STRATEGIC DATA PROJECT

# SDP FELLOWSHIP CAPSTONE REPORT

# Leveraging Teacher Effectiveness Data to Improve Student Achievement

**Tony Pratt, Tennessee Department of Education**
**Tara Tucci, Pittsburgh Public Schools**
**Ashley Varrato, Pittsburgh Public Schools**
**Casey White, Teach for America**

*SDP Cohort 4 Fellows*

**SDP Fellowship Capstone Reports**

SDP Fellows compose capstone reports to reflect the work that they led in their education agencies during the two-year program. The reports demonstrate both the impact fellows make and the role of SDP in supporting their growth as data strategists. Additionally, they provide recommendations to their host agency and will serve as guides to other agencies, future fellows, and researchers seeking to do similar work. *The views or opinions expressed in this report are those of the authors and do not necessarily reflect the views or position of SDP or the Center for Education Policy Research at Harvard University.*

**Introduction**

As revealed by research studies conducted in recent years, a teacher is the most important determinant of student success (Rivkin, Hanushek & Kain, 2005). This finding has resulted in an increased focus on teacher effectiveness nationwide. Realizing the positive effects yielded by an effective teacher and the dire consequences that result from exposing students to ineffective teachers, national, state, and local leaders have increased focus on recruiting, identifying, retaining, and supporting highly effective educators.

There are few areas of complete agreement in education research and policy, but most policymakers and researchers agree with the general point that teacher quality is incredibly important. The impact of providing every student with access to effective teachers extends beyond the K–12 landscape. A landmark study by Chetty, Friedman, and Rockoff (2013) illustrates that teacher effectiveness has a substantial impact on long-term outcomes for students, ranging from their likelihood to attend college to their ultimate career earnings.  The authors found that replacing a teacher whose value-added score is in the bottom five percent of teachers with an average teacher for one school year will increase the lifetime earnings of the students in the class by approximately $250,000. Additional research conducted by Hanushek (2010) also demonstrates the economic impact of teacher quality. Exposing students to teachers at the 84th percentile will result in additional earnings of $400,000 for a classroom of 20 students. The author emphasizes that a teacher has this impact on student earnings every year that they remain in the classroom and perform at this level of effectiveness.

For many years, school districts' evaluations of teachers have been inconsistent and centered around single performance metrics (TNTP, 2010). Observations of classroom practices have often served as the only window into an educator's practices. While this evaluation method has its value, evaluation models that incorporate multiple components can serve as more reliable measures of teacher effectiveness. As revealed in The Widget Effect (2009), a report produced by The New Teacher Project (TNTP), approximately 98% of educators were labeled as effective by traditional evaluation systems. This statistic is disturbing because, as the previously described research shows, teacher effectiveness varies considerably and teachers have a tremendous impact on their students' futures. Gathering evaluation data that fails to truly differentiate teachers based on performance prevents districts and states from making informed decisions to improve instructional effectiveness.

The recent development of multiple-measure systems of teacher evaluation has resulted in a wealth of new data about teacher effectiveness. As a result, education agencies have considerable information about the effectiveness of their current teachers. Districts and state agencies must utilize

this data in decision-making for educators at each end of the performance spectrum. As evidenced in The Irreplaceables (2012), differential retention strategies must be employed to ensure teachers who consistently facilitate more than a year of student growth during each academic year remain in the classrooms and schools where they are needed most. Failing to use data to determine approaches to retention and teacher compensation will result in a continued exodus of the most effective educators from classrooms. This report examines different approaches for leveraging teacher effectiveness data to enact such policies and strategic initiatives.

The case studies presented in this report highlight practices from a nonprofit focused on teacher preparation, a large urban school district, and a state department of education. In each case, the agency has leveraged teacher evaluation data to explore methods for improving teaching effectiveness, and focuses on the practical considerations for the types of analyses each agency conducted and the potential policy implications of their findings. As a result, this report hopes to serve both those interested in undertaking similar analyses and those with the ability to make policy decisions impacting teacher effectiveness.

The case studies included in this report are:

- **Pittsburgh Public Schools (PPS):** Beginning in 2009, Pittsburgh Public Schools re-committed to elevating and advancing the teaching profession in a way that is aligned to its goals for students, and garnered significant public and private funding for the work totaling more than $80 million dollars over six and a half years to implement a strategic vision for improvement: Empowering Effective Teachers (EET). As a first step, representatives of PPS, the Pittsburgh Federation of Teachers (PFT), and more than 400 teachers and school administrators came together to create a new professional growth and evaluation system for Pittsburgh teachers that utilizes three lenses to accurately identify differences in teacher effectiveness: 1) observation of teacher practice, 2) student learning and growth, and 3) student feedback. This collaboratively-developed and externally-validated teacher growth and evaluation system has changed the game for students and teachers. PPS now has information to understand and respond to differences in teacher effectiveness in ways that better support teachers and allow for better decisions on behalf of students.

  SDP Fellows Tara Tucci and Ashley Varrato oversaw the development of a series of analyses to better understand trends related to movement of teachers across schools, matching of students and teachers within schools, predictors of teacher effectiveness, and impact of teacher

effectiveness on student outcomes. Using these analyses, Tucci and Varrato have guided conversations within the district aimed at identifying and facilitating practice and policy changes.

- **Teach For America (TFA):** Teach for America is a non-profit organization that aims to expand educational opportunity by recruiting, training and fostering the leadership of recent college graduates and professionals to teach for two years in urban and rural public schools around the country. TFA uses a rigorous selection process, including an online activity, phone interview and day-long in-person interview. Less than 15% of applicants are offered admission to corps.

  TFA plans to conduct analyses to determine the feasibility of predicting future efficacy at time of hire using both cognitive and non-cognitive measures. As states and districts are increasingly employing multiple measures in their teacher evaluation systems, TFA plans to investigate multiple outcomes, including student achievement growth and measures of student-teacher relationships or classroom environment. Information about future effectiveness, particularly early identification of strugglers, would be extremely valuable to the TFA staff who train and support teachers. Early insight will allow for more targeted programming and raise the overall impact of the corps.

- **The Tennessee Department of Education (TDOE)**: TDOE has utilized teacher effectiveness data from a multiple-measure system first implemented in the 2011–2012 school year to examine the relationship between teacher retention and effectiveness. The analyses conducted by TDOE's Office of Research and Policy have assessed not only the relationship between retention and effectiveness, but also the factors that seem particularly important for the retention of highly effective teachers. This work has the potential to drive district behaviors that will lead to a more effective teacher workforce overall.

The case studies that follow describe the work in each of these agencies in greater detail. The report closes with a discussion of themes and lessons learned that may inform analysts and policy makers to leverage teacher effectiveness data to improve student achievement.

# Case Study: Pittsburgh Public Schools

**Agency Context**

Pittsburgh Public Schools' (PPS) vision is that all students will graduate from a two- or four-year college or receive a workforce certification. The district has four goals aimed at achieving that vision: 1) accelerate student achievement, 2) eliminate racial disparities, 3) develop a student-focused culture, and 4) become a district of first choice. PPS serves roughly 25,000 students across 54 schools, about 54% of whom are African American, 34% White, and 13% other races. Seventy percent of students are low-income.

As part of the district's partnership with the Strategic Data Project, three fellows were enrolled in the fellowship program. Two were seated within the Human Resources office: Tara Tucci and Ashley Varrato. A third fellow, Pete Lavorini, participated through the College Readiness Indicator Systems (CRIS) network and worked in the district's Student Services office through June 2014. The following case study focuses primarily on the work of the fellows within Human Resources, although having fellows situated across departments within the district was beneficial in facilitating cross-functional analyses, as will be described in more detail below.

**Developing Multiple Lenses on Teacher Effectiveness**

As noted above, for five years, PPS has been engaged in its Empowering Effective Teachers (EET) plan to improve teaching and learning in every classroom across the district. The goals of the EET plan include:

1) Increase the number of highly effective teachers;

2) Increase the exposure of high-needs students to highly effective teachers; and

3) Ensure all teachers and students work in learning environments that promote college-readiness.

The district first began this work by developing ways to understand and respond to differences in teacher effectiveness. Through collaboration with the Pittsburgh Federation of Teachers (PFT) and more than 400 teachers and school administrators, PPS has made significant progress in creating a new professional growth and evaluation system for Pittsburgh teachers. The system utilizes multiple lenses to accurately identify differences in teacher effectiveness and provides unprecedented information to teachers to support meaningful professional growth. These lenses on teacher effectiveness include (see

PPS Appendix A):

    1) **Observation of teacher practice** using a Danielson-based rubric, referred to locally as RISE;

    2) **Student learning and growth** measured by teacher-level value-added measures developed in partnership with Mathematica Policy Research, Inc. or, for teachers in non-tested grades and subject areas, a rubric-based measure of student learning and growth over time referred to locally as 3f[1]; and

    3) **Student perceptions** using the Tripod Student Survey.

RISE was piloted in the district during the 2009–10 school year, with its first year of full implementation in 2010–11. Results from two measures, student learning and growth and student perceptions, were shared privately with teachers between 2011 and 2013 to build understanding of the measures as tools for professional growth. In August 2013, over 1,400 teachers for the first time received a comprehensive view of their effectiveness when they received reports that pulled together the multiple lenses of practice into an overall view of their practice. These reports, known in PPS as Educator Effectiveness Reports, were no-stakes-attached previews of an overall combined effectiveness measure[2] and associated performance level for each teacher. The August 2013 release was also the first time school leaders and staff with a role in supporting teacher growth had full access to individual teacher results.

Based on these preview reports, over 85% of PPS teachers demonstrated effective performance in 2012–13, with 15% of teachers identified as performing at the top level, or Distinguished. Another 5% performed just below the Proficient level, in Needs Improvement. And, 9% of teachers performed at the lowest, or Failing, level.[3] (See PPS Figure 1.)

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[1] Beginning in the 2014–15 school year, PPS will transition to the use of student learning objectives as the measure of student learning and growth for teachers in non-tested grades and subject areas.

[2] In PPS, the combined measure of effectiveness is based 50% on observation of professional practice (RISE) and 50% on measures of student outcomes (30% teacher-level measures of student learning and growth using teacher VAM or 3f, 15% student perceptions using Tripod, and 5% school-level measures of student learning and growth using building-level VAM). This is in accordance with Pennsylvania state law, Act 82 of 2012, requiring teacher evaluation to be based 50% on observation and 50% on student outcomes.

[3] While the four categories of performance (Distinguished, Proficient, Needs Improvement, and Failing) were defined by Act 82, PPS uses locally-developed performance level ranges that determine the combined measure scores that are associated with each performance level.

**PPS Figure 1: Distribution of Teacher Performance, 2012–13**
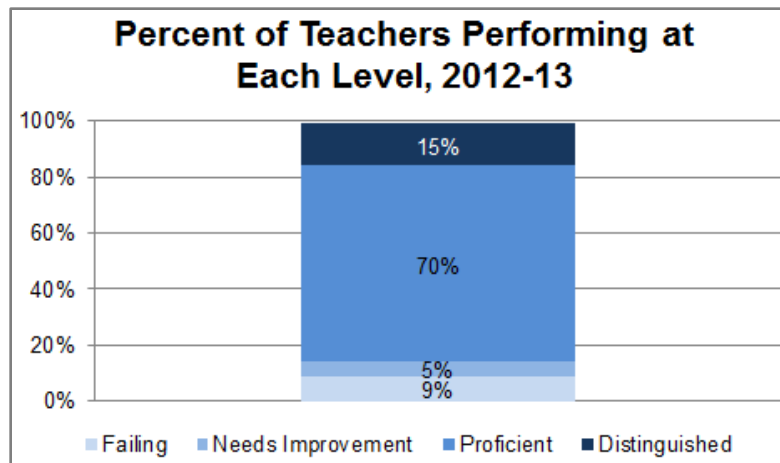


Passing this milestone was an important first step, and the culmination of the first four years of the EET plan.  Building on this, it is *how* this information is used that will help the district reach the goals of the EET plan and impact student outcomes.

## The "How": Moving from Data Availability to Data Use

After the district passed the August 2013 milestone by opening up access to an unprecedented level of information on teacher effectiveness to principals and relevant central office staff, the next phase of work began to facilitate the use of the information.  Data use focused on professional growth purposes and areas related to the EET goals such as staffing, promotional opportunities, and performance-based compensation.  This next phase required a plan for data analysis to inform decision-making, and a plan for data sharing and dissemination.

*Data Analysis to Inform Key Areas of Decision-Making*

To focus and organize its efforts, PPS defined a problem of practice around its use of teacher effectiveness data: *How do we maximize the share of students receiving highly effective instruction, with particular focus on our most high-need students?*

This work was supported by Tucci and Varrato, who developed a series of analyses to better understand trends related to: 1) movement of teachers across schools, 2) matching of students and teachers within schools, 3) predictors of teacher effectiveness, and 4) impact of teacher effectiveness on student outcomes.

Findings are limited to what can be gleaned from just two years of effectiveness data: that from the 2013–14 preview reports, as well as 2012–13 baseline data that was not shared but rather used to

guide development of the combined measure of effectiveness.

- As a District PPS is able to identify common areas of growth, which can inform district-provided professional learning opportunities. These include:
    - RISE component 1f – Designing ongoing formative assessment
    - RISE component 3b – Using questioning and discussion techniques
    - RISE component 3d – Using assessment to inform instruction
    - Tripod construct of Control
- Between 2012–13 and 2013–14, the district had a 98.7% retention rate among its most highly effective teachers, those performing at the Distinguished level. Of 223 teachers exhibiting Distinguished performance in 2012–13, 220 were still teaching in PPS the next school year. (See PPS Figure 2.)

**PPS Figure 2 – Retention Among Highly Effective Teachers**
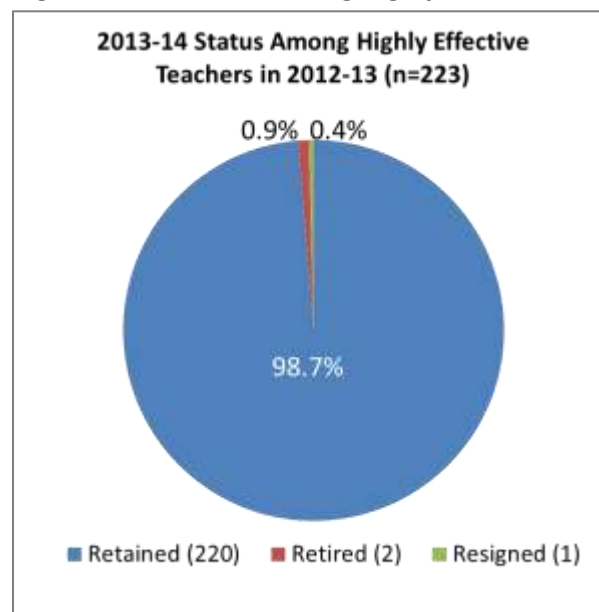


- Teachers performing at the Distinguished level in 2012–13 were also much less likely to have transferred schools between 2012–13 and 2013–14 than their peers performing at the bottom levels, Needs Improvement and Failing. (See PPS Figure 3.)

**PPS Figure 3 – Across-School Movement by Effectiveness Level**
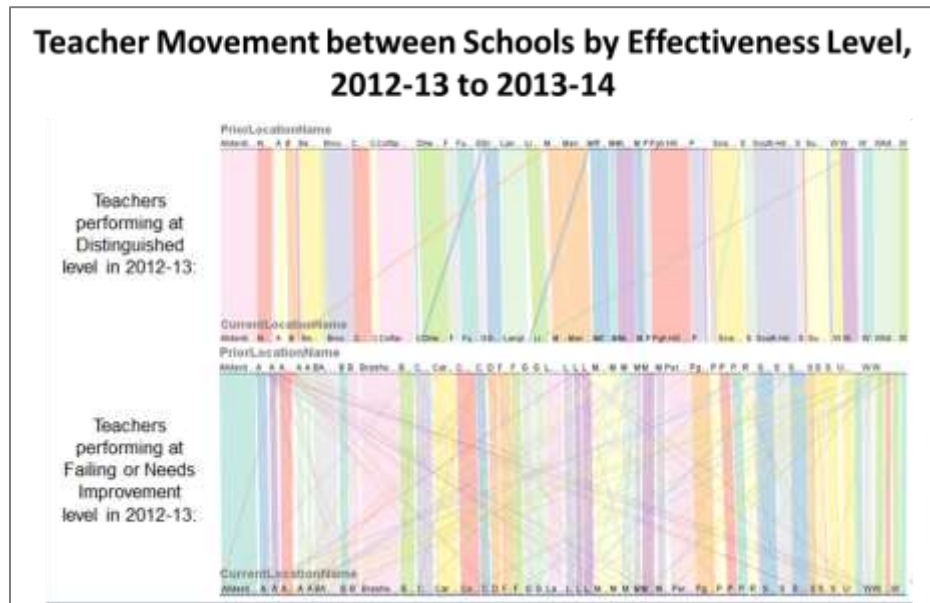


(Note that lines that cross the vertical bars are teachers who have moved to different schools between 2012-13 and 2013-14.)

- Teachers who performed at the two lowest levels were much more likely to have experienced a grade level or subject area assignment change in the previous year than their peers.(See PPS Figure 4.)

**PPS Figure 4 – Grade Level/Subject Area Movement by Effectiveness Level**
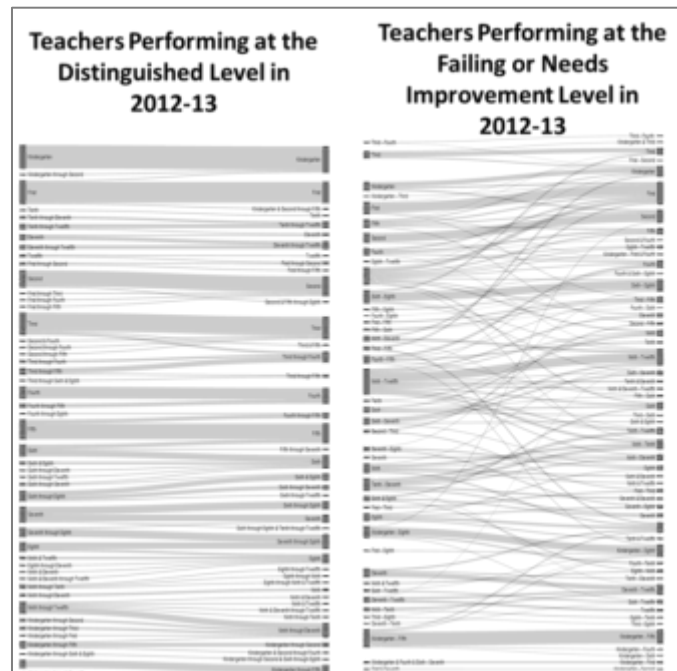


(Note that lines that move up or down the horizontal bars are teachers who moved grade-level assignments between 2011–12 and 2012–13.)

- Particularly in ELA, the district's most high-need students were less likely than their peers to receive highly effective instruction, defined as being taught by a teacher performing at the Distinguished level. (See PPS Figure 5.)

**PPS Figure 5 – Exposure to Highly Effective Instruction by Student Demographic**
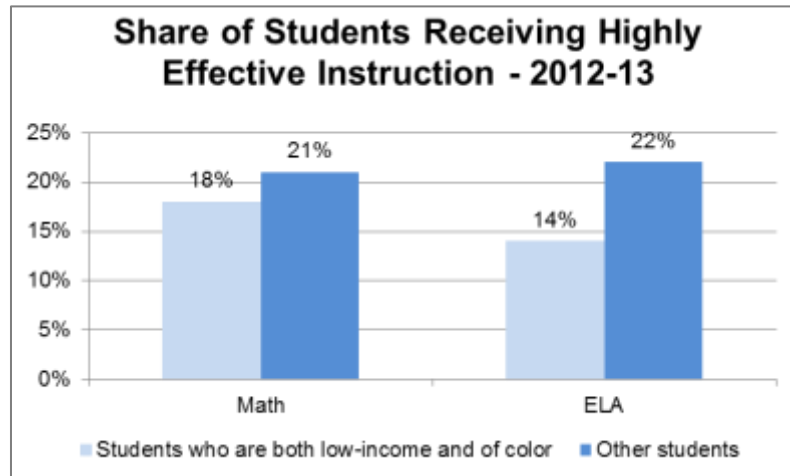


- In PPS, the teacher characteristic found to be most closely associated with high performance is National Board of Professional Teaching Standards certification. Other factors, such as education level and years of experience were not found to be significantly predictive of overall effectiveness levels. (See PPS Figure 6.)

**PPS Figure 6 – Distribution of Effectiveness by Teacher Characteristic**
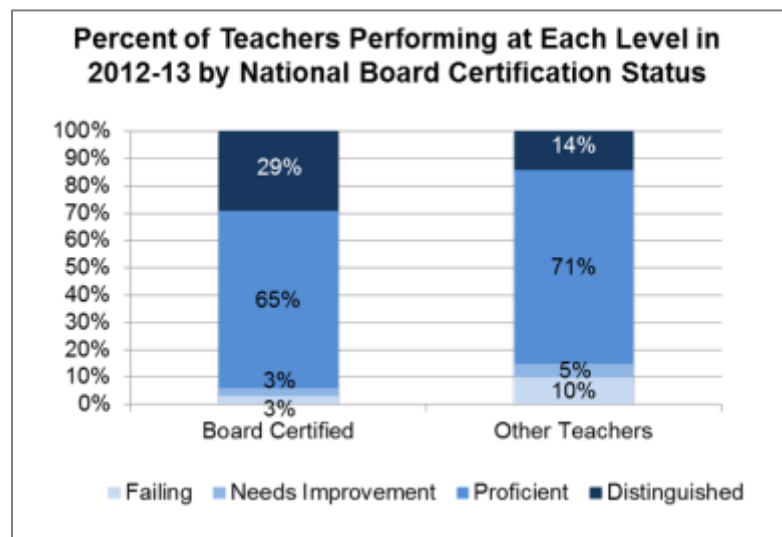


- The district's teacher leaders, selected into promotional roles known as Career Ladder roles beginning in 2010 have an overall distribution of performance that was higher than that of other

teachers in the district despite not being selected based on the combined effectiveness measure or performance level.[4]

- Receiving Distinguished teaching is the best chance of moving students into proficiency and beyond. Students with a teacher performing at the Distinguished level were twice as likely to move from Basic to Proficient than students with a teachers performing at the Failing level.

PPS is currently further partnering with SDP to create a set of unique analytics aimed at examining the connection between effective teaching and college-going outcomes for students. This work leverages the work of all three fellows, combining teacher effectiveness data and the district's new college-readiness indicators developed through the CRIS work.

In conjunction with the delivery of the 2012–13 preview reports, the district prioritized the use of teacher effectiveness information for professional growth purposes for the 2013–14 school year. As such, it organized a menu of resources and learning opportunities around the evaluation framework. More than 15 different types of professional learning and support opportunities are available to PPS teachers. These resources include professional development courses, videos aligned to evaluation components, feedback from principals and peers, year-long growth projects, curriculum training, and more. (See PPS Appendix B.)

In addition, effective educators have opportunities to support their peers by sharing their practice. PPS teachers and central office staff are working together to offer a series of workshops led by effective teachers and to hold peer-led conference style meetings to provide space for teachers to emerge as leaders and share their successful practices.

The analyses described above have opened opportunities for conversation, and created an information base upon which PPS has begun to examine district policies and practices. PPS is engaged in ongoing conversations with teachers, administrators, and the Pittsburgh Federation of Teachers to identify policy and practice changes that can better serve students and better support teachers. That work is still unfolding, but is centered around creating a more equitable distribution of effective teachers across schools, particularly schools that have been historically hard to staff.

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[4] Three Career Ladder roles were launched in 2011–12: Clinical Resident Instructor, Learning Environment Specialist, and Promise-Readiness Corps. Two more roles were launched in 2012–13: K–8 Instructional Teacher Leader and Secondary Instructional Teacher Leader. Applicants were selected using a combination of the following factors: classroom observations by a 3rd-party observer, (where available) contributions to student growth as measured by teacher VAM, and scores on interviews and in-basket activities.

*Data Capture and Dissemination*

Facilitating the use of teacher effectiveness information to better support teachers and students also required a plan to disseminate data to a select group of district administrators in a secure way. PPS is committed to being a responsible steward of sensitive teacher effectiveness information, yet also recognizes the importance of using the information to make progress toward its EET goals.

In order to appropriately balance these two imperatives, the district has set up a need-to-know standard (i.e., only those individuals who need the information to more effectively support teachers and administrators) for access to all teacher effectiveness information. The district also requires as a prerequisite for the receipt of teacher effectiveness data: 1) completion of a data-use training tailored specifically to the recipient's job function, and 2) a signed confidentiality agreement.

Storing and sharing teacher effectiveness data in a secure manner required development of the district's data warehouse and reporting platform. August 2013's preview Educator Effectiveness Reports were the first reports wholly delivered through the district's newly developed warehouse. The behind-the-scenes work leading up to the availability of this data was a large undertaking for the district and required a cross-functional effort to construct the necessary systems.

Through the new data warehouse and reporting platform (PPS Insight), more than 2,000 users have access to 16 different reports. Most recently, two new reports were made available through the warehouse that, for the first time, provide high school leaders and teachers up-to-date access to college-readiness indicators for each student in their class or school.

Furthermore, to build confidence in its individual measures of teacher effectiveness and ensure their accuracy, PPS has been working to strengthen the process of data collection around each measure and establish a transparent data governance process through the following actions:

- Capturing observation data has been an ongoing struggle for PPS. After abandoning a software system in 2012 due to technical challenges, the district looks forward to launching BloomBoard to support the RISE process in 2014–15 and beyond. The district also continues to implement its process to certify principals and others as observers to ensure inter-rater reliability.

- Through a student-level roster verification process, teachers now have more visibility into the process by which the students and classes they teach are attributed to them for purposes of value-added calculation.

- Processes around student survey administration have been strengthened based on teacher feedback. The district partners with Cambridge Education for data collection and reporting processes.

Finally, improved data quality and more sophisticated data storage and reporting functionality have caused a ripple effect in information availability across the district. Improved quality of human resource data, such as teacher assignment area and school locations—data necessary to run PPS' combined effectiveness model—has opened the door to additional process solutions. Linkages between teachers and students is another example of data quality that has gotten stronger and is now more broadly available across the district.

## What's Next for Teacher Growth and Evaluation at PPS

In June 2014, PPS reached another milestone. For the first time, more than 1,700 teachers received Educator Effectiveness Reports and Annual Rating Forms that counted for their actual end-of-year ratings. For most of those teachers, their evaluation was based on multiple measures.[5] Between the 2012–13 preview reports and the 2013–14 end-of-year ratings, the district saw a significant positive shift in teacher performance with more teachers performing at the highest levels and fewer at the lowest levels than in prior years. Specifically, this year, 23% of PPS teachers performed at the Distinguished level, 74% at the Proficient level, 2% at Needs Improvement, and 2% at the Failing level.

A positive shift in performance was not unexpected given that teachers and principals received a full preview of this information to inform professional learning and better understand the evaluation process, and that this is the first year that true evaluative stakes are attached.

While analysis into this change in the distribution is currently underway, PPS hypothesizes that the shift is likely based on a combination of 1) improvements in teaching practice, 2) changes in how principals and teachers engaged in the evaluation process this year, and 3) changes in the teachers who were a part of PPS' workforce.

Now that the district has moved out of the design process and into the implementation phase of its teacher growth and evaluation system[6], it is able to shift its focus toward more deeply utilizing evaluation as a tool both to continue to support growth in teacher practice and to make better decisions

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[5] Roughly 75% of PPS teachers were rated in 2013–14 based on 50% observation and 50% student outcomes. The remainder, mostly teachers in their first three semesters and those in the district's special schools, were rated based on observation of practice only.

[6] The district also plans to expand its efforts around growth and evaluation to other employee groups across the district. Beginning in 2014–15, school leaders will be evaluated based 50% on observation and 50% on student outcomes, and non-teaching professionals (counselors, social workers, nurses, etc.) will be evaluated based 80% on observation and 20% on student performance, as required by Act 82. In addition, though not required by state law, the district is also implementing a growth and evaluation model for central office staff that is similar to teachers and other employee groups. Central office administrators will be based 65% on outcomes and 35% on observation.

on behalf of students. Of course, there will always be opportunities to further strengthen the growth and evaluation system, and so PPS also intends to maintain a collaborative structure for teachers to weigh in on the components of their evaluation system at consistent intervals throughout the year in order to inform the continuous improvement of the system.
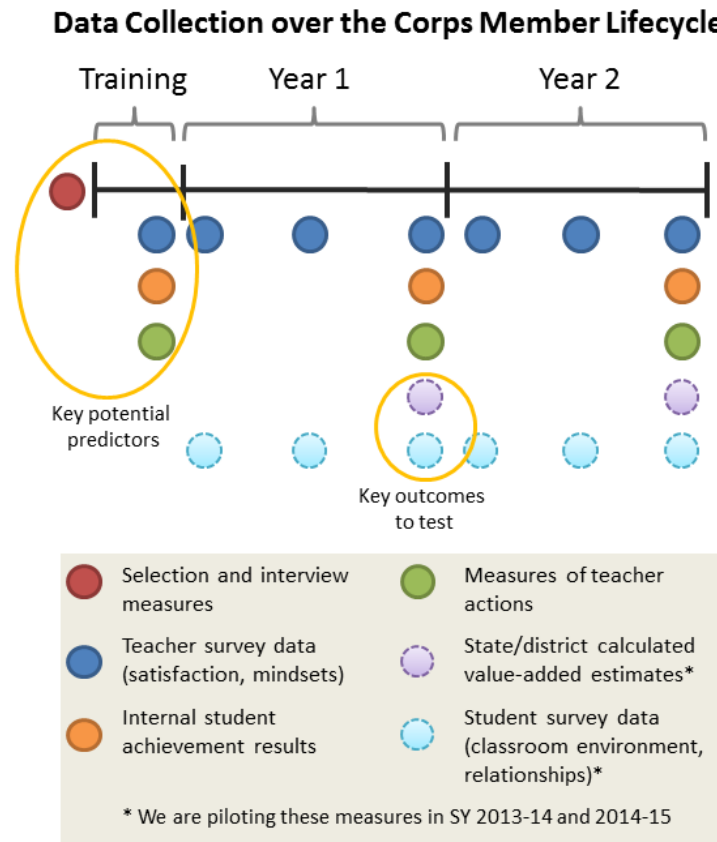
# Case Study: Teach For America

## Agency Context

Teach For America (TFA) is a non-profit organization founded by Wendy Kopp in 1990. TFA's mission is to build the movement to eliminate educational inequity. The organization aims to expand educational opportunity by recruiting, training, and fostering the leadership of recent college graduates, graduate students, and professionals to teach for two years in urban and rural public schools around the country. In the 2013–14 school year, 11,000 corps members reached more than 750,000 students. Additionally, the organization actively supports the leadership of alumni who work from within the field of education and across all sectors, as they continue to expand opportunities for low-income students. Over 30,000 alumni leaders work at every level of education, policy, and other professions, to ensure that all children can receive an excellent education.

While researchers have struggled to identify strong predictors of teacher effectiveness at the time of hire (Rockoff et al. 2011), there is significant evidence that the TFA selection and training process leads these teachers to outperform other novice teachers, and in some cases, all teachers in a state (Boyd et al. 2010; Kane, Rockoff & Staiger 2008; Noell & Gansle 2009; Turner et al. 2012; Xu, Hannaway & Taylor 2011; Glazerman, Mayer & Decker 2006; Mathematica 2013).

## The Research Question

The Strategy and Research (S&R) team within Teacher Preparation, Support and Development at TFA planned to conduct analyses to determine the feasibility of predicting teachers' future efficacy at time of hire using an extensive set of cognitive and socio-emotional measures, with a particular focus on early identification of low-performers or "strugglers." As part of the analysis, S&R planned to use existing predictor information, including corps member characteristics and early career performance, as well as pilot the collection of promising new predictive measures. As states and districts are increasingly employing multiple measures in their teacher evaluation systems, S&R planned to investigate multiple outcomes, including student achievement growth, measures of student-teacher relationships or classroom environment gathered through student surveys, and principal ratings. TFA is piloting the collection of these outcomes in the 2013–14 and 2014–15 school years as part of a larger strategy to measure student impact aligned with the organization's ultimate aims for students. (See TFA Figure 1.) Each measure captures a nuanced perspective on student impact, and the S&R team had hoped that multiple lenses would increase confidence in the results. For instance, this data could be used to pose the question: Is there some subset of corps members who have low scores across all measures?

**TFA Figure 1: Data Collection over the Corps Member Lifecycle**

## Data Collection over the Corps Member Lifecycle

| Training | Year 1 | Year 2 |
|---|---|---|

Key potential predictors

Key outcomes to test

| | | |
|---|---|---|
| 🔴 | Selection and interview measures | 🟢 Measures of teacher actions |
| 🔵 | Teacher survey data (satisfaction, mindsets) | 🟣 State/district calculated value-added estimates* |
| 🟠 | Internal student achievement results | 🔵 Student survey data (classroom environment, relationships)* |

\* We are piloting these measures in SY 2013-14 and 2014-15

While this this line of research would be valuable for the organization, as well as external education policy experts and the ground-level decision makers who hire teachers, this project has been put on hold. TFA's regional leaders explained that information about future effectiveness, particularly early identification of strugglers, would be extremely valuable to the staff who train and support corps members. This early insight will allow for more targeted supports that could raise the overall impact of the corps. This research could be externally useful as a potential lever for increasing district-wide teacher quality. For instance, although TFA corps members are a unique subset of teachers, findings from this line of research may be generalizable; these results will underscore the characteristics or combinations of characteristics that principals may want to have in mind when faced with a hiring decision.

## Developing the Research Question

TFA strives to be an evidence-based, data-driven organization. As a result, TFA's decision makers have long been interested in studying the subset of corps members that struggle with low performance, ultimately aspiring to reduce that fraction in order to improve the overall effectiveness of the corps.

The current project proposal ("Struggling CMs")—to focus on the relationships between the inputs that are currently collected or might be collected in the future and the likelihood of struggling—was developed after a series of meetings with key team members. Initial meetings in November and December of 2013 were used to gather context on past work on this line of research within the organization, including: (i) how was "struggling" defined; (ii) what research questions were asked; (iii) what data and methods were used in these analyses; (iv) what conclusions were drawn; (v) how were these findings presented and received by regional stakeholders; (vi) what questions remain open; and (vii) what have regional leaders put forward as their priorities for further study?

These initial conversations revealed other critical questions around the organization's operation and philosophy that are intertwined with the Struggling CMs work. For instance, stakeholders have asked:

(i)      what are the potential strategies across the program continuum for addressing strugglers;

(ii)     what are best practices for supporting and developing corps members who are identified as likely to struggle in the future;

(iii)    are there common "profiles" of predicted strugglers;

(iv)    if so, are certain types of strugglers more likely to improve than others;

(v)     would the organization ever consider counseling out corps members who are predicted to significantly under-perform;

(vi)    what would the implications of such a decision be?

The planned focus of the Struggling CMs work – the early prediction of future strugglers – was purposefully selected as it could be the jumping off point for many other important questions.

Additionally, the Struggling CMs work would augment an existing body of historical and ongoing internal research. Every year internal experts study corps members whose students made dramatic academic growth and ask: What characteristics set these teachers apart? Through this line of research, TFA has distilled a set of key characteristics to look for in the selection and hiring process. Such characteristics include:

(i)      a deep belief in the potential of all kids;

(ii)     demonstrated leadership ability and superior interpersonal skills to motivate others;

(iii)    strong achievement in academic, professional, extracurricular, and/or volunteer settings;

(iv)    perseverance in the face of challenges; and

(v)     respect for individuals' diverse experiences and the ability to work effectively with people from a variety of backgrounds.

The proposed project examining the feasibility of predicting teachers' future efficacy at time of hire using an extensive set of cognitive and socio-emotional measures would extend this research by focusing on low performance, including additional data sources for both predictor and outcome variables, and may involve testing new models and methods.

**Current Project Status**

While S&R had initially planned to move forward with preliminary analyses with available pilot outcome data early in the 2014–15 school year, the Struggling CMs work has been put on hold. This decision was made after a series of collaborative planning and prioritization conversations within the S&R team and across the organization. Given the S&R's limited capacity for discretionary work, team leaders prioritized projects based on a variety of factors such as: alignment to the organization's overall priorities, demand or interest, potential impact, distribution and balance of projects across team members, expertise and unique value-add. While the Struggling CMs work has been deprioritized this year, the internal researchers will continue to study innovative teacher training and support pilots, as well as the common traits among teachers whose students make dramatic academic growth.

# Case Study: Tennessee Department of Education

**Agency Context**

The Tennessee Department of Education (TDOE) strives to expand students' access to effective teachers and leaders, families' access to good schools, educators' access to resources and best practices and public access to information and data. TDOE serves nearly a million students across a diverse set of 140 districts that include everything from small, rural districts to large, urban districts with hundreds of schools.

Partnering with the Strategic Data Project for Cohort 4 of the Fellowship program, TDOE placed two SDP Data Fellows (Nate Schwartz and Jennifer Esswein) and one SDP Agency Fellow (Tony Pratt). All three are founding members of the department's Office of Research and Policy (ORP). ORP, among other functions, conducts research aligned to TDOE's strategic priorities. This research is designed to inform key decisions both within and beyond the department. In many cases, including the case described here, ORP has utilized data from Tennessee's statewide teacher evaluation system, which was first implemented statewide in the 2011–12 school year.

While most teachers in Tennessee remain in their positions for many years, it is also the case that some of the most effective teachers depart each year, either to go teach in a different school, a different district, or sometimes to leave the profession entirely. Not all of these moves are avoidable, but finding ways to retain as many high-quality teachers as possible represents a central challenge for all administrators. The project described in this case study represents an example of leveraging data from a teacher evaluation system to gain new insights, and highlights the relationship between retention rates and teacher effectiveness and the variation across schools and districts in the state of Tennessee.

The project used teacher evaluation data, teacher retention data, and working conditions data to address the following questions:

- What are the overall retention rates in Tennessee public schools? How does the likelihood that a teacher remains for another year differ by the teachers' years of teaching experience?
- How do retention rates vary according to teachers' overall level of effectiveness derived from Tennessee's multiple measure teacher evaluation system (TEAM)?
- Are highly effective early career and minority teachers retained at similar rates to other highly effective teachers?
- How do overall retention rates and the retention rates of highly effective teachers vary across districts? Does district size help to explain any variation?
- What school-level factors seem to be driving retention, particularly of highly effective teachers?

While there has been a tremendous amount of research conducted about various issues related to teacher retention (Borman, G. D., & Dowling, N. M. 2008; Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S., & Wyckoff, J. 2011), only recently have researchers turned their attention to questions related to the retention of the most effective teachers (Goldhaber, D., Gross, B., & Player, D. 2011; Jacob, A., Vidyarthi, E., & Carroll, K. 2012). This project allowed ORP to build on this existing research by describing the landscape of teacher retention in Tennessee schools, particularly as it relates to teacher effectiveness.

**Defining Retention**

After the research questions for this project were laid out, the first major decision was to arrive at a definition of retention. While retention is sometimes simplified to mean teachers who remained in the same school, the department thought it was important to also examine whether teachers remained in the same district or continued to teach in Tennessee schools. As a result, ORP settled on the following retention outcomes that are used throughout the analysis:

1. Retained — taught in the same school

2. Retained — taught in the same district

3. Retained — taught in a different district within the state

4. Not retained — did not teach in Tennessee public schools

Due to some data limitations—including the fact that effectiveness data from the state's teacher evaluation system only existed in 2011–12 forward—we were only able to examine one year of retention data, from 2011–12 to 2012–13. While future analyses with additional years of data have the potential to provide additional insights about the relationship between teacher retention and effectiveness, it was decided that using one year of data still provided valuable insights.

**Findings**

*Retention and Experience*

As expected, early and late career teachers were retained at lower rates than mid-career teachers. TDOE Figure 1 (below) displays retention rates by the teacher's prior years of experience. The height of the dark blue bar represents the percent of teachers retained within the same school; the height of the medium blue bar represents the percent of teachers who moved to a different school

within a same district; and the height of the light blue bar represents the percent of teachers who moved to a different district. The overall height of each bar represents the percent of teachers who were retained in Tennessee public schools. While teachers at all experience levels sometimes moved to different schools within the same district, early career teachers were the most likely to move across districts.

**TDOE Figure 1 – Retention Rates by Years of Experience**
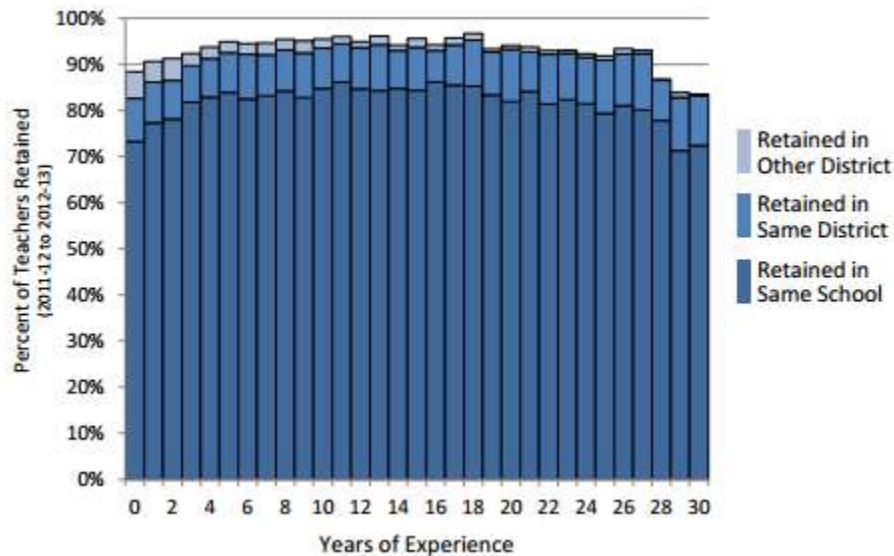


*Retention and Effectiveness*

In the 2011–12 school year, Tennessee began the implementation of the multiple component TEAM teacher evaluation system. TEAM includes observation scores from multiple observations, growth scores, and achievement measure scores; these components are combined to arrive at an overall level of effectiveness of Level 1, 2, 3, 4, or 5. ORP examined whether teachers who received higher overall levels of effectiveness were retained at different rates than teachers who received lower overall levels of effectiveness. In the remainder of this paper, teachers earning the highest two levels—Level 4 or Level 5—are considered highly effective teachers.

TDOE Figure 2 displays retention rates for teachers by overall level of effectiveness. Highly effective teachers—those who earned a score of Level 4 or Level 5—tended to be retained at a higher rate than teachers who earned a score of Level 1, 2, or 3. The difference between the retention rates of teachers who earned a score of Level 3, 4, or 5, however, was largely negligible. One interpretation for this result is that teachers who performed at or above expectations were retained at a similar rate and that rate exceeded the retention rate of teachers performing below expectations. Overall, the state lost 1,253 teachers who earned a score of Level 5 in 2011–12.

**TDOE Figure 2 – Retention Rates by Overall Level of Effectiveness**
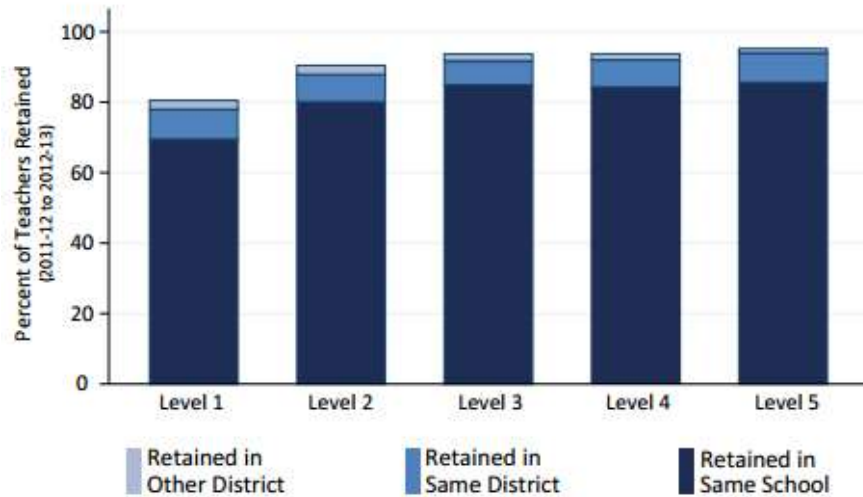


TDOE Figure 3 displays the same information for teachers who were in their first, second, or third year of teaching during the 2011–12 school year. While the trends are similar to those observed for all teachers, early career teachers are retained at lower rates across the board and highly effective early career teachers are more likely to change schools or districts than the typical highly effective teacher. This suggests that districts and schools could improve their proportion of effective teachers by finding ways to retain highly effective early career teachers at a higher rate. In all, about 500 early career teachers who earned an overall level of effectiveness of 4 or 5 in 2011–12 did not teach in Tennessee in the 2012–13 school year.

**TDOE Figure 3 – Retention Rates by Overall Level of Effectiveness (Early Career Teachers)**
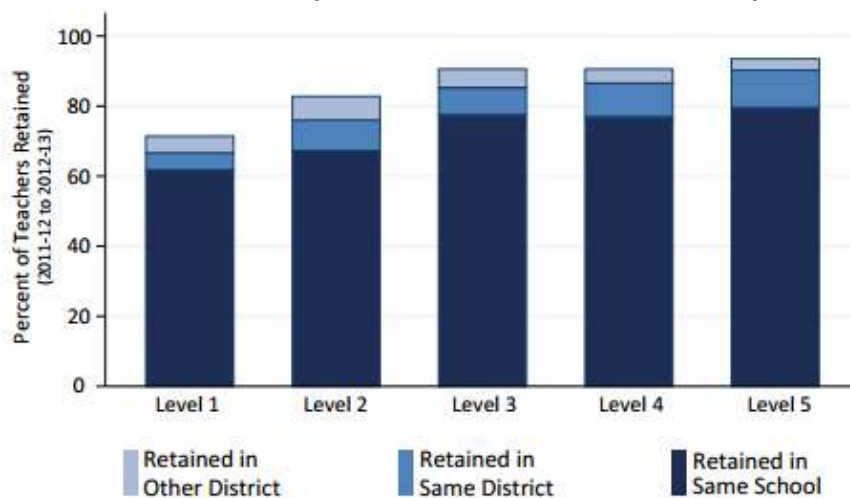
Unlike the trend for all teachers, there is little difference in the overall retention rates of minority teachers who earn Levels 2 through 5 (see Figure 1 in TDOE Appendix A). Additionally, over a third of minority teachers who earn a Level 5 switched schools between years. The retention rate of Level 5 minority teachers within Tennessee public schools (90.4%) lags behind the overall retention rate of Level 5 teachers (95.2%) and even the retention rate of early career Level 5 teachers (93.4%). Strategies should be considered to improve the retention of minority teachers generally, but especially those who prove to be highly effective.

*District Variation in Retention Rates*

There is also considerable variation across districts in both overall retention rates (see figure 2 in TDOE Appendix A) and the rate at which they retain their most effective teachers. (See TDOE Figure 4.) The variation is not explained by district size; small, medium, and large districts all varied considerably in their overall retention of Level 5 teachers. This suggests that it is possible for rural, urban, and suburban districts to retain their most effective teachers at high rates.

**TDOE Figure 4 – District Retention Rates – Level 5 Teachers**
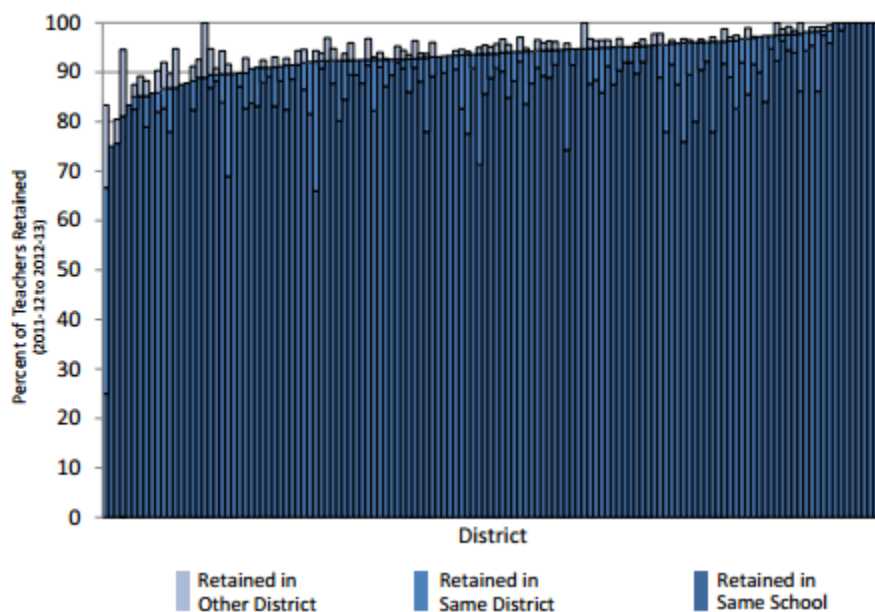


Districts also varied considerably in whether they tended to retain their highly effective teachers—those earning scores of Level 4 or 5—at a higher rate than their teachers earning scores of Level 1, 2, or 3. TDOE Figure 5 illustrates that while the majority of districts retain more effective teachers at a higher rate, 37 districts retain teachers earning scores of Level 1, 2, or 3 at a higher rate than teachers earning a score of Level 4 or 5. As in the case of the retention rates of the Level 5

teachers, this variation is not explained by district size.

**TDOE Figure 5 – District Retention Rate Differences by Effectiveness**
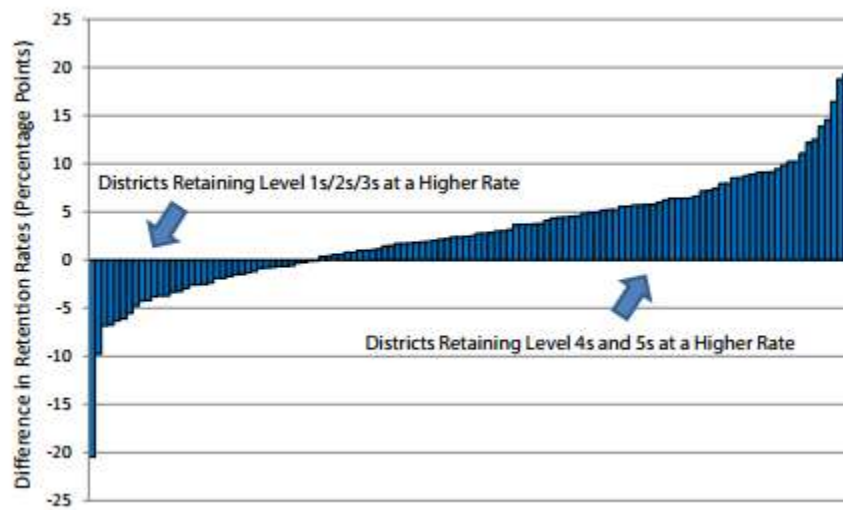


*Retention and Working Conditions*

ORP also explored which working conditions were associated with retention of highly effective Tennessee teachers, those earning an overall level of effectiveness of 4 or 5. School-level ratings of several school working conditions were obtained from teachers' responses to a statewide survey of school working conditions, the Teaching, Empowering, Leading and Learning (TELL) survey. Teachers were asked to strongly agree, agree, disagree or strongly disagree with several items related to each working condition category. Of the working conditions included in this analysis, "effective time use" and "functional teacher evaluation" were significantly related to retention rates of highly effective teachers.

The "effective time use" working condition measures whether teachers have sufficient time to meet their instructional and non-instructional responsibilities in the school. This suggests that district and school leaders concerned with improving their retention of effective teachers might implement policies and practices that protect teachers' time by ensuring that:

- Teachers are allowed to focus on educating students with minimal interruptions;
- Teachers are protected from duties that interfere with their essential role of educating students; and
- Teachers feel that the non-instructional time they are provided in their school is sufficient.

The "functional teacher evaluation" working condition measures whether teacher performance is assessed consistently and objectively and the evaluation results in useful feedback.  As a result,

additional strategies aimed at increasing the retention rate of effective teachers might include taking steps to ensure that as part of the teacher evaluation processes:

- Teachers receive feedback that can help them improve teaching;
- Teacher performance is assessed objectively; and
- The procedures for teacher evaluation are consistent.

**Impact**

This project is already informing strategy at the state level. TDOE's Division of Teachers of Leaders is using this analysis to inform a new strategic plan they are writing in 2014. Additionally, ORP will continue to probe the interesting trends that emerged through further retention analyses that incorporate additional years of data.

More generally, this analysis has the potential to drive conversation around the retention of effective teachers. ORP released a public white paper outlining this analysis in June 2014 and hopes that it might encourage school and district leaders to think critically about how they can target their most effective teachers in their retention efforts. ORP and TDOE also hope that the white paper adds to the growing body of research around the relationship between teacher retention and teacher effectiveness.

In response to the findings around the substantial variation in retention patterns at the district level, the Office of Research and Policy collaborated with TDOE's Centers of Regional Excellence (CORE), which each provide support to a particular region of the state, to produce actionable district-level reports. These reports mirrored some of the key analyses in the state-level analysis but included district-specific data. In addition, TDOE worked with CORE to produce a list of guided questions that district leaders could ask themselves about the relationship between retention and effectiveness in their district. The reports and guiding questions, along with a copy of the white paper, will be distributed to superintendents and school board chairs during a series of regional meetings that TDOE is conducting during the summer of 2014.

This project illustrates that teacher effectiveness data can be leveraged to provide insights about human capital patterns. These insights, in turn, can be used to enact strategies that improve the retention of effective teachers and, as a result, the chance that each student has access to an effective teacher. Other agencies could leverage their newly available teacher effectiveness data for similar purposes.

# Lessons Learned and Themes from the Three Case Studies

Although the work presented in the preceding case studies varies considerably across organizations, each provides a view of how they are approaching the utilization of robust teacher effectiveness information that pulls together multiple lenses on effectiveness.

When considering the case studies together, several key themes emerge that may be helpful to agencies finding themselves at a similar point in the effort to build more robust teacher growth and evaluation systems with a goal of using the information provided by those systems to improve student outcomes.

- Building systems that reliably and accurately differentiate teacher performance is hard work that requires significant resources. However, even more difficult is building the systems, creating the will, and changing necessary policy to actually use the information to better support teachers and make decisions on behalf of students that considers information on teacher effectiveness. **Ensuring sufficient capacity and resources are available to move the work beyond development and design of the system to use of the information for the benefit of teachers and students is critical.**

- There are many applications of information related to teacher effectiveness, including informing targeted professional learning opportunities, developing strategic retention strategies, refining teacher recruitment and selection processes, revising teacher staffing practices to more strategically match teachers and students, and more. As a result, **prioritizing focus and establishing a clear guiding research question or problem of practice to guide efforts are essential to prevent against the risk of having a focus too broad to be effective**. Doing so requires cross-functional collaboration of technical- and strategic-focused individuals within an agency to develop specific priorities and create a strategic analysis plan that matches with those priorities.

- **Establishing processes and structures to support information and data sharing are key to facilitating the use of teacher effectiveness information**. As a rule, most local and state education agencies face an uphill battle when it comes to sharing data in a timely and easy-to-understand manner. The same is true when it comes to teacher effectiveness data, which in many cases is an unprecedented amount of information that agencies previously did not have to

store, share, analyze or communicate about. Just as it is critical to establish clear priorities and research questions to guide the use of teacher effectiveness information, it is also important to build a complementary plan for how the results will be shared, or how the data itself will be shared in a secure way so that individuals may engage with the information on their own to inform their work.

The recent development of multiple-measure systems of teacher evaluation has created a wealth of new data about teacher effectiveness that holds immense promise but that also creates significant challenges. Teacher evaluation systems are complex but hold little value on their own. Instead, utilizing the data that comes from the systems is where the true promise lies, guiding efforts to improve instruction and ensure every student receives the benefit of effective teaching. After several years of building multiple-measure systems, districts and states are just beginning to utilize teacher effectiveness information. The agencies and organizations featured in this report are among some of those at the forefront of this work. It is the hope of the collaborators that the experiences they have had can help to inform others at similar phases in this important work.

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# Appendices

**PPS Appendix A: Individual Measures of Teacher Effectiveness**

## One Lens for Understanding Effective Teaching: Observation of Teacher Practice

Through the observation of teacher practice, we can see the complex interactions between the students, the teacher, and the subject matter in the classroom, all of which contribute to growing Promise-Ready students across all grades. Pittsburgh Public Schools (PPS) uses the Research-based Inclusive System of Evaluation (RISE) to observe teacher practice in the classroom as one lens to understand teacher effectiveness.

## ABOUT RISE

In 2009, leaders from PPS and Pittsburgh Federation of Teachers (PFT), and approximately 120 teachers and administrators, joined together to create RISE. Defining effective teaching across four domains and 24 components of practice, RISE is a differentiated system of teacher evaluation. Each year, teachers participate in one of two versions of the RISE process: the Formal Process or the Supported Growth Project, which allows a deep focus on one component of the RISE rubric through action research. The comprehensive RISE rubric is based upon Charlotte Danielson's *Framework for Teaching.* The framework represents all aspects of a teacher's work and is derived from the latest theoretical and empirical research about teaching. The four domains of the framework are briefly described below*.*

### Domain 1: Planning and Preparation

The components in Domain 1 address how a teacher plans and prepares for lessons by identifying what is important for students to learn and designing instruction that enables students to achieve those learning goals. Domain 1 work designs the plans implemented in Domain 3.

### Domain 2: The Classroom Environment

The components in Domain 2 address the conditions that a teacher creates in order for learning to take place. These conditions are necessary for the components of Domain 3 to be effectively put in place.

### Domain 3: Teaching and Learning

The components in Domain 3 address how a teacher actually engages students with the content. In this domain, the teacher implements the plans designed in Domain 1.

### Domain 4: Professional Responsibilities

The components in Domain 4 identify professional skills and responsibilities that are not visible in the classroom, but are crucial for successful classroom teaching and for enhancing the overall profession of teaching.

## WHY OBSERVATION OF TEACHER PRACTICE IS IMPORTANT

Teaching involves a complex set of skills and practices. PPS teachers must know their students, content, and the curriculum thoroughly—and have a broad repertoire of content-specific, culturally responsive strategies and activities to use with students to meet rigorous learning goals. Teachers must be flexible given students' learning needs and the dynamics of the classroom, and use formative assessment to adapt instruction to maximize learning opportunities for all students. Effective teachers have established rituals and routines that foster a safe learning environment where effort is privileged, allowing students to fully engage in instructional activities, ask questions, and take part in class discussions. Effective

teachers continuously work to improve their practice and knowledge of students while acting as a resource for others in their professional learning community.

RISE provides a comprehensive rubric for understanding effective teaching practice across many components, and a common language for discussing them. RISE is just one of the District's multiple measures used to collect evidence about a teacher's practice to inform and guide continuous professional growth.

## HOW WE USE RISE

### Accelerating Student Learning and Growth

The mission of RISE is to ensure PPS students are Promise-Ready by continuously advancing the professional practice of our teachers. RISE aims to identify and assess effective teaching practice in order to accelerate student learning and growth

### Supporting Professional Practice and Growth

The RISE evaluation system does more than evaluate: it fosters teacher learning and promotes ongoing growth of professional practice. As a growth-oriented model, RISE is differentiated to support novice and experienced teachers across four performance levels: unsatisfactory, basic, proficient, and distinguished. Supervision within

### The Story of RISE

Teachers were once evaluated in PPS through a single rating of either Satisfactory or Unsatisfactory. The old system rated 99% of teachers as Satisfactory. There was no way to give teachers information to improve their practice, and no way to recognize excellence in practice.

As the Empowering Effective Teachers plan evolved, it was crucial to anchor the work in an equitable, fair and rigorous evaluation system. RISE is a powerful and comprehensive tool to ensure that every teacher receives fair and differentiated support and feedback to better inform their professional growth. RISE also seeks to create a system of teacher evaluation based on the continual improvement of teaching practice and the value that a teacher adds to student growth over time.

RISE was the first of the District's multiple measures to be designed and implemented District-wide and was initially introduced over a two-year period to provide enough time for thoughtful design and testing. In the 2009–10 school year, 24 schools chose to participate in the pilot of RISE, and in 2010–11, every PPS school implemented RISE. In 2011–12, about 1,600 teachers received ratings through RISE. The RISE ratings differentiate teachers across four performance categories.

RISE has been put in place hand-in-hand with PPS educators. The District continues to involve teachers in the annual revision process, working in 2012–13 with a teacher member of the RISE Leadership Team from every school.

the system is differentiated based on tenure status, performance level, and the status of the professional as a Career Ladder teacher. Furthermore, teachers whose overall performance is currently unsatisfactory step outside of the RISE process altogether to receive intensive support through an Employee Improvement Plan (EIP).

### Informing the Summative Rating

Since 2010–11, teacher summative ratings have been based on RISE. Beginning in 2013–14 in alignment with state legislation (Act 82 of 2012), the District will combine multiple measures to reach summative ratings. RISE or EIP results will be included as a measure for observation of teacher practice, comprising 50% of the combined measure used to determine teacher summative ratings.

### Providing Feedback

*In spring 2012, 80% of PPS teachers said they are using feedback from observations to improve teaching and determine areas of growth. We also know that many schools are using RISE to open classroom doors and facilitate peer-to-peer collaboration.*

# One Lens for Understanding Effective Teaching: Student Learning and Growth

Student learning and growth is one lens that we use to understand teacher effectiveness in Pittsburgh Public Schools (PPS), as part of our system of multiple measures. Value-added measures (VAMs) are what we use to help us to better understand the contribution that a school, team, or teacher makes to student growth.
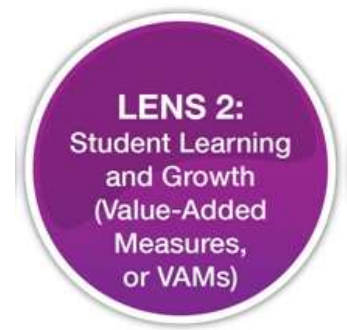
## ABOUT VALUE-ADDED MEASURES

Using value-added measures is one way to look at student growth. This lens focuses on the growth that students make in the subject area during their time with each teacher. Value-added measures are fairer than simply using a single test score or proficiency level because they take into account prior levels of student achievement. When used with multiple measures, such as observation of teacher practice and student perception surveys, value-added measures are useful for identifying effective teaching.

## WHY STUDENT LEARNING AND GROWTH ARE IMPORTANT

Most people can agree that an educator's role is to take students wherever they are and help them progress in their learning. Schools and teachers impact student learning in many ways, some of which can be measured and some of which cannot. Value-added analysis provides an objective measure of the contribution schools, teams, and teachers have on student growth.

With value-added measures, we can identify our most effective schools and teachers contributing to student growth so that we can learn from their practices and replicate those practices across classrooms. Even the most effective teacher has something to learn from his or her colleagues. This heightened awareness of effective practices improves our collective and individual practice on behalf of our students.

Value-added measures aim to:

- Provide information in addition to achievement data that isolates the contributions of schools and teachers on the learning of students.
- Support responsive and reflective teaching.
- Promote educator collaboration within schools, grade levels, and subjects.
- Recognize and validate teacher, team, and school contributions to student growth.

It is important to measure student learning and growth in all classrooms, however value-added measures are not currently available for all content areas or grade levels. For this reason, RISE component 3f, and in the future Student Learning Objectives (SLOs), is also used to measure the impact teachers have on student learning.

## HOW WE USE VALUE-ADDED MEASURES

### Accelerating Student Learning and Growth

Value-added measures are used primarily to inform improvement planning at the school level and individual professional reflection and growth at the teacher level. Each year, teachers and administrators should analyze the reports, discuss and understand value-added estimates, and use value-added information with other data to uncover practices that effectively contribute to student learning and growth.

## Supporting Professional Practice and Growth

Teacher-level value-added measures can help teachers understand their contribution to student learning and growth in specific content areas. Principals and central office staff with a role in facilitating growth also can see final teacher-level value-added reports so they can support teachers in interpreting and responding to results.

With value-added measures, we identify teachers and teams contributing most to student growth so we can learn from their teaching practices and replicate best practices across classrooms. There are teachers with high and low VAM results across all of our schools. Teachers with the highest VAMs are getting results so significant they could erase achievement gaps between African-American and Caucasian students across multiple years.

By approaching the analysis of value-added results as a way to combine all of our teachers' strengths, we help students and teachers to learn more. This improves our collective and individual practice on behalf of our students.

## Informing the Summative Rating

Beginning in 2013–14, the District will combine multiple measures, including value-added measures, to reach summative ratings, in alignment with state legislation (Act 82 of 2012). School-level VAM results will account for 5% of teachers' evaluation and teacher-level VAM results will account for 30% of the evaluation when available.

### Who Will Have a Value-Added Report?

All school staff will receive *school-level* value-added reports to inform school improvement efforts.

Approximately 40% of PPS K–12 classroom teachers have *teacher-level* value-added measures. Teachers will receive a 2012–13 teacher-level VAM report if he or she:

1. Was a teacher of record in Mathematics in Grades 2–11, ELA in Grades 2–12, Science in Grades 4 and 6–11, Social Studies in Grades 6–11, Algebra I in Grade 9, Literature in Grade 10, Spanish Levels 1–2, or French Level 2 during the 2012–13 school year, and
2. Was not on leave for greater than 90 days in the 2012–13 school year, and
3. Had at least 10 students with complete data (prior achievement and current assessment) who can be attributed to him or her.

For a complete list of assessments and core content courses used to link students to teachers, see the see the Value-Added Measures business rules on the My PPS VAM page.

Value-added measures require quantifiable information that can be collected, analyzed, and tracked over time. So for now, not every teacher will have his or her own individual value-added measure. In some grades and subjects, there will not be any individual value-added measures; in other grades and subjects there will be one value-added measure. In other areas there could be more than one value-added measure.

Over time, our goal is that all teachers will have student learning and growth outcome measures. To get there, we will consider incorporating additional assessments and refining our current assessments, but only in areas where doing so is helpful in understanding the contribution of teachers to student growth. The timeline and approach to incorporating additional assessments will be informed by the RISE Leadership Team and shared with all staff each year with the release of reports.

### A Story of Student Growth

*A student enters the fourth grade on a first-grade reading level. With the help of her teacher, she enters fifth grade on a fourth-grade reading level. This student may not score Proficient on her PSSA, but she improved dramatically. Using value-added measures helps us capture her teacher's impact on her learning.*

# One Lens for Understanding Effective Teaching:
# Student Perception

Student perception is one lens that we use to view teacher effectiveness in Pittsburgh Public Schools (PPS) as part of our professional growth and evaluation system. Through the student perception lens, we are able to better understand how students see their teacher and the classroom learning experience. The Tripod student survey is our way of including student feedback among measures of effective teaching.
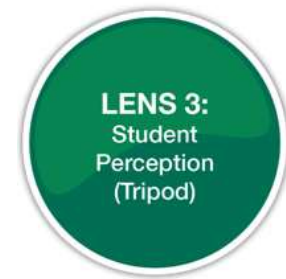
The "tripod" in the Tripod Project refers to three "legs" of quality teaching: content, pedagogy, and relationships. This model emphasizes teachers' content knowledge and pedagogic skills, and their capacity to form and sustain effective student-teacher relationships. The premise is that students will engage more deeply and learn more effectively when they perceive (or experience) that all three legs are strong.

The impact of effective teaching goes beyond what is measured by academic assessments. We know that:

- Teachers influence how students experience the school and classroom, and contribute to how students grow as individuals, developing habits of mind that contribute to success;
- Positive learning environments enable teacher effectiveness and student success; and
- Feedback from our students about how they are experiencing the classroom can help us drive improvement in certain areas.

## ABOUT TRIPOD

The Tripod student survey is a research-based, classroom-level analysis and reporting system developed over 10 years as a partnership between Cambridge Education and Dr. Ronald Ferguson of Harvard University. Now the survey is in its eleventh generation, and hundreds of schools and thousands of classrooms in more than 25 states have participated. Nationally, research shows that student perception survey results are valid and consistent.[7]

The survey asks students to give feedback on specific aspects of the classroom experience, organized around seven elements of teaching practice. The questions use Likert-scale response options, and focus on specific statements such as, *"Our class stays busy and doesn't waste time."* In addition, the survey asks students to assess their level of engagement around several student engagement targets, both individual and collective. These include targets such as trust, cooperation, ambitiousness, and diligence. Surveys like the Tripod student survey provide valuable information to guide continuous improvement.

## WHY STUDENT PERCEPTION IS IMPORTANT

The impact of effective teaching goes beyond what is measured by academic assessments. Teachers influence how students experience the school and classroom, and contribute to how students grow as individuals, developing habits of mind that bring about success.

In Pittsburgh, we have recognized that positive learning environments enable teacher effectiveness and student success. Feedback from our students about how they are experiencing the classroom can help us drive improvement in these areas. The Tripod student survey helps us to assess student perception of teacher effectiveness, and it gives us a clearer picture of student well-being.

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[7] [7] December 2010, Policy Brief on Learning About Teaching: Initial Findings from the Measuring Effective Teaching Project, Bill & Melinda Gates Foundation, http://www.gatesfoundation.org/college-ready-education/Documents/preliminary-finding-policy-brief.pdf.

State policy (Act 82 of 2012) now requires teacher evaluation to be based on multiple measures of effective teaching starting in 2013–14. For more than three years, PPS has been committed to identifying the best available measures and adapting them to work in PPS. Tripod is one of those research-based measures.

Together with RISE and value-added measures, Tripod is helping to provide an unprecedented understanding of teaching effectiveness that will help the District better support teacher growth, make better decisions on behalf of students, and meet the requirements of new state policy.

## HOW WE USE TRIPOD

The primary purpose of the survey is to provide valuable information to teachers that can be used for professional growth. Data can also be aggregated to measure school climate. This data can help focus priorities, track improvement, evaluate programs, and make decisions.

### Accelerating Student Learning and Growth

Students will have the opportunity to provide meaningful, structured feedback to their teachers, and reflect on their own engagement in the classroom. As a district, we will better understand how students are experiencing the classroom, and how engaged students are in learning.

### Supporting Professional Practice and Growth

Teachers receive reports that present information in a way that can be used to focus professional growth. We can also use the data to look at the entire school climate. Together, this information helps us to focus priorities, track improvement, evaluate programs, and make decisions.

### Informing the Summative Rating

## The 7 Cs

The 7 Cs are the central constructs in the Tripod Project framework for measuring teaching effectiveness. Each construct is supported by research in peer-reviewed publications.

1. **Care** refers to teacher behaviors that help students to feel emotionally safe and to rely on the teacher to be a dependable ally in the classroom personal satisfaction.
   *"My teacher really tries to understand how students feel about things."*

2. **Control** identifies classroom management skills.
   *"Our class stays busy and doesn't waste time."*

3. **Clarify** pertains to teacher behaviors to promote understanding, such as interactions that clear up confusion to help students persevere.
   *"My teacher has several good ways to explain each topic that we cover in this class."*

4. **Challenge** connects both effort and rigor—pressing students to work hard and to think hard.
   *"My teacher wants us to use our thinking skills, not just memorize things."*

5. **Captivate** isolates teacher behaviors that make instruction stimulating, instead of boring.
   *"My teacher makes lessons interesting,"*

6. **Confer** concerns seeking students' points of view by asking them questions and inviting them to express themselves.
   *"My teacher gives us time to explain our ideas."*

7. **Consolidate** focuses on how teachers help students to organize material for more effective encoding in memory and for more efficient reasoning.
   *"My teacher takes the time to summarize what we learn each day."*

**The elements of teaching practice organized by the seven Cs very closely align with those**

In 2013–14, survey results will be used as one of multiple measures for evaluation of teachers and will be a part of teachers' summative evaluation as long as the criteria for inclusion have been met.

**PPS Appendix B: Professional learning and support opportunities are available to PPS teachers in 2013-14.**

# Resources and Opportunities for Professional Growth

In Pittsburgh Public Schools, we believe that high-quality, differentiated professional learning that is directly linked to classroom instruction is the key to increasing educator effectiveness and results for students. We are committed to creating and sustaining a culture of continuous learning and growth through both job-embedded and District-wide professional learning opportunities. All professional learning is specifically designed to align to Learning Forward's *Standards for Professional Learning.* Professional learning is offered in the following modalities: formal training, independent learning, team-based learning, and one-on-one coaching and support. Log on to www.pps.k12.pa.us/learningopps for more information.

## Online Resources

- **Pittsburgh Public Schools: Professional Learning Opportunities www.pps.k12.pa.us/learningopps**

- **Teachscape** *Learn* **www.login.teachscape.com**

- **Pittsburgh Federation of Teachers: ER&D Courses www.pft400.org**

## FORMAL TRAINING, COURSES, AND WORKSHOPS

**Recommended Learning Opportunities**

- **Educational Research & Dissemination (ER&D) Courses:** PFT-sponsored, research-based professional development program facilitated by PPS teachers. Courses are aligned to RISE and allow for application of learning and peer feedback.

- **Monthly Effective Teacher Workshop Series:** Monthly, informal after school sessions designed and facilitated by PPS teachers.

- **Formal Curriculum Training:** Just-in-time training to support curriculum implementation. Typically delivered as a half-day pullout prior to the start of a new unit.

- **Curriculum Planning Workshops**: After school opportunities for teachers to review upcoming curriculum units and plan with a content expert. Frequency varies/content area and grade level.

- **Common Core State Standards (CCSS) Mini-Courses:** After school mini-courses offered each semester focusing on the 2013-2014 CCSS Learning Priorities.

- **Content-Specific Courses of Study:** 4-6 session content-specific courses designed to introduce and or reinforce key ideas, instructional strategies, and concepts in a given subject area or course.

## INDEPENDENT LEARNING
**Recommended Learning Opportunities**

- **Online Resources aligned to CCSS & RISE:** Over 130 Courses, 5,000 Videos, SGP Exemplars, and Learning Bridge Resources will all be available within Teachscape *Learn* beginning September 2013.

- **Core Curriculum Documents & Resources:** Curriculum features that support teacher practice and learning, including RISE & CCSS Look Fors.

- **Instructional Handbooks:** Provide relevant content-specific guidelines, resources, and information to support effective teaching (supplement to the curriculum).

- **CBA Assessment Blueprints:** Provide detailed information about the content that will be assessed on CBAs to support pacing, planning, and formative assessment.

## TEAM-BASED LEARNING
**Recommended Learning Opportunities**

- **Professional Learning Communities:** Opportunities for school-based teams to learn and growth together. Suggested protocols to support the work of PLCs include but are not limited to: Collaborative Lesson Design, Lesson Study, Data Inquiry, & Analysis of Student Work.

- **Instructional Rounds:** Collaborative observation and feedback process. Can be done with live observation and/or video analysis.

## ONE-TO-ONE COACHING AND SUPPORT
**Recommended Learning Opportunities**

- **Observing & Conferring through RISE:** Continuous cycles of observation, feedback and support from school-based instructional leaders, including Principals, Directors, Academic Aps and ITL2s.

- **Enhanced Process for RISE Component 3f:** Additional structure provided to support goal setting and evidence collection for RISE Component 3f will provide opportunities to identify and continuously monitor progress towards student learning goals (embedded in the RISE process).

- **Peer-to-Peer Observations:** Opportunities to observe and discuss teaching practice in peers' classrooms (with a focus on sharing effective and promising practices).

- **Growth Partners:** Ongoing partnership with a school-based peer based on particular strengths and growth areas.

**TDOE Appendix A: Tennessee Department of Education**

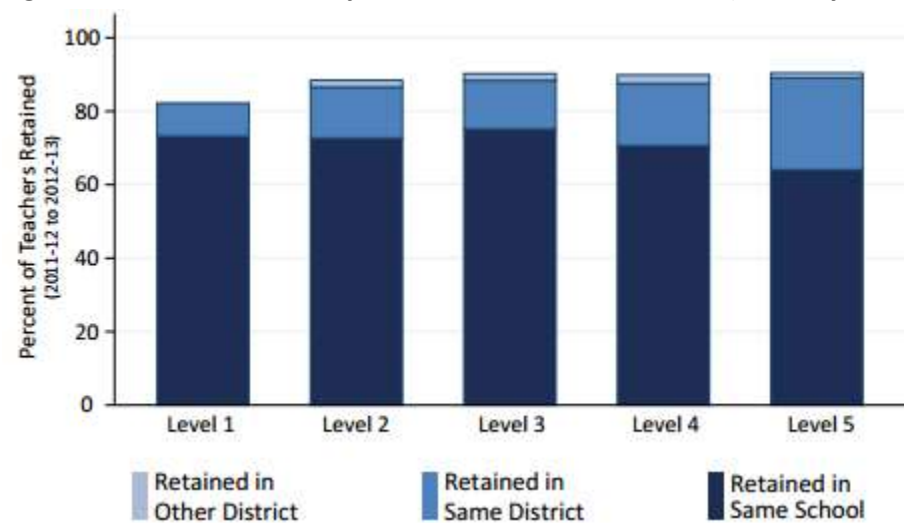**Figure 1 – Retention Rates by Overall Level of Effectiveness (Minority Teachers)**



**Figure 2 – Overall Retention Rates by District (All Teachers)**