

*Stepping Up: How Are American Cities Delivering on the
Promise of Public School Choice?*

Technical Report: Scoring and Measures

November 2017



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Introduction

The Center on Reinventing Public Education (CRPE) conducted this study in two phases. In fall 2016, we created a baseline for our analysis by asking education and community leaders across the country about the most important education issues they were facing.

Following feedback, we summarized what we heard into three guiding questions:

- Is the education system continuously improving?
- Do all students have access to a high-quality education?
- Is the education strategy rooted in the community?

These questions drove our data collection and analysis. For each question, we developed indicators of how cities are doing (outcomes), and what they are doing (system reforms). From there we created an analytical framework to guide our research.

Analytical Framework

The education system is continuously improving	
<p>Student and School Outcomes</p> <p>A1. School proficiency rates in math and reading are improving</p> <p>A2. Low-scoring schools do not remain low scoring for several consecutive years</p> <p>A3. Graduation rates are improving</p>	<p>System Reforms</p> <p>A4. Schools have the kinds of teachers they need</p> <p>A5. Schools have the kinds of leaders they need</p> <p>A6. Funding equitably follows students</p>
All students have access to a high-quality education	
<p>Student and School Outcomes</p> <p>B1a. Low-income students in the city are performing better than their peers nationally</p> <p>B1b. Student sub-groups are enrolling in the city’s top-scoring schools at similar rates</p> <p>B2. Students are equitably enrolled in advanced coursework</p>	<p>System Reforms</p> <p>B3. The school supply represents an array of models</p> <p>B4. The city is being strategic about opening and closing schools</p> <p>B5. Families have the information they need and know how to use it</p> <p>B6. The enrollment process is working for families</p> <p>B7. Transportation is working for families</p>
The education strategy is rooted in the community	
<p>Student and School Outcomes</p>	<p>System Reforms</p> <p>C1. The education system responds to community feedback</p> <p>C2. The city engages families in educational decisions that impact them</p> <p>C3. A variety of groups are engaged in education</p> <p>C4. A strong and deep coalition of support exists for the education strategy</p>

Is the education system continuously improving?

The concepts of continuous improvement and access to high-quality schools are closely related. CRPE's previous work has emphasized the need for choice paired with a distribution of high-quality, good-fit schools. For this project, we focused on school-level improvement. Our outcomes measured city graduation rates and proficiency rate gains in reading and math. System reforms indicators focused on the resources, specifically school-level talent and budget flexibility, that were available to schools to make improvements.

Do all students have access to a high-quality education?

To understand student access to education opportunities, we used three possible outcome indicators. For every city, we measured student subgroup enrollment in high school advanced math coursework. For most cities, we used an index developed by Education Cities and GreatSchools that measures how well low-income students are performing in math and reading relative to their peers nationwide (the [Education Equality Index](#)). For other cities, we identified student enrollment patterns in top-scoring elementary and middle schools. System reform indicators measured how the choice process is working for families and how education leaders are managing the city's school portfolio.

Is the education strategy rooted in the community?

In many cities, education leaders are trying to improve how they involve communities in education reform efforts. We lacked comparable outcomes data, so this category used media review, document review, and interview questions to identify grassroots support for the education strategy and school system responsiveness to families and community members.

This project builds on CRPE's previous work. In developing our indicators and criteria, we drew on the seven components of the [Portfolio Strategy](#), as well as prior work on choice and school portfolio management. The outcomes measures are updated versions of indicators we used in our 2015 report, [Measuring Up: Educational Improvement and Opportunity in 50 Cities](#). Our community engagement indicators are based on prior CRPE work as well as research about public participation and stakeholder communication from the International Association for Public Participation, the National Center for Statistics, and the Annenberg Institute of School Reform at Brown University.

Our outcomes indicators present data from all charter and district schools within a city's municipal boundary. We collect data from our system reform indicators across both district and charter sectors, unless otherwise noted.

City Selection

The 18 cities in this study are Atlanta, Georgia; Boston, Massachusetts; Camden, New Jersey; Cleveland, Ohio; Chicago, Illinois; Denver, Colorado; Houston, Texas; Indianapolis, Indiana; Kansas City, Kansas; Los Angeles, California; Memphis, Tennessee; New Orleans, Louisiana; New York City, New York; Oakland, California; Philadelphia, Pennsylvania; San Antonio, Texas; Tulsa, Oklahoma; and Washington, D.C.

We chose to study these cities because they are pursuing an improvement strategy that gives families choice among public school options, both district and charter. In all the cities, district and charter schools are held to high standards of accountability, resulting in intervention or possibly closure if they do not meet those standards. In most of the cities, at least a subset of district schools are also given some degree of decisionmaking autonomy over staffing, curriculum, and/or budget.

However, the cities differ in how long and to what extent they have been pursuing reform strategies. Boston, Cleveland, Chicago, Houston, Los Angeles, New York City, Oakland, Philadelphia, and Washington, D.C., were early adopters of charter schools in the mid-1990s. Throughout the 2000s, Denver, Indianapolis, and New Orleans launched comprehensive initiatives to improve school quality and family access to public school options. The two most recent cities to do so were Cleveland in 2012 and Camden in 2013. Atlanta, Kansas City, San Antonio, and Tulsa are in the midst of implementing strategies to improve school quality and the choice process.

The scale of the work varies as well. Some cities can wrap their arms around the challenge, like Camden, educating 10,500 students, while New York City educates over a million students. Each city has a different share of students enrolled in charter schools. New Orleans has the highest percentage of students enrolled in charter schools (92 percent), while Tulsa has the lowest (8 percent).

The cities in our analysis also represent a range of governance models. Some have state-controlled education systems (Camden, and Memphis), others are controlled by the mayor (Boston, Cleveland, Chicago, New York City, and Washington, D.C.), and one is controlled by both (Philadelphia). In most cities, a single district formulates and guides the education strategy (Atlanta, Denver, Kansas City, Los Angeles, Oakland, and Tulsa). In a couple of cities, the charter sector is organized as a single body that works alongside the district (New Orleans and Washington, D.C.), while in some, multiple districts exist within the same municipal boundary (Houston, Indianapolis, Memphis, and San Antonio). At CRPE, we are agnostic about what the best model is—we are simply interested in knowing whether the city has been successful in making sure its model works for students and families.

Table 1. City Characteristics

	District		Charter	
	Primary district(s) and oversight	Districts in city	Authorizers	Enrollment share†
Atlanta	APS: Elected board	1	District, state	16%
Boston	BPS: Mayoral appointed board	1	State	19%
Camden	Camden City School District: State control	1	State	34%
Cleveland	CMUSD: Mayoral appointed board	1	District, state, higher education institutions, nonprofits	31%
Chicago	CPS: Mayoral appointed board	1	District, state	15%
Denver	DPS: Elected board	1	District	18%
Houston	HISD: Elected board	17	District, state	22%
Indianapolis	IPS: Elected board	11	Mayor, state, higher education institution, independent chartering board	31%
Kansas City	KCPS: Elected board	1	District, state, higher education institutions	40%
Los Angeles	LAUSD: Elected board	1	District, county	24%
Memphis	SCS: Elected board ASD: State control	2	District, state	11%*
New Orleans	OPSB: Elected board RSD: State control	2	District, state	92%
New York City	NYCDOE: Mayoral control	1	District, state, higher education institution	9%
Oakland	OUSD: Elected board	1	District, county	28%
Philadelphia	SDP: Mayoral control and state appointed board	1	Mayoral, state appointed board	32%
San Antonio	SAISD: Elected board	14	District, state	30%
Tulsa	TPS: Elected board	11	District, higher education institution	8%††
Washington, D.C.	DCPS: Mayoral control	1	Independent chartering board	45%

† Share of public school students enrolled in charter schools: *A Growing Movement: America's Largest Charter Public School Communities and Their Impact on Student Outcomes*, 11th ed. (National Alliance for Public Charter Schools, 2016).

†† *Oklahoma Public School Resource Center*.

* Enrollment is only for Shelby County Schools and does not include the Achievement School District.

System Reforms

Data Collection

For each city, we collected information about district and charter policy related to school choice, talent, and the district's school improvement strategy from the district website, charter authorizer website(s), enrollment system(s), and school information guide(s). We used an analytical framework with set criteria to guide data collection.

System Reforms Data

- Semi-structured interviews with district leaders, charter sector leaders, and community groups, February 2017 to July 2017
- Structured review of education-related media coverage from the city’s largest daily newspaper, August 2016 to May 2017
- Website and policy document reviews

Following this initial review, we then conducted three to six interviews per city using a semi-structured interview protocol. In total, we conducted 85 interviews. All our questions were posed to at least two interviewees per city, and questions about community engagement were asked of everyone.

For each city, we conducted a 30- to 60-minute interview with representatives from the district and charter sectors. We also conducted two interviews with people who could speak about community and family experience with education in the city (Table 2).

Table 2. Types of Interviewees and Their Frequency

Sector represented	Type of interviewee	Number
District	Director of a district office in charge of school portfolio management or improving school quality†	15
	Director in Human Resources or Talent office	9
	<i>Other:</i> Deputy Superintendent, Deputy Chief of Staff, Assistant to the Superintendent	4
	Director in community engagement office	2
Charter	Director of a nonprofit organization that supports, oversees, or coordinates the charter sector, including regional offices of statewide charter school associations	7
	Director of an organization that improves the quality of schools citywide by making investments in talent, replicating quality schools, and/or coordinating efforts citywide	5
	<i>Other:</i> Director at an independent charter district, authorizing board, or research organization	4
	Director of a charter management organization	2
	Director in a District Charter Schools Office	2
Community	Director of an organization that helps families through the choice process	10
	Director at an education or parent advocacy organization	8
	Member of a regional community school board or parent activist	8
	Director of a community-based organization that works with families, but education is only one part of its mission*	7
	Director of an organization that improves the quality of schools citywide by making investments in talent, replicating quality schools, and/or coordinating efforts citywide	2
		Total: 85

† Examples include Portfolio Office, Office of Innovation and Improvement, Office of Planning, Office of Strategy and Performance Management, Office of Improvement.

* This included organizations such as the Urban League, public library systems, community development organizations, faith-based organizations or coalitions, and neighborhood planning units.

We started with established contacts in each city, typically from the district and/or charter sector. We used snowball sampling to identify additional contacts.

For more information, contact the Center on Reinventing Public Education at crpe@uw.edu.

Scoring the System Reforms

We scored each system reform on a 4-point scale, from 0 to 3. We used words to help readers interpret the individual indicator scores:

- 0 = Little in Place
- 1 = Developing
- 2 = Good
- 3 = Exemplar

A city that received a score of 0 has little in place in terms of both policy and implementation. A score of 1 means that the strategy is in a developing state in terms of both policy and implementation. A score of 2 means the city has good policy, but the reform falls short of achieving its goal. A score of 3 means the city excels at meeting the indicator’s standards.

When scoring, a city had to meet the criteria for both the district and charter sector to receive a certain indicator score. Unless otherwise noted in the scoring criteria, we used the lowest sector score for the city as a whole. For example, if the district received 2 for having the teachers it needs but the charter sector received a 1, the city score would be 1 (developing).

Scoring the Three Goals

When scoring individual cities, we translated our three guiding questions into the following three goals: The system is continuously improving, students have access to a high-quality education, and the education strategy is rooted in the community. Each goal has between three and five system reforms for a total of twelve indicators.

We scored each indicator on a 4-point scale, from 0 to 3. We calculated the goal scores by adding the individual indicator scores together to arrive at a raw score for each goal. For example, “the education system is continuously improving” goal has three indicators for possible raw scores of 0 to 9. For each of our goals, we distributed the possible raw scores into four groups to arrive at one of four final goal scores: Little in Place, Developing, Good, or Exemplar.

Table 3. Translating the Raw Scores into Goal Scores

Goal	Little in Place	Developing	Good	Exemplar
The education system is continuously improving	0-1	2-4	5-7	8-9
Students have access to a high-quality education	0-3	4-7	8-11	12-15
The education strategy is rooted in the community	0-2	3-6	7-9	10-12

Table 4 shows how we would have scored a sample city:

Table 4. Scoring Example

Goal	Indicator & Score	Raw Score	Final Goal Score
The education system is continuously improving	<i>Schools have the kinds of teachers they need: 1</i> <i>Schools have the kinds of leaders they need: 2</i> <i>Funding equitably follows students: 0</i>	3	Developing
Students have access to a high-quality education	<i>The school supply represents an array of models: 3</i> <i>The city is being strategic about opening and closing schools: 1</i> <i>Families have the information they need and know how to use it: 2</i> <i>The enrollment process is working for families: 2</i> <i>Transportation is working for families: 2</i>	10	Good
The education strategy is rooted in the community	<i>The education system responds to community feedback: 0</i> <i>The city engages families about educational decisions that impact them: 1</i> <i>A variety of community groups are engaged in education: 1</i> <i>A strong and deep coalition of support exists for the education strategy: 0</i>	2	Little in Place

Below are summaries of the scoring criteria researchers used for each system reform. Our actual rubrics provide a great deal more detail. For a copy of the rubrics, contact CRPE at crpe@uw.edu.

Goal: The school system is continuously improving

Do schools have the resources they need? School improvement happens at the school level, but making sure resources are available requires sound citywide policy. Having the right talent is critical for schools to be able to provide students with a quality education. Schools should also have control over their budgets so they have the resources they need for their student population.

Indicator	A4. Schools have the kinds of teachers they need
Source	District and charter interviews
Scoring	<i>Exemplar:</i> District and charter leaders report few problems with quantity, quality, or fit. <i>Good:</i> There are a few problems, but a strategy is in place to address them. <i>Developing:</i> There are problems, with an incomplete strategy in place or the strategy in place is not addressing perceived problems. <i>Little in Place:</i> There are problems, and there is no strategy in place.

Indicator	A5. Schools have the kinds of leaders they need
Source	District and charter interviews.
Scoring	<i>Exemplar:</i> District and charter leaders report few problems with quantity, quality, or fit. <i>Good:</i> There are a few problems, but a strategy is in place to address them. <i>Developing:</i> There are problems, with an incomplete strategy in place or the strategy in place is not addressing the stated problems. <i>Little in Place:</i> There are problems, and there is no strategy in place.

Note: We originally intended to use vacancy and retention data for Indicators A4 and A5, but because of inconsistent data collection across the cities, especially in the charter sector, we were only able to gather information about the perception of quality and fit accompanied by anecdotal information about quantity. A4 and A5 would have been best answered through principal surveys, but that was outside the scope of this project.

Indicator	A6. Funding equitably follows students
Source	Edunomics budget analysis and district interviews.
Scoring	<p><i>Exemplar:</i> More than 50% ($\geq 50\%$) of funds are sent to the school level.</p> <p><i>Good:</i> More than 5% but fewer than 50% ($\geq 5\%$ but $< 50\%$) of available funds are sent to the school level.</p> <p><i>Developing:</i> 5% or less ($< 5\%$) of available funds are sent to the school level, but there is a defined student-based allocation (SBA) formula.</p> <p><i>Little in Place:</i> 5% or less ($< 5\%$) of available funds are sent to the school level, and there is no defined SBA formula.</p>

Note: This indicator is only for district schools and does not address equity in funding for charter schools.

Goal: Students have access to a high-quality education

Do school choice and supply meet family needs? This goal addresses how well the city is doing with providing families access to quality schools. We look at what the city is doing to ensure quality schools are in every neighborhood, and how well the choice process is working for families who want to use it.

Indicator	B3. The school supply represents an array of models
Source	District and charter interviews to confirm new schools that opened between 2014-15 and 2016-17. Analysis of information guides and/or individual school websites to identify the instructional model and operator of each new school.
Scoring	<p><i>Exemplar:</i> New schools represent an array of instructional models and operators.</p> <p><i>Good:</i> New schools represent some variety of instructional models and operators.</p> <p><i>Developing:</i> New schools represent little variety in instructional model and operator.</p> <p><i>Little in Place:</i> New schools do not represent an array of instructional models and operators.</p>
Definitions	<p>Instructional model variety: We calculated the percent of non-traditional instructional models among new schools to determine variety. “Non-traditional” is defined as a model that offers a different instructional experience in terms of <i>how</i> a student is being taught. (We define <i>what</i> a student is taught as pertaining to curriculum rather than to instructional model.) Examples of non-traditional instructional models: dual-language, single gender, internship/ mentorship, virtual learning, military school, expeditionary, Montessori, competency-based, or similar. Does include blended learning and project-based learning when that model is used schoolwide. Does not include STEM, Early College, voc/tech, or arts magnet programs. Does not include blended learning or project-based learning when we could not confirm that it was a school-wide instructional model.</p> <p>Array of operators: We calculated the percent of single operators or small, local networks of 2-3 charter schools to determine operator variety.</p> <p>New school: All new K-12 schools in the city. In cities with multiple districts, the new school count included all new charter schools within the physical boundaries of the city, but only new district schools reported by the primary district. New schools also included a newly opened district or charter school; expanded level (but not grades); and transformation/restart/ turnaround schools as defined by the city, whether or not there is a change in operator, school building, school name, and/or school leader. New schools do not include expanded grades in an existing school model (e.g., middle school that expands from 5-7 to 5-8); Pre-K only programs; adult education programs (18+); or private schools, even those that are publicly funded.</p>

Indicator	B4. The city is being strategic about opening and closing schools
Source	District, charter, and community interviews and review of publicly available documents, when available, to identify the data and criteria being used to close and site schools.
Scoring	<p><i>Exemplar:</i> Education and community leaders perceive that the city is strategically managing the city’s portfolio of schools for both charter and district schools.</p> <p><i>Good:</i> Education and community leaders perceive that the city is being strategic about school closures or openings (charter and district), but not both.</p> <p><i>Developing:</i> Education and community leaders perceive that the city is opening and closing schools opportunistically in at least one sector.</p> <p><i>Little in Place:</i> Education and community leaders perceive that the city is opening and closing schools opportunistically in both sectors.</p>
Definitions	<i>Being strategic:</i> Using consistent data and criteria to guide school portfolio decisions every time there is a change in the school supply.

Note: We originally intended to use a quantitative measure for Indicator B5, but because of incomplete data collection across the cities, we were only able to collection information about the perception among education and community leaders about whether or not the school supply is being strategically managed.

Indicator	B5. Families have the information they need and know how to use it
Source	Community interviews and analysis of school information guides, district website(s), and/or charter authorizer website(s).
Scoring	<p><i>Exemplar:</i> Community leaders report that access and use of information is not a barrier for families.</p> <p><i>Good:</i> Community leaders report that access and use of information is a barrier for families. There is a citywide information strategy.</p> <p><i>Developing:</i> Community leaders report that access and use of information is a barrier for families. There is an information strategy, but it is not citywide and/or is incomplete.</p> <p><i>Little in Place:</i> Community leaders report that access and use of information is a barrier for families. There is no information strategy in place.</p>
Definitions	<i>Citywide information strategy:</i> Information for all schools in the city is available in a consolidated format.

Indicator	B6. The enrollment process is working for families
Source	Community interviews and analysis of the enrollment system(s) used in the city.
Scoring	<p><i>Exemplar:</i> Community leaders report that the enrollment process is not a barrier.</p> <p><i>Good:</i> Community leaders report that the enrollment process is a barrier. A citywide enrollment strategy is in place.</p> <p><i>Developing:</i> Community leaders report that the enrollment process is a barrier. A partial enrollment strategy is in place.</p> <p><i>Little in Place:</i> Community leaders report that the enrollment process is a barrier. No enrollment strategy is in place.</p>
Definitions	<i>Citywide enrollment strategy:</i> The city has a unified enrollment system, common application, and/or common lottery system used for all charter and district schools. If not a unified system, there are common applications within sectors accompanied by common timelines across sectors. Some schools may be missing, but this accounts for fewer than 10% of the total.

Indicator	B7. Transportation is working for families
Source	Community interviews and transportation policy as defined on the district website.
Scoring	<p><i>Exemplar:</i> Community leaders report that transportation is not a barrier.</p> <p><i>Good:</i> Community leaders report that transportation is a barrier. There is a citywide transportation strategy in place.</p> <p><i>Developing:</i> Community leaders report that transportation is a barrier. There is a partial strategy in place.</p> <p><i>Little in Place:</i> Community leaders report that transportation is a barrier. There is no strategy in place.</p>
Definitions	<i>Citywide transportation strategy:</i> Families have free transportation to any school outside the walk-zone through yellow buses, transit passes, or other (such as a circulator bus or travel reimbursement). This includes district schools of choice and all charter schools.

Goal: The education strategy is rooted in the community

Is the whole community engaged? Education is a citywide endeavor. When families, community organizations, and city leaders have the opportunity to provide feedback and share in the vision, the strategy is more likely to be sustainable and meet the needs of all students. In this goal, we look at how well the city is doing with engaging key stakeholders.

Indicator	C1. The education system responds to community feedback
Source	Community, district, and charter interviews.
Scoring	<p><i>Exemplar:</i> Community leaders perceive that the city is responsive to the concerns of the entire community on an ongoing basis.</p> <p><i>Good:</i> Community leaders perceive that the city is responsive on an ongoing basis. Engagement may be uneven, but education leaders are generally listening to the needs of all community members (e.g., certain types of parents or families living in certain regions).</p> <p><i>Developing:</i> Community leaders perceive that the city is responsive to community concerns, but only sporadically or when rolling out a major initiative. Engagement may be uneven, but education leaders are generally listening to the needs of all community members (e.g., certain types of parents or families living in certain regions).</p> <p><i>Little in Place:</i> Community leaders perceive that the city is not responsive to community concerns on an ongoing basis. Education leaders are not listening to the needs of all community members (e.g., certain types of parents or families living in certain regions).</p>

Indicator	C2. The city engages with families about educational decisions that impact them
Source	Community, district, and charter interviews.
Scoring	<p><i>Exemplar:</i> Families from charter and district schools are helping to shape the city’s school portfolio, and procedures are in place for this to be a regular practice.</p> <p><i>Good:</i> In either opening (includes restarting and turning around) or closing schools (may be improving or consolidating), both the charter and district sectors are fully engaging families.</p> <p><i>Developing:</i> One or both sectors are sporadically engaging families in shaping the city’s school portfolio.</p> <p><i>Little in Place:</i> One or both sectors are not at all engaging families in shaping the city’s school portfolio.</p>
Definitions	<i>Shaping the city’s school portfolio:</i> Depending on the city’s strategy, this may include opening, improving, restarting, turning around, consolidating, or closing schools.

Indicator	C3. A variety of community groups are engaged in education
Source	Community, district, and charter interviews.
Scoring	<p><i>Exemplar:</i> A cross-section of community groups is involved in the education strategy. Groups include those that represent families most impacted by low-performing schools.</p> <p><i>Good:</i> A cross-section of community groups is involved in the education strategy. Groups representing community members most impacted by low-performing schools are not fully participating.</p> <p><i>Developing:</i> Some groups are involved in the education strategy, but there is not a great deal of variety. Groups representing community members most impacted are not fully participating.</p> <p><i>Little in Place:</i> Few community organizations are engaged. Groups representing community members most impacted are not fully participating.</p>

Indicator	C4. A strong and deep coalition of support exists for the education strategy
Source	Structured news review of articles from the city’s largest daily newspaper. Article date range is August 1, 2016 to March 15, 2017.
Scoring	<p><i>Exemplar:</i> Overall tone of news articles is neutral to positive. There is clear alignment and support across civic and education leaders.</p> <p><i>Good:</i> Overall tone of news articles is neutral to positive. There is either general alignment and support or no evidence that these are lacking. It could also be that the overall tone of news articles is neutral to negative with strong support from civic and education leaders.</p> <p><i>Developing:</i> Overall tone of news articles is neutral with somewhat fractured support among civic and education leaders.</p> <p><i>Little in Place:</i> Overall tone of news articles is neutral to negative with obviously fractured support among civic and education leaders.</p>
Definitions	<i>Civic and education leaders:</i> This depended on the governance model and particular landscape in each city. For example, in a city with mayoral or state control, we placed greater emphasis on identifying support from these leaders.
Search protocol	<p>Within the source and date range, we used set keywords to refine the search to articles pertaining to K-12 education that mentioned the school board, superintendent, mayor, and/or city council. We excluded all opinion pieces from the analysis.</p> <p>For the following cities, we used LexisNexis: Atlanta, Camden, Chicago, Denver, Los Angeles, New York City, Philadelphia, Tulsa, and Washington, D.C.</p> <p>When the source we needed was not available in LexisNexis, we used Advanced Google Search. This was the case for the following cities: Boston, Cleveland, Houston, Indianapolis, Kansas City, Memphis, New Orleans, Oakland, and San Antonio.</p>

Supplemental data collection

In addition to the system reforms above, researchers collected supplemental information about city strategies. We developed thresholds to identify trends but did not use the indicators in scoring.

We used this information in our culminating cross-city report, *Stepping Up: How are American Cities Delivering on the Promise of Public School Choice?* and in the analysis on our individual city web pages. Both are available on [the project website](#).

Indicator	1.1 All schools have the same performance standards for making decisions about school expansion, replacement, improvement, or closure
Source	Review of district and charter authorizer materials, followed up by an interview if necessary.
Criteria	<p><i>Meets standard:</i> There is a common school performance framework for all public schools.</p> <p><i>Does not meet standard:</i> District and charter schools each have their own accountability or performance frameworks.</p>

Indicator	1.2 The city is collecting supply and demand data for both sectors
Source	Review of district and charter authorizer materials, followed up by an interview if necessary.
Criteria	<i>Meets standard:</i> (1) The district or other organization collects information about enrollment patterns, choice data, and academic performance. (2) This information is collected for both sectors. <i>Does not meet standard:</i> The district or other organization is not collecting supply and demand data for both sectors.

Indicator	1.3 The city uses high-quality operators and replicates quality models when opening schools
Source	Researcher review of district and charter school performance.
Criteria	<i>Meets standard:</i> Of new schools that used an existing model or operator in 2014-15, 2015-16, and 2016-17, over 50% were from an existing model in the city with above-average performance AND/OR a model outside the city with a good track record. <i>Does not meet standard:</i> Of the new schools that opened between 2014-15 and 2016-17, fewer than 49% were from an existing model in the city with above-average performance AND/OR a model outside the city with a good track record.
Definitions	<i>Existing model can include</i> (a) expanded level (but not grades), such as a new elementary school based on the model of an existing middle school; and (b) new school from an existing operator in the city or outside the city. <i>Quality model</i> is defined as having above-average performance when compared to other schools in the city. <i>New school</i> is defined the same as in Indicator B4.

Indicator	1.4 Charter authorizers have high-quality practices
Source	2016 National Association of Charter School Authorizers (NACSA) survey.
Criteria	<i>Meets standard:</i> All of the main charter authorizer(s) in the city receive an 11 or 12 on the most recent annual NACSA survey. <i>Does not meet standard:</i> At least one of the main charter authorizers in the city receives a 10 or lower on the most recent annual NACSA survey.
Definitions	<i>“Main charter authorizer”</i> is one that authorizes 20% or more of all charter schools in the city.

Indicator	1.5 The district central office is pursuing a school autonomy strategy
Source	Researcher review of district strategy supplemented by interview.
Criteria	<i>Meets standard:</i> The district is actively pursuing a strategy to grant autonomy to district schools and reduce the centralized authority of the district. This is a public strategy with clear criteria in place for identifying school rights and responsibilities. This can include autonomy for all schools or for a subset of schools. <i>Does not meet standard:</i> The district is granting autonomies to schools on an ad-hoc basis, but it is not pursuing a clearly defined strategy. OR, the district pursued such a strategy in the past but is now backing away from it. OR, there is nothing in place.

Indicator	1.6 District policy allows school leaders to make decisions about staffing
Source	National Council on Teacher Quality Teacher Contract Database. If the policy is not listed here, a district policy document (written district policy about hiring, teacher contract, or principal contract). If no policy document could be found, an interview.
Criteria	<i>Meets standard:</i> The district contract includes a written mutual-consent hiring policy. OR, an interview confirms that all principals have autonomy over hiring as part of a defined autonomy policy. <i>Does not meet standard:</i> The district contract does not include a written mutual-consent hiring policy or any other written policy providing principals with autonomy over hiring. Interview confirms that principals do not have autonomy over hiring.

Indicator	1.7 Families impacted by closures can select a spot in a higher-performing school
Source	Review of district policy and interview.
Criteria	<p><i>Meets standard:</i> District policy guarantees that families impacted by school closure are guaranteed a spot in a better or higher-performing school. OR, given preferential enrollment in a school of their choice.</p> <p><i>Does not meet standard:</i> Families impacted by school closures are neither guaranteed a spot in a higher-performing school nor given preferential enrollment in a school of their choice.</p>

Indicator	1.8 Few public schools have selective enrollment criteria
Source	Review of district policy, followed up by interview when necessary.
Criteria	<p><i>Meets standard:</i> 85% of district choice schools do not have restrictive enrollment criteria.</p> <p><i>Does not meet standard:</i> 86% or more district schools of choice have restrictive enrollment criteria.</p>
Definitions	<p><i>Restrictive criteria include:</i> (a) requiring certain grades or test scores to be admitted; (b) admitting students based on English language proficiency; (c) selecting students based on an essay or interview; (d) requiring parent participation; (e) giving priority to students attending a pre-application school workshop or open house.</p> <p><i>Do not include but note:</i> (f) [charter only] allowing admission only in entry-level grades (e.g., K, 6, 9); (g) [charter only] allowing admission at the beginning of the school year.</p> <p><i>Does not include:</i> Sibling, neighborhood, and school staff priorities are not counted as restrictions. We identified the percent of schools using neighborhood preferences but did not use these data to identify whether the city met the criteria standard.</p>

Note: Some cities do not have a centralized location for charter school enrollment policies, and we lacked capacity for this iteration of the project to check every charter school website. However, we recognize that enrollment priorities are a barrier students face in applying for both district and charter schools. We plan to update this indicator to include charter school enrollment criteria in future iterations of this project.

Indicator	1.9 There are regular avenues for informing families and collecting feedback
Source	Review of district policy and interview.
Criteria	<p><i>Meets standard:</i> (1) The district or other organization collects input from district and charter school families (can be different organizations). (2) Input comes from multiple formats, which include forums, online surveys, regular meetings, or other.</p> <p><i>Does not meet standard:</i> (1) The district or other organization collects input from either district or charter school families. (2) Input may or may not come from multiple formats.</p>

Indicator	1.10 Community and education groups provide citywide resources and education services
Source	Interview.
Descriptive	<p>(1) Number and name of organizations in the city that offer key services citywide like enrollment, school performance information, family engagement. (2) Identify whether these organizations offer key services citywide to all schools (or a significant set of schools).</p> <p><i>Note:</i> This can include a harbormaster or education incubator. The organization must have a partnership or be coordinating with the district or other organization.</p>

Indicator	1.11 Citywide education leaders collaborate to address shared priorities
Source	Interview.
Criteria	<p><i>Meets standard:</i> (1) Education leaders across district(s) schools and charter schools are meeting. (2) Meetings are structured and regular. (3) Leaders have identified at least one high-priority need that they are working on. Interviewees confirm that the priority/ priorities are a key issue for all involved.</p> <p><i>Does not meet standard:</i> Leaders are meeting, but there is no accountability once leaders come to a decision. OR, only some leaders are meeting (e.g., just charters, just district) so only one sector is moving forward on a priority. OR, leaders are not meeting.</p>

Parent Survey

A parent survey provided additional data for our culminating cross-city report, *Stepping Up: How are American Cities Delivering on the Promise of Public School Choice?* and in 7 of the 18 city reports. We did not use survey data to determine a city’s system reforms score because we did not have survey results for all cities.

Results from select survey responses are available on our website and as an appendix in *Stepping Up: How are American Cities Delivering on the Promise of Public School Choice?* Both are available on our [project website](#). If you are interested in the full results of the survey, contact CRPE at crpe@uw.edu.

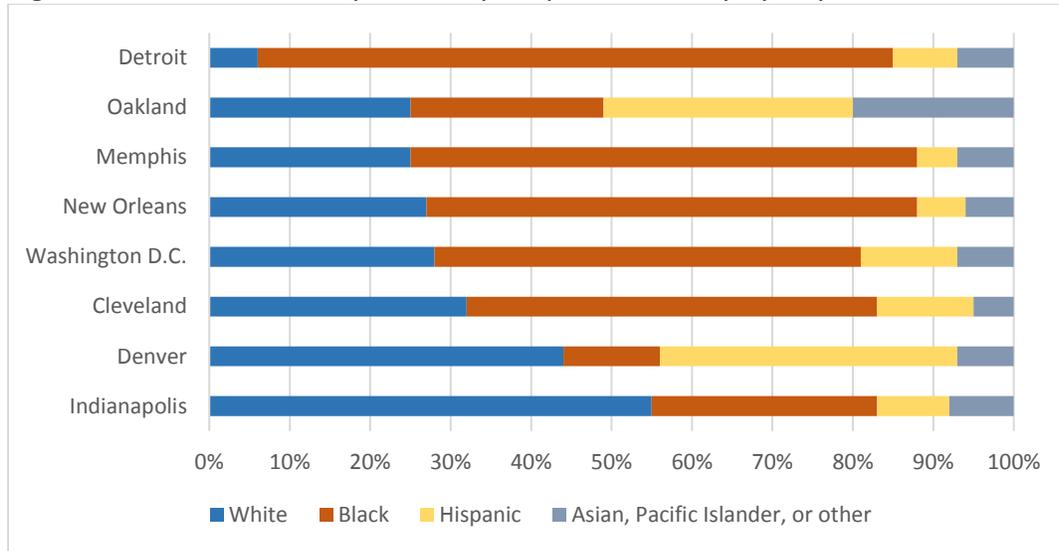
CRPE administered the survey in March 2017 in Cleveland, Denver, Detroit, Indianapolis, Memphis, New Orleans, Oakland, and Washington, D.C. (400 parents in each city for a total of 3,200 families surveyed). This work builds on an earlier survey and study CRPE conducted in 2014, *How Parents Experience Public School Choice*.

Respondents were randomly selected by telephone using a combination of landline and cell phone numbers. Landline respondents were randomly selected from a listed sample of adults in each city. Cell phone respondents were randomly selected from a random-digit dial sample of cell phones in each city. Spanish language translation was available in all cities. In order to participate, participants had to live in one of the eight selected cities and be either a parent or guardian of a student enrolled in a K-12 school.

The entire survey included background questions about the respondent and student (including information about the type of school the student attended), and 15 questions about the families’ experience with school choice and school quality. Please see Appendix B for a copy of the survey protocol. All survey results were weighted based on U. S. Census Bureau estimates for age, race, and educational attainment.

The racial and ethnic characteristics of the survey respondents varied across the cities (see Figure 1).

Figure 1. Race and Ethnicity of Survey Respondents Vary by City



Source: CRPE parent survey respondents

In Table 5 we compare Census results with our sample. Our sample is fairly representative of demographics as a whole.

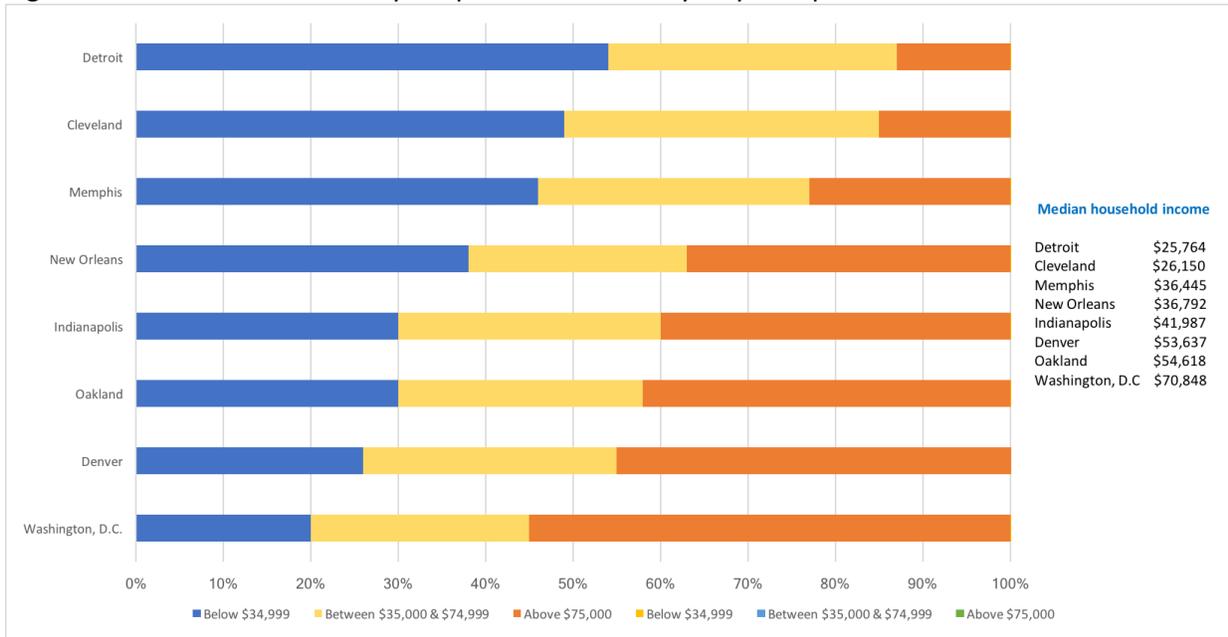
Table 5. Census and Sample Estimates by Race/ Ethnicity

	White		Black		Hispanic		Asian, Pacific Islander, or other	
	Census	Sample	Census	Sample	Census	Sample	Census	Sample
Detroit	9%	6%	80%	80%	8%	8%	3%	6%
Oakland	27%	26%	25%	25%	26%	32%	22%	17%
Memphis	27%	26%	63%	65%	7%	5%	3%	4%
New Orleans	31%	27%	59%	63%	6%	6%	4%	4%
Washington, D.C	36%	29%	48%	55%	10%	12%	6%	4%
Cleveland	34%	33%	51%	52%	11%	12%	4%	3%
Denver	53%	44%	9%	12%	31%	37%	7%	5%
Indianapolis	57%	55%	28%	28%	10%	9%	5%	6%

Source: U.S. Census Bureau Community Facts, 2011-15.

The income levels of respondents also vary. Figure 2 shows the income levels of survey respondents compared to Census-reported median household income by city. Although the data were collected differently, general trends in income are consistent between the sample and city population as a whole.

Figure 2. Income Level of Survey Respondents Varies by City Compared to Census Median Income



Sources: CRPE parent survey respondents; U.S. Census Bureau, QuickFacts. Median household income (in 2015 dollars), 2011-15.

Within our sample, the majority of families enrolled their children in a traditional public school, with the exception of New Orleans and Washington, D.C. Between 10 and 29 percent of parent respondents enrolled their child in a private school. We excluded private school parent respondents from the results we reported for survey questions 13 and 15.

Figure 3. In Every City Except New Orleans and Washington, D.C., the Majority of Families Sent Their Child to a Traditional Public School

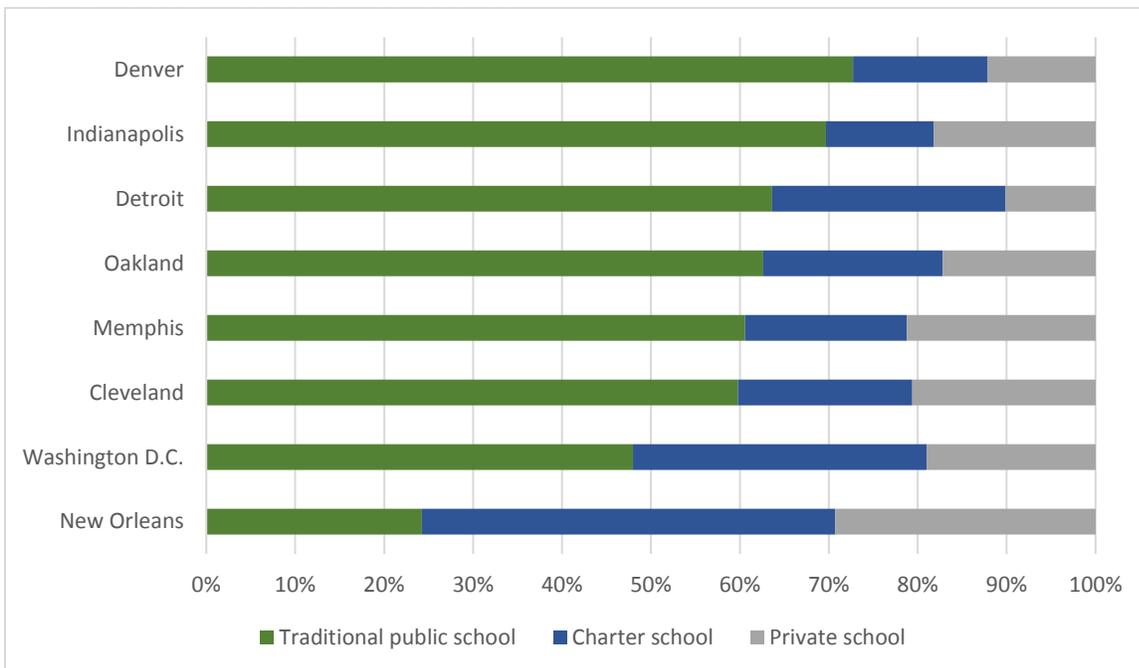


Table 6 lists the questions we used in the individual city pages and in the culminating cross-city report.

Table 6. Parent Survey Questions Used in Citywide Education Progress Reports and *Stepping Up: How are American Cities Delivering on the Promise of Public School Choice?*

Survey question	Prompt 1	Prompt 2	Prompts 3 & 4
6. Does your child attend a school that she/he is assigned to based on your address?	yes	no	
11. If your child couldn't attend his or her current school, is there another public school currently available to you that you'd be just as happy to send him or her to?	yes	no	
13. How much do academic programs vary between schools in [CITY]? Do they vary...	A great deal	A fair amount	Some but not much
15. I'm going to read a list of things some parents find difficult about applying to schools. Please tell me if each one was difficult or not when you were applying to schools for your child.			
a. Understanding which schools your child was eligible to attend	yes	no	
b. Finding enough information about schools	yes	no	
c. Difficult or confusing paperwork to complete applications	yes	no	
d. The number of applications you had to complete	yes	no	
e. Finding a school that has strong academics			
f. Finding a school that is a good fit for my child	yes	no	
g. Finding transportation for my child to get to and from school	yes	no	
22. Which statement comes closest to your own view	Parents like me can do very little to make positive changes in my child's school	Parents like me can do a lot to make positive changes in my child's school	
23. Overall would you say that public schools in your city are	Getting better	Getting worse	Staying the same
24. How much trust and confidence do you have in the city's public school system to make sure all neighborhoods have great schools?	Great deal	Fair amount	Not very much/ None at all

Student and School Outcomes

This study did not seek to conduct a causal analysis of how the growth of choice has changed student learning in cities as a whole or in particular groups of schools. In this study, we ask only if school performance appears to be changing, but we cannot say definitively whether choice, demographic changes, or other factors are driving the results.

We did not use outcomes data to score cities as we did with systems reforms because we did not have common data for all cities. Instead, we rank each city on specific measures in the [compare cities](#) page of our website.

Student and School Outcomes Data

- State agency school performance and enrollment files, 2010-11 to 2014-15 for the majority of cities. See the notes section within individual indicators for special cases.
- Four-year adjusted cohort graduation rates and citywide demographic data from the ED Facts Initiative, 2011-12 to 2014-15. See the notes section within individual indicators for special cases.
- Student enrollment in advanced math coursework from the Civil Rights Data Collection (CRDC), 2013-14.

Advantages and limitations of state and federal data sources

To measure our outcomes, we used the most recent state performance and federal data available. Because of the time it takes for states to release data, the results are necessarily lagged and do not reflect the most recent developments in any of the cities. However, we chose to use publicly available, state-provided data over district data for two reasons: (1) Using state and federal data allowed us to compare results across cities, and (2) Using aggregate school-level data makes our work transparent and reproducible.

We did not have the statewide, student-level data required to run school value-added models. One of the biggest problems with using state data is that most states provide school-level proficiency rates in their publicly available data rather than continuous measures of student achievement, and these proficiency rates are based on different tests with different cut scores. This makes it difficult to directly compare performance levels across cities as expectations for proficiency vary widely by state. Since we can't directly compare proficiency rates across states, we built the indicators around relative measures of performance, like the share of students in a city eligible for free and reduced-price lunch (FRL) who are enrolled in its top-scoring schools. However, we did not address the relative measure of proficiency rate relative to the state mean. In other words, a city like Camden is being compared to other cities in New Jersey that have similar reforms, such as Newark.

It is also important to note that state proficiency rates ignore important information because they collapse all the information in the student's test score into a binary outcome: a student is or is not proficient. As a result, two schools can have similar proficiency rates but different underlying proficiency profiles. Imagine, for example, School A, where most students are just over the proficiency line, compared to School B, where most students are far above the proficiency line. However, both schools have the proportion of students scoring above proficiency. In this example, both schools have the same proficiency rate, but the comparison masks a real difference in underlying proficiency.

The Civil Rights Data Collection data also have some important limitations. Although the Office for Civil Rights data are useful for looking across cities, they suffer from shortcomings associated with survey data (e.g., respondents interpreting questions differently). In addition, the way all these data sources identify groups of students relies on crude measures, such as using FRL eligibility as a poverty measure, or using "Hispanic" to identify a population of students that is far more heterogeneous than a single label implies.

Goal: The education system is continuously improving

Indicator A1: School proficiency rates in math and reading are improving

For 14 of the 18 cities, we calculated the average cohort change made in math and reading proficiency over a three- or four-year period.

We estimated a separate linear regression model for each city in our sample, in which the outcome variable is the mean-centered (by state and year) proportion of students in a school scoring at or above “proficient” on each state’s standardized math test (we also did the same for reading). The model can be expressed as follows:

$$Y_{jt} = \beta_0 + \beta_1 (Year_t) + \beta_2 X_{jt} + \beta_3 S_{jt} + \epsilon_{jt}$$

Where Y_{jt} is the dependent variable (the within-state-year standardized proportion of students in school j at time t scoring at or above “proficient” in math or reading), $Year_t$ represents the year as a linear term, X_{jt} is a vector representing a school’s student composition (the proportion FRL, white, black, Hispanic and Asian), S_{jt} is a vector representing other school characteristics (whether the school is in an urban area, the grade level of the school, and the school’s total enrollment), and ϵ_{jt} is the residual term. We exclude schools with missing information on any of these variables. The coefficient of primary interest here is β_1 , which tells us the average change in proficiency rate per year for the schools in a given city controlling for student demographics. To approximate the change over two years (from year one to year three), we multiply β_1 by 2, yielding the results presented in the individual city pages and our *Compare the Cities* page. Positive values indicate increases in proficiency rates in a city, while negative values indicate losses.

To account for the fact that schools show up multiple times in our data over the three years, we used clustered standard errors to compute confidence intervals. If the 95 percent confidence interval includes zero, then the gain (or loss) is not statistically significant and the bars in the figure are not shaded. If the 95 percent confidence interval does not contain zero, then the gain (or loss) is statistically significant and the city’s bar in the figure is shaded.

We also estimated random intercept and slope models but the results were substantively similar to those presented in the report.

Importantly, this model estimates changes in the proficiency rate from one cohort of students to the next in a school controlling for student demographics and select school characteristics. Cohorts will change from year to year as students enter and exit schools. While these measures reflect trends in the proficiency rate across schools in a city, we cannot attribute these trends to the actions of schools. Therefore, these measures do not indicate whether schools are "getting better" or "getting worse." These models also can’t speak to how school openings and closings affect overall performance. For example, if a city closed many low-quality schools and replaced them with high-quality schools, the system would be improving in a way that does not show up in these results.

We did not use this indicator for Memphis, Oakland, and Los Angeles because of problems with the state data. We did not use this indicator for Washington, D.C., because there is no state-level comparison data.

Year range: For all cities except Denver, Kansas City, New York City, Philadelphia, and Tulsa we used the date range 2011-12 to 2014-15. Because of missing or unusable state data we used different years of data for some cities. Denver: 2011-12 to 2013-14, New York City and Philadelphia: 2012-13 to 2014-15; Tulsa: 2014-15 to 2016-17. For Kansas City we used seven years of data, from 2009-10 to 2015-16.

Source: State Agency School Performance Files

A2- Low-scoring schools do not remain low scoring for several consecutive years

We used statewide, school-level standardized assessment results to identify schools that ranked in the bottom 5 percent of their state in terms of math proficiency (we did the same for reading). We chose the lowest 5 percent because this was the bar identified for the recently expired federal SIG program, and for the schools on which state and district efforts have been focused. We used each school's unique identifier to identify how many of the schools that started in the bottom 5 percent of the state in year 1 remained in the bottom 5 percent in years 2, 3, and 4.

This measure only identifies the schools that are among the lowest scoring in the state. It is important to acknowledge that the lowest-scoring schools may also serve high concentrations of the state's most challenging or most at-risk students. Because we can only look at the percentage of students meeting proficiency standards, and were not able to measure the value-add of schools, we should be careful not to interpret these schools as the lowest-performing schools in the state. Some low-scoring schools may in fact be posting strong gains by moving students nearer to proficiency but not yet to the level of proficiency. Also, some schools may show strong value added to student performance though they remain low scoring. This measure is also relative: schools in a city may have stayed the same or even gotten worse, but their ranking relative to other schools in the state may have risen, making it appear that their scores improved.

Despite these drawbacks, we believe the measure provides an indication of the dynamism in the school system as a whole. In cities where low-scoring schools do not remain among the bottom 5 percent of the state, the schools may have improved or closed, but it may also reflect changing student demographics or a decline in proficiency rates statewide. But in cities where schools defy the odds and remain among the lowest scoring in the state for several consecutive years, it is safe to conclude that these schools really are stuck, and that the education system lacks appropriate levers for addressing them.

We did not use this indicator for Memphis, Oakland, and Los Angeles because of problems with the state data.

Year range: For all cities except Denver, New York City, Philadelphia, and Tulsa we used the date range 2011-12 to 2014-15. Because of unusable state data, for Denver we used 2011-12 to 2013-14, for New York City and Philadelphia we used 2012-13 to 2014-15, and for Tulsa we used 2014-15 to 2016-17.

Source: State Agency School Performance Files

Indicator A3: Graduation rates are improving

We used the National Center for Education Statistics' definition of Adjusted Cohort Graduation Rate (ACGR). State agencies calculate the ACGR by identifying the number of first-time 9th graders in the fall of 2011 (starting cohort) plus students who transferred in, minus students who transferred out, emigrated, or died between 2011 and 2015. The ACGR is then the number of cohort members who earned a regular high school diploma within four years, or by the end of the 2014-15 school year. For more information, see the [National Center for Education Statistics](#).

When the data provided a numerical range for a school’s rate, we used the mid-point of the range provided by ED Facts (e.g., if a school’s rate was given as between 50 and 54 percent, we recoded it as 52 percent). When a school provided a “greater than” or “lesser than” range (e.g., greater than 80 percent), we used the number rather than the average of the range (e.g., we reported the graduation rate as 80 percent). We calculated the citywide graduation rate from school cohort-adjusted graduation rates and weighting by the size of each school’s cohort.

To arrive at graduation rate differences, we took ED Facts four-year cohort graduation rates and subtracted the change in state rates from the change in city rates to produce a percentage point change. This can be expressed through the following:

$$\text{Change in the gap} = (2015 \text{ city rate} - 2015 \text{ state rate}) - (2012 \text{ city rate} - 2012 \text{ state rate}).$$

For example, in Camden the citywide graduation rate for all district and charter schools in 2011-12 was 56 percent, while the state’s rate was 87 percent. The difference between the two is 31 percentage points. In 2014-15, Camden’s rate was 70 percent, while the state’s rate was 90 percent, for a difference of 20 percentage points. We subtracted the percentage point difference of 20 (2014-15) from 31 (2011-12) to find an 11 percentage-point gain on the state.

We did not control for income or demographic differences between the city and state, so these gaps reflect, in part, differences in the types of students who enroll in the city versus demographics of the statewide student population. However, we feel that at a minimum, cities should be expected to graduate all students. Therefore, this measure reflects a gap that will be important to close.

Year range: For all cities except Memphis, New Orleans, and Tulsa, we used the date range 2011-12 to 2014-15. For Memphis, we used 2011-12, 2012-13, and 2014-15. For New Orleans, we used 2011-11 to 2013-14, and for Tulsa we used 2012-13 to 2014-15.

Sources: *The ED Facts Initiative; U.S. Department of Education, Assessment and Adjusted Cohort Graduation Rates (ACGR) Data 2011-2015.*

Goal: Students have access to a high-quality education

Indicator B1a: Low-income students in the city are performing better than their peers nationally

Education Cities and GreatSchools developed this indicator, the Education Equality Index (EEI). They first measured the percent of students who scored proficient or above on state standardized tests in their respective grades. To make the results nationally comparable, they adjusted the percent proficient based on the difference between FRL average proficiency on the National Assessment of Educational Progress (NAEP) and the FRL average proficiency on each state’s standardized test. This resulted in an estimate of the “percent proficient” a school or city would have gotten on the NAEP had all the FRL students taken the NAEP that year. They make an adjustment for the concentration of students at each school who qualify for FRL to account for the known correlation between poverty and academic performance. They then converted the adjusted scores for each grade and subject into percentiles on a 0 to 100 scale, with 100 being the best. They used a weighted average of the percentiles for all grades and subjects tested within a given school or city to arrive at the EEI Score, on a 0 to 100 scale.

For more details about the data and measure, visit the [EEI website](#).

We used this indicator for the following cities: Boston, Chicago, Houston, Indianapolis, Los Angeles, Memphis, New Orleans, New York City, Oakland, Philadelphia, and San Antonio.

Year range: Boston, Chicago, Houston, Memphis, New Orleans, New York City, Philadelphia, and San Antonio used 2010-11 to 2014-15 data. Indianapolis used 2011-12 to 2014-15. Los Angeles and Oakland used 2010-11, 2011-12, 2012-13, and 2014-15.

Indicator B1b: Student sub-groups are enrolling in the city’s top-scoring schools at similar rates

Because we did not have data for all cities to report the indicator B1a, we used an alternative indicator, B1b. Note that we did not have the data to report either indicator for two cities: Atlanta and Tulsa.

This measure looks at the enrollment of different demographic student groups in a city’s highest-scoring elementary and middle schools. We define a high-scoring school as one with proficiency rates in the top 20 percent of schools citywide in the most recent year of available data, either 2013-14 or 2014-15 (see below for the date range of each city). After using school-level proficiency rates to identify schools in the top 20 percent of each city’s performance distribution, we looked at the share of students citywide enrolled in those schools. As expected, this tended to be around 20 percent. We compared each city’s specific enrollment share in the top-scoring schools with the enrollment rates of different student sub-groups, including FRL and racial and ethnic minority subgroups. This tells us two things: (1) Whether student sub-groups were enrolling in the highest-performing schools at similar rates to each other, and (2) Whether student sub-groups were enrolling in the highest-performing schools at similar rates as they were enrolling in middle- or low-performing schools.

Although student demographics, student residence, and school performance are all highly correlated, we nevertheless might expect to see variation across the cities due to use of public school choice and the range of students and schools in the cities.

In these analyses, we focus on elementary and middle schools because proficiency data is widely available for 3rd through 8th grades. Because not all state datasets include high school test scores, we can report only the primary and middle school results.

We used this indicator for the following cities: Camden, Cleveland, Denver, Kansas City, and Washington, D.C.

Year range: For Camden, we used data from 2011-12 to 2014-15. For all other cities using this indicator (Cleveland, Denver, Kansas City, and Washington D.C), we used 2011-12 to 2013-14.

Source: State Agency School Performance files.

Indicator B2: Students are equitably enrolled in advanced coursework

This measure focuses on the share of students taking advanced math courses in high school. The data come from the US Department of Education’s Office for Civil Rights’ CRDC survey. We used the CRDC defined courses Advanced Math, Calculus, and AP Math; the CRDC defines Advanced Math courses to include topics like analytic geometry and trigonometry.

We calculated the rates of enrollment in these courses by dividing the number of course/test takers in geometry and trigonometry at each high school by the total enrollment at that high school. We calculated sub-group rates including FRL and racial and ethnic subgroups by dividing the number of sub-

group course/test takers for these subjects at each high school by the total enrollment for that subgroup at that high school. We compared the enrollment rates in math courses with the demographics within the total school population to show whether certain student sub-groups were over- or under-represented in advanced math courses.

Year range: All cities used 2013-14 data.

Source: U.S. Department of Education's Office for Civil Rights, *Civil Rights Data Collection 2013-2014*.

Appendix A: Semi-Structured Interview Protocol

School Portfolio

1. **School model variety:** Since 2014-15, what are the names of schools that have been opened? Are there school models that are lacking? What's getting in the way of opening those types of schools? [district & charter]
2. **Data-informed decision-making:** What data are you using to decide where schools should be opened or expanded? How do you decide when to replace, close, or transform schools? [district & charter]
3. **Strategic process:** What is the process you use to decide *where* to open or expand your next school? (i.e., in areas with few quality schools/ strategic siting process)? [district & charter]
4. **Implementation:** Do you think that new schools are opening where they are most needed? Do you think the right schools are being closed or replaced? What is not happening that you think should be? [district, charter, & community]

Talent

1. **Talent output data:**
 - About how many schools opened for the 2016-17 school year with principal vacancies? [district & charter]
 - About how many teacher vacancies did you have at the beginning of the 2016-17 school year? [district only]
2. **Talent data strategy:**
 - How do you assess the number and types of teachers/ leaders the city needs? [district]
 - Is anyone in city collecting sector-wide talent data for all charter schools (teachers & leaders)? [charter only]
3. **Perception of principal applications:** For the 2016-17 school year, how *satisfied* were you with the quality of applicants for principal positions? Do you think you are getting leaders who represent the right *quality*? Are you getting leaders who represent the *right fit*? (ex: demographics, leaders who can thrive in autonomous schools)? [district & charter]
4. **Principal strategy:** What strategy are you/ charters using to get the right school leaders? How is it working? [district & charter]
5. **Perception of teacher applications:** For the 2016-17 school year, how *satisfied* were you with the quality of applicants for principal positions? Do you think you are getting the right teachers, in terms of *quality and fit*? (ex: demographics, right subject areas)? [district & charter]
6. **Teacher strategy:**
 - What would you like to be doing, if you could? [district only]
 - What would you like to see the sector doing? [charter only]

District School Autonomy

1. **District autonomy:** Is the district pursuing a strategy to give principals school-level autonomy? *If Yes:* Has the district central office changed anything in pursuing such a strategy—like reducing, decentralizing, or adding units and capacity? [district only]

Community Engagement & Governance

1. **Perception of engagement:** Over the past year, what has the city done well in terms of community engagement? Any initiatives or efforts that the community did not respond well to? Why? [district, charter, community]
2. **Responsiveness:** Can you give me an example of how community or family feedback has impacted the education strategy in the past year? How responsive do you think the education system is to the needs of parents? [community only]
3. **Feedback mechanisms:**
 - Where do you get your best feedback? Who aren't you reaching? What are the barriers? [district only]
 - How do education leaders in the city (district, charter, other) get feedback from the community? How often is it done? What is working? What isn't? Who do families trust for good information- are those avenues being tapped? [community only]
4. **Charter school engagement, feedback, grievance procedures:** Is there any charter-wide effort to engage with families, or it is just done on a school-by-school basis? Does anyone collect feedback from families & community members? How is it done? How often? Is there a point of contact families can go to for problems in their charter schools? [charter only]
5. **School supply involvement:**
 - How do you/ charters inform families about school openings? Do families have the opportunity to give feedback as the process is unfolding? How involved are families in the school closure process? [district & charter]
 - How involved are families in the school opening process? Do families and the community have an opportunity to shape the school closure process? School opening? [community only]
6. **Collaboration across education leaders:** Do education leaders (such as district, charter, third party, agencies, or non-profits) meet? How often? Is there anyone missing from the meetings? What are the priority issues you are working on right now? Making any progress? Is there an MOU or anything to hold folks accountable? [district & charter]
7. **Coalition of support:** Which civic leaders support the way things are going? Are local funders involved? Who doesn't support the way things are going? [district & charter]
8. **Organizational involvement:** What kind of community-based organizations are involved in the education strategy? Any church or parent-based groups? Business community? Do you think these are representative of your city as a whole—especially parents who are most impacted by poor-performing schools? Who is missing that you think should be involved? [community only]

9. **Organizational support:** Tell me about any nonprofit or community organizations that provide services to the education system as a whole (both charters & district schools)? I am thinking about things like enrollment, transportation, talent. [district only]

Family Experience with Public School Choice

1. **Information:** Do families have the information they need to choose the best school for their child? Are they aware of where to get that information? Is the information easy to get? Do ELL and Special Education families have the information they need? Do families know how to use the information to choose a school that is a good fit for their child? [community only]
2. **Enrollment:** Are there any barriers in the enrollment process that make it difficult for parents- I am thinking in terms of applications, how complicated the process is, etc.? [community only]
3. **Transportation:** Is transportation preventing families from enrolling in schools they want their students to go to? What particular barriers are there in your city? [community only]

Appendix B: Survey Protocol

Hello, my name is [NAME] and I'm conducting a short public opinion survey. We are not selling anything or asking for donations. We're surveying parents about important issues facing [CITY'S] schools. The survey will only take a few minutes and all responses will be anonymous.

[ELIGIBILITY QUESTIONS]

1. To start, do you currently live in [CITY]?

- Yes
- No TERMINATE

2. Are you the parent or guardian of a child enrolled in a kindergarten through 12th grade school?

- Yes
- No Ask for qualified. If none, terminate.

3. Are you of a Hispanic or Latino background? (IF NO) How would you describe your race?

- White or Caucasian
- Black or African American
- Native American
- Asian or Pacific Islander
- Something else
- Hispanic or Latino
- DK/NA/REFUSED

[CHILD BACKGROUND]

We'd like to focus our conversation on just one of your children. As you take this survey, if you have more than one child in school, please answer my questions based on the child who most recently had a birthday.

4. To start, what year did your child enroll in his or her current school?

5. What grade is your child currently in?

- Kindergarten
- 1st grade
- 2nd grade
- 3rd grade
- 4th grade
- 5th grade
- 6th grade
- 7th grade
- 8th grade
- 9th grade
- 10th grade
- 11th grade
- 12th grade
- DK/NA/REFUSED

6. Does your child attend a school that she/he is assigned to based on your address?

- Yes
- No
- DK/NA/REFUSED

ONLY READ IF ATTENDING ADDRESS-ASSIGNED SCHOOL (ADDRESS = 1)

7. Did you consider sending your child to any other school?

- Yes
- No
- DK/NA/REFUSED

8. What type of school does your child attend? (READ LIST)

- A traditional public school
- A charter school
- A private school
- DK/NA/REFUSED

9. Is your child's school in [CITY] or is it in another city? (READ LIST)

- In city
- Another city
- DK/NA/REFUSED

[SCHOOL OUTLOOK]

Overall, how satisfied or dissatisfied are you with each of the following? You can say very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied.

10. The school your child attends this year

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied
- DK/NA/REFUSED

11. If your child couldn't attend his or her current school, is there another public school currently available to you that you'd be just as happy to send him or her to?

- Yes
- No
- DK/NA/REFUSED

For these next couple of questions, keep in mind there are no right or wrong answers. I'm only interested in your views based on your experiences and what you may have heard or read.

12. How much does education quality vary between schools in [CITY]? Does it vary... (READ LIST)

- A great deal
- A fair amount
- Some but not much
- UNSURE (DO NOT READ)
- REFUSED

13. How much do academic programs vary between schools in [CITY]? Do they vary... (READ LIST)

- A great deal
- A fair amount
- Some but not much
- UNSURE (DO NOT READ)
- REFUSED

14. How much does the strictness of student discipline vary between schools in [CITY]? Does it vary... (READ LIST)

- A great deal
- A fair amount
- Some but not much
- UNSURE (DO NOT READ)
- REFUSED

[CHOOSING]

15. I'm going to read a list of things some parents find difficult about applying to schools. Please tell me if each one was difficult or not when you were applying to schools for your child. You can just say yes or no as I read them. Here is the first one... (ROTATE LIST)

- Understanding which public schools your child was eligible to attend
- Finding enough information about schools
- Difficult or confusing paperwork to complete applications
- The number of applications you had to complete
- Finding a school that has strong academics
- Finding a school that is a good fit for my child
- Finding transportation for my child to get to and from school
- Finding the money to pay the tuition for the private school I most want my child to attend

[TRANSPORTATION]

16. How does your child usually get to school each day?

- Walking
- School bus or van
- Car (driven by adult or child)
- Bike
- Public transportation
- DK/NA/REFUSED

17. On average, how many minutes does it take your child to go one-way from your home to their school?

18. Does your child typically rely on an adult or older sibling to get to their school or bus stop?

- Yes
- No
- DK/NA/REFUSED

ONLY READ IF RELIES ON ADULT OR SIBLING (RELY = 1)

19. This school year, who usually helps get your child to their school or bus stop? (READ LIST)

- An adult in your household
- An adult family member or friend outside your household
- An older sibling

- A caregiver like a nanny or babysitter
 - A carpool
 - Other parents
 - A transportation service like a taxi or Uber
 - Other (RECORD)
 - DK/NA/REFUSED
-

20. Does your child participate in any after school activities (for example: sports, band, drama, or academic clubs)?

- Yes
 - No
 - DK/NA/REFUSED
-

21. How often have transportation-related challenges prevented your child from participating in after-school activities that they would otherwise want to participate in? (READ LIST)

- Frequently
 - Occasionally
 - Never
 - DK/NA/REFUSED
-

[ENGAGEMENT AND CONFIDENCE WITH THE SYSTEM/GOVERNMENT]

I'd like to switch gears a little to ask about the school system more broadly.

22. Which statement comes closest to your own view (ROTATE)

- Parents like me can do very little to make positive changes in my child's school
 - Parents like me can do a lot to make positive changes in my child's school
 - DK/NA/REFUSED
-

23. Overall, would you say that public schools in [CITY] are (ROTATE) <getting better>, <getting worse>, or staying the same?

- Getting better
 - Getting worse
 - Staying the same
 - DK/NA/REFUSED
-

24. How much trust and confidence do you have in the city's public school system to make sure all neighborhoods have great schools? (READ LIST)

- Great deal
- Fair amount
- Not very much
- None at all
- No opinion
- DK/NA/REFUSED

Thank you. I have a few questions for statistical purposes and then we'll be finished.

Just so we know that we are representing everyone with this survey...

25. What's the highest level of education you've fully completed? (READ LIST)

- 8th grade or less
- Some high school
- High school diploma or GED
- Some college
- Associate's Degree
- Bachelor's Degree
- Some grad school
- Graduate or professional degree
- DK/NA/REFUSED

26. Which of the following categories includes your annual household income in 2016 before taxes? Your best guess is fine. Just stop me when I read the right category. (READ LIST)

- Under \$15,000
- \$15,000-24,999
- \$25,000-34,999
- \$35,000-49,999
- \$50,000-74,999
- \$75,000-99,999
- \$100,000 or higher
- DK/NA/REFUSED

27. What language do you speak most often at home? (READ LIST)

- English
- Spanish
- Other
- DK/NA/REFUSED

This concludes the survey. Thank you VERY MUCH for your time.
