Part of a series of case studies on training data-literate teachers that includes Western Oregon University, Relay Graduate School of Education, Boston Teacher Residency, and Urban Teachers.
“What I’ve learned about data at Urban Teachers has changed the way I teach. Data now drive my day. It’s how I decide what I am going to teach and how I am going to teach it. I have third-graders reading below a kindergarten level and others reading at a fifth-grade level. Collecting data every day helps me know where all of my students are and adjust. I teach multiple subjects — science, math, reading and writing — and I plan individually for each student. Without the data I would teach all my students the exact same thing. But the data help me effectively differentiate.”

— Brooke Nenadal, Urban Teachers second-year student, currently teaching third grade at Holabird Academy in Baltimore, MD

Urban Teachers’ (formerly known as Urban Teacher Center) four-year program aspires to produce “a great teacher, every time, for our nation’s hardest-to-staff schools.” This “bold promise,” as CEO and co-founder Jennifer Green describes it, focuses on participants’ ability to produce measurable learning gains among students from day one as newly minted teachers. “Urban Teachers believes that schools need a guarantee that before teachers are certified, they are evaluated for quality instruction and student achievement gains. Urban Teachers’ innovative model ensures that districts only get teachers who have demonstrated effectiveness in the classroom.” The idea is to deliver an Urban Teachers graduate with a “Good Housekeeping” type seal of approval.

A veteran educator, Green worked in the Baltimore Public Schools and trained in traditional teacher-education programs before founding Urban Teachers. She firmly believes that great teachers are made, not born. To make those great teachers, Green designed a program that attracts committed, high-quality candidates and trains them in the practical skills they need to coax significant learning gains from K-12 students.

Although Urban Teachers doesn’t label itself as solely focused on data literacy, the skills the institution teaches its candidates track closely to those the Michael & Susan Dell Foundation and others have identified as exactly that. Alongside core pedagogy and content knowledge, Urban Teachers emphasizes candidates’ ability to gather and assess a broad range of student learning data in order to better tailor instruction to each student’s needs.

While Urban Teachers deliberately promotes data-centric behaviors in candidates’ daily practice, work remains to help would-be teachers actually use data most effectively over the long haul. “We equip our teachers to do a lot of diagnostic work around student data,” Green

says, helping them understand students’ strengths and weaknesses at a given point. “We are not as good at equipping them to manage classroom data over time.”

**CLEARLY DEFINED DATA LITERACY PRACTICES**

The “Teacher Practice Rubric” (TPR) forms the core of Urban Teachers’ curriculum and is used to both guide and evaluate candidates’ mastery of key skills. The rubric clearly defines the skills, habits and dispositions that make for good teaching, including ongoing “diagnostic” data-related activities. Data literacy is reinforced through Urban Teachers’ requirement that teachers earn a license in Special Education, which enshrines the notion of individualized education and multi-pronged assessments (from evaluating evidence of student needs to developing personalized learning goals and plans).

The TPR identifies five key behaviors of effective teachers, who know how to:

A. Build a productive and caring classroom environment.

B. Act as diagnosticians in order to “know each child individually and use data to drive performance.”

C. Set precise goals for student learning, enact them, and “differentiate instruction to meet the needs of all learners.”

D. Foster academic discussion.

E. Relentlessly pursue continuous learning, seeing teaching “as a profession where all are working to become increasingly more effective.”

Each letter strand above encompasses a slew of hands-on skills and practices that Urban Teachers embeds in coursework and expects good teachers to demonstrate. In periodic observations, coaches use the rubric to rate candidate effectiveness, ranging from showing “no evidence” of the relevant behaviors to having “mastery” of them.

While strand B stands out for explicitly addressing data and its role in effective teaching, other strands still connect to data literacy. Candidates use data to inform classroom management, for example, says Roxanne White, Urban Teachers’ director of curriculum. “How are you keeping track of student behaviors? How are you tracking how many kids are on or off task? What do you know about kids and the ways developmentally they need to engage with one another? How does that inform your room arrangement?”

Data impacts effective goal-setting too, helping Urban Teachers candidates understand things like: “Why this lesson for this day? How do I know who I’m differentiating the work for? What does this group need to do? What’s their work product? How do I assess whether they’ve learned what I wanted them to?” On fostering academic discourse, data involves “listening to what kids are saying and how that illustrates comprehension of the concept that you’ve just put on the table, and then stepping in accordingly.”

Green sees diagnostic strand B as the heart of candidates’ ability to connect what they teach to what students learn. “The work of a teacher is this diagnostic work,” she says. This strand requires teaching candidates to master several fundamental data literacy skills, including:

1. The ability to construct and maintain data systems to monitor student learning, and knowledge and routine use of “key assessments in literacy and math.”

2. Consistent use of data systems, including effective use of formative classroom assessments (e.g. daily use of informal assessments and “on their feet” monitoring of student understanding).

3. The capacity to use data to talk with students about their progress so students feel “ownership” over setting learning goals and progressing toward them.

“Our teachers know students,” White says. “They understand that in order to teach the students in front of them, they have to have a clear sense of what students know and are interested in. They have a versatile toolkit of assessments that they use wisely and regularly to gather data about their students. Effective teachers do not lock this data in a vault. They share the data with colleagues and families and, most importantly, with students.”

Urban Teachers candidates start tackling the diagnostic strand B from the beginning, starting with a five-week summer institute where candidates work four hours a day with K-12 students in summer program classrooms and four hours on coursework. (During the regular school year residency, they are paired with full-time teachers in Urban
Teachers partner schools.) Candidates first begin to learn how to systematically gather data using tools other than formal assessments to analyze what each student knows and can do. One assignment, for example, might require candidates to interview individual students about their attitudes toward math. Candidates are expected to use “kid watching” techniques and tools such as sociograms (a kind of social mapping that can help point out students who need more emotional support and help teachers create a more positive classroom culture) or small-group seating charts to collect and document information about how students approach particular math tasks. Similarly, early-stage candidates are taught how to gauge children’s language development through assignments that have them record and track children’s conversations inside and outside the classroom walls. “It’s about getting to know the whole child – quantitative data, learning styles, triggers, background and how that impacts the classroom,” White says. “We have them collect a lot of that data through student interviews. We also have our residents think back about their (own) K-12 years and think about what the student is going through. The goal is to ensure candidates learn all the discrete things to fill in a ‘data puzzle’ about kids.”

As candidates progress through their initial residency year, they spend most of their time in K-12 classrooms and faculty coaching sessions. In terms of diagnostics, candidates start unpacking more formal assessments to find data trends and patterns and to set student learning goals and help students achieve them. One assignment asks candidates to pick an appropriate assessment to diagnose an English language learner’s reading and comprehension abilities and then, based on the results, find ways to help him measurably progress. This could include practicing one-on-one read-aloud sessions and asking the student to retell the story in his own words to boost comprehension, word recognition and fluency. “At this stage [in the program], the clinical faculty spent a lot of time trying to get the residents to really analyze the data carefully and purposefully,” says Mary McMackin, a literacy expert at Lesley University in Cambridge, Mass., who helped Urban Teachers develop its literacy curriculum. “We want them to reflect on what the data is showing about the strengths the students are bringing to that particular assessment. And then reflect on where they [candidates] need to use the data to inform instruction.”

Despite Urban Teachers’ focus on ensuring novice teachers know how to collect and use a range of data to help each student achieve learning goals, leaders see room for improvement to strengthen data literacy more uniformly across the curriculum. White acknowledges faculty aren’t always consistent in how they address each TPR strand in every course, but strand B (and the rubric as a whole) remains an important guiding tool.

And Urban Teachers’ requirement that all candidates pursue special education (SPED) certification helps strengthen the institution’s data literacy efforts. With special education’s mandatory focus on creating an Individualized Education Program (IEP) for every student, teachers learn concrete skills in using a range of tools and evidence to evaluate student needs and develop highly personalized learning plans. “In our Special Education coursework, candidates learn to act on data that is specific to certain students instead of whole-class data, which is the focus in the mainstream courses,” says Katryna Andrusik, former assistant director of curriculum. “They learn to take multiple data points and examine them with specific students in mind. They have to do observations of children; teacher, parent, and student interviews; partner observations with peers to observe teachers and children. They do a wide spectrum of different kinds of assessments of where the child is academically, physically, and emotionally and where they need to be.”

But to be clear, this individual focus informs candidates’ broader data literacy around whole classrooms too, says Mary Beth Curtis, who oversees Urban Teachers’ special education curriculum. “We want them to think about how to design and deliver lessons that might address specific academic or behavioral or social issues. We also want them to think about how they will maximize the opportunity for all students to engage in grade-appropriate standard-based instruction.”

Bottom line, says Patricia Crain de Galarce, Director of the Center for Special Education at Lesley University: “When you talk to residents and fellows about how to interpret data, they’ll say that they learned it in the SPED coursework.”
DEFINED OUTCOMES FOR CANDIDATE SUCCESS

With a stated mission of creating teachers who will be “great” on Day One in the classroom, Urban Teachers has made graduation difficult by design. “Urban Teachers believes in purposeful attrition and uses the residency year as the time to determine who will be most effective as a full-time teacher,” notes one Urban Teachers document.2 As many as one in five candidates drop out in their first year because they lack skills covered by key elements of the teacher practice rubric or they find the program’s rigorous demands too much to handle. “We want to catch [less skilled candidates] pre-tenure, before they can get a full state license,” Green says.

A foundational Urban Teachers concept goes: “The only reliable measure of a teacher’s future performance with students is an assessment of past performance.” Throughout the four-year program, Urban Teachers regularly assesses each candidate’s ability to improve student learning and uses the results to determine whether candidates progress. Urban Teachers relies heavily on data to determine who gets into the program in the first place as well as who comes out the other end as an Urban Teachers graduate and licensed teacher. To that end, Urban Teachers sets up several key gateways, each with set requirements candidates must meet to move on:

1. Admission to residency (year 1 of program) – Urban Teachers differentiates itself from other institutions by requiring a relatively high bar for entry. Candidates must have at least a 3.0 GPA (2.75+ for outstanding candidates) and commit to teaching for at least four years.

2. Moving from residency year to first-year teacher of record (year 2) – Before residents can take on their own classroom, Urban Teachers looks at candidates’ coursework GPA (3.0 minimum); evaluation of clinical practice via the TPR; “professional disposition” data such as candidate maturity, growth mindset, belief about self and why they teach as well as attitude and disposition towards students and families served. Urban Teachers starts measuring candidates’ effectiveness in helping K-12 students log learning gains using the nationally normed NWEA at the start and end of the school year when they are full-time teachers. Successful candidates earn their Master’s of Education.

3. Moving to second-year teacher of record and becoming eligible for certification (year 3) – By the end of their second year as a teacher of record, candidates are evaluated for effective clinical performance (including data literacy skills), student learning gains, and professionalism to be eligible for certification.

4. Graduation from program (year 4) – Urban Teachers participants graduate from the program at the end of year four, after they’ve demonstrated proficiency in teaching.

As high as Urban Teachers’ expectations are for candidates’ performance and use of data to continuously improve their teaching, Green and other administrators have equally high expectations for Urban Teachers’ institutional use of data to drive continuous program improvement. “I’m interested in our own attrition data, because we, as a program, have to do better,” Green says. “It’s not just, ‘Oh, there’s attrition.’ It’s, ‘Okay, what is it about the fabric of what we’ve built that is not working?’ Then we adjust. We try to create good teachers who are built to last, but they aren’t bullet proof.”

Urban Teachers faculty and staff meet three times a year to review survey data and field observations of candidates to determine what curricular changes are needed. Green believes this ongoing revision, the high bar for graduate success, and the data skills with which Urban Teachers equips its teachers all make it possible for each Urban Teachers graduate to ultimately reach every student in their classroom.

“We want to reconnect the link between K-12 student performance and what teachers do day-to-day,” Green says. “We want to build a teacher who can do deep diagnostic work, who, after training, has a ‘tool kit’ of skills on hand to meet the needs of individual students 30 times over in a classroom. That is the gold standard of teacher effectiveness.”

**OUTCOMES: JUNE 2015**

95% of host teachers said their resident analyzes data to identify students’ strengths and challenges.

90% of host teachers said their resident prompts students with questions and tasks that move them to deeper understanding.

95% of host teachers said their resident positively impacts student learning.

91% of teachers said Urban Teachers provided them with the tools and skills needed to use student assessment data to improve student learning.

93% of teachers said the Urban Teachers training gave them the knowledge and skills needed to be an effective classroom teacher.

Source: Urban Teachers teacher survey