 | 272.28 | 15.10 |
| **Baltimore** | 261.54 | 262.78 | -1.24 |
| **Boston** | 282.14 | 265.36 | 16.78 |
| **Charlotte** | 285.46 | 277.36 | 8.10 |
| **Chicago** | 270.50 | 265.47 | 5.03 |
| **Cleveland** | 256.10 | 253.19 | 2.90 |
| **Dallas** | 274.29 | 261.12 | 13.18 |
| **Detroit** | 246.46 | 255.24 | -8.78 |
| **District of Columbia (DCPS)** | 256.21 | 263.26 | -7.05 |
| **Fresno** | 256.62 | 265.68 | -9.05 |
| **Hillsborough County** | 282.26 | 276.14 | 6.12 |
| **Houston** | 279.54 | 267.03 | 12.51 |
| **Jefferson County** | 274.46 | 275.76 | -1.30 |
| **Los Angeles** | 261.04 | 267.10 | -6.06 |
| **Miami** | 271.86 | 271.42 | 0.44 |
| **Milwaukee** | 254.40 | 259.46 | -5.06 |
| **New York City** | 272.67 | 267.57 | 5.11 |
| **Philadelphia** | 265.28 | 262.95 | 2.34 |
| **San Diego** | 278.73 | 277.67 | 1.07 |
| | | | |
| **Large City Schools*** | 274.17 | 271.18 | 2.98 |
| **Not Large City Schools**□ | 285.68 | 284.50 | 1.18 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

Exhibit A-9. Grade Four Reading Actual Performance, Expected Performance, and District Effects, 2013

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 206.55 | 209.00 | -2.44 |
| **Atlanta** | 214.28 | 207.60 | 6.68 |
| **Austin** | 220.81 | 209.44 | 11.36 |
| **Baltimore** | 204.26 | 205.76 | -1.50 |
| **Boston** | 214.40 | 200.02 | 14.38 |
| **Charlotte** | 226.44 | 217.80 | 8.64 |
| **Chicago** | 206.15 | 205.15 | 1.00 |
| **Cleveland** | 189.66 | 193.59 | -3.92 |
| **Dallas** | 204.65 | 194.89 | 9.76 |
| **Detroit** | 189.71 | 194.35 | -4.65 |
| **District of Columbia (DCPS)** | 205.73 | 205.94 | -0.21 |
| **Fresno** | 195.85 | 201.75 | -5.90 |
| **Hillsborough County** | 227.86 | 214.22 | 13.64 |
| **Houston** | 207.83 | 200.79 | 7.04 |
| **Jefferson County** | 220.94 | 216.81 | 4.13 |
| **Los Angeles** | 204.85 | 206.04 | -1.20 |
| **Miami** | 223.11 | 207.60 | 15.51 |
| **Milwaukee** | 198.71 | 201.54 | -2.83 |
| **New York City** | 216.27 | 208.36 | 7.91 |
| **Philadelphia** | 199.93 | 202.38 | -2.45 |
| **San Diego** | 217.77 | 213.11 | 4.66 |
| | | | |
| **Large City Schools*** | 212.43 | 208.72 | 3.72 |
| **Not Large City Schools‡** | 223.60 | 222.89 | 0.71 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

Exhibit A-10. Grade Eight Reading Actual Performance, Expected Performance, and District Effects, 2013

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 256.42 | 255.23 | 1.19 |
| **Atlanta** | 254.87 | 250.01 | 4.85 |
| **Austin** | 261.72 | 257.99 | 3.73 |
| **Baltimore** | 252.52 | 249.97 | 2.55 |
| **Boston** | 257.22 | 246.87 | 10.35 |
| **Charlotte** | 266.99 | 262.92 | 4.07 |
| **Chicago** | 253.75 | 250.58 | 3.17 |
| **Cleveland** | 239.25 | 238.25 | 1.00 |
| **Dallas** | 251.67 | 245.17 | 6.50 |
| **Detroit** | 239.61 | 242.01 | -2.40 |
| **District of Columbia (DCPS)** | 245.55 | 247.42 | -1.87 |
| **Fresno** | 245.40 | 250.36 | -4.96 |
| **Hillsborough County** | 267.50 | 261.73 | 5.77 |
| **Houston** | 252.50 | 250.19 | 2.31 |
| **Jefferson County** | 260.69 | 262.63 | -1.95 |
| **Los Angeles** | 250.18 | 253.24 | -3.06 |
| **Miami** | 259.16 | 255.77 | 3.38 |
| **Milwaukee** | 242.74 | 244.70 | -1.96 |
| **New York City** | 256.78 | 251.99 | 4.79 |
| **Philadelphia** | 248.72 | 247.75 | 0.97 |
| **San Diego** | 259.97 | 261.04 | -1.07 |
| | | | |
| **Large City Schools*** | 257.98 | 256.31 | 1.67 |
| **Not Large City Schools**□ | 269.47 | 269.47 | -0.00 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

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Exhibit A-11. Grade Four Mathematics Actual Performance, Expected Performance, and District Effects, 2013

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 234.53 | 231.79 | 2.75 |
| **Atlanta** | 233.10 | 226.81 | 6.29 |
| **Austin** | 244.97 | 231.53 | 13.44 |
| **Baltimore** | 222.87 | 221.53 | 1.34 |
| **Boston** | 236.87 | 224.38 | 12.50 |
| **Charlotte** | 247.35 | 237.18 | 10.18 |
| **Chicago** | 230.50 | 227.93 | 2.57 |
| **Cleveland** | 216.27 | 215.96 | 0.31 |
| **Dallas** | 234.22 | 219.84 | 14.39 |
| **Detroit** | 204.25 | 215.90 | -11.65 |
| **District of Columbia (DCPS)** | 228.61 | 226.50 | 2.11 |
| **Fresno** | 219.69 | 225.37 | -5.68 |
| **Hillsborough County** | 242.80 | 235.15 | 7.65 |
| **Houston** | 235.90 | 224.54 | 11.35 |
| **Jefferson County** | 233.70 | 235.01 | -1.32 |
| **Los Angeles** | 228.46 | 229.59 | -1.13 |
| **Miami** | 237.40 | 229.44 | 7.96 |
| **Milwaukee** | 221.45 | 224.22 | -2.77 |
| **New York City** | 235.84 | 231.48 | 4.36 |
| **Philadelphia** | 223.38 | 225.09 | -1.71 |
| **San Diego** | 240.88 | 235.56 | 5.32 |
| | | | |
| **Large City Schools*** | 234.96 | 230.28 | 4.68 |
| **Not Large City Schools□** | 242.80 | 241.13 | 1.67 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

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Exhibit A-12. Grade Eight Mathematics Actual Performance, Expected Performance, and District Effects, 2013

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 273.89 | 262.59 | 11.3 |
| **Atlanta** | 267.19 | 272.38 | -5.19 |
| **Austin** | 285.00 | 273.50 | 11.5 |
| **Baltimore** | 260.72 | 259.13 | 1.59 |
| **Boston** | 283.76 | 261.62 | 22.15 |
| **Charlotte** | 289.43 | 278.35 | 11.07 |
| **Chicago** | 269.29 | 266.22 | 3.07 |
| **Cleveland** | 253.26 | 251.07 | 2.18 |
| **Dallas** | 274.84 | 260.92 | 13.92 |
| **Detroit** | 240.00 | 252.06 | -12.05 |
| **District of Columbia (DCPS)** | 260.76 | 262.19 | -1.43 |
| **Fresno** | 260.05 | 267.85 | -7.8 |
| **Hillsborough County** | 284.07 | 276.92 | 7.15 |
| **Houston** | 280.70 | 265.92 | 14.78 |
| **Jefferson County** | 273.57 | 276.16 | -2.59 |
| **Los Angeles** | 264.90 | 270.79 | -5.89 |
| **Miami** | 273.98 | 271.78 | 2.2 |
| **Milwaukee** | 257.62 | 258.29 | -0.67 |
| **New York City** | 274.11 | 268.74 | 5.37 |
| **Philadelphia** | 267.03 | 261.99 | 5.04 |
| **San Diego** | 277.54 | 279.60 | -2.06 |
| | | | |
| **Large City Schools*** | 275.87 | 272.18 | 3.70 |
| **Not Large City Schools‡** | 286.30 | 284.54 | 1.76 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

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Exhibit A-13. Grade Four Reading Actual Performance, Expected Performance, and District Effects in 2015

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 206.88 | 209.03 | -2.16 |
| **Atlanta** | 212.18 | 213.04 | -0.86 |
| **Austin** | 220.02 | 210.30 | 9.71 |
| **Baltimore** | 199.07 | 203.23 | -4.16 |
| **Boston** | 219.46 | 204.77 | 14.69 |
| **Charlotte** | 225.58 | 217.75 | 7.83 |
| **Chicago** | 213.09 | 208.68 | 4.41 |
| **Cleveland** | 196.81 | 195.06 | 1.74 |
| **Dallas** | 213.91 | 200.16 | 3.87 |
| **Detroit** | 204.03 | 195.60 | -9.15 |
| **District of Columbia (DCPS)** | 186.45 | 210.84 | 3.07 |
| **Duval County** | 225.27 | 218.64 | 6.62 |
| **Fresno** | 198.95 | 204.45 | -5.5 |
| **Hillsborough County** | 229.65 | 216.39 | 13.25 |
| **Houston** | 209.55 | 204.34 | 5.21 |
| **Jefferson County** | 221.95 | 216.93 | 5.02 |
| **Los Angeles** | 204.43 | 208.97 | -4.54 |
| **Miami** | 226.41 | 213.57 | 12.85 |
| **Milwaukee** | -- | 208.66 | -- |
| **New York City** | 214.01 | 206.08 | 5.35 |
| **Philadelphia** | 200.53 | 212.63 | -5.55 |
| **San Diego** | 215.91 | 218.64 | 3.27 |
| | | 204.45 | |
| **Large City Schools*** | 213.65 | 216.39 | 2.17 |
| **Not Large City Schools□** | 224.28 | 204.34 | 0.72 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

Exhibit A-14. Grade Eight Reading Actual Performance, Expected Performance, and District Effects in 2015

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 251.66 | 257.60 | -5.94 |
| **Atlanta** | 252.87 | 250.25 | 2.62 |
| **Austin** | 262.14 | 258.29 | 3.85 |
| **Baltimore** | 244.27 | 245.29 | -1.02 |
| **Boston** | 258.71 | 249.79 | 8.93 |
| **Charlotte** | 263.86 | 261.28 | 2.58 |
| **Chicago** | 257.15 | 250.05 | 7.10 |
| **Cleveland** | 240.79 | 240.19 | 0.59 |
| **Dallas** | 245.83 | 243.18 | 7.12 |
| **Detroit** | 250.30 | 241.47 | -3.68 |
| **District of Columbia (DCPS)** | 237.79 | 247.74 | -1.91 |
| **Duval County** | 264.39 | 263.31 | 1.08 |
| **Fresno** | 242.51 | 251.97 | -9.46 |
| **Hillsborough County** | 261.54 | 258.02 | 3.52 |
| **Houston** | 252.02 | 251.48 | 0.54 |
| **Jefferson County** | 261.83 | 260.67 | 1.16 |
| **Los Angeles** | 251.28 | 252.87 | -1.59 |
| **Miami** | 265.22 | 257.16 | 8.06 |
| **Milwaukee** | -- | 254.43 | -- |
| **New York City** | 258.61 | 250.32 | 4.18 |
| **Philadelphia** | 248.65 | 261.53 | -1.67 |
| **San Diego** | 262.29 | 263.31 | 0.75 |
| | | | |
| **Large City Schools*** | 257.20 | 255.52 | 1.67 |
| **Not Large City Schools**‡ | 267.30 | 266.96 | 0.33 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

Exhibit A-15. Grade Four Mathematics Actual Performance, Expected Performance, and District Effects in 2015

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 230.58 | 233.30 | -2.72 |
| **Atlanta** | 228.09 | 226.06 | 2.03 |
| **Austin** | 246.14 | 231.60 | 14.54 |
| **Baltimore** | 214.91 | 222.20 | -7.29 |
| **Boston** | 235.53 | 226.54 | 8.99 |
| **Charlotte** | 247.82 | 235.49 | 12.33 |
| **Chicago** | 231.92 | 228.08 | 3.84 |
| **Cleveland** | 219.15 | 216.44 | 2.71 |
| **Dallas** | 237.93 | 222.20 | 15.73 |
| **Detroit** | 204.64 | 215.43 | -10.79 |
| **District of Columbia (DCPS)** | 232.24 | 228.82 | 3.43 |
| **Duval County** | 242.80 | 236.08 | 6.72 |
| **Fresno** | 217.68 | 225.23 | -7.55 |
| **Hillsborough County** | 243.61 | 235.28 | 8.33 |
| **Houston** | 238.71 | 225.53 | 13.18 |
| **Jefferson County** | 235.75 | 234.16 | 1.59 |
| **Los Angeles** | 224.19 | 229.66 | -5.47 |
| **Miami** | 242.10 | 231.91 | 10.19 |
| **Milwaukee** | -- | -- | -- |
| **New York City** | 231.05 | 229.26 | 1.79 |
| **Philadelphia** | 217.45 | 225.15 | -7.69 |
| **San Diego** | 232.76 | 233.84 | -1.08 |
| | | | |
| **Large City Schools*** | 234.00 | 230.82 | 3.18 |
| **Not Large City Schools‡** | 241.68 | 240.77 | 0.91 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

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Exhibit A-16. Grade Eight Mathematics Actual Performance, Expected Performance, and District Effects in 2015

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| **Albuquerque** | 270.85 | 272.15 | -1.30 |
| **Atlanta** | 266.59 | 264.14 | 2.45 |
| **Austin** | 284.34 | 274.18 | 10.16 |
| **Baltimore** | 256.07 | 256.81 | -0.74 |
| **Boston** | 282.46 | 263.28 | 19.19 |
| **Charlotte** | 286.57 | 277.29 | 9.28 |
| **Chicago** | 275.32 | 265.40 | 9.91 |
| **Cleveland** | 254.62 | 251.38 | 3.24 |
| **Dallas** | 271.20 | 259.06 | 12.14 |
| **Detroit** | 244.69 | 251.91 | -7.22 |
| **District of Columbia (DCPS)** | 260.84 | 261.35 | -0.51 |
| **Duval County** | 274.90 | 275.93 | -1.02 |
| **Fresno** | 257.32 | 266.74 | -9.42 |
| **Hillsborough County** | 276.04 | 273.57 | 2.47 |
| **Houston** | 276.63 | 266.59 | 10.05 |
| **Jefferson County** | 271.92 | 275.45 | -3.53 |
| **Los Angeles** | 264.01 | 268.70 | -4.69 |
| **Miami** | 274.74 | 272.25 | 2.49 |
| **Milwaukee** | -- | 269.95 | -- |
| **New York City** | 276.67 | 263.58 | 6.72 |
| **Philadelphia** | 267.50 | 278.59 | 3.92 |
| **San Diego** | 281.26 | 275.93 | 2.66 |
| | | | |
| **Large City Schools*** | 274.38 | 270.81 | 3.57 |
| **Not Large City Schools**□ | 284.05 | 282.30 | 1.75 |

* Includes district-authorized charters.
‡ Includes charters authorized by others and independent charters.

Exhibit A-17. Grade Four Reading Actual Performance, Expected Performance, and District Effects in 2017

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| Albuquerque | 206.83 | 212.05 | -5.22 |
| Atlanta | 213.96 | 210.27 | 3.69 |
| Austin | 216.74 | 211.03 | 5.71 |
| Baltimore | 197.37 | 203.66 | -6.28 |
| Boston | 217.15 | 203.59 | 13.56 |
| Charlotte | 224.89 | 219.05 | 5.83 |
| Chicago | 211.26 | 208.12 | 3.13 |
| Clark County | 213.38 | 214.24 | -0.86 |
| Cleveland | 196.41 | 195.15 | 1.26 |
| Dallas | 201.10 | 200.69 | 0.41 |
| Denver | 213.93 | 195.38 | 18.54 |
| Detroit | 181.52 | 195.57 | -14.05 |
| District of Columbia (DCPS) | 213.00 | 210.45 | 2.55 |
| Duval County | 225.62 | 218.37 | 7.25 |
| Fort Worth | 205.91 | 201.95 | 3.96 |
| Fresno | 202.96 | 205.80 | -2.84 |
| Guilford County | 222.03 | 216.54 | 5.49 |
| Hillsborough County | 227.23 | 217.95 | 9.28 |
| Houston | 205.31 | 204.44 | 0.87 |
| Jefferson County | 220.88 | 217.82 | 3.06 |
| Los Angeles | 207.50 | 210.54 | -3.04 |
| Miami | 228.92 | 214.59 | 14.33 |
| Milwaukee | 195.23 | 203.25 | -8.02 |
| New York City | 214.38 | 211.40 | 2.98 |
| Philadelphia | 197.33 | 205.53 | -8.21 |
| San Diego | 221.69 | 213.95 | 7.74 |
| Shelby County | 203.14 | 205.70 | -2.56 |
| | | | |
| Large City Schools* | 213.25 | 211.05 | 2.20 |
| Not Large City Schools‡ | 223.55 | 222.73 | 0.82 |

* Includes district-authorized charters
‡ Includes charters authorized by others and independent charters

Exhibit A-18. Grade Eight Reading Actual Performance, Expected Performance, and District Effects in 2017

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| Albuquerque | 255.17 | 257.39 | -2.22 |
| Atlanta | 254.29 | 252.09 | 2.20 |
| Austin | 262.97 | 259.27 | 3.70 |
| Baltimore | 242.73 | 247.68 | -4.95 |
| Boston | 261.87 | 249.96 | 11.92 |
| Charlotte | 260.64 | 262.55 | -1.91 |
| Chicago | 258.93 | 254.30 | 4.63 |
| Clark County | 258.54 | 258.71 | -0.17 |
| Cleveland | 237.76 | 240.45 | -2.69 |
| Dallas | 246.47 | 239.73 | 6.74 |
| Denver | -- | -- | -- |
| Detroit | 235.85 | 240.64 | -4.79 |
| District of Columbia (DCPS) | 246.73 | 252.29 | -5.55 |
| Duval County | 263.29 | 261.77 | 1.52 |
| Fort Worth | 248.59 | 248.66 | -0.07 |
| Fresno | 244.60 | 252.68 | -8.08 |
| Guilford County | 259.89 | 261.35 | -1.46 |
| Hillsborough County | 265.16 | 261.71 | 3.45 |
| Houston | 249.60 | 251.99 | -2.39 |
| Jefferson County | 260.94 | 262.96 | -2.02 |
| Los Angeles | 254.78 | 256.97 | -2.19 |
| Miami | 261.26 | 257.22 | 4.04 |
| Milwaukee | 245.04 | 247.39 | -2.35 |
| New York City | 259.24 | 256.76 | 2.48 |
| Philadelphia | 249.37 | 250.07 | -0.70 |
| San Diego | 265.43 | 263.15 | 2.28 |
| Shelby County | 247.92 | 250.13 | -2.21 |
| | | | |
| Large City Schools* | 258.41 | 256.69 | 1.73 |
| Not Large City Schools‡ | 268.53 | 267.57 | 0.96 |

* Includes district-authorized charters

‡ Includes charters authorized by others and independent charters

Exhibit A-19. Grade Four Mathematics Actual Performance, Expected Performance, and District Effects in 2017

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| Albuquerque | 229.90 | 232.80 | -2.90 |
| Atlanta | 231.14 | 226.24 | 4.90 |
| Austin | 243.32 | 232.01 | 11.31 |
| Baltimore | 215.36 | 220.20 | -4.83 |
| Boston | 233.33 | 224.48 | 8.86 |
| Charlotte | 243.87 | 235.96 | 7.92 |
| Chicago | 231.81 | 227.64 | 4.17 |
| Clark County | 230.13 | 233.50 | -3.36 |
| Cleveland | 214.37 | 213.59 | 0.78 |
| Dallas | 233.77 | 220.71 | 13.06 |
| Denver | 228.76 | 217.85 | 10.91 |
| Detroit | 199.89 | 213.86 | -13.97 |
| District of Columbia (DCPS) | 230.80 | 227.77 | 3.03 |
| Duval County | 247.50 | 234.76 | 12.74 |
| Fort Worth | 230.47 | 223.58 | 6.89 |
| Fresno | 221.42 | 224.94 | -3.52 |
| Guilford County | 240.03 | 233.97 | 6.05 |
| Hillsborough County | 244.64 | 235.63 | 9.01 |
| Houston | 235.25 | 225.60 | 9.65 |
| Jefferson County | 233.31 | 234.70 | -1.39 |
| Los Angeles | 223.14 | 230.30 | -7.16 |
| Miami | 244.99 | 232.69 | 12.30 |
| Milwaukee | 215.88 | 221.70 | -5.82 |
| New York City | 229.22 | 230.40 | -1.18 |
| Philadelphia | 214.33 | 223.04 | -8.71 |
| San Diego | 237.51 | 234.82 | 2.69 |
| Shelby County | 224.71 | 222.48 | 2.23 |
| | | | |
| Large City Schools* | 231.52 | 229.98 | 1.54 |
| Not Large City Schools‡ | 241.31 | 239.89 | 1.42 |

* Includes district-authorized charters
‡ Includes charters authorized by others and independent charters

Exhibit A-20. Grade Eight Mathematics Actual Performance, Expected Performance, and District Effects in 2017.

| TUDA/ Jurisdiction | Actual Mean | Expected Mean | District Effect |
|---|---|---|---|
| Albuquerque | 269.84 | 270.35 | -0.50 |
| Atlanta | 265.15 | 263.07 | 2.08 |
| Austin | 283.34 | 273.97 | 9.37 |
| Baltimore | 255.84 | 258.44 | -2.59 |
| Boston | 280.38 | 263.06 | 17.31 |
| Charlotte | 287.78 | 277.12 | 10.66 |
| Chicago | 275.88 | 266.23 | 9.65 |
| Clark County | 272.82 | 273.91 | -1.09 |
| Cleveland | 257.62 | 250.15 | 7.47 |
| Dallas | 268.25 | 254.57 | 13.68 |
| Denver | -- | -- | -- |
| Detroit | 245.58 | 250.96 | -5.37 |
| District of Columbia (DCPS) | 263.39 | 264.60 | -1.21 |
| Duval County | 275.62 | 274.41 | 1.22 |
| Fort Worth | 268.47 | 262.44 | 6.02 |
| Fresno | 254.95 | 265.53 | -10.58 |
| Guilford County | 277.01 | 274.44 | 2.56 |
| Hillsborough County | 277.35 | 275.51 | 1.84 |
| Houston | 273.49 | 265.32 | 8.17 |
| Jefferson County | 270.95 | 276.44 | -5.49 |
| Los Angeles | 266.99 | 269.88 | -2.89 |
| Miami | 274.03 | 269.79 | 4.24 |
| Milwaukee | 254.40 | 259.50 | -5.10 |
| New York City | 275.35 | 271.02 | 4.33 |
| Philadelphia | 260.78 | 262.45 | -1.67 |
| San Diego | 283.50 | 279.86 | 3.64 |
| Shelby County | 256.98 | 262.10 | -5.12 |
| | | | |
| Large City Schools* | 274.50 | 270.71 | 3.80 |
| Not Large City Schools‡ | 284.72 | 282.47 | 2.25 |

* Includes district-authorized charters
‡ Includes charters authorized by others and independent charters