# TABLE OF CONTENTS

**EXECUTIVE SUMMARY** 1

**OVERVIEW** 3
- Overview of Program 3
- Selective Admissions Process 4
- Intensive and Aligned Training and Support 8
  - Coursework 8
  - Clinical Experience 9
  - Coaching and Feedback 11
- Continual Evaluation of Performance 13
  - Coursework Performance 13
  - Teaching Practice 14
  - Growth Mindset and Professionalism 16
  - Use of Performance Data 17

**SUMMARY AND NEXT STEPS** 18

**ACKNOWLEDGEMENTS** 19

**REFERENCES** 20
EXECUTIVE SUMMARY

Recently, a variety of education policy organizations, researchers, legislators and government officials have called for improvements to teacher preparation, as well as concrete evidence that programs are graduating effective teachers. For example, the National Council on Teacher Quality is seeking to achieve fundamental changes in the policy and practices of teacher preparation programs. The Council for the Accreditation of Educator Preparation has advanced evidence-based accreditation to assure quality and support continuous improvement to strengthen student learning. Deans for Impact is supporting its network in sharing data, program designs, and strategies, in an effort to improve student-learning outcomes by transforming the field of educator preparation. The Transforming Teaching Project calls for the creation of vertically aligned pathways that run from teacher preparation through induction and continue into ongoing school-based learning. The TeachStrong coalition, with 50-plus member organizations, seeks to reimagine teacher preparation to make it more rooted in classroom practice and a professional knowledge base, with universal high standards for all candidates.

While a recent paper raises questions about the appropriate policy responses to these calls for action in light of the limited and conflicting research base regarding which teacher qualifications and components of teacher preparation lead to teacher effectiveness (Aldeman & LiBetti Mitchel, 2016), it is possible to draw lessons from research to inform practice. One approach teacher preparation providers can take is to build a teacher program from the ground up, investing in elements of teacher preparation which research indicates are related to teacher effectiveness and student gains. Another is for teacher preparation programs to take responsibility for assessing their participants’ effectiveness prior to program completion, drawing on lessons from research on teacher evaluation. Urban Teachers has elected to implement both of these approaches at once. This paper provides a description of our model, its theory of change, and the literature base that supports and informs our model.

In 2009, Urban Teachers, an innovative, residency-based teacher preparation program, was founded to supply high-need schools with effective new teachers. Urban Teachers takes a multifaceted approach to producing effective teachers, beginning with a strategic, rigorous selection process, followed by four years of intensive training and support, extensive classroom experience, and regular coaching visits. Along the way, Urban Teachers systematically evaluates the performance of its participants in several dimensions in order to make a final determination for or against teacher licensure, based on the proven effectiveness of its participants.

Urban Teachers’ unique theory of change reflects lessons from the research base on teacher selection, preparation, in-service training, and evaluation. To supplement this research base, Urban Teachers conducts ongoing internal research in an effort to continuously improve our approach to
providing effective teachers to high-need schools. This research brief provides detail on the research in this area and our internal evaluation of the various components of Urban Teachers’ approach.

While we have drawn insights from the extant evidence base in developing and refining our model, it is clear that more research is needed on this subject. Urban Teachers is dedicated to advancing this research by collaborating with traditional and alternative teacher preparation programs to continually improve methods for teacher preparation and evaluation.
Extensive research has demonstrated the importance of teacher quality. Researchers have documented teachers’ impact on student achievement growth (Kane, McCaffrey, Miller, & Staiger, 2013), social and behavioral skill development (Jennings & DiPrete, 2010), motivation (Ruzek, Domina, Conley, Duncan, & Karabenick, 2014), and graduation outcomes (Jackson, 2012; Koedel, 2008). Students assigned to highly effective teachers are more likely to attend college, attend higher-ranked colleges, earn higher salaries, live in higher socioeconomic status neighborhoods, and save more for retirement (Chetty, Friedman, & Rockoff, 2014).

One key challenge for teacher preparation programs is developing effective practices and policies in light of the mixed and inconclusive findings in the research base regarding which qualifications and components of teacher preparation produce effective teachers (Aldeman & LiBetti Mitchel, 2016). Despite the conflicting results, Urban Teachers has drawn numerous insights from the research base as we designed our teacher preparation program and have identified elements of teacher selection, preparation, and evaluation that appear to be linked to teacher quality.

This paper seeks to provide an overview of Urban Teachers’ evidence-based teacher preparation program. It provides the research backing for the elements of our theory of change – rigorous selection, intensive training and support, and ongoing evaluation – and discusses findings from both external research and internal analyses which have guided the refinements we have made to our model.

OVERVIEW OF PROGRAM

The mission of Urban Teachers is to prepare highly effective teachers to significantly accelerate student learning in the nation’s highest-need schools. Since 2009, we have designed and built an innovative, research-informed teacher preparation program from the ground up. Depicted in Figure 1, Urban Teachers’ multifaceted theory of change for producing effective teachers combines:

1) a rigorous selection process
2) intensive training and support, including 1500 hours of clinical experience and 3 years of instructional coaching
3) continual evaluation of performance, as the basis for feedback, support, improvement, and accountability
The first fourteen months of our four-year program is a clinical residency, in which our participants work in classrooms alongside host teachers and receive on-site coaching. At the same time, they take clinically-based graduate-level courses that introduce them to specific teaching practices and have immediate opportunities to implement those practices in classrooms.

At every stage of the program, Urban Teachers systematically evaluates the performance of its participants along multiple dimensions. The evaluation system is intended to codify Urban Teachers' high expectations for participant performance, provide feedback to participants on their success in meeting those expectations, and provide an evidentiary basis for dismissing participants who do not meet expectations. In this way, we hope to facilitate a continuous cycle of improvement.

**FIGURE 1: URBAN TEACHERS’ THEORY OF CHANGE.**

Urban Teachers' multifaceted approach reflects lessons learned from research on teacher selection, preparation, in-service training, and evaluation. To supplement this research, Urban Teachers conducts ongoing internal research to evaluate the extent to which our measures are capturing the skills and behaviors of effective teachers and to continuously improve our approach to how we supply high-need schools with effective teachers. The following sections provide detail on the research base and also on our internal evaluation of the various elements of Urban Teachers' theory of change.

**SELECTIVE ADMISSIONS PROCESS**

Urban Teachers engages in nationwide recruitment efforts seeking diverse, resilient, results-oriented college graduates and career-changers that want to make a difference in urban education. Applicants submit their undergraduate transcript, an essay and a resume, which are screened for academic accomplishments, writing skills, and experience working with children, respectively. Applicants who meet Urban Teachers’ initial qualifications are invited to participate in a digital performance exercise, which includes a timed writing task and responses to interview questions.
Selected applicants are invited to a full-day interview. The final interview day typically includes a mini lesson, group discussion, classroom management task, role-play, and one-on-one interviews with Urban Teachers' staff. Selected candidates also need to pass state-required teaching exams as part of the program admission criteria. This intensive selection process affords an opportunity to assess candidates' likelihood of succeeding in challenging school environments.

A growing body of literature suggests the importance of recruiting teachers of color, as a student-teacher demographic mismatch is related to outcomes such as lower student test scores and negative teacher assessments of student behavior and ability (Clotfelter, Ladd & Vigdor, 2007; Dee, 2004; Egalite, Kisida & Winters, 2015; McGrady & Reynolds, 2013; Ouazad, 2014). For example, a study of high school teachers in Chicago found that students of African American teachers outperformed students of white teachers, and the authors note that some of the influence derives from the demographic match between students and teachers (Aaronson, Barrow & Sander, 2007). In a recent study drawing on data from the Educational Longitudinal Study of 2002, researchers found that non-Black teachers have significantly lower educational expectations for Black students than Black teachers do when evaluating the same students (Gershenson, Holt & Papageorge, 2015). In addition, Black students are rated as less disruptive when they have a Black teacher (Wright, 2015). Given that Urban Teachers primarily serves students of color, recruiting a diverse group of teacher candidates is intended to benefit the students we serve. But this is only a partial solution. In addition, through directed coursework, Urban Teachers prepares all of our teacher participants to be culturally responsive teachers for their diverse populations.

In developing and refining our selection metrics, we have attended to research on teacher selection and found that some qualifications are at best weakly related to success in the classroom. Using data from Chicago, researchers found that observable teacher characteristics, such as quality of college attended and undergraduate major, explain very little of the variation in teacher effectiveness (Aaronson et al., 2007). In a study using data from New York City, the authors did not find a relationship between college selectivity and teacher effectiveness (Kane, Rockoff & Staiger, 2008). Consistent with research that suggests that these pre-hire characteristics are not strong predictors of teacher effectiveness, Urban Teachers does not consider college selectivity or major in our general selection model.

Research on the relationship between teacher candidates’ undergraduate grade point average (GPA) and teacher performance is mixed. A study based on an analysis of six years of data on New York City public school students and newly hired teachers concluded that overall undergraduate GPA is not significantly linked with teacher effectiveness (Kane et al., 2008). Conversely, a study of 5th grade math teachers in Kentucky found that teachers’ overall undergraduate GPA predicted students’ math achievement (Kukla-Acevedo, 2009). Similarly, a study of Teach for America’s selection process revealed that a teacher’s GPA from junior and senior years of college was associated with student gains in math; these findings are particularly relevant since the study is specific to alternatively certified teachers (Dobbie, 2011). Furthermore, a study of the hiring process in DC Public Schools
found that undergraduate GPA strongly predicted teacher effectiveness (Jacob, Rockoff, Taylor, Lindy, & Rosen, 2016). Thus, while the research on GPA is conflicting, some evidence suggests that GPA is related to teacher effectiveness, particularly in math. Urban Teachers screens for a 3.0 GPA, though in exceptional cases, candidates may be admitted with a lower GPA.

In addition to GPA, some indicators of teacher candidates’ abilities and coursework appear to be modestly predictive of teacher quality in general, and others matter depending on grade and subject taught. A review of literature concluded that teachers’ literacy level and verbal abilities tend to show positive effects on student achievement, and that coursework in content areas appears to be related to teacher effectiveness at the secondary level (Rice, 2003). Another review of literature that explored the inconsistent relationships between coursework and student achievement found that high school students learn more from teachers with more mathematics-related coursework (Wayne & Youngs, 2003). Thus, the evidence supports considering measures of literacy skills in selecting teachers generally, as well as considering coursework for those entering secondary programs of study, particularly math. Urban Teachers’ selection process includes multiple essays to screen for literacy skills, as well as a transcript review for secondary math candidates.

Finally, some evidence indicates that teachers’ perseverance, commitment, and mindsets have implications for teacher effectiveness, possibly by influencing perseverance of both teachers and students. A study of Teach for America’s selection process revealed that a teacher’s perseverance is associated with student gains in math, while a commitment to the Teach for America mission is associated with gains in English (Dobbie, 2011). Perseverance and commitment are examples of what Carol Dweck (2006) describes as a “growth” mindset, defined as the belief that most basic abilities can be developed through dedication and hard work, as opposed to “fixed” mindset, or the belief that intelligence and talent are fixed traits. Dweck’s work suggests that teachers with growth mindsets are more likely to persist in the face of setbacks, see effort as the path to mastery, and learn from criticism. In addition, teachers’ mindsets can influence students; based on a series of studies, researchers conclude that instructors with fixed mindsets and low expectations lower the motivation and expectations of their students (Rattan, Good & Dweck, 2012). Urban Teachers has sought to develop pre-screening measures of perseverance and growth mindset in an effort to select teacher candidates who learn from feedback as they develop their teaching skills and can model perseverance for their students.

Though pre-screening of new teachers remains challenging, Urban Teachers’ approach to selection is in keeping with recommendations that teacher preparation programs consider measures of both cognitive skills and social-emotional skills such as the ability to persist (DeMonte, 2015; Rockoff, Jacob, Kane, & Staiger, 2011). We focus on screening for high-achieving, mission-driven individuals who seek to serve the students that need them the most and who exhibit a love of learning and persistence, the elements of a growth mindset that will enable them to persevere as they develop their teaching skills. The components of Urban Teachers’ selection process allow us to assess
candidates along dimensions identified by researchers as indicative of the potential to be effective teachers.

Since GPA is used as an initial screen before moving candidates into more time-consuming aspects of the selection process, we have sought to determine the extent to which GPA predicts participants’ performance. Cumulative GPA did not predict teaching practice scores for participants who started the program in either school year 2014-15 or school year 2015-16. We found a statistically significant, positive relationship between GPA and site teams’ ratings of growth mindset and professional behaviors during the summer institute for participants who started the program in school year 2014-15, but not for those who started in school year 2015-16. When we grouped participants based on whether GPA was above or below 3.0, we found that higher and lower GPA groups have similar average teaching practice scores across all years. In two of three cohorts, participants with GPAs below 3.0 scored significantly lower in growth mindset and professionalism during the residency year. However, we do not find differences after the residency year, and this cannot be attributed to differences in attrition. Thus, among participants in our program, GPA appears unrelated to quality of teaching practice. GPA may predict growth mindset and professionalism in the short term, but these findings are mixed, and GPA is not a predictor of growth mindset and professionalism when participants become teachers of record. As such, we are willing to consider exceptional candidates who do not meet our target GPA of 3.0.

We have conducted several analyses in an effort to refine our selection model. When we examined our selection data for participants who started the program in school year 2014-15, the total score from final interview day predicted site teams’ ratings of Urban Teachers participants’ growth mindset and professionalism in summer institute, but was not significantly related to teaching practice scores from summer institute. Prior to the selection of residents for school year 2015-16, we refined our selection rubrics in an effort to more accurately capture applicants’ competencies. Subsequently, among participants who began the program in school year 2015-16, we found a statistically significant, positive relationship between the total score from final interview day and teaching practice scores from summer institute. Although the total score was unrelated to growth mindset and professionalism, one of the four sub-scores was positively related to growth mindset and professionalism. Based on these findings, the most recent set of selection tasks and rubrics have been further revised to ensure stronger alignment between the selection criteria and the metrics used to evaluate our participants as they progress in the program.

For our most recent cohort that has completed the residency year (participants who started the program in school year 2014-15), in general we did not find that our selection metrics have a statistically significant relationship with performance during the residency year, after the summer institute. We view this as consistent with our theory of change, since we do not rely solely on our selection process to produce effective teachers. Rather, we provide an intensive intervention, including a combination of rich clinical experiences, coursework, coaching, and feedback, in an effort to foster improvement among Urban Teachers’ participants. Some measures might be strongly
predictive of outcomes in the absence of an effective intervention, but not predictive of outcomes if the intervention successfully addresses variation in performance (Yeager, Byrk, Muhich, Hausman & Morales, 2015). Thus, we find it promising (if not conclusive) that our selection measures predict short-term performance, but are less predictive of long-term performance after participants have engaged in Urban Teachers’ clinical experiences, coursework, and coaching, to which we now turn.

INTENSIVE AND ALIGNED TRAINING AND SUPPORT

Urban Teachers partnered with national experts to design a four-year teacher preparation program that emphasizes intensive training and support for individuals interested in becoming career teachers. Important features of our program include a relevant and rigorous master’s degree program, 1,500 hours of real-world experience in multiple classroom settings, and 100 hours of instructional coaching and feedback across three years as Urban Teachers’ participants develop their teaching skills. The following sections describe research related to each of these elements of training and support.

COURSEWORK

Education coursework has come under considerable fire in recent years. Numerous studies have found that on average, teachers with master’s degrees are not more effective than their colleagues (Aaronson et al., 2007; Clotfelter, Ladd & Vigdor, 2006; Clotfelter et al., 2007). A review of teacher preparation programs revealed that the amount and type of coursework was unrelated to teacher effectiveness (Constantine et al., 2009). Furthermore, teachers from the highly selective Teach for America program undergo just five weeks of training prior to teaching yet are, on average, as effective as other teachers; some studies have found that TFA high school teachers are more effective than other high school teachers (Clark, Isenberg, Liu, Makowsky & Zukiewicz, 2015; Clark et al., 2013; Xu, Hannaway & Taylor, 2007). In light of these findings, some have come to question the extent to which coursework can be used as a mechanism to develop effective teachers.

While coursework may introduce candidates to effective teaching practices and provide an opportunity to apply these practices, teacher preparation programs vary in the amount of time devoted to teaching methods. Based on data from a nationally representative survey of teachers, researchers found that teachers who completed more methods-related coursework felt better prepared and were more likely to stay in teaching (Ronfeldt, Schwartz & Jacob, 2014). The authors of a study of New York City teachers found that teacher preparation that focuses more on the work of the classroom and engages participants in the actual practices involved in teaching, such as planning guided reading lessons, produces teachers who are more effective during their first year of teaching (Boyd, Grossman, Lankford, Loeb & Wyckoff, 2009). These findings suggest that teacher preparation
programs should consider increasing methods courses and integrating teaching practices into coursework.

Consistent with what the evidence suggests is most effective, all coursework at Urban Teachers is practical, experiential, and actionable, allowing for immediate practice of learned skills and standards-based curriculum in the classroom. Urban Teachers’ coursework emphasizes literacy and math skills that are essential to student success across all content areas. Coursework also provides training on implementing and interpreting assessments of reading and math skills, so our teachers can evaluate their students’ learning needs and provide more targeted instruction. Additionally, taking multiple special education courses enables Urban Teachers’ participants to meet the needs of diverse learners.

Assignments are organized around core teaching practices, in keeping with recommendations from researchers (Ball & Forzani, 2009; Grossman, Hammerness & McDonald, 2009), and coursework is aligned to the Council of Chief State School Officers’ Interstate Teacher Assessment and Support Consortium (InTASC) standards. Examples of assignments include collection of instructional data about student learning, identification of instructional challenges and how they were addressed, and reflection on practice. These tasks provide an opportunity for Urban Teachers’ participants to receive feedback from their coursework instructor and their colleagues as they develop their teaching skills. In addition, assignments can foster meaningful conversations about the needs of our participants (Goe, Biggers & Croft, 2012). This approach allows coursework instructors and coaches to address participants’ needs during the residency year, prior to when participants become teachers of record.

While our coursework is consistent with the lessons drawn from research, we continually assess the quality of coursework in an effort to strengthen it. Urban Teachers’ Curriculum and Professional Development team routinely reviews course evaluations to obtain stakeholder feedback on whether the course was adequately challenging and enriched participants’ understanding of the subject, as well as the extent to which instructors provided constructive feedback. The team holds coursework retreats during which curriculum leaders and clinical faculty review course evaluations and make revisions to the coursework. In addition to course evaluations, we routinely seek feedback from our participants regarding whether coursework is promoting strong teaching practice. Based on our spring 2014 and 2015 surveys of residents and teachers, nearly 90 percent of our participants agreed or strongly agreed that their math, literacy, and classroom management courses prepared them to teach effectively.

**CLINICAL EXPERIENCE**

Urban teacher residencies are founded on the belief that new teachers in urban schools should have substantial guided clinical experience in an urban classroom prior to becoming teacher of record (Berry et al., 2008); however, while some studies indicate that lengthier periods of student
teaching are beneficial, others do not find positive effects of extended practice. For example, in a study of prospective teachers in a large urban district, researchers found that lengthening student teaching has little effect on teacher outcomes, but in a nationally representative survey of teachers, those who completed more practice teaching felt better prepared and were more likely to stay in teaching (Ronfeldt & Reininger, 2012; Ronfeldt, Schwartz & Jacob, 2014). While many have advocated for more extensive guided clinical experiences, whether this will result in more effective novice teachers is uncertain. Differences in the quality and features of student teaching experiences may help explain these inconsistent findings. Quality of student teaching (measured by participants’ satisfaction with their placement school, cooperating teacher, and other placement teachers and staff) has a positive and significant effect on outcomes. Of particular importance for urban residency programs, the effect of the quality of student teaching is greater in schools with more Black and Hispanic students (Ronfeldt & Reininger, 2012).

Qualitative studies of student teaching reveal how quality in student teaching experiences varies. For example, case studies of nine student teachers, cooperating teachers, and university supervisors found numerous instances of lost opportunities for student teachers to learn to teach in their student teaching experience, including limited feedback on teaching subject matter and few connections made to content from methods courses (Valencia, Martin, Place & Grossman, 2009). Urban Teachers assigns instructional coaches to participants based on grade level experience and content knowledge, and coaches use an observation rubric in an effort to ensure that participants receive useful feedback on teaching subject-matter and on specific teaching practices. Links to methods courses are made explicit through clinically based course assignments, as described in the coursework section.

Evidence also suggests that specific features of student teaching matter. For example, programs that provide more oversight of student teaching and more opportunities to engage in the specific practices involved in teaching result in more effective first-year teachers for New York City schools (Boyd et al., 2009). To ensure that residents have opportunities to engage in teaching practice while in the classroom, Urban Teachers’ residency year includes eight weeks of required whole-group student teaching, which gives residents the opportunity to develop and practice their instructional and classroom management skills in a whole class setting. Instructional coaches provide oversight of student teaching experiences by conducting on-site classroom observations, and residents are required to create a portfolio that chronicles student teaching experiences, including lesson plans, samples of student work, and video footage.

Where teacher candidates do their student teaching may influence teacher effectiveness. Boyd et al. (2009) find that teachers who have had the opportunity to review curriculum used in their district as part of their preparation are more effective. Additionally, a study of six Washington State teacher preparation programs indicates that teachers are more effective when the student demographics of their current school are similar to the student demographics of the school in which they did their student teaching (Goldhaber, Krieg, & Theobald, 2016). Since our residents are placed in schools in
the district where they will teach, they have exposure to district curriculum and state standards prior to becoming teachers of record. Our residents work in diverse, high-need schools; their teaching placements are either in their residency site or similar schools.

Urban Teachers’ approach to clinical experiences reflects some of the key practices identified in the literature base, and while we cannot disentangle the influence of clinical experiences from coaching and coursework, our participants have been consistently positive about their clinical experiences on our annual survey. Among our most recent cohort that has completed the residency (participants who began the program in school year 2014-15), 85 percent agreed or strongly agreed that their clinical placement gave them the knowledge and skills needed to be an effective teacher. In addition, 88 percent said they were supported by the teachers in their residency schools, and 96 percent indicated that they were supported by other Urban Teachers participants in the building.

**COACHING AND FEEDBACK**

Coaches provide instructional support for teachers as a means of improving teaching practice. Under Urban Teachers’ coaching model, residents and first-year teachers see their coach at least twice a month. Each quarter they engage in a planning meeting, a focused observation, and a comprehensive coaching cycle. Second-year teachers meet with their coaches less frequently, but still engage in three comprehensive coaching cycles throughout the year. Though limited empirical evidence exists regarding the effectiveness of coaching in changing teacher practice and improving student achievement, a few recent studies find promising results and offer insights for programs implementing coaching models.

In a longitudinal study that included 287 teachers and 8,576 students in kindergarten through second grade, researchers used a statistical model to compare student literacy learning over three years of one-on-one coaching against learning prior to the coaching, under baseline conditions (Biancarosa, Bryk & Dexter, 2010). Results demonstrated increasing improvements in student literacy learning during coaching implementation, and the benefits persisted through subsequent summers. While Urban Teachers’ coaching model does not focus solely on literacy instruction, it is similar to the model studied in that coaching is one-on-one.

Another study involved a randomized trial of a literacy coaching program implemented in elementary schools that served high numbers of students who are low-income, minority, and English language learners (Matsumura, Garnier, Correnti, Junker & Bickel, 2010). After two years, teachers in schools that implemented the coaching model significantly improved the quality of their observed classroom text discussions relative to teachers in comparison schools, and researchers found a significant positive impact of the coaching program on achievement of English language learners. These findings are particularly relevant to Urban Teachers as many of our participants work in elementary schools with high numbers of students who are low-income, minority, and English language learners.
In a study of Florida’s reading coach program at the middle school level, researchers found that many teachers and principals reported that coaches had positive effects (Marsh et al., 2008). Approximately two-thirds of reading and social studies teachers who had interacted with the coach believed these interactions helped them better plan and organize instruction. The vast majority of principals reported that their coaches had a positive effect on their own knowledge, a sense of community among teachers, and on students’ motivation to read. The authors found mixed evidence regarding the impact of coaching on student achievement; having a state-funded coach was associated with small but significant improvements in average annual gains in reading for two of the four cohorts analyzed. The frequency with which coaches reviewed assessment data with teachers was positively associated with improved student outcomes. At Urban Teachers, instructional coaches provide feedback and support on participants’ use of student data to inform instruction; we are continuing to develop supports for our coaches and teachers to better understand and make use of assessment data.

An investigation of the MATCH teacher coaching in the Recovery School District in New Orleans indicated no effect of coaching on any outcome measures when data are pooled across cohorts; however, the researchers found that teachers coached in the first cohort scored higher on an index of effective teacher practices (Blazar & Kraft, 2015). In contrast, coaching had no effect among teachers in the second cohort. Cohort 1 teachers may have benefitted from a higher dosage (4 weeks for Cohort 1, compared to 3 weeks for Cohort 2) and lower coach-teacher ratios. In addition, the focus of coaching changed between cohorts; in Cohort 1, coaches made decisions about which areas to focus on based on their interpretation of teachers’ strengths and weaknesses and on conversations with these teachers, whereas in Cohort 2, coaching was formally organized such that coaches prioritized behavior management early in the coaching process and only moved on to other focus areas after teachers mastered this skill. Urban Teachers uses a fairly high dosage model and strives for low coach-teacher ratios (about 1:12). Consistent with the approach used in the more successful cohort of the aforementioned study, our coaches make decisions about which areas to focus on based on participants’ strengths and weaknesses relative to our Teacher Practice Rubric and on conversations with participants.

Feedback from our participants indicates that the coaching has been a valuable program component. Among our most recent cohort that has completed the residency (participants who began in school year 2014-15), 92 percent said coaching sessions are useful in improving their teaching practice. Among our first-year teachers in school year 2014-15, 84 percent said coaching sessions are useful, while 68 percent of second-year teachers reported that coaching sessions are useful. We plan to follow up with our second-year teachers for feedback on how to make coaching sessions more useful as they progress through the program.
CONTINUAL EVALUATION OF PERFORMANCE

Only about a quarter of traditional teacher preparation programs routinely gather information on the performance of their teacher candidates (Greenberg, McKee & Walsh, 2013), and very few other programs gather data once teachers move into the classroom. Given the significant and far-reaching impacts of quality teaching, many have advocated for including measures of teacher effectiveness in policies that govern decisions about teacher hiring, certification, tenure, and advancement (Glazerman et al., 2010; Gordon, Kane & Staiger, 2006). They argue that, without information about how teachers perform, schools and districts cannot make strategic choices about staffing their schools, supporting their students, or determining whom to promote into leadership positions. In keeping with these recommendations, Urban Teachers’ approach involves continual evaluation of participants’ performance using multiple measures: coursework performance, teaching practice, and growth mindset and professionalism. We evaluate our participants’ performance both during the residency year and in the first two years as teacher of record. In the following sections, we describe each of the areas of our evaluation in more detail.

COURSEWORK PERFORMANCE

Performance of teachers in teacher preparation courses may be a more valuable indicator of future effectiveness than simply whether or not one has taken courses. Several studies have yielded promising if not consistently significant findings regarding the relationship between (1) grades and (2) grade point average (GPA) in teaching coursework and subsequent teacher performance. For example, in a study of a university-based teacher preparation program, researchers found that teachers’ total GPA in upper division courses was positively associated with students’ math achievement, though the relationship between GPA and reading achievement was not statistically significant (Henry et al., 2013). In a meta-analysis of 123 studies, the authors found that performance in teacher preparation programs as measured by GPA was a better predictor of teaching skill than test scores (D’Agostino & Powers, 2009). More recently, researchers reached similar conclusions based on a study of 1,800 teaching candidates (Wilson & Robinson, 2012). Perhaps not surprisingly, these studies suggest that measures of performance in education coursework are a better indication of teacher quality than the amount of coursework completed.

To ensure that coursework grades accurately reflect the extent to which participants are gaining the knowledge and skills required to teach effectively, Urban Teachers’ key assignments are aligned to specific aspects of Urban Teachers’ classroom observation rubric. For example, in one of our courses, Emergent and Early Reading, a key assignment asks participants to assess students’ knowledge of sight words, analyze assessment data, and reflect on the instructional implications of this data analysis. This assignment is aligned with a section of the rubric devoted to teachers’ use of data. The key assignment for our Language Development in Children course requires participants to
analyze discussion between students and explain how findings will affect future instructional decisions to extend students’ linguistic development; it is aligned with the segment of the rubric that focuses on academic discourse in the classroom. Subsequently, coursework grades reflect the quality of participants’ work on assignments that are organized around core teaching practices. Since grades are a reflection of participants’ performance with regard to specific teaching practices, success in Urban Teachers’ coursework indicates competency with regard to those teaching practices.

To assess the extent to which our participants’ course grades reflect their emerging competency in the classroom, we analyzed the relationship between coursework grades and scores on related areas of the classroom observation rubric. Preliminary findings suggest that coursework grades are positively related to participants’ scores on the classroom observation rubric, as well as student achievement gains. For example, grades in Emergent and Early Literacy, taken during the residency year and containing several assignments related to data literacy, have a significant, positive relationship with coaches’ ratings of participants’ use of data. Although we only have student achievement gains for a small number of teachers, we find that participants’ grades in Emergent and Early Literacy have a significant, positive relationship with student gains in reading during the first year as teacher of record. Thus, coursework grades appear to capture teaching skills that generate improvements in student outcomes.

**TEACHING PRACTICE**

Empirical evidence suggests observation-based evaluations, an integral part of Urban Teachers’ coaching model, can support improvements in instructional practice. For example, a study of mid-career math teachers in Cincinnati demonstrated that observation-based evaluation and performance measures could improve mid-career teacher performance both during the period of evaluation and in subsequent years (Taylor & Tyler, 2012). In a separate study set in Chicago, schools participating in a teacher evaluation reform based on the Danielson Framework for Teaching, a widely-used observation rubric, performed better in reading and math than control group schools at the end of the first year (Steinberg & Sartain, 2015). In this regard, classroom observation rubrics are not merely a mechanism for evaluating effectiveness but can actually *promote* effectiveness.

In many ways, Urban Teachers’ model is consistent with lessons from research regarding the features of effective instructional coaching. Urban Teachers’ instructional coaches use a classroom observation rubric to assess how well participants are implementing specific teaching practices. Ratings on teaching skills provide participants with information on which skills they’ve mastered and which areas require more attention. The observation of classroom practice by experienced educators, guided by a rubric that describes effective instructional practice, facilitates valuable feedback on strengths and weaknesses and provides structure to conversations regarding novice teachers’ teaching practice and ongoing improvement.
Urban Teachers trains and calibrates observers before they begin classroom observations, and implements norming protocols to ensure coaches are using the tool consistently, in an effort to ensure that our observers can use the rubric to accurately rate teaching practices along a 4-point scale. In addition, as part of our partnership with the Strategic Data Project at the Center for Education Policy, we piloted a paired observation protocol to increase inter-rater reliability among a subset of coaches (Jackson, 2016). Finally, in keeping with the findings from both external studies that suggest multiple observations increase reliability and our own internal research (Bill & Melinda Gates Foundation, 2012; Hill, Charalambous & Kraft, 2012; Jia, Cummings, Jackson, Clifford, & Hoch, 2015), we draw on ratings from multiple observers and multiple observations for high-stakes decisions.

Urban Teachers, in close partnership with Westat, has also invested in assessing the validity of our classroom observation rubric to ensure its soundness as a measurement tool. An effective rubric should differentiate among teachers at different levels of practice. We would expect to see substantial variation in ratings if a rubric is implemented well, particularly among novice teachers who enter teaching with different experiences and whose skills may develop at different rates. Urban Teachers’ observational ratings do show substantial variation and do not cluster strongly in the middle or top categories.¹ We find no indication of the leniency often seen in teacher performance evaluation systems (Weisberg, Sexton, Mulhern, & Keeling, 2009). Westat’s longitudinal analysis of our rubric ratings finds that ratings increase over the first few years of teaching, which is consistent with a considerable body of research indicating that, on average, teachers improve a great deal in their first few years on the job (Clotfelter et al., 2006; Clotfelter et al., 2007; Atteberry, Loeb, & Wyckoff, 2015). These analyses give us confidence that our observers are able to accurately distinguish among various levels of teaching practice as described by the rubric.

Trained evaluators, using rigorous classroom observation rubrics, can produce ratings of teaching practice that are significantly and positively correlated with student achievement growth (Kane, Taylor, Tyler & Wooten, 2011). Such evidence suggests that rubrics can accurately capture the specific instructional practices that lead to enhanced student learning. To assess whether our classroom observation rubric leads to accurate evaluation of such practices, we examined correlations between rubric ratings and student achievement gains. Initial analyses by Westat indicate that rubric-generated ratings have a positive, moderate correlation with student gains.² Urban Teachers has confirmed these results with subsequent groups of participants and conducted

¹ For more details on the analyses conducted of Teacher Practice Rubric data, please see Assessing Effectiveness: How Urban Teachers Evaluates Its New Teachers.
² Our external partner, Education Analytics, obtained student gains estimated on the NWEA Measures of Academic Progress assessment for 20 year second-year teachers (cohort 2010) and 32 first-year teachers (cohort 2011). Education Analytics used a standard form of a value-added model estimated within a large data sample with one exception: due the small number of participants, the population parameters were not estimated, but instead calibrated from a large sample from urban districts and then assumed to be accurate for students and teachers associated with Urban Teachers. The correlation between observation scores and student gains was $r=0.51$ for participants who started the program in school year 2010-11 and $r=0.34$ for participants who started the program in school year 2011-12.
additional analyses to assess whether specific indicators are more strongly related to student achievement. We found that ratings on all 19 indicators had a statistically significant, positive relationship with student gains in math; 16 of the 19 indicators had statistically significant, positive relationships with student gains in reading (Jackson, 2015). The findings suggest that ratings on indicators in our rubric capture the quality of teaching practices that facilitate student achievement gains.

**GROWTH MINDSET AND PROFESSIONALISM**

As noted in the section on selection, several studies indicate that social and emotional traits are related to teacher effectiveness. Urban Teachers has adopted measures of growth mindset in keeping with research on social and emotional characteristics of effective teachers and recommendations from the Council of Chief State School Officers’ Interstate Teacher Assessment and Support Consortium (InTASC). Specifically, our growth mindset measures are aligned with InTASC’s Standard 9, Professional Learning and Ethical Practice (2011). Since new teachers face a steep learning curve, we want participants to actively participate in a professional learning community and be open to feedback. Participating in professional learning communities and being open to feedback will serve our program graduates throughout their careers, as the knowledge base around teaching is continually evolving and new technologies are emerging that can help our teachers work more effectively and efficiently. In addition, we expect Urban Teachers to have an internal locus of control, as reflected by taking responsibility for problem-solving issues with teaching practice. We view professional learning communities, openness to feedback, and internal locus of control as keys to a growth mindset that are essential for continuous improvement.

In keeping with research that suggests many social and emotional traits are malleable (Yeager & Dweck, 2012), Urban Teachers not only screens for these traits during the selection process but also evaluates and provides feedback to participants on behaviors that reflect these traits after they enter the program. To improve consistency in the evaluation of growth mindset and professionalism, we have developed guidance for our clinical faculty, who generate ratings in each of these areas. Evidence is used to support ratings, and our rubric provides a framework for balancing concerns against evidence of positive behavior. We expect that participants will be given feedback to support them in developing appropriate behaviors. In developing feedback loops, we hope to foster a continuous improvement ethic among our participants.

While the early research on growth mindset suggests it is an important characteristic of teachers, measures of growth mindset are relatively new with a limited research base. As such, we continue to explore ways to improve how we capture evidence of growth mindset and how to best promote growth mindset among our participants.
USE OF PERFORMANCE DATA

We view this ongoing evaluation system as a means of conveying high expectations and providing feedback to our participants and providing information to our school partners regarding the extent to which our participants are meeting these expectations. Recently, we introduced participant progress reports to increase transparency in the evaluation process. In school year 2015-16, we are providing these reports to our participants quarterly as we work to improve communication of expectations. Participants who are not successful in meeting Urban Teachers’ expectations are eligible for dismissal. Strategic attrition is intended to ensure that the teachers we supply our school partners have demonstrated the capacity to teach effectively.

While our decisions regarding whether participants advance in the program are informed by data from our ongoing evaluation system, we recognize the need to use professional judgment in each case. As such, we ask for input from individuals familiar with participants and their school environments regarding whether any contextual factors should be taken into account when making such decisions. This additional information ensures that we make decisions with the needs of our school partners and students, as well as our participants, in mind.
SUMMARY AND NEXT STEPS

Urban Teachers’ theory of change is grounded in the notion that a combination of selective admissions, rigorous, clinically-based coursework, extensive experience in classroom settings, ongoing support and coaching, and continual evaluation will result in more effective teachers for our urban schools. Our model is supported by lessons drawn from extant research as well as our own internal research, including analyses conducted by our external partners. We recognize that these findings are preliminary and that the quality of implementation matters; as such, we will continue our analyses to monitor program quality, develop a better understanding of what is working, and facilitate continuous improvement. For example, because our participant survey results indicate that compared to residents and first-year teachers, fewer second-year teachers viewed coaching as helpful, we are exploring ways to strengthen support to our second-year teachers and to differentiate support for these teachers.

By collaborating with our school district and higher education partners, we hope to gain more insight into which aspects of our model are most effective and what needs to be refined. We also look forward to working collaboratively with other alternative teacher preparation programs to share knowledge and access to best practices and resources as a partner under Relay Graduate School of Education’s TeacherSquared, one of the five Teacher Preparation Transformation Centers funded through the Bill & Melinda Gates Foundation. Urban Teachers is also exploring the possibility of an external evaluation of its program in order to more rigorously assess our model.

As an organization, we are dedicated to modeling continuous progress in the field of teacher preparation. Although the evidence base is wide and varied on this subject, we are committed to conducting research and improving our process for the improvement of teacher preparation writ large. As we engage with different partners, from both alternative and traditional programs, we learn more about new approaches to ensure that novice teachers have the skills they need to teach effectively. We will continue to examine the processes that result in teacher effectiveness and accelerated student learning, in order to target our efforts toward those practices that will generate greater quality in outcomes for our school district partners and the students we collaboratively serve.
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Urban Teachers Evidence-Based Approach to Teacher Prep Final.docx


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