STRATEGIC DATA PROJECT

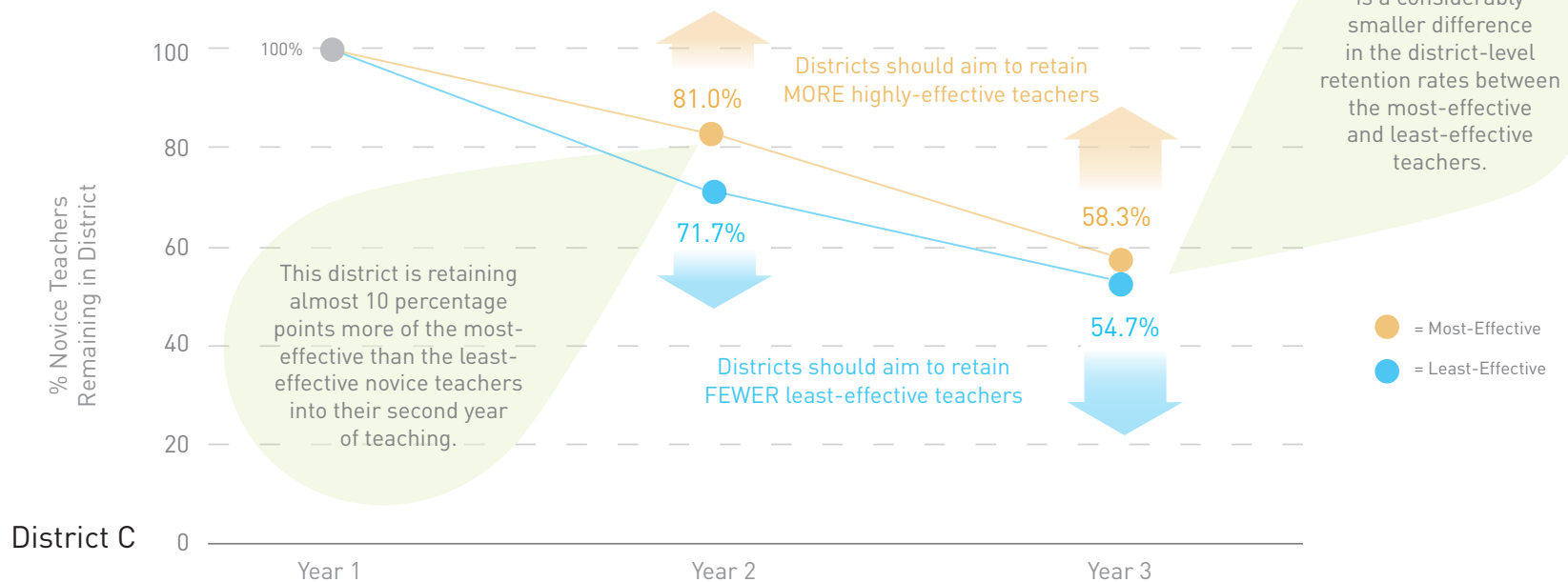# THE EFFECTIVE TEACHER RETENTION RATE

Do Retention Patterns Differ Between the Most- and Least-Effective Novice Teachers?

Yes, but not as much as they could.

The Strategic Performance Indicator *The Effective Teacher Retention Rate* examines how retention rates for novice teachers differ by level of effectiveness. It reveals that after their first year of teaching, the most-effective novice teachers are successfully retained by districts at a higher rate than the least-effective ones. This difference in retention rates narrows, however, by year three. This indicates that there is an opportunity to systematically employ strategies that selectively improve retention rates for more-effective teachers, while lowering retention rates for less-effective ones.

By Year 3, there is a considerably smaller difference in the district-level retention rates between the most-effective and least-effective teachers.

Districts should aim to retain MORE highly-effective teachers

This district is retaining almost 10 percentage points more of the most-effective than the least-effective novice teachers into their second year of teaching.

Districts should aim to retain FEWER least-effective teachers

% Novice Teachers Remaining in District

100%
81.0%
71.7%
58.3%
54.7%

= Most-Effective
= Least-Effective
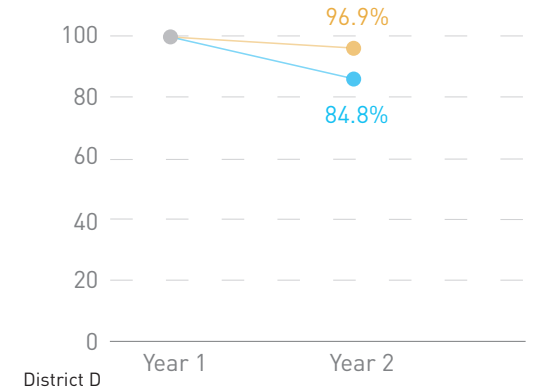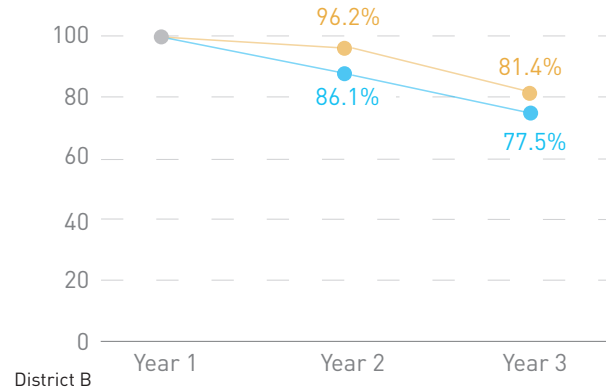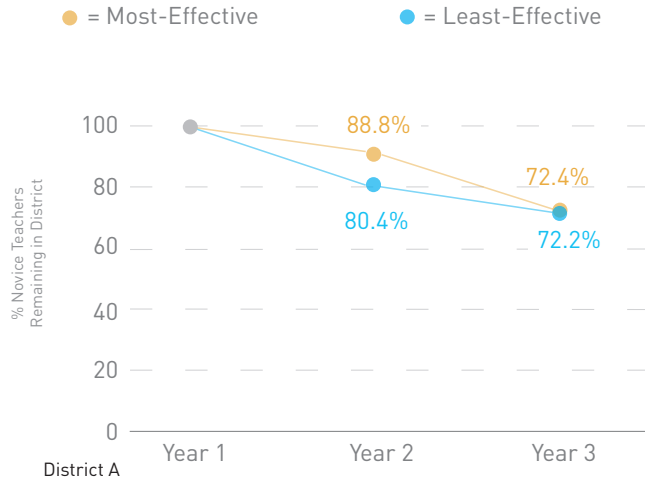
District C

Year 1   Year 2   Year 3

WHAT ARE STRATEGIC PERFORMANCE INDICATORS?

Strategic Performance Indicators (SPIs) are measures that reveal policy and management levers that have the potential to improve student outcomes. SPIs are derived from a set of rigorous analyses that the Strategic Data Project (SDP) performs on a common set of issues using existing data from partnering education agencies. Housed at the Center for Education Policy Research at Harvard University, SDP's mission is to transform the use of data in education to improve student achievement.

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THE EFFECTIVE TEACHER RETENTION RATE

What are the results in other partner districts?

The graphs below provide the retention rates by level of teacher effectiveness for novice math teachers in three other districts. In each district, there is some difference between retention rates of the most- and the least-effective teachers, but this difference decreases over time.

● = Most-Effective   ● = Least-Effective

District A — % Novice Teachers Remaining in District
- Year 1, Year 2, Year 3
- Most-Effective: 88.8%, 72.4%
- Least-Effective: 80.4%, 72.2%

District B
- Year 1, Year 2, Year 3
- Most-Effective: 96.2%, 81.4%
- Least-Effective: 86.1%, 77.5%

District D
- Year 1, Year 2
- Most-Effective: 96.9%
- Least-Effective: 84.8%

NOTE: The sample size in Year 3 in District D was too small to provide reliable results.

How do we construct this measure?

1 First, we clean and connect data by linking students to their math teachers and their schools. This results in one dataset with student, teacher, class, and school-level data.
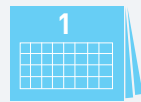
2 Next, we identify math teachers in their first year of teaching ("novices") and estimate their value-added scores ("teacher-effectiveness estimates").

3 Then, we divide those novice teachers into thirds, based on teacher-effectiveness estimates, and calculate retention rates separately for the most-effective and least-effective math teachers.

4 Finally, we compare the retention rates of most-effective and least-effective novice math teachers into the second and third year of teaching.

Why does this matter?

A teacher's effectiveness has more impact on student achievement than any other factor under the control of school systems. If districts examine the retention rates for teachers of different levels of effectiveness, they will be able to focus their efforts more strategically to retain even more highly effective teachers and counsel out the lower performers.

For more information about how to construct this measure and other analytical factors for use in performance measurement of education systems, please visit the Strategic Data Project's Toolkit for Effective Data Use at http://hvrd.me/sdp-toolkit