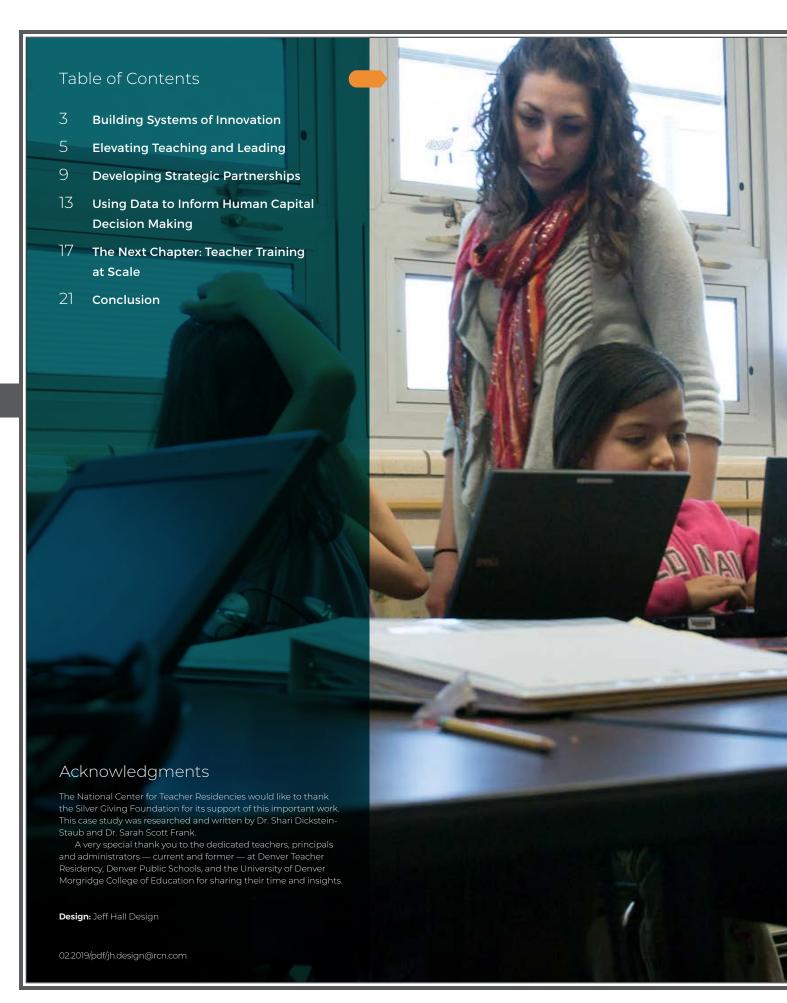


Building Systems of Innovation at Scale:

A Look at How the Denver Teacher Residency
Transformed the Human Capital Pipeline in
Denver Public Schools





Preparing DIVERSE, TALENTED AND EFFECTIVE EDUCATORS

About the National Center for Teacher Residencies

We believe that all children deserve effective, well-trained teachers. That's why, in 2007, we started the National Center for Teacher Residencies to transform how educators are prepared for America's classrooms. Through partnerships with public schools, higher education, nonprofits and states, we have helped launch more than 30 teacher residency programs that are preparing diverse, talented and effective educators for schools that need them most. Our teacher residency programs are located in 17 states, and develop teachers for 50 school districts and charter school networks. More than 90 percent of our resident teachers work in Title I schools.

FOR SCHOOLS
THAT NEED
THEM MOST.



Building Systems of Innovation

Ten minutes of conversation with third grade teacher Angelique Riviera will convince you that teaching is complex, difficult work. Ms. Riviera just finished her sixth year as the teacher of record at a Title I elementary school run by Denver Public Schools (DPS).

As the fast-paced conversation with Ms. Riviera moves along, three things become clear: while she is a leader in her school, she is constantly thinking about how to improve her teaching so that she can better meet her students' needs; she has an unwavering commitment to teach in one of Denver's most difficult-to-staff schools; and she knows that excellent instruction matters when it comes to issues of equity and educational access.

Ms. Riviera applied to DPS' year-long teacher residency program, the Denver Teacher Residency (DTR), after first doing some post-college work at a non-profit supporting adolescents and their families. Realizing how much she enjoyed working with young people, she decided to pursue teaching as a career. Once accepted to DTR, Ms. Riviera completed an intensive year of clinical training from a rigorously selected and highly effective mentor teacher in conjunction with her coursework. In that training year, she learned, through rigorous practice, how to implement high quality teaching practices most likely to raise student achievement. Woven throughout Ms. Riviera's talk about her preparation is the equity lens she learned to bring to her teaching and the ways in which her training provided the hands-on experience she needed to feel and be successful on day one.

After Ms. Riviera completed her residency year, her training site hired her for an open teaching position, enabling her to step into a role that in many ways paralleled her residency year experience. She recently completed her second year as a mentor teacher for DTR—a coveted role at her school that she felt ready to tackle as a fifth-year teacher. In her first several years, she wanted to work on her own practice before mentoring a new teacher in the classroom. She is now quick to point out that the benefits of mentoring extend beyond learning to coach and collaborate, to becoming a better teacher. She notes:

"I really love how innovative and on my toes I have to be to help residents come up with solutions. The ideas they bring to me are really great too. The way they structure their lessons and approach to behavior management are often different from how I would do it. That's okay. It helps me stay not bogged down in my own ideas and my own approaches to how I work with students."

For the past decade, DTR has operated as a districtembedded residency in partnership with the University of Denver Morgridge College of Education, placing groups

graduation; up to 80% tuition incentive/reimbursement was dispersed upon fulfillment of 5-year contract with Denver Teacher Residency program and commitment to DPS (includes residency year). Access to student health care benefits and financial aid advice was available through the University of Denver, Morgridge College of Education.

¹ This is a pseudonym.

² During the residency year candidates completed Master's Degree course-work and Residency practicum in a DPS Title 1 School. \$10,000 of tuition reimbursement was dispersed during residency year as a living stipend. Loan forgiveness programs incentivized residents to teach in DPS after

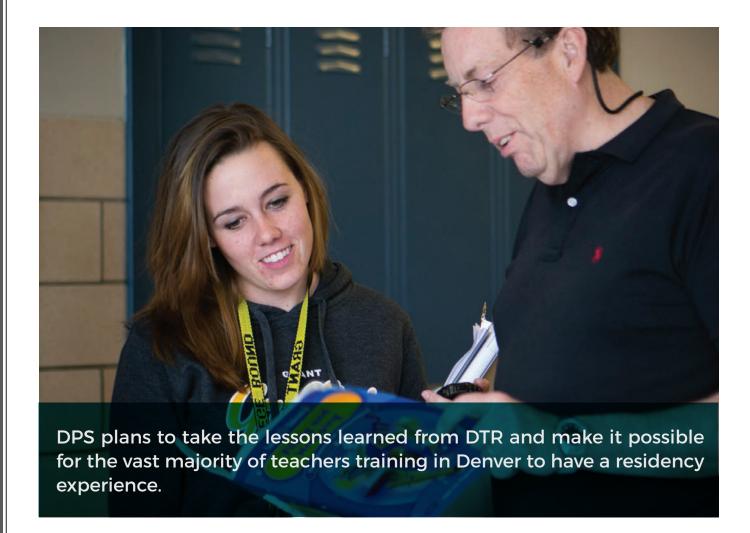
of six to eight residents in schools that are committed to creating a community of teacher learners.² Ms. Riviera felt well-prepared to be a teacher of record when she was hired at her school, and later felt prepared to become a mentor teacher. In both cases, Ms. Riviera credits DTR as the source of her confidence. What allowed Ms. Riviera to feel so prepared to teach in her first years, stay in the role of classroom teacher for six years, and then step into a mentor teacher role?

This question can be answered in two parts. First, organizers carefully designed DTR to be rooted in the principles of highly effective teacher preparation. Second, DTR took shape in the context of an urban district committed to human capital improvement. By elevating teaching and leading, developing strategic partnerships, and masterfully using data, DPS has developed robust teacher and school leader pipelines that resulted in increases in teacher retention and a decade of year-over-year improvements in student outcomes—especially for students with disabilities

and English language learners.

Spring 2018 marked the end of a separate DTR program and the beginning of DPS' effort to do residency-like work throughout the district in partnership with colleges, universities, and other providers across the Denver region. While DTR prepared just 30–65 teachers each year, DPS plans to take the lessons learned from DTR and make it possible for the vast majority of teachers training in Denver to have a residency experience, just like Ms. Riviera did.

In light of Denver's decision to close their decade-old residency program as they move to work at scale, this case study takes a close look at DPS' primary strategy for human capital improvement and ends with a glimpse of DPS' vision for innovation over the next decade. Throughout the report we highlight key lessons learned by DPS, DTR, and other stakeholders in order to inform districts, universities, and other entities that may be interested in designing or refining a residency program as a human capital strategy.



Elevating Teaching and Leading

s DPS developed a strategic plan for improvement, it emphasized investing in people. By focusing on human capital as the keystone of district improvement efforts, DPS acknowledged and addressed the most difficult aspect of transformational change in a district: building the capacity of teachers to provide excellent instruction across all subject areas and of school leaders to create school ecosystems focused on excellent instruction.

DPS knew that transforming their district would not be as easy as simply adopting an excellent curriculum or creating strong, standards-aligned resources for teachers. While these tools are important, the district committed itself to the idea that the heart of improvement resides in the quality of its school leaders and teachers, on whose skill and expertise instructional improvement depends.

Rewarding Excellent Teaching

The idea that great teachers matter is not new to DPS. One of the district's initial efforts to enhance its human capital was piloting a pay-for-performance system. In 1999, DPS was one of a small number of large urban districts in the United States to introduce merit based pay. Its pilot project moved teachers away from a single salary schedule—in which teachers move lockstep through a prescribed pay scale—and introduced a system that rewarded teachers for learning gains, performance on teacher evaluations, willingness to work in hard-to-staff schools and content areas, and additional credentials such as National Board Certification. This project marked the beginning of bold and innovative thinking in Denver Public Schools.

The pay-for-performance pilot ran until 2003. Just a year later, in March 2004, union members ratified the DPS Professional Compensation program (ProComp), a compensation program that evolved out of the pay-for performance pilot

that involves a teacher's base salary, incentives based on the school or role a teacher is in, and compensation for performance evaluations and educational achievements. ProComp provided a context to elevate great teaching and underscore the idea that excellent teachers are crucially important to the district. Through ProComp, district leaders saw an opportunity to develop a career pathway for teacher leaders. Soon after, the Denver Teacher Residency was born.³

Developing Pathways to Excellent Teaching: Denver Teacher Residency is Born

Realizing a commitment to put highly trained teachers in every classroom also meant that DPS had to innovate pathways to teaching. DPS imagined the Denver Teacher Residency to do just that. Through DTR, DPS would partner with a local institution of higher education (IHE) to recruit and prepare teachers, called residents, to train in the district's hard-to-staff schools.

After a planning year in 2008, the first cohort of DTR residents began in Fall 2009 at a time when there were just a few other similar residencies in the country (such as the Boston Teacher Residency in Massachusetts, and the Boettcher Teacher Residency, also located in Colorado). These programs provided strong models on which DTR could build. Today, dozens of residency programs exist across the country, in part because of research that points to the efficacy of the residency model in preparing novices to be student-ready teachers from day one.⁴

³ http://thecommons.dpsk12.org/Page/1551

⁴ National Center for Teacher Residencies. (2014). Building Effective Teacher Residencies. Chicago, IL: National Center for Teacher Residencies.

When DTR began, DPS leadership was eager to launch a district embedded teacher training program, in partnership with a local university, to: allow residents to learn from the district's most skillful teachers, introduce residents to DPS systems and curricula, and shift school culture in some of DPS' most hard-to-staff schools. DPS selected the University of Denver Morgridge College of Education (DU) as a partner because they were deeply committed to building out and customizing a program in partnership with DTR, rather than just taking the content they already had and "adapting it" for a residency program. They wanted the chance to do something very different, and DTR provided them with an opportunity to do just that. Additionally, Robert Coombe, who was then DU's Chancellor, was incredibly supportive of the idea.

Together, DPS and DU leveraged their expertise and common goals to launch an innovative residency program on an extremely short timeline. DU provided two professors with a reduced teaching load so they could work with DTR staff on curriculum design. In collaboration, they began by creating a tool they called the Framework for Equitable Teaching ("Framework") in order to name and identify observable practices of culturally responsive teachers who were also skillful in working with the close to 40 percent of DPS students who are English language learners. DTR leadership then worked to embed the Framework into the programs' scope and sequence and curriculum for both residents and mentor teachers. This approach helped ensure that residents in DTR were not just trained to be generally well-prepared teachers; program designers had an eye on preparing residents to teach DPS students who historically were underperforming. With these specially trained teachers, DPS hoped to change the trajectory of student performance.

Designing DTR To Transform DPS' Human Capital Pipeline

DPS placed DTR residents in clusters in historically hard-to-staff DPS schools. DPS carefully selected these sites, which tended to have strong leadership committed to DTR, as an intentional component of its human capital strategy. Because of the training lens of the residency program, designers hoped that residents would be change accelerators, contributing to a culture that values a growth mindset, and that their presence would accelerate conversations about what it takes to develop the core knowledge and skills associated

with being an excellent teacher and colleague.

In the course of building DTR to be a highly profession-alized pathway into teaching in the district, DPS principals quickly began to recognize the program's potential to help build and shift district and school culture. To this day, principals and district leadership speak about the lasting imprint of DTR in hard-to-staff buildings (now called priority schools); they call the program a win-win from the perspective of hiring and cultural change. Principals excitedly describe how residents created an internal human capital pipeline into teaching in their buildings, and to key features of the DTR program that helped shift the culture of teaching and learning—such as highly trained residents who understand culturally relevant pedagogy, selectively recruited and highly trained mentor teachers, and an emphasis on the elements of high quality instruction.

Principals' hunch that DTR residents would act as change accelerators is paying off. Data show that residents hired as teachers of record in priority schools tend to stay longer than teachers hired at the same time from other pathways. One principal explained:

"Residents are steeped in our environment—we serve a population with a large number of students who are special education students or English language learners, and a vast majority of our students qualify for free and reduced lunch. Residents are steeped in serving students with diverse and severe needs; they come out of the DTR program ready to do that."

Creating Career Pathways for Teacher Leaders

A key tenet of DTR was its selection and training of mentor teachers, with many mentors calling their work with DTR the very best professional development they have ever received because it demanded that they examine their own practice. One mentor explained, "Being a mentor teacher forces you to dive deeper and see your instruction in a different way."

The process of identifying mentor teachers was intense. If there were 50 residents who needed placement, DTR would vet up to 70 highly qualified potential mentors. The vetting process included: observing the mentor candidate teaching in their classroom, conducting a mock coaching cycle intended to mimic the type of feedback and coaching the mentor would provide a resident, and requiring candidates to write



Teacher Evaluation Data

Measuring the impact of DTR using teacher evaluation and student achievement data shows a complex picture of the overall impact of DTR residents on DPS. However, there is one very clear metric where DTR outperforms all other pathways: teacher retention. For DTR residents, retention rates are stronger over a three-year period and many stay four or more years. Teacher retention is critical in hard-to-staff buildings as it builds stability for students and their families. This is just one example of a metric that is not captured in standard student achievement or teacher evaluation data but is important for school climate and culture over the long term.

There are a range of other issues that are not easily measured by teacher evaluation data such as school

climate, relationships with students, and a commitment to equity and social justice. For example, school principal data suggests that DTR residents differ from teachers prepared by other pathways chiefly in their commitment to specific schools, teaching practices, and the district overall. This "mission alignment" is not captured robustly by any teacher evaluation framework. When designing program evaluation and impact metrics, developers should look closely at "non-traditional," but significant, measures: student attendance in classrooms where residents are placed, Social-Emotional Learning (SEL) surveys, and other school climate metrics that have the potential to help programs understand their impact in dynamic and holistic ways.

an essay. The time spent vetting mentors ensured that the program could pair residents with the right mentors. And this vetting process was just step one in their approach.

Once DTR felt that they had the right mentors and administrators, they went through a matching process. They watched mentors teach. They observed residents teaching during their first summer school teaching placements. Then they used a speed dating protocol to match up resident and mentor personalities. All this up-front work occurred before the start of the school year and was guided by field managers. A field manager was a DTR staff member who bridged residents' university coursework with their practicum experience.

A scope and sequence mapped to a gradual release calendar outlined the resident learning experience, and mentors received targeted development and support in alignment with this calendar. This ensured that DTR provided mentors with training on the specific skills their residents were learning so they could provide relevant, timely, and targeted feedback. In addition to monthly half-day professional learning seminars, site coordinators placed full-time at each school site worked daily with mentors to build their capacity as coaches and teacher educators.

This is not to say that the training was always perfect. One problem in training DTR mentors was that mentors tended to return year after year and so bringing new mentors into the fold became difficult. Veteran mentors had become well versed in the norms of feedback and coaching, and understood the gradual release calendar and how to focus their support for residents. As a result, professional development for mentors became more focused on nuanced problems of practice. New mentors, who lacked the training veterans had received years earlier, appreciated this professional development, but also were eager for clear guidance on how to best use the gradual release calendar and how to provide high quality feedback to the mentor teachers; differentiation was not always easy.

Many aspects of DTR's mentoring program—from the program's approach to mentor selection, to its intentionally designed continuum of development and support—now form the basis of DPS' district-wide pre-service mentor teacher pathway, a key strategy in the district's ever-evolving commitment to elevating teaching and leading. In 2018, the pre-service mentor teacher role become a formal leadership role within DPS' Teacher Leadership and Collaboration division. All pre-service mentor teachers in DPS now need to meet a set of district-identified selection criteria and participate in year-long professional development. The district's growth and evaluation framework, Leading Effective Academic Practice or LEAP, will examine teachers' performance in this role as part of its professionalism indicator.

Denver Public Schools

The mission of the Denver Public Schools is to **provide all students the opportunity to achieve** the knowledge and skills necessary to become contributing citizens in our diverse society.

DENVER PUBLIC SCHOOLS

Discover a World of Opportunity

Number of Schools:

207

Enrollment:

92.331

Number of Teachers:

4,329

Students Qualifying for Free/Reduced Lunch:

69%

Demographics:

56% Latino

23% White

13% African American

5% Other

3% Asian American

University of Denver Morgridge College of Education

The Morgridge College of Education is a graduate college of education **dedicated to creating positive change by unleashing the power of learning.** The college infuses social justice, diversity and inclusion across its 22 advanced degrees in higher education, teacher preparation, public policy, special education, counseling, psychology, research methods, and information science. Enrollment is roughly 500 full time students, served by about 30 full time faculty members.



considered in their overall LEAP evaluation through P7: Builds capacity among colleagues and demonstrates service to students, school, district and the profession.

⁵ http://teacherleader.dpsk12.org/apply/#1524162649099-c177b824-1ecl

⁶ For information on the LEAP, see: http://careers.dpsk12.org/leap-teacher-growth-and-performance/. Specifically, mentor performance will be

Developing Strategic Partnerships

PS' ability to elevate teaching and leading evolved alongside, and, as a result of, a commitment to strategically strengthen partnerships with local universities and district schools; examples include the University of Denver Morgridge College of Education, and its work with the individual Title 1 schools within DPS that served as "host schools" for the residency program.



Emphasize Inter-Departmental Collaboration

A less explicit component of the partnership strategy that proved central to DTR's success was the DPS leaders intentional work to connect departments of human resources, curriculum and instruction, and professional learning from the outset. The district realized early on that growing the teacher pipeline through DTR could not be the sole responsibility of the talented team working in human resources. Those engaged in recruitment and those who do professional learning needed to work in tandem to ensure a coherent approach to teacher preparation and development as the

district shifted to embed teacher preparation within its walls.

Over the course of its decade-long tenure as a program, DTR "sat" in various departments and under the leadership of various directors. Most recently it was led by the Director of New Teacher Pathways and Development. However, the district leadership took intentional steps to diminish silos to achieve coherence. Identifying and addressing potential silos can be an important early task for any district to take when shifting to embed preparation as part of a multi-faceted strategy to transform human capital.

Partnering with University of Denver, Morgridge College of Education

From the earliest stages of DTR, the University of Denver Morgridge College of Education played a key role in the district's human capital transformation. As DPS sought to launch DTR, DU brought a willingness to think differently—and flexibly—about teacher preparation. DU's willingness to work collaboratively as a "learning partner" committed to working and learning from and with the district, and to tailor the DTR program to DPS' needs, helped fuel DTR's success.

The partnership between DTR and DU was multifaceted and changed over time. There was buy-in at the university level, a willingness to work flexibly around issues of tuition and fees, and "skin in the game" at the department level, with faculty receiving course release time to participate in the initial design work. While many university/residency partnerships exist in name only, DU became a true collaborator in the work. DU's current dean, Karen Riley, explained:

"We had to be willing, early on, to think about teacher preparation in a different way. Not just in the College of Education, but in the university as a whole. For a partnership to thrive you have to have a commitment to the partnership and a commitment to pivot as a program learns and evolves. That's a hallmark of Morgridge College of Education and DU as we build on long traditions of excellence."

One key hallmark of this partnership was a willingness and openness to learn from each other. Dean Riley describes it as a "learning partnership," noting that true partnerships are not always easy. Relatedly, various interviewees noted that taking the first step toward partnership is often simple, but that sustaining a partnership over the long term is when the hard work takes place. Partnering also required some risk-taking by all parties. When DTR began, there were many unknowns and residencies were not yet a common approach to teacher education. Some participants attribute the partnership's success to a willingness to learn from its teacher mentors and residents as well as being a part of networks nationally through organizations such as the National Center for Teacher Residencies.

In addition to taking risks, partners also were willing to work through the many logistics that need to be addressed in order to make a university-district partnership work. For example, the ways universities recruit and matriculate students differ from the mechanisms districts' human resource departments use to recruit and hire teachers. While DTR residents were working in DPS schools, they were studying to earn a graduate degree from DU. Being clear about who owned what part of the recruitment and matriculation process was an important logistical part of making the partnership work.

Ironically, the success of the partnership between DU and DPS was one of the key drivers in the decision to sunset DTR. For several years, DU had both DTR and their "traditional" teacher education program (TEP). Over time, as DTR and DU's TEP evolved, they began to look a lot alike. DU began to utilize a year-long residency placement model in place of the more traditional semester-long approach to student teaching, and the equity lens that drove the DTR curriculum design became a key aspect of DU's TEP, too. Operating two such similar programs, in different silos, made various stakeholders wonder, "What's the difference?" This led to conversations about closing the relatively small DTR program in favor of working at scale.

Leveraging Host Schools as Key Partners in Human Capital Transformation

From the outset, DTR and DPS leadership made the strate-gic choice not to place residents in every school across the large district. Instead, the program partnered with a small number of host schools with high levels of principal buy-in to create a friendly culture of learning for both students and teachers. These "host schools" were historically hard-to-staff Title I schools in DPS.

DPS principals are responsible for hiring in their own buildings and many saw DTR as a potential staffing pipeline. One principal explained:

"One of the biggest problems we have is teacher turnover. Each year we retain close to 70 percent of our teachers [district wide]. There's a constant churn of teachers that we constantly have to train and most of them are new teachers. We tend not to attract veteran teachers. [Using] DTR as part of our talent pipeline is a relief because we have this trusted talent pool and more people in the building who are mission focused."



DPS partnered with the University of Denver Morgridge College of Education because of its prior experience working with a residency program and their enthusiasm for and investment in the partnership. Despite their experience, partners quickly learned that to be sustainable, such a relationship requires tremendous work. For example, partners have to work hard to articulate a range of issues that are typically not well aligned between universities and districts such as data

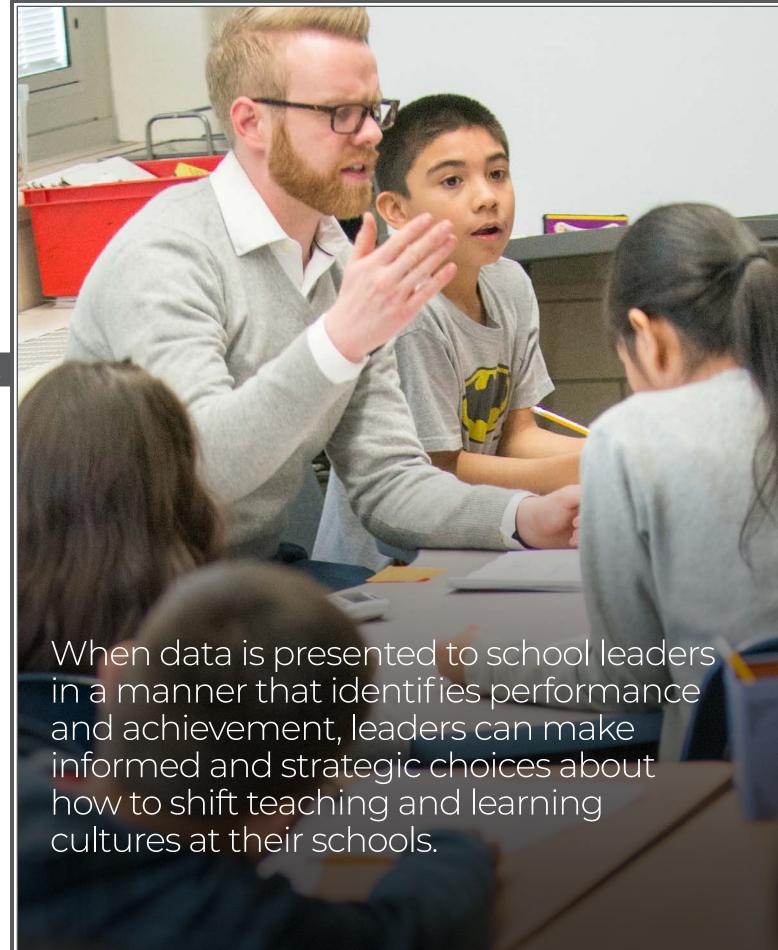
sharing, norms of collaboration and communication,

recruitment and enrollment procedures, and even district and university calendars. There is challenging work to be done to establish alignment and a common mission, vision, and goals in order to drive the mechanics of the partnership. Working proactively to articulate the partnership, and then frequently revisiting the agreements to assess how well they are working, is key to maintaining a healthy and lasting partnership in a residency — and really any — inter-institutional program.

Over time, however, DTR became so much more than a hiring pipeline as it worked to shift school cultures, grow teacher leaders by elevating high-performing staff into pre-service mentors, and create rich and collaborative teaching and learning environments. As one principal explained:

"If you really do want to develop a culture of learning, then put learning at the forefront. Not just for your students but for your staff, your employees, and for everyone involved, parents included. We all need to be learning and operate with the idea that we are going to become better each day, whether that be mentor to mentee or colleague to colleague."

What better way to do that then to commit to growing a talent pipeline of Denver-committed, culturally responsive teachers while building the leadership capacity of more veteran teachers in order to improve teaching, learning, and achievement.



Using Data to Inform Human Capital Decision Making

n addition to building and sustaining strategic relationships with key partners, the district's use of data played a central role in its mission to elevate teaching and leadership. Using data to drive educational decision-making and innovation is not unique to DPS.

What makes DPS' use of data stand apart, is how district leaders, over two plus decades and with a strong commitment to raising teacher quality and student achievement, strategically leverage data to transform hiring decisions and human capital pipelines.

Data to Support School Leaders' Hiring Decisions

In order to use data to drive instructional improvement at scale, the data has to be usable. For district leadership this means that data must live in a form that is accessible and actionable. Early in ProComp's tenure, for example, DPS began to employ strategic analytics teams to produce reports that present data to principals in ways that allowed them to understand the embedded numbers and statistics. And when data is presented to school leaders in a manner that facilitates the identification of strengths and gaps in teacher performance and achievement, leaders can make informed and strategic choices about how to shift teaching and learning cultures at their schools — helping to raise the quality of teaching and learning, districtwide. Making data more usable helped DPS principals understand the value of the program. Explained one interviewee:

"Data reports would be put in front of our HR school partners who were working directly with principals. We would ask them to think about how they are going to digest this data with principals. There's a ton of data available to principals and a strong appetite for data, but very few people care about presenting that data in actionable ways. Having dedicated support to thinking about how you do analytics in a smart, action-oriented way with hands on support — that is how you make principals data literate. This is what made many principals hungry to participate in DTR. Data helped principals know a DTR resident could change the culture of their school and that they would have access to a pipeline of very well-trained teachers."

Additionally, DTR evaluated its residents using the same DPS growth and evaluation framework, Leading Effective Academic Practice (LEAP), that the district uses to observe teachers. This allowed principals to use data to drive hiring decisions while residents finished up their training. Two principals explained:

"We can use LEAP data to drive hiring decisions. I just finished three debrief meetings with DTR residents — they fall on high approaching to effective on every aspect of the LEAP framework — they also know exactly where they fall and why — this is amazing! If we hire them, they know exactly where they are. As a principal trying to hire a new teacher, [when I] know the teacher is adept at describing his/her areas of growth, I don't think of them as a year 1 teacher. Yes, they are new to the profession, but hiring DTR residents makes my job easier."



Thoughtful, Strategic, and Proactive About Data Architecture

Across the board it is difficult to evaluate the effectiveness of DTR candidates relative to those from other pathways. Data analysis across multiple preparation pathways suggests that there is more variability within programs than between programs. Defining what effectiveness looks like also proved difficult. For example, on the DPS LEAP framework, 88 percent of teachers fall into the range considered effective. This means there is not a lot of contrast in teacher performance. Another study of new teachers in DPS grouped all first through third year teachers into the category of "novice" teacher." As a result, it was difficult to discern from data if

first-year DTR residents really looked different than other novice teachers. Another study of DTR residents used value added measures across three years to understand the impact of DTR residents on student achievement. The difficulty here, however, was that students had a different teacher every year and so it was nearly impossible to attribute their gains to DTR.

Thinking proactively about data architecture is crucial.

While districts and partnerships can not anticipate every research question that might arise as programs evolve, designing logic models from the start in ways that maximize flexibility in the collection and coding of impact data is key.

"Being able to observe a resident throughout the entire year, and then being able to interview them for a position at my school — I feel like I already know that that resident will make a perfect fit, for this culture."

Hiring DTR residents meant that principals did not need to just hope their new hires were skillful. Perhaps one former DTR host school principal said it best when explaining why she was a founding DTR partner and hosted at least six residents every year of the program:

"I know that when I hire a teacher coming out of a traditional program I have to get in there immediately and help them set up the rituals and routines and the management — and I have approximately three weeks to do that, otherwise I lose. I don't have to do that with a [former] resident. I have over 15 on staff, and I don't have to do that. I have not been able to hire a teacher from a traditional program that I haven't needed to do that. [...] When I'm supporting in the fall a new teacher from a traditional program, I'm supporting management. When I'm supporting a first year [residency graduate], I'm supporting instruction. And that's a significant difference."



Like many large urban districts, DPS is faced with the daunting task of hiring hundreds of new teachers each year. While DTR was the district's first embedded pathway, many alternative pathways into DPS soon became available. This made recruitment of candidates difficult as there was a lot of overlap between available programs. This brought about an opportunity to examine how to leverage each pathway to

maximize the number of highly qualified new teachers and how to ensure that programs were designed for sustainability. As districts begin growing their talent pipelines through embedded and other alternative pathways, it is crucial to consider how these pathways can act in cooperation, rather than competition, with each other and how they can work on sustainability planning from the start.

7 http://careers.dpsk12.org/teachers/additional-pathways-to-teaching/

Data to Examine the Pipeline

only allows district leaders to understand areas of strength and growth for novice teachers – it also allows them to tie teacher performance back to teacher training pathways. This helps DPS encourage their teacher preparation partners to understand graduates' performance post-certification and provides valuable data for DPS human resource and

DPS' robust growth and performance system (LEAP) not

to understand graduates' performance post-certification and provides valuable data for DPS human resource and professional learning teams in order to make more strategic decisions about the district's overall talent pipeline. As one district administrator notes:

"When I came in, teacher prep was completely separate from the district. We didn't know where teachers were doing their student teacher experience. We didn't keep track of where they did their teacher certification or where they completed their student teaching. In fact, the student teaching placements were done in many ways out of convenience. For example, [if] the principal went to church with the teacher educator. The Denver Teacher Residency allowed us to better understand teacher prep, and we were able to start looking at data across different pathways to more fully understand our teacher preparation pipeline."

Transforming District Human Capital Systems

Lessons from the Denver Public Schools and the Denver Teacher Residency

Develop Comprehensive, Strategic Partnerships

- Determine fit with potential IHE, school, and other partners from the outset by engaging in frank conversations about goals, mission and vision, and norms of collaboration.
- Identify potential silos early in the planning process. Transformative partnerships require breaking down silos between, for example, HR and professional learning departments.

Design a Coherent Human Capital Strategy

- Develop innovative and complementary pipelines and pathways to avoid over saturation.
- Reward performance and foster leadership opportunities to grow and retain talent.

MAKE AN UNWAVERING COMMITMENT TO ELEVATE TEACHING AND LEADING

Approach Curriculum and Professional Learning from a Lens of Coherence

- Design learning experiences and opportunities in lock-step with district priorities, standards, and frameworks.
- Align professional learning opportunities for mentors and other teacher leaders with pre-service teacher learning experiences and targets.

Prioritize and Build a Strategic and Comprehensive Data System

- Identify clear outcomes and outcomealigned metrics.
- Identify tools and methods that allow for traditional and non-traditional assessments of progress and impact.
- Establish transparent protocols and timelines for collecting and sharing data with key outcomes in mind.
- Consider how to present data in waysthat are actionable by key stakeholders.

The Next Chapter: Teacher Training at Scale

Since DTR's inception, the district has strongly believed that more time in classrooms with DPS students, curriculum, and resources, partnered with really strong mentor teachers, is the most effective way to prepare skillful beginning teachers.

This builds the capacity of rookie teachers to replicate positive instructional experiences that they have observed in DPS' most accomplished teacher classrooms. While the district moved to close DTR at the end of the 2017–18 school year, their belief in how to most effectively prepare teachers has not diminished. Rather than symbolizing the end of an era, the decision to shutter DTR marks the beginning of DPS' effort to bring key elements of their innovative residency program to scale.

DTR has always been small relative to the district's overall hiring needs. At its peak, DTR prepared 65 teachers. However, as a large urban district, Denver routinely has to find 900 or more teachers each year. About one third of Denver's new hires are novices who have never led a classroom of their own. As DPS considered this hiring conundrum, and due to their success with DTR residents', district leadership began asking:

"What would it look like if the vast majority of novice teachers entering DPS had completed a year-long residency experience working in a DPS school?"

The next phase of the district's work, then, is to partner with eleven colleges, universities, and other teacher certification providers in the Denver region to bring residency-like experiences to scale. DPS' hope is that, regardless of which teacher preparation program candidates attend, the clinical experience in a DPS school will be similarly grounded in the tenets of the residency program that brought the district some of their strongest teachers and teacher leaders to date.

In interviews, current and former DPS leaders noted that the district has become forever changed because of the knowledge gained from DTR. It allowed the district to both understand and have more ownership over teacher preparation. Putting skin in the game — both human and financial resources to manage the residency — changed the district's perspective on the teacher preparation pipeline. It allowed the district to gain a sense of ownership for growing a cadre of DPS-ready teachers and gave the district the opportunity to influence the preparation of candidates and mentors operating within the residency. One interviewee explained:

"It raised the bar on everyone in a powerful way. As we close DTR, the district has done an evolution that ends up with DPS integrating the best of DTR and leaving the rest behind."

The Legacy of the Denver Teacher Residency

DTR's 10-year history spans a crucial decade in the teacher preparation landscape across the United States. Districts and states worked to meet the challenge of having a highly qualified and skillful teacher in every classroom while the range of pathways to teacher certification, including the availability of residency programs, increased dramatically.

Embedding DTR in DPS empowered the district to sit in the trenches of teacher training for almost a decade, learning from this work. Without DTR, DPS would not be able to embrace the lofty goal of scaling the residency-like experience.

One interviewee explained:

"I think you are in a different place to partner with universities and other providers if you yourself are also in the business of preparing teachers. You are saying we are in this with you, let's look at the data together, let's all collectively drive the performance of teacher preparation."

While it is difficult to capture the entirety of DTR's ripple effect across the DPS ecosystem, the program finishes with hundreds of DTR graduates across the district who are equity minded, well-trained, and committed to Denver as a district. Many have moved into school leadership positions. The following are five additional legacies that will endure even as DTR comes to an end.



Legacy 1

DTR's Approach to Mentor Training

As explained previously, being a DTR mentor teacher was a coveted and competitive role within DPS and DTR's mentors were highly trained. As DPS moves forward to do residency-like work at scale, the approach to mentor teacher training will need to endure at scale — potentially impacting more students and teachers than ever before. DTR helped DPS fully understand the critical importance of the mentor teacher; many experts lauded as a model the training DTR provided its mentors. DTR's careful and systematic approach to recruitment of mentors, its placement of residents, and its targeted mentor professional learning aligned to the

residency curriculum fueled a desire to ensure a strategic approach to candidate placement and mentor teacher training at scale. Gone are the days of finding placements based on convenience and relationships. DPS hopes that teacher educators will no longer call school principals to ask for a student teaching placement as a favor. Instead, by partnering with 11 teacher certification providers, DPS hopes to create a residency placement process that is clear and systematic and a training process for mentors that builds on the legacy of DTR's thorough and strategic support for mentor teachers.



Legacy 2

Building a Diverse Pathway

DTR proved that it is possible to use district embedded teacher training as a strategy for recruiting teachers of color to the district. The need to diversify the teacher preparation pipeline cannot be understated. There is considerable research documenting the many ways in which teacher diversity benefits students; so diversifying the teacher preparation pipeline was a primary goal of DTR. The district sought to recruit residents of color, especially individuals fluent in Spanish, to train with DTR. The 2010-2011 cohort

represents the peak of DTR's diversity, with 37 percent of DTR residents identifying as ethnically diverse compared with a district average of 20 percent of new teachers coming into DPS identifying as ethnically diverse. Going forward, DPS will continue its commitment to increasing the number of teachers of color that enter the district and will help its partners understand key levers, both programmatic and financial, that have been successful for recruiting diverse candidates in the past.



Legacy 3

DPS' Principal Residency Program

The design of DPS' Learn to Lead program, a year-long principal residency, was informed by the design of the Denver Teacher Residency. As do teachers in DTR, future principals spend a year in-residence working alongside a host principal in order to gain crucial experience prior to being a school leader of record. Like DTR, the Learn to Lead program is built around a strong framework, in this case the DPS School

Leadership Framework, which allows for a training experience that is coherent with on the job expectations. There is also careful attention to the training of host principals and showing how host principals can provide constructive real-time feedback. The implementation of the Principal Residency represents another possibility in DPS' career pathways for teachers.



Legacy 4

DTR's Framework for Equitable Teaching

When DTR began, the founding team, including professors from the University of Denver Morgridge College of Education and DTR staff, created the Framework for Equitable Teaching. As stated, developers oriented this framework around the question of what it means to be a culturally responsive teacher who is skillful in working with English language learners in Denver's schools. The Framework for Equitable Teaching was a driving influence behind the eventual framework DPS adopted for use with the LEAP system for developing and evaluating classroom teaching.

Developers also designed the DTR curriculum around the original equitable teaching framework. Amazingly,

this curriculum has stood the test of time, with the same coursework scope and sequence standing for nine years. This has provided a level of coherence and knowledge building that enabled DTR and DU staff to look closely at resident performance data to tweak course design. For almost ten years participants could take a close look at the gradual release calendar, which was designed around the original Framework for Equitable Teaching, and know what residents should currently be learning. This model of coherence between university coursework and candidate learning will provide a model for designing resident learning experiences at scale.



Legacy 5

Denver Student Teacher Residency

Finally, the Denver Student Teacher Residency (DSTR) grew out of DTR's model of a year-long DPS residency.

Candidates from Metropolitan State University at Denver and the University of Colorado Denver who have completed all the requirements prior to student teaching are eligible for the year-long Denver Student Teacher Residency that

includes DPS-specific curriculum and additional preparation such as completing the Colorado Cultural and Linguistically Diverse Education endorsement. Like DTR residents, teacher candidates who complete a residency through DSTR will have high hiring priority when seeking a position within DPS upon graduation.



Conclusion

Just a decade ago only half of DPS students graduated high school in four years and a majority of students did not meet expectations on the Colorado State Assessment Program (CSAP), which is now called the Colorado Measures of Academic Success (CMAS). Additionally, annual teacher retention was low and principal turnover high. DPS was, by every metric, a failing district.

Fast forward one decade and DPS students are showing improvement each year. For example, the on-time graduation rate has steadily increased; in 2015–16 the four-year graduation rate for students who started at DPS their freshman year was 74 percent. Improvements on CMAS have been impressive. While there are still some important achievement gaps worth exploring more deeply, DPS has shown considerable

growth in both English/language arts and math achievement across the district. In 2018, for example, DPS students posted stronger academic growth than the rest of the state in both ELA and math for the eighth year in a row.⁹

DTR played an undeniable role in the story of DPS' continued improvement and, through its legacy, will continue to have a lasting footprint on the DPS human capital pipeline.

⁹ https://www.dpsk12.org/dps-students-again-outpace-state-in-academic-growth-on-2018-cmas/



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