
Teaching Residency Programs: A Multisite Look at a New Model to Prepare Teachers for High-Need Schools

November 2014

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EXECUTIVE SUMMARY

Elementary and secondary education stakeholders around the country, especially in large urban districts, have long struggled to staff low-performing schools with well-qualified teachers and to retain the teachers they hire (Berry et al. 2007). In The Higher Education Opportunity Act of 2008 (Public Law 110–315), Congress responded to these challenges by creating the Teacher Quality Partnership Grants Program to fund a relatively new model of teacher preparation known as teaching residency programs (TRPs).¹ TRPs are a pathway to teaching for those who already have a bachelor’s degree. In this model of teacher preparation, prospective teachers simultaneously complete coursework and have a supervised fieldwork experience lasting at least one school year (the residency). The residency takes place in high-need schools and gives the resident opportunities to practice his/her craft and take on increased teaching responsibility under the guidance of an experienced classroom teacher in settings where the resident will be hired. This model of teacher preparation is expected to attract different types of candidates than traditional teacher preparation programs and better prepare teachers to meet the demands of teaching and thus to improve student achievement and teacher retention.

This report provides implementation findings based on the 30 TRPs that received funding through one of 28 Teacher Quality Partnership residency grants awarded in fall 2009 and spring 2010. Although some of the 30 programs had been operating prior to the grant award, most were newly established and data collection generally covers their second year of operation. For a subset of the TRPs, the report also provides in-depth information from the 2011–2012 school year on three groups of program participants: (1) *residents* who were in their residency year of the program, (2) *classroom mentors* of those residents, and (3) *novice TRP teachers* (former residents who were in either their first or second year as teachers of record). This subset includes 12 programs that are among the largest or most experienced TRPs that received grant program funding. The study also provides comparative information on *non-TRP novice teachers* in the same districts served by these 12 TRPs.

Following are the study’s major findings:

- **In keeping with their intended purpose and the grant requirements, the residency programs provided a fieldwork experience, typically with a trained and experienced mentor teacher, along with integrated coursework.** Residents reported an increase in the number of days fully in charge of instruction between the first and second halves of their residency (21 versus 37 days, on average). Most TRP mentors had substantial teaching experience (10 years, on average), were trained by the residency program (averaging 37 hours of training), and had prior mentoring experience (an average of 3.5 semesters). TRPs included the equivalent of 10 courses, on average, with core emphasis on content and pedagogy, classroom management, and student assessment and a lesser emphasis on child development and education philosophy. Most residents reported that their fieldwork reinforced what they learned in their coursework and that their coursework was well-integrated with their residency classroom experiences (83 and 68 percent of residents, respectively).
- **The residency programs somewhat broadened the pool of people entering the teaching profession in the participating districts.** Novice teachers in the study who

¹ The Teacher Quality Partnership grants were available to fund certain baccalaureate teacher preparation programs, in addition to TRPs.

had completed a TRP appeared more likely than their non-TRP peers to have made a distinct career change when they joined their programs. For example, they were more likely than non-TRP teachers to report having worked in a full-time job other than teaching (72 percent versus 63 percent). However, novice TRP and non-TRP teachers had similar demographic characteristics (sex, race/ethnicity, and age).

- **Novice teachers from residency programs had similar retention rates to other novice teachers.** Focusing on teachers after their first or second years of teaching, about 92 percent of TRP teachers and 90 percent of non-TRP teachers reported staying in the same district from spring 2012 to fall 2012; about 4 percent of TRP teachers and 6 percent of non-TRP teachers were no longer teaching. None of these were statistically significant differences.

Teacher Quality Partnership Residency Grants

The Department of Education’s Institute of Education Sciences sponsored a descriptive study of the TRPs that received Teacher Quality Partnership residency grants.² The purpose of the residency grants is to improve the quality of new teachers serving in high-need districts and schools³ by creating or expanding model teaching residency programs. The discretionary grant competition included the following requirements:

- A partnership composed of at least one institution of higher education and at least one high-need school district. Within the institution, both a school of education and a school of arts and sciences must be part of the partnership.
- Admissions goals and priorities aligned with the hiring objectives of the partnership’s high-need district(s) and candidate selection that is likely to provide effective teachers and broaden and diversify the pool of teachers in the districts served.
- At least one academic year of teaching alongside a trained and experienced classroom mentor teacher, prior to becoming the teacher of record. The mentor teacher is to be teaching high-need subjects and grade levels⁴ in a high-need school.
- Rigorous graduate-level coursework leading to a master’s degree.
- A one-year living stipend or salary offered to residents during their residency year in exchange for subsequently teaching full-time in a high-need school for a minimum of three years.
- Two years of induction support after placement as a full-time teacher in a high-need school.

² Congress called for a study of the programs funded with TQP grants, of which TRPs are one type.

³ According to program requirements, a high-need district serves a substantial number or percentage of children from low-income families and also (1) employs a high percentage of teachers who do not teach the subject or in the grade level in which they trained; (2) experiences a high teacher turnover rate; or (3) hires a high percentage of teachers with emergency, provisional, or temporary certification or licensure. Schools qualify as high-need if they (1) are among the district’s poorest (in the top 25 percent according to various poverty measures), or (2) have a certain percentage of students eligible for a free or reduced-price lunch (at least 60 percent for elementary schools and at least 45 percent for other schools).

⁴ No program requirements defined high-need grades or subjects; applicants could designate them based on the teacher needs of their partner districts.

Research Questions and Study Design

This study addresses the following research questions:

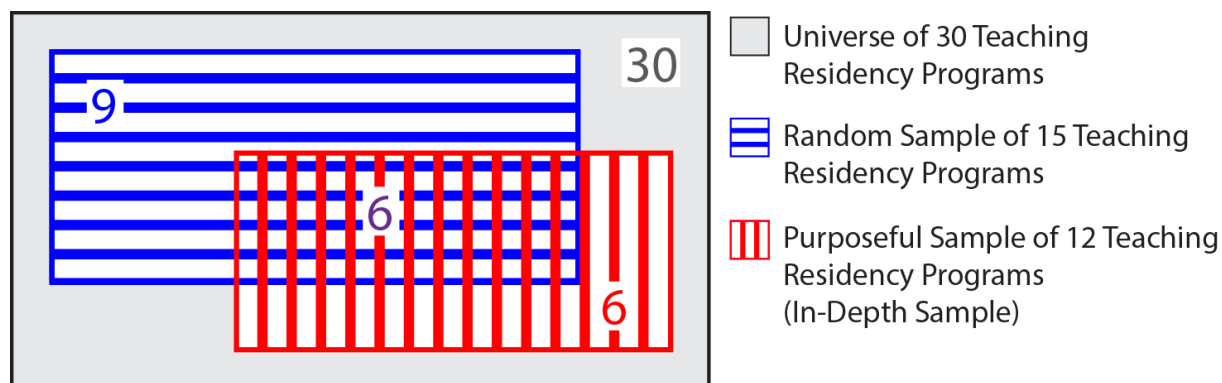
1. What are the characteristics of residency programs funded by the Teacher Quality Partnership Grants Program?
2. What are the characteristics and experiences of residency program participants? How do the characteristics and experiences of novice residency program teachers compare with those of novice teachers from other programs?
3. What are the retention rates and mobility decisions of novice residency program teachers and other novice teachers? What are the characteristics of schools that novice teachers leave and enter?

To address these questions, we relied primarily on data from original surveys and interviews conducted with various sets of TRPs, but also collected secondary data from district administrative records and other sources. Information on programs is representative of all 30 TRPs, but because of the study's sampling approach (explained below), information on mentors, residents, and novice teachers is not.

Program samples. Seeking to balance a preference for representative data on TRPs and their participants with a need to use resources efficiently, we used different, overlapping sets of programs for different data collections (Figure ES.1). Study resources enabled us to collect basic information on programs from the full universe of 30 TRPs, but for additional information, we drew a random sample of 15 TRPs (represented by the horizontal/blue striped area of Figure ES.1). The 15 programs worked with a total of 48 partner districts, in which the proportion of students eligible for a free or reduced-price lunch—a common measure of economic need—ranged from 43 to 98 percent, with a mean of 75 percent.

To collect data on mentors, residents, and teachers of record, we used a purposeful (nonrandom) sample of 12 programs, which we referred to as the in-depth sample (represented by the vertical/red striped area of Figure ES.1). Three priorities influenced our selection of specific programs for the in-depth sample. To allow us possibly to observe retention for some TRP teachers into their fourth year of teaching in fall 2013, we prioritized programs that had placed a cohort of graduates in fall 2010. To maximize the number of mentors, residents, and novice teachers in the study, we also prioritized large programs. Indeed, although the in-depth sample included 40 percent of the TRPs, it accounted for about 60 percent of all TRP mentors and residents. Finally, to make data collections efficient, we prioritized programs that each served a single school district as well as multiple programs that partnered with the same district. The resulting 12 programs served six districts. The in-depth sample of 12 TRPs is not representative of the full set of 30 TRPs in the study. Six programs were in both the random sample and the purposeful sample, represented by the area of Figure ES.1 where the horizontal and vertical stripes overlap.

Program data collections. We surveyed the directors of all 30 TRPs in spring 2012 to gather information about program structure and operations. We gathered additional details from interviews with the directors of the random sample of 15 programs during spring and summer 2012.

Figure ES.1. Sampling Scheme for Teaching Residency Programs in the Study

Resident and classroom mentor data collections. We surveyed all residents who entered the 12 in-depth sample programs in 2011 and remained in these programs in the second half of their residency year. The sample included 390 residents. We also surveyed the mentors who worked with the sampled residents. The sample included 406 mentors. Both surveys addressed respondents' backgrounds and experiences in these programs and were conducted in spring 2012.

Teacher-of-record data collections. We surveyed novice teachers of record from the 12 in-depth sample programs, as well as other novice teachers in the six districts that these programs served. We defined novices as individuals in their first or second year of full-time teaching as of spring 2012. (Because these teachers had completed TRPs in the past, the sample of novice teachers differed from the sample of current residents described above.) The survey collected information on novices' backgrounds, training experiences, and teaching experiences. In fall 2012, we again surveyed the novice teachers to determine whether and where they were teaching in what would be their second or third year. The sample of novice teachers included 435 from TRPs and 376 from other programs.

Additional data sources on teachers and schools. The Department of Education's Common Core of Data for the 2010–2011 school year provided information on the characteristics of schools where residents were placed and novice teachers were employed. Other information on school characteristics came from state and district websites. We used Barron's rankings of college competitiveness (as of 2007–2008) to characterize residents' and novice teachers' undergraduate institutions.

Analysis. Because TRP and non-TRP novice teachers were likely teaching under different circumstances (for example, the former are intentionally placed in high-need schools), we controlled for school characteristics and subjects taught when comparing the two groups' experiences and perceptions. Although our descriptive analysis controlled for some aspects of the novice teachers' placements, any comparison of outcomes for the two groups may reflect not only the influence of the programs they attended but unmeasured characteristics of their teaching placements or other factors.⁵

⁵ Throughout the report, when testing for differences between groups, we used two-tailed tests and applied a 5 percent critical value.

Detailed Findings

Screening and Participant Characteristics

Under the grant requirements, TRPs are supposed to recruit and admit “highly qualified individuals, including minorities,” either recent college graduates or “mid-career professionals” from fields other than education. Programs’ admission processes are supposed to favor candidates with (1) strong content knowledge or a record of accomplishment in the field or subject area they will teach, (2) strong oral and written communication skills, and (3) other attributes linked to effective teaching. Grant requirements also reference consideration of applicants who reflect the communities in which they will teach or represent populations underrepresented in the teaching profession. Together these guidelines suggest that TRPs may be viewed as a means to broaden or diversify the teacher pool in high-need districts. Findings on TRPs’ screening processes for applicants and on participants’ characteristics are summarized below.

Most residency programs looked for candidates with particular characteristics or experiences, and some required sample teaching lessons as part of their screening process.

- All 15 directors interviewed for the study sought participants who reflect the communities they would teach in or who are underrepresented in the profession. For example, 12 directors mentioned looking for racial/ethnic minorities. They also sought participants with particular skills, work experience, or life experience. For example, 10 mentioned looking for applicants with particular content or subject knowledge developed in a career or college coursework.
- Writing samples and interviews were the most common screening tools used by the 15 program directors interviewed; 15 used the former, 14 used the latter. Seven programs also required applicants to demonstrate their skills with a brief sample teaching lesson.

The residency programs attracted individuals whose work and education experiences differed from those of other novice teachers in the same districts; they did not attract individuals with different demographic characteristics.

- Since graduating from college (an average of about five to seven years before the study), TRP teachers were more likely than non-TRP teachers to report having worked in a full-time job other than teaching (72 percent versus 63 percent). In addition, TRP teachers were less likely to report having worked as a long-term substitute teacher (15 percent versus 31 percent), a short-term substitute (18 percent versus 31 percent), or a teacher’s aide (22 percent versus 32 percent). These findings suggest that teaching was more likely to represent a distinct career change for the TRP teachers than for the non-TRP teachers.
- Novice TRP teachers were less likely than their non-TRP peers to have a bachelor’s degree in education (9 percent versus 25 percent). They also were more likely to have received their bachelor’s degree from a college rated in the “most competitive” category based on admission standards and academic achievement of applicants admitted (26 percent versus 12 percent).
- Novice TRP and non-TRP teachers had similar demographic characteristics. Fifty-five percent of TRP teachers were white, non-Hispanic, as were 60 percent of non-TRP teachers. Twelve percent of TRP teachers were black, non-Hispanic, as were 10 percent

of non-TRP teachers. Nineteen percent of TRP teachers were Hispanic, as were 18 percent of non-TRP teachers. Twenty-four percent of TRP teachers were male, as were 28 percent of non-TRP teachers. The average age of both groups was 30 years. None of these was a statistically significant difference.

Program Characteristics and Participant Experiences

The TRPs are intended to provide a unique training experience that prepares teacher candidates for the challenges of teaching in high-need schools. To help residents master the craft of teaching during a residency lasting at least one school year, programs hire and train experienced teachers to serve as classroom mentors for residents. Mentors use demonstrations, hold one-on-one discussions, and provide feedback as they help residents assume increasing responsibility for instruction during the year. The residency is designed to complement the coursework that participants simultaneously undertake in pursuit of a master's degree. A stipend is available as financial support during the residency. Participants continue to receive support after placement as a teacher of record. Findings on the characteristics and offerings of TRPs, on residents and mentors' experiences in TRPs, and on the support offered to novice teachers are summarized below.

The residency programs provided a training experience in which residents spent considerable time with their classroom mentors and took on increasing instructional responsibilities over the year. Residents also completed a substantial amount of coursework, which in the view of most residents complemented the residency experience.

- Over half (54 percent) of residents reported typically spending four full days a week in their mentor's classroom during the first half of their residency; 14 percent reported typically spending five full days a week with their mentor. Larger shares of residents reported spending four days (60 percent) or five days (18 percent) a week in their mentor's classroom during the second half of the residency.
- Residents reported being fully in charge of their residency classroom for an average of 21 full school days during the first half of the year and an average of 37 full days during the second half. In addition, the percentage of residents and mentors reporting that residents had primary responsibility for each of nine instruction-related activities (such as planning lessons and working with small groups of students) increased from the first to the second half of the year. For both groups and for all nine activities the increases were statistically significant.
- Program directors in the interview sample reported requiring their participants to complete an average of 450 hours of coursework, with 218 hours the fewest and 649 hours the most required. Assuming that a typical college course involves about 45 hours of instruction (3 hours per week for 15 weeks), the average TRP's total coursework is roughly equivalent to 10 college courses. Coursework scheduled during the residency period averaged 335 hours. For a typical residency lasting one full school year (about 36 weeks), 335 hours of instruction would average out to just over 9 hours per week.
- Eighty-three percent of residents reported that their work as a resident teacher reinforced what they learned in their coursework, and 68 percent reported that their coursework was well-integrated with their residency classroom experiences. Responses on these items varied substantially by program, however; the range was from 65 percent to 96 percent for the former item, and from 43 percent to 94 percent for the latter item.

- The TRPs hired and trained experienced teachers to serve as classroom mentors to residents. Mentors in the in-depth sample reported having taught full time for an average of 10 years. In addition, 84 percent of the mentors said they had received some training for this role; the average amount of training they reported, in total, was 37 hours, and the longer they had served as a mentor, on average, the more hours of training they had received. TRPs reported providing 32 hours of training, on average, for new mentors.

Compared to other novice teachers in the same districts, graduates of residency programs reported greater ongoing support from their preparation program.

- About 80 percent of both TRP and non-TRP first-year teachers reported being assigned to a mentor/master teacher or field supervisor during the 2011–2012 school year. Second-year TRP teachers, however, were more likely than their non-TRP counterparts to report having worked with these support staff (49 percent versus about 37 percent). In addition, among those assigned to this type of support staff, the second-year TRP teachers were more likely than their non-TRP counterparts to describe the person as affiliated with their teacher preparation program (46 percent versus about 21 percent). These findings suggest that TRP teachers maintain these support relationships longer than non-TRP teachers, possibly reflecting the TRPs' delivery of a two-year induction program to former residents.

Perceived Outcomes and Teacher Retention

TRPs aim to produce teachers who are well-prepared to teach high-need subjects in high-need schools and districts. Part of the vision for TRPs is that the teachers they train will have higher retention in high-need schools than teachers trained in other programs. Teachers' opinions about how prepared they felt for full-time teaching are summarized below. Also summarized are estimates for two sets of retention rates, those of first-year teachers into a second year of teaching and those of second-year teachers into a third year of teaching.

Novice residency program teachers felt more prepared than other novice teachers in the same districts.

- TRP teachers were more likely than non-TRP teachers to report having felt prepared, at the start of their teaching careers, for six of eight teaching activities: creating lesson plans (86 percent versus 74 percent), using a variety of instructional methods (71 percent versus 53 percent), assessing students (70 percent versus 49 percent), interacting with parents (64 percent versus 54 percent), selecting and adapting curriculum and instructional materials (64 percent versus 49 percent), and handling a range of classroom management or discipline situations (57 percent versus 40 percent). The activities for which the two groups felt about equally prepared were teaching the subject matter and using technology in classroom instruction.

Novice residency program teachers and other novice teachers in the same districts had similar retention rates.

- From spring 2012 to fall 2012—that is, as they moved into their second or third year of teaching—TRP teachers in the in-depth sample did not have higher or lower retention rates than non-TRP teachers in the same six districts. About 92 percent of TRP teachers stayed in the same district, and about 4 percent were no longer teaching. Among non-TRP teachers, about 90 percent stayed in the same district, and about 6 percent were no longer teaching. These were not statistically significant differences. In addition, neither

first-year TRP teachers nor second-year TRP teachers had retention rates that were statistically higher or lower than those of their non-TRP counterparts in the same cohort.

Future Data Collection and Publication

This report represents the first and largest of two publications planned for this study. The next publication will examine teacher retention rates using data collected in fall 2013.

I. INTRODUCTION TO TEACHING RESIDENCY PROGRAMS AND THIS STUDY

In this report, we present findings from a study of a relatively new model for teacher preparation: teaching residency programs (TRPs), specifically those funded by the federal Teacher Quality Partnership (TQP) Grants Program in 2009 and 2010.⁶ The purpose of the study is to describe the programs to policymakers, operators of teacher preparation programs, school district officials, and community and business leaders—those with a stake in making sure that schools, especially schools primarily serving students from low-income families, are staffed with well-qualified teachers. People interested in a teaching career and those considering various routes into the profession may also benefit from learning about these programs.

The report answers three research questions (see section D) that focus on program characteristics, participant characteristics and experiences, and teacher retention. It explains how teaching residency programs operate, including their recruitment and selection of participants, the coursework and training they provide before participants are placed in full-time teaching positions, and the support they provide to participants after placement. It describes the characteristics of staff and participants in the programs and compares novice teachers from these programs with those from other programs. It also examines the retention of novice teachers from these and other programs into their second and third years of teaching.

In this chapter, we first summarize the short history of the residency model of teacher preparation and the federal government's role in promoting a particular vision of the model. We then explain the vision for the resources that support the programs, how the programs should operate, and what outcomes the programs might be expected to achieve. Next, we summarize the limited research on residency programs to date and list the research questions that this study addresses. We conclude the chapter with a brief summary of the major topics addressed in the report's subsequent chapters.

A. Teaching Residency Programs: A New Approach to Teacher Recruitment, Preparation, and Placement

In 2001, a group of business, community, and education leaders in Chicago developed a new teacher preparation program model for training teachers: the urban teacher residency program. The model, which grew out of the need to place well-qualified teachers in low-performing Chicago schools, relies on partnerships between a nonprofit organization, a local university, and public schools to train prospective teachers. Participants simultaneously complete coursework toward a master's degree and work with a mentor teacher in a Chicago public school. In exchange for a stipend during the residency year, participants commit to teaching for a certain number of years in a high-need school in the district. The model is described in more detail in a text box on the following page.

Chicago's program soon caught the attention of education stakeholders in other struggling urban school districts, which faced similar challenges in attracting and retaining well-qualified teachers. Similar programs were established in 2003 in the Denver area (Boettcher Teachers Program) and in Boston (Boston Teacher Residency).

⁶ The grantees, all of whom participated in this study, are listed at the beginning of the appendix.

Key Features of the Urban Teacher Residency Model, Developed in Chicago

- A nonprofit organization leads the effort.
- The nonprofit partners with a school district and with a local university, which offers coursework leading to a master's degree. These partnerships ensure (1) that the program produces the types of teachers most needed in the district's low-performing schools, and (2) that participants can be placed in high-need schools during the training phase and subsequently as teachers of record.
- The program reaches beyond the labor pool supplied by traditional college-based education programs and targets mid-career professionals in an effort to attract nontraditional candidates into the teaching profession.
- The cohort admitted in a given year takes classes and attends workshops and meetings as a group, allowing participants to learn from and support one another.
- While taking courses, participants spend one school year under the close guidance of a mentor teacher, working in the mentor's classroom almost full time. The coursework and fieldwork are integrated and coordinated, with each reinforcing the other.
- Participants receive a stipend during the residency year and, in exchange, formally commit to teaching in a high-need school in the district for a certain number of years—in the Chicago Teacher Residency program, the commitment is four years.
- Participants continue to receive support and coaching during their first two years as teachers of record.

Growing interest in the model's new approach to teacher preparation eventually led to the formation of the Chicago-based Urban Teacher Residency United (UTRU). Established in 2007, UTRU is a nonprofit organization dedicated to promoting the model and to supporting partnerships in launching and operating an urban teacher residency program. Its mission is “to build and manage a national network of high performing urban teacher residencies dedicated to accelerating student achievement through the training, support, and retention of excellent urban teachers” (UTRU 2010). Toward that end, UTRU has developed standards for program design elements that it considers essential for a high quality urban teacher residency program.

In the years after the founding of the first three residency programs (Chicago, Denver, and Boston), the number of such programs continued to grow, probably in part because of UTRU's work. By 2009, about 11 such programs were in operation, though not all were affiliated with UTRU, and some had not instituted all the key features of the model as developed in Chicago, Denver, and Boston—for example, no living stipends and therefore no commitment to teach in a partner district for any length of time. As of early 2013, UTRU had 18 programs in its network.

B. The Federal Vision for Teaching Residency Programs: A Means to Improve Student Achievement and Teacher Retention

The federal government has played a substantial role in promoting the residency model of teacher preparation. The Higher Education Opportunity Act of 2008 (Public Law 110-315) provided for TQP grants to fund teaching residency programs as well as two other types of programs.⁷ The act permits grants to establish new teaching residency programs and to continue operating or expand existing residency programs. The U.S. Department of Education awarded 28 grants to fund TRPs, 19 in September 2009 and 9 in March 2010. One grantee operates three TRPs, so altogether the TQP grants support 30 programs. Note that this study focuses solely on residency programs funded through TQP grants, and not on other residency programs, which are not subject to the

⁷ The other two types of programs mentioned in the legislation were for pre-baccalaureate, 5th-year initial licensure, and for school leadership.

same requirements concerning structure and operation. Finally, it is worth remarking that, even though the residency model was originally associated with single urban districts, TQP grants were not restricted to partnerships involving urban districts; in fact, some grantees are using TRPs to supply new teachers to high-need rural districts.

The legislation that authorized the TQP grants, particularly its statement of the grants' purposes, conveys a specific vision of TRPs: by developing better teachers, the programs will raise student achievement. In this vision, retention also is a central issue. The grant requirements specify (1) that grant applications must describe partner districts' needs with respect to teacher retention, and (2) that the issue of retention must be included in partnerships' evaluations of their programs.⁸

For the purposes of this study, we developed a logic model for TRPs based on the law and its regulations (Figure I.1). The model includes the major resources needed to create and operate the programs (inputs), the programs' training strategies and key activities, the programs' "products" (outputs), and the effects the programs aim to achieve (outcomes). A detailed discussion of the model and key components of TRPs follows and will serve as a foundation for understanding the topics addressed in this report.

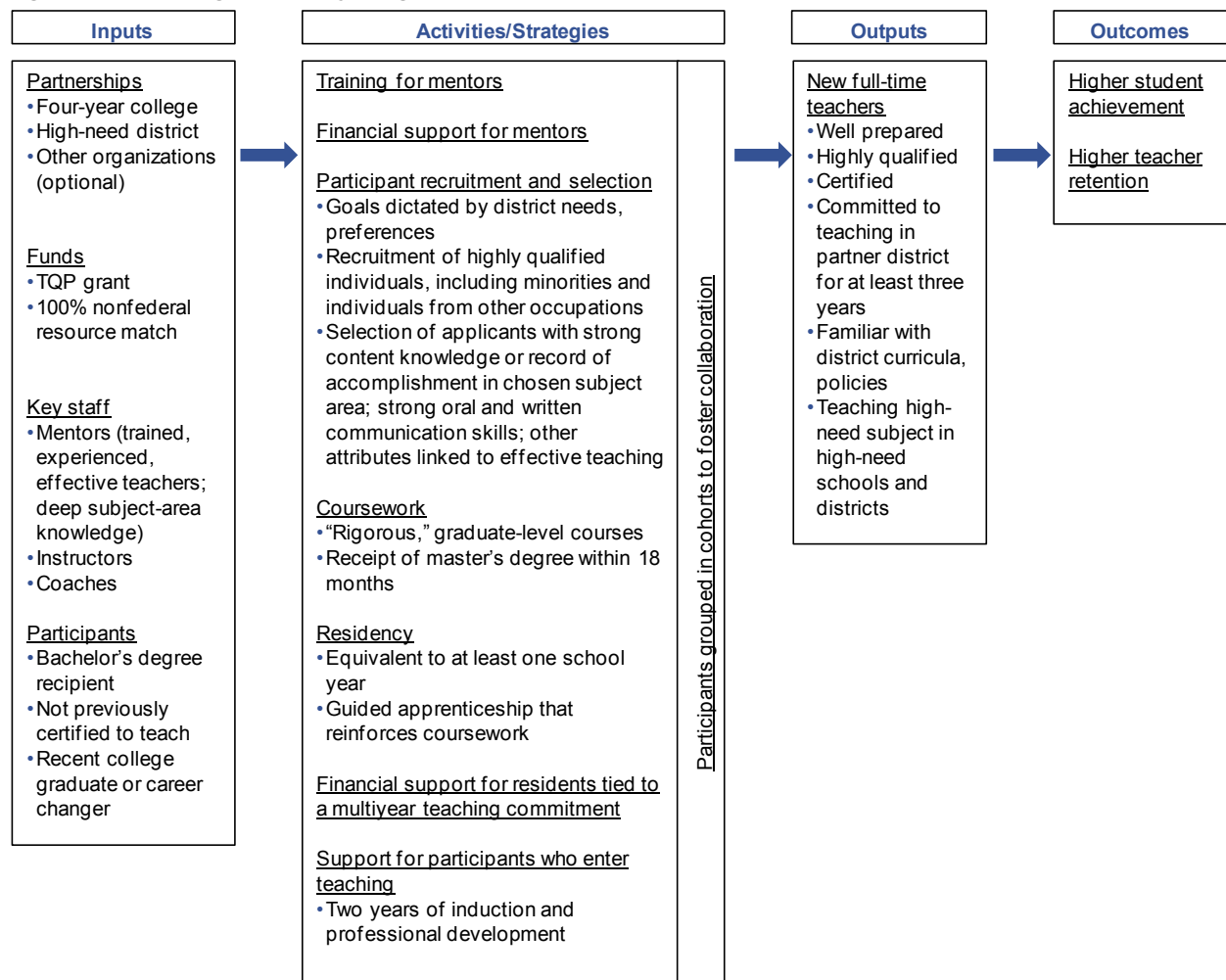
1. Program Inputs

Partnerships. Each TRP must be operated by a partnership that comprises at least one institution of higher education (IHE) and at least one high-need school district.⁹ A high-need district is defined as one that serves a substantial number or percentage of children from low-income families, and that has at least one of the following characteristics: (1) it employs a high percentage of teachers who do not teach the subject or in the grade level in which they trained; (2) it has a high rate of teacher turnover; or (3) it hires a high percentage of teachers with emergency, provisional, or temporary certification or licensure. Because districts directly participate in the teacher preparation programs, they should be able to ensure that their needs are met. Specifically, district participation should ensure that the program admits candidates with characteristics that the district considers most important; that the program trains new teachers for hard-to-fill positions; that the program familiarizes participants with the district's curricula and policies; and that participants are hired to fill full-time teaching positions in the district. In addition to IHEs and school districts, partnerships may also include other organizations that, according to officials, might contribute to the effective training of new teachers. These include businesses, public or private nonprofit educational organizations, educational service agencies, and teacher organizations.

⁸ *Federal Register*, vol. 74, no. 148, August 4, 2009, pp. 38592–38605.

⁹ The requirements specify that partnerships must also include (1) a school, department, or program of education within the IHE; (2) a school or department of arts and sciences within the IHE; and (3) one or more high-need schools in the district or a high-need early childhood education program. For practical purposes, however, we do not distinguish these technically distinct entities from the IHE or district.

Figure I.1. Teaching Residency Programs as a Path to Improved Student and Teacher Outcomes



Funds. The TQP grants were intended to help support programs for five years but not to be programs' sole source of funds. The grant requirements specify that grantees must provide, from nonfederal sources, cash or in-kind resources equal to the amount of the grant, although the secretary of the Department of Education may waive all or part of the matching requirement if it would result in "serious hardship or an inability to carry out the authorized activities." The goal of the matching requirement is to ensure that TRPs will continue to operate after termination of the grants. In fact, applications must describe how a partnership's resources will support the program beyond the fifth year.

Staff. To provide the necessary training to participants, programs must determine the appropriate number and type of staff needed. Arguably, the most important role in the programs is that of classroom mentor. A mentor is a teacher of record in a high-need school who teaches a high-need subject and hosts a resident teacher in his or her classroom for all or part of a school year in

order to help the resident master the craft of teaching.¹⁰ Mentors are supposed to be “trained and experienced” teachers; programs select mentors based on their effectiveness as teachers and their subject-area knowledge.

Given that programs provide participants with coursework leading to a master’s degree, program staff must include qualified course instructors. A variety of other staff may also be involved, such as subject area coaches, field supervisors, cohort coaches, or other types of coaches or mentors to assist participants at different stages (either during their residency or after their placement as full-time teachers). TQP grant requirements do not specify criteria for individuals who serve as instructors or who assume any other role in TRPs.

Participants. TRPs are a path to teaching for individuals who hold a bachelor’s degree but have not previously earned certification to teach. Applicants may be either a recent college graduate or “a mid-career professional from outside the field of education possessing strong content knowledge or a record of professional accomplishment.”

2. Program Activities and Strategies

Training and financial support for classroom mentors. To ensure that mentors understand their roles and responsibilities, programs provide them with appropriate training. According to the grant requirements, programs must provide “high quality training” for mentors; among the areas mentioned specifically are “instructional strategies for literacy instruction and classroom management (including approaches that improve the schoolwide climate for learning, which may include positive behavioral interventions and supports).” Recognizing that mentors assume responsibilities above and beyond those associated with their classroom teaching, programs typically compensate them in some way. The grant requirements mention both paid release time and stipends as possible forms of compensation.

Participant recruitment and selection. A number of criteria go into recruiting and selecting program participants. First, as stated in the law, programs funded with TQP grants seek “to recruit highly qualified individuals, including minorities and individuals from other occupations, into the teaching force.” Second, programs are directed to select individuals with strong content knowledge or a record of accomplishment in the field or subject area they will teach, strong oral and written communication skills, and other attributes linked to effective teaching. Third, TRPs are required to develop admissions goals and priorities that are aligned with the hiring objectives of partner districts, which may mean considering applicants who reflect the communities in which they will teach or who represent populations that are underrepresented in the teaching profession.¹¹ Given these criteria, individuals who enter teaching through TRPs may demonstrate characteristics different from those who enter teaching through different programs.

¹⁰ According to program requirements, schools qualify as “high-need” if they (1) are among their district’s poorest (in the top 25 percent according to various poverty measures), or (2) have a certain percentage of students eligible for a free or reduced-price lunch (at least 60 percent for elementary schools and at least 45 percent for other schools). No requirements defined high-need grades or subjects; applicants could designate them based on the teacher needs of their partner districts.

¹¹ In exchange for programs’ alignment of their admissions goals with partner districts’ hiring objectives, districts must commit to hiring “qualified graduates” from these programs. The law’s use of “qualified” suggests that districts are not obligated to hire *every* program graduate.

Coursework. Programs must engage participants in “rigorous” graduate-level courses leading to a master’s degree.¹² By law, a TRP must be structured so that participants receive a master’s degree within 18 months of entering the program.¹³

Residency. The central training experience in TRPs—the feature that most sets them apart from other programs—is the residency. The grant requirements describe this clinical component as one academic year in length¹⁴ concurrent with program coursework. The integration of pedagogy and classroom practice, or coursework and fieldwork, is central to program design. The residency is described as “a guided teaching apprenticeship” during which residents observe, learn from, assist, and teach alongside an experienced mentor teacher in his or her regular classroom. The mentor’s approach to teaching is expected to be consistent with the program’s approach and to foster an integrated learning experience in which “clinical practice is tightly aligned with coursework.” Partnerships have discretion in handling of this program component; for example, they may decide how much time per week residents spend in their mentor’s classroom, whether residents are assigned to a single mentor all year or different mentors for different parts of the year, and whether a mentor oversees one or more residents at a time.

Financial support for residents and residents’ contractual teaching commitments. TRPs must offer participants a one-year living stipend or salary during their residency. Participants who want the financial support must apply for it (it is not automatically available). In exchange for the support, participants must agree to teach a high-need subject in a high-need school in a partner high-need district for at least three years, though programs may require longer teaching commitments. Participants must begin fulfilling their commitment immediately after their residency year, though programs may grant deferrals for beginning or completing the commitment “on grounds of health, incapacitation, inability to secure employment in a school served by the eligible partnership, being called to active duty in the Armed Forces of the United States, or other extraordinary circumstances.” Participants who do not complete their obligation must repay the funds to the partnership, with interest, in accordance with terms established by the partnership.

Support for participants who enter teaching. Participants’ connections to TRPs do not end when their coursework and residency are completed. Once participants are hired as teachers of record, the programs must support them for at least two school years through professional development, networking opportunities, and an induction program. The induction program has several goals: provide support for new teachers, improve their professional performance (by promoting effective teaching and behavioral interventions), and retain them in the teaching profession. Some components of induction specified in the law include high-quality teacher mentoring, time for collaboration with other teachers and mentors, a focus on the learning process and the assessment of learning, assistance in understanding student achievement data and the data’s applicability to classroom instruction, and observation and evaluation of new teachers by multiple evaluators. Programs may provide support services to other new teachers in partner districts—that is, those who were not TRP participants—but are not required to do so.

¹² TQP grant requirements did not specify what was meant by rigorous.

¹³ The law at issue is Public Law 111-39, which made technical corrections to the Higher Education Opportunity Act of 2008.

¹⁴ Programs may structure the residency to last longer than one school year, but TQP grant funds may be used to support participants only in the final one-year period, before their placement as teachers of record.

Cohort grouping. Under the requirements of the grant, programs must group residents in cohorts to facilitate professional collaboration, and place graduates in cohorts to facilitate continued collaboration as well as collaboration between the graduates and mentor teachers in the placement schools.

3. Program Outputs

The activities and strategies described above are intended to produce new teachers who are well prepared to teach high-need subjects in high-need schools in high-need districts, and to do so for at least three years. The objective is for TRP participants to be better prepared than those who teach in similar settings but who enter teaching through a different program. Part of their preparedness consists of their familiarity with the district curriculum and policies, which should be greater than it would be had they participated in a different program, not overseen by the district. All program completers will be “highly qualified” as defined by federal law¹⁵ and eligible to receive full state certification or licensure.

4. Program Outcomes

The main program outcomes concern student achievement and teacher retention. Because of the TRPs’ applicant selection process and because of program activities, the students of TRP graduates are expected to have higher achievement than students taught by teachers who took a different route into teaching.¹⁶ In addition, TRP teachers are expected to exhibit retention rates higher than those for teachers with similar assignments who entered teaching through another program.

C. Limited Research on Residency Model of Teacher Preparation

At the time this study was conceived, the available research on residency programs was rather limited. A study prepared jointly by the Aspen Institute and the Center for Teaching Quality (Berry et al. 2008a) described the distinct approach of urban teacher residencies to recruiting, preparing, and retaining teachers in high-need districts. Published in the same month that Congress passed the Higher Education Opportunity Act of 2008, the report was essentially a case study of two of the most prominent residency programs in operation at the time: the Academy for Urban School Leadership in Chicago and the Boston Teacher Residency. In addition to describing the programs’ defining principles and how the programs operated, the report discussed the motivation for creating the programs, ways that such programs might be launched, potential signs of their effectiveness, and options for sustaining them through long-term funding. One major conclusion of the study was that urban teacher residencies “may cost more in upfront investments than most university-based and alternate pathways to certification, but they have potential to bring important benefits that reach beyond the scope of most teacher preparation programs” (p. 37).

¹⁵ The Elementary and Secondary Education Act of 1965 defines “highly qualified” for general education teachers, and the Individuals with Disabilities Education Act defines “highly qualified” for special education teachers.

¹⁶ Although the logic model refers to student achievement, the study does not address this outcome. The study team and the Institute of Education Sciences early on considered examining the relationship between the programs that novice teachers attended and the test scores of their students, but determined this to be infeasible for this study, in part because a large proportion of teachers trained by TRPs did not appear to be teaching in tested grades and subjects.

A follow-up paper published by the Center for Teaching Quality (Berry et al. 2008b) contained some of the same information but focused more on the relationship of urban teacher residencies with institutions of higher education. It added a discussion of efforts to create a residency program at Bank Street College in New York City.

Subsequent years saw the release of a few additional studies, each focusing on a single program, but these studies have not all been equally informative. Three recent studies have examined a program in Tennessee, the Memphis Teacher Residency.

- Annual reports on the effectiveness of teacher preparation programs in Tennessee included value-added scores for recent graduates of the Memphis Teacher Residency (Tennessee Higher Education Commission 2011, 2012), but key analyses were based on a small number of former participants (as few as five), and the results differed dramatically over the two years.
- A study from Memphis City Schools examined outcomes for novice teachers who went through the Memphis Teacher Residency and for veteran teachers who served as mentors (Garrison 2012). The study found evidence that program mentors were more effective teachers than other teachers in the district, based on value-added scores. With data for 21 of 35 mentors in the program in 2011–2012, the average 2011–2012 value-added score for the mentors was higher than the average for 2,127 other teachers in the district. The study also found that the program produced novice teachers who were more effective than other nontenured teachers in the district. The average 2011–2012 value-added score for 25 teachers who completed the program in 2009–2010 or 2010–2011 was higher than the average for other nontenured teachers in the district. These differences were statistically significant.

Finally, a recent study of the Boston Teacher Residency (BTR) (Papay et al. 2012) represents the most extensive examination of any residency program to date. Using administrative data from Boston Public Schools, it explored how well the program achieved four objectives: preparing teachers for hard-to-staff subject areas (namely, secondary math and science), attracting racially and ethnically diverse teachers, increasing teacher retention rates, and producing more effective teachers. The study's general analytic approach compared BTR graduates with graduates of other programs hired in the district during the same seven-year period, from 2004–2005 through 2010–2011. The study also focused on the effectiveness of program mentors. The major findings are as follows:

- BTR teachers were more likely than non-BTR teachers to teach secondary math and science; the finding held for the full set of teachers examined and for those in their first year of teaching.
- BTR teachers were more likely than non-BTR teachers to be Asian American and Hispanic and less likely to be white.
- BTR teachers were more likely than non-BTR teachers to continue teaching in the district into their fifth year. In addition, the attrition rate of BTR teachers did not rise notably after they completed their third year, when they had fulfilled their three-year teaching commitment.
- According to a value-added analysis using math and English language arts test scores in grades 4 through 8, BTR teachers overall were less effective than non-BTR teachers in math, but the BTR teachers' performance improved more with experience than did that

of their counterparts.¹⁷ First-year BTR teachers were statistically less effective math instructors than other first-year teachers; the gap narrowed for second- and third-year teachers and was not statistically significant; and fourth- and fifth-year BTR teachers were statistically more effective math instructors than their non-BTR counterparts. The analysis found no statistically significant differences in English language arts either overall or for teachers with different experience levels.

- The value-added analysis also found that district teachers who had served as a BTR mentor were statistically more effective than other teachers in both math and English language arts.

D. Study Substantially Expands Research Base

In addition to creating the TQP grants and defining the characteristics of TRPs eligible to receive grant funds, the Higher Education Opportunity Act of 2008 directed the secretary of the Department of Education to evaluate the various programs funded under the grants.¹⁸ All TQP grantees were required to cooperate with the national evaluation contractor. The department's Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, issued a request for proposals in 2009 to conduct a study of TRPs. With funds from both the TQP program and Title II of the Elementary and Secondary Education Act, a contract for the study was awarded in 2010 to Mathematica Policy Research and its partner, Decision Information Resources.

The study addresses the following research questions:

1. What are the characteristics of teaching residency programs funded by the Teacher Quality Partnership Grants Program?
2. What are the characteristics and experiences of teaching residency program participants? How do the characteristics and experiences of novice teaching residency program teachers compare with those of novice teachers from other programs?
3. What are the retention rates and mobility decisions of novice teaching residency program teachers and other novice teachers? What are the characteristics of schools that novice teachers leave and enter?

In light of the limits of the current research base, which focuses on three programs, the present study is an important contribution to the field in both its breadth and depth. It provides basic descriptive information about all the TRPs operating with TQP grant funds as well as detailed information on a random sample of half the programs. Drawing on a purposeful sample of a dozen of the programs (including some of the largest and oldest), this study also provides detailed descriptions of residents and mentors—groups little studied before now. Finally, for the same subset of programs, it describes the backgrounds, professional experiences, and early retention outcomes of novice TRP teachers and other novice teachers in the same districts who entered teaching through other preparation programs. The study substantially expands the knowledge base regarding a still relatively new model of teacher preparation.

¹⁷ The subjects and grades included in the analysis were the only ones for which it was possible to perform analyses. These and other restrictions mean that the analysis included about 50 of the approximately 300 total BTR graduates and about 1,000 of the district's approximately 4,700 total teachers.

¹⁸ Congress called for a study of the programs funded with TQP grants, of which TRPs are one type.

E. Overview of the Remainder of This Report

The remainder of the report is organized as follows: In Chapter II, we explain the study design and data collection and analysis methods—in other words, the approach to answering the research questions. In Chapter III, we describe basic program characteristics and staff characteristics. In Chapter IV, we discuss resident recruitment and selection as well as the characteristics of novice teachers from TRPs and other training programs. In Chapter V, we focus on the training of residents through coursework and residency assignments. In Chapter VI, we outline the teaching experiences of novice teachers from TRPs and other programs. In Chapter VII, we present program residents' and novice teachers' views on TRPs and various training experiences. Finally, in Chapter VIII, we explore novice teachers' retention rates and reasons for mobility. An appendix provides some technical details of the study, especially related to the analysis of teacher retention, and supplies additional information on the study programs and their participants that may be of interest to readers seeking the fullest possible understanding of TRPs.

II. STUDY DESIGN, DATA, AND METHODS

This study of teaching residency programs (TRPs) uses multiple sources of information from samples of programs, mentors, residents, and novice teachers. In this chapter, we describe the samples included in the study, the data collected, and the analytical approach.

The study focuses on the 30 TRPs operated by recipients of Teacher Quality Partnership (TQP) grants in fall 2009 and spring 2010. Nearly all of these programs began using the grant funds to support the cohort of residents that entered in 2010,¹⁹ although some of the programs had been operating before they received these funds. Data on programs, residents, and mentors were collected in spring 2012, when previously established programs were in their second year of incorporating TQP funds into their operations and newly established programs typically were in their second year of operation overall. Data on novice teachers from these programs—in their first or second year as teachers of record in spring 2012—reflect the experiences of residents who entered TRPs in 2010 or 2011.

A. Study Samples

The population of interest in this study is the 30 TRPs operated with TQP grants awarded in fall 2009 and spring 2010. Residency programs that did not receive TQP grant funds are not included in the study population. It is also important to note that this is not a study of the TQP Grants Program itself; as explained in Chapter I, that program also supported programs other than TRPs that are not part of this study.

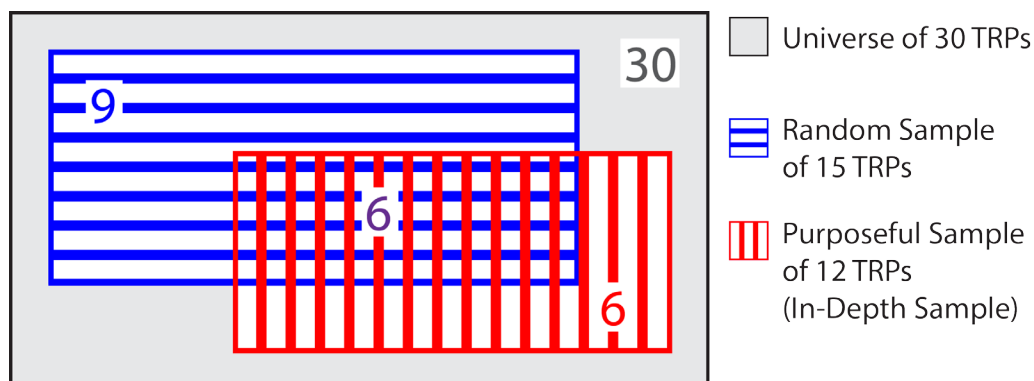
The primary study samples were drawn from the population of TQP grant-supported residency programs. Different types of data were collected from three overlapping samples of these programs—a full sample, a randomly chosen sample, and an in-depth, purposefully chosen sample—which are described below. Then additional data were collected from residents and mentors from the in-depth sample. Finally, for purposes of comparison, samples were drawn from novice teachers of record from the same school districts that partnered with programs in the in-depth sample, including teachers prepared through TRPs and those prepared through other routes.

1. Three Samples of Teaching Residency Programs

Resource constraints prevented the collection of all the desired study data from the full set of TRPs in the population. Instead, the study focused on three samples of programs (full sample, random subsample, and in-depth sample) for different aspects of the data collection. These samples were designed to provide as much information on TRPs as possible in the most efficient manner possible. The three program samples are represented graphically in Figure II.1.

The first program sample includes *all 30 TRPs in the population of interest*. Basic program information was collected from this sample through a survey administered to all programs.

¹⁹ Three programs delayed implementation until 2011.

Figure II.1. Sampling Scheme for Teaching Residency Programs in the Study

To obtain more-detailed information on program operations, we drew a *random sample* of 15 programs, represented by the area of Figure II.1 with horizontal/blue stripes, and conducted semi-structured interviews with the directors from these programs. To ensure that the sample, though randomly selected, would be balanced on certain key dimensions, it was stratified according to the programs' years of experience and number of partner districts.²⁰ Because this was a random sample of programs, estimates based on the directors' interviews are representative of the full set of 30 programs in the population (see Table A.1 in section A.1 of the appendix for a comparison of programs included and excluded from the random sample). The 15 programs worked with a total of 48 partner districts. Enrollment in these districts ranged from about 300 to over 300,000 students in 2010–2011, with a mean enrollment of 45,572 students. The proportion of their students eligible for a free or reduced-price lunch—a common measure of economic need—ranged from 43 to 98 percent, with a mean of 75 percent. In the average partner district, 49 percent of students were black, 21 percent were Hispanic, and 7 percent were English-language learners.

Most of the data collected on program residents, program mentors, and novice teachers who came through the programs were from a third sample of programs, the *in-depth sample*. This sample, represented by the area of Figure II.1 with vertical/red stripes, is a purposefully selected sample of 12 programs that was designed to efficiently provide detailed information on the largest and most experienced TRPs. Data were collected from this sample in order to learn as much as possible about the residents and mentors in residency programs and about the novice teachers of record who came through these programs. Purposeful selection of the in-depth sample made it possible to focus data collection resources on programs and districts with the largest number of program participants and alumni, including some who could be followed beyond the programs' typical three-year teaching commitment. In particular, this sample prioritized programs along the following dimensions:

- **Program age.** To allow for the possibility of measuring the retention of novice teachers into their fourth year as teachers of record, selection of the in-depth sample prioritized TRPs that began operating before 2010. Only these programs would have placed two or

²⁰ In particular, three strata were created: (1) programs with one to two years of experience as of the 2011–2012 school year and with a single partner district, (2) programs with more than two years of experience and a single partner district, and (3) programs with more than one partner district. Eight of the nine programs with more than one partner district had no more than two years of experience. A comparison of the 15 randomly selected programs to the 15 programs not selected for the random sample showed that their characteristics were similar (see section A of the appendix).

more cohorts of former residents as teachers of record in partner districts by the 2011–2012 school year, when the novice teacher sample was drawn. Only teachers in their second year of teaching in 2011–2012 will reach their fourth year of teaching in fall 2013, the last point at which we will measure retention.

- **Program size.** To maximize the size of resident, mentor, and novice teacher samples, larger TRPs were given priority in selecting the in-depth sample.
- **Number of partner districts.** To collect data on novice teachers from district administrative data sources as efficiently as possible, the selection process targeted programs that partnered with a single school district. This approach made it possible to work with just one district to obtain information on the alumni of a given program. For the same reason, selection also targeted multiple programs located in the same district.

In the end, the in-depth sample included 12 programs that had partnered with six districts. Because of the purposeful nature of the sample selection, these programs are not representative of the full population of grantee TRPs. Not surprisingly, their characteristics differ from those of other grantee programs, most strikingly in the dimensions on which sampling was based. The typical in-depth sample program had been operating for five years as of spring 2012, compared with less than two years for programs not in the in-depth sample. The in-depth sample programs were also larger (with an average in 2011 of about 38 residents, versus 14 in other programs) and had just a single partner district, compared with an average of three partner districts for other programs. See Table A.2 in section A.1 of the appendix for more details.

Given these differences, data on program residents, mentors, and novice teachers that are based on this sample will not fully capture the characteristics or experiences of residents, mentors, and novice teachers who are affiliated with smaller TRPs, newer TRPs, or programs working with multiple districts. On the other hand, the in-depth sample does capture a large segment of the population of interest. In particular, although only 40 percent of all TRPs were included in the in-depth sample, this sample accounted for about 60 percent of the residents and mentors from all 30 programs in spring 2012.

2. Samples of Residents, Classroom Mentors, and Novice Teachers

To provide in-depth information on program residents, mentors, and alumni who became novice teachers of record in partner districts, we collected information from samples of each of these groups of interest. In each case, the sample was drawn from only the 12 TRPs included in the in-depth sample described above.

Sample of residents. For a survey of residents (described below), we sampled all the spring 2012 residents from all 12 programs in the in-depth sample. Residents who began the program in 2011 but left prior to spring 2012 were not included in this sample, but all those who began their residency in 2011 and remained for the second half of their residency year were included. Spring 2012 represented the second half of the 2011–2012 residency year in most of the programs.²¹ Ultimately, this sample included 390 residents.

²¹ One program included in the in-depth sample operated on a different schedule than the others, with a residency year covering January through December 2011. For this program, our sample of residents (and mentors) was based on those in the program as of fall 2011.

Sample of classroom mentors. The survey of mentors (described below) sampled virtually all mentors of all residents in the in-depth sample. If a single mentor worked with a resident through the entire residency year, that mentor was included in the sample. If two different mentors worked with a resident, one in the first and one in the second half of the residency year, both mentors were included in the sample.²² If multiple mentors simultaneously worked with a resident during part or all of the school year (a situation that occurred infrequently), the sample included the mentor who, according to program directors, spent the most time with the resident. The final mentor sample size was 407.

Sample of novice teachers from teaching residency programs. To learn more about what happens to residents after they complete their residency and become teachers of record, we sampled novice teachers in the six districts that partnered with the 12 TRPs in the in-depth sample. Specifically, the sample included all classroom teachers of record in those districts who had completed the residency program and were in their first or second year of teaching as of spring 2012. The 12 in-depth sample programs provided lists of former residents who had completed their residency in the last two years and were teaching either in the partner district or in a charter school in the same geographic area as the district (including those that were not district schools); eligible teachers were identified from these lists. Excluding those determined later to be ineligible because they reported having more than two years of teaching experience (46 teachers in total) brought the size of the novice TRP teacher sample to 435. Since this sample was selected at the same time as the resident sample, the two samples do not overlap. In other words, none of the novice TRP teachers in the study also was included in the resident sample.

Sample of novice teachers from other programs. As a point of comparison for the novice TRP teachers, we developed a sample of novice teachers from other programs. Specifically, the sample drew on spring 2012 novice teachers of record who taught in the same six districts as those partnering with the 12 in-depth sample TRPs, but who had not entered teaching through a TRP. Lists from the districts of all first- and second-year teachers in the 2011–2012 school year were used as a sample frame in selecting the non-TRP novice teacher sample.²³ The aim was to end up with a sample of roughly the same size as the TRP novice teacher sample in each district. If a district list contained far more non-TRP than TRP teachers, we selected a random sample of non-TRP teachers. If on the other hand the total number of non-TRP novice teachers in the district was close to the number of TRP teachers, all non-TRP novice teachers from the district were included. Excluding those determined later to be ineligible because they reported having more than two years

²² Many of the questions on the mentor survey that relate to the resident asked specifically about either the first half or second half of the residency year. Therefore, we have only a single response to these questions, even for residents who had two mentors.

²³ These district lists may not have included charter schools located within the geographic boundaries of the district. We did not attempt to sample non-TRP novice teachers at those nondistrict charter schools, even though (as described above) the TRP sample did include teachers in such schools. Sensitivity analyses found that the inclusion of this subset of nondistrict charter school teachers in the TRP sample but not in the non-TRP sample did not substantively affect the vast majority of results (see section E of the appendix for details). Districts were asked to exclude teachers who had fewer than two years of experience as teacher of record in the district, but more than two years of experience overall. In some cases, district officials were unable to determine whether teachers with fewer than two years of experience in their district were novice teachers or not. The final sample excludes those teachers later determined to be ineligible because they reported having more than two years of experience as a teacher of record in any district or in private schools. The sample could, however, include some teachers with more than two years of experience in cases where the teachers did not report their years of experience overall. The final sample also excludes those teachers who are known to have left the district before spring 2012.

of teaching experience (86 teachers in total) brought the size of the novice non-TRP teacher sample to 376. (Additional information on the identification of novice teachers and determination of response rates is provided in section E.1 of the appendix.)

B. Data Sources and Data Collection

Below we describe the specific types of data collected from or about the samples of programs, residents, mentors, and novice teachers, as well as when and how the data were collected. An overview of all of the data collections is presented in Table II.1.

1. Information on Programs

Information on the characteristics of TRPs came from a program survey and semi-structured interviews of program directors. In addition, information on TQP grant funding that supported these programs came from the Department of Education's Office of Innovation and Improvement, which administers the TQP Grants Program.

- **Program survey.** A survey was administered in spring 2012 to the full population of 30 TQP grant-supported TRPs. Addressed to the director, it collected information on basic program characteristics, such as program size, resident placements, staff backgrounds, admission standards, the length and structure of the program, and stipend amounts.
- **Program director interview.** A semi-structured protocol was used in spring and summer 2012 to interview the directors of the random sample of 15 programs. The telephone interviews obtained more-detailed information about program characteristics and operations, such as the programs' partnership structure, its recruitment practices, characteristics of the residency and coursework components of the programs, and resident and teacher-of-record placements.

2. Information on Residents and Classroom Mentors

To learn about the characteristics of residents and mentors and their experiences in the TRPs, we surveyed the residents and mentors associated with the 12 programs in the in-depth sample in spring 2012.²⁴

- **Resident survey.** This survey collected information on the residents' demographic characteristics, education and work experience, and experiences in and perceptions of the residency component of the program.
- **Mentor survey.** This survey collected information on the mentors' demographic characteristics, education and work experience, training for the role, interactions with the residents, and perceptions of the residents' preparedness for teaching and their own experiences in the program.

²⁴ As noted above, the timeline for the residency in one program covered the 2011 calendar year rather than the 2011–2012 academic year. In that program, we conducted the resident and mentor surveys in December 2011.

Table II.1. Teaching Residency Program Evaluation Data Collection Activities

Data Collection Activity	Sample of Programs	Sample of Respondents	Initial Sample ^a	Data Collection Methods	Respondent Incentive ^b	Timing of Data Collection	Response Rate
Program Survey	All grantee programs	Program director	30	Mail survey, with phone follow-up	None	Summer 2012	100%
Program Director Interview	Random program sample	Program director	15	Semi-structured telephone interviews	None	Summer 2012	100%
Resident Survey	In-depth program sample	All spring 2012 residents	390	Mixed: mail survey with phone follow-up; in-person group administration	\$25	Spring 2012	92%
Mentor Survey	In-depth program sample	Classroom mentors of all spring 2012 residents ^c	406	Mixed: mail survey with phone follow-up; in-person group administration	\$20	Spring 2012	89%
Novice Teacher-of-Record Survey	In-depth program sample	All spring 2012 1 st - & 2 nd -year TRP teachers in partner districts & charter schools	481	Mixed: mail survey with phone follow-up; web-based survey	\$25	Spring 2012	89%
		All spring 2012 1 st - & 2 nd -year non-TRP teachers in partner districts	462	Mixed: mail survey with phone follow-up; web-based survey	\$25	Spring 2012	79%
Mobility Survey	In-depth program sample	All spring 2012 1 st - & 2 nd -year TRP teachers in partner districts & charter schools	435	Mixed: mail survey with phone follow-up; web-based survey	\$20	Fall 2012	87%
		All spring 2012 1 st - & 2 nd -year non-TRP teachers in partner districts	376	Mixed: mail survey with phone follow-up; web-based survey	\$20	Fall 2012	76%
Administrative Data Collection	In-depth program sample	All partner districts	6 ^d	Provided by district	None	Fall 2012	100%

^aColumn displays the total number of sample members from whom data were sought, regardless of whether we successfully obtained data from them, or whether they were later determined to be ineligible. Later tables that mention “sample size” are referring to the number of respondents.

^bTeachers received gift cards in the amounts shown, with value determined by the length of the survey. In districts that prohibited direct payments to teachers, teachers received DonorsChoose cards that could be used for classroom projects or materials.

^cWhen a resident had two mentors sequentially during the year, both mentors were included in the sample; we would have multiple reports about these residents if both mentors responded to the mentor survey. When a resident had more than one mentor simultaneously, only the mentor who spent the most time with the resident was included.

^dAll six districts in the in-depth sample provided records. Ultimately, records were received for 753 of the 811 teachers in the mobility sample. The records provided by the districts may not have included teachers at charter schools located within the geographic boundaries of the district. We asked districts to include teachers who had two or fewer years of experience as a teacher of record overall, not just in the district. In some cases, district officials were unable to determine whether teachers with less than two years of experience in their district also had experience teaching elsewhere. The final sample of 753 for analyses of administrative records excludes those teachers later determined to be ineligible because they reported having more than two years of experience overall. It could, however, include some teachers with more than two years of experience in cases where teachers did not report their years of experience overall. The final sample also excludes those teachers known to have left the district before spring 2012. Records for TRP teachers in one district were provided by the TRPs.

3. Information on Novice Teachers

To learn about the characteristics and experiences of TRP and non-TRP teachers, we administered two surveys—a teacher-of-record survey and a mobility survey—to the novice teacher samples described above. We also collected administrative data for these teachers. A second round of mobility data were collected in fall 2013 for use in a future report.

- **Teacher-of-record survey.** This survey, conducted in spring 2012, collected information on the novice teachers' demographic characteristics, education and pre-teaching work experience, and teaching experiences, as well as the support they received as novice teachers, the training they received in the program through which they had entered teaching, their perceptions of the programs they attended, and how prepared they felt when they first started teaching full time.
- **Mobility survey.** This survey, conducted in fall 2012, collected follow-up information on the status of the novice teacher sample in the school year after they were sampled—that is, in their second or third year of teaching (assuming they remained in the profession). Teachers were asked whether and where they were teaching, and those who had changed schools or left teaching were asked for their reasons for this move. Although we obtained information from the six districts on the sample members' employment status (see below), the mobility survey made it possible to determine whether those teachers no longer teaching in the district were teaching elsewhere or had left the profession entirely.
- **Administrative data.** The six districts in which the 12 in-depth sample programs were located provided administrative data for novice teachers included in both the TRP and non-TRP samples. Specifically, the data showed whether teachers in these groups who appeared on district lists in spring 2012 were still employed as teachers in the district in fall 2012, and if so which school they taught in.²⁵ This information was available for all such sample members, including those who did not respond to the mobility survey.

4. Other Information on Teaching Residency Program Participants

We also collected secondary data on the schools where residents were placed and novice teachers were employed, as well as the colleges where residents and novice teachers received their bachelor's degree.

- **School characteristics.** Information on school characteristics came from three sources. The 2010–2011 Common Core of Data, a source maintained by the Department of Education, provided information on the schools' racial/ethnic composition, the proportion of students eligible for free or reduced-price lunch, and the school's grade span. Information on the reading and math proficiency of students at these schools, as well as the proportion of students who were English-language learners, came from state and district websites.
- **Barron's rankings of college competitiveness.** For information on the characteristics of the undergraduate institutions attended by residents and novice teachers in the study

²⁵ As noted above, the district lists may not have included teachers at charter schools located within the geographic boundaries of the district.

samples, we used Barron's (2009) rankings of college competitiveness in 2007–2008. This measure reflects colleges' academic standards, the typical academic qualifications of admitted freshmen, and students' level of difficulty in gaining admission to the colleges from which they graduated. Other recent Institute of Education Sciences studies of novice teachers (Constantine et al. 2009; Clark et al. 2013) have used Barron's rankings as a general proxy for the teachers' pre-collegiate academic ability and motivation. (Definitions of Barron's college ranking categories are provided in section E.2 of the appendix.)

5. Information on District Characteristics

Information on characteristics of partner districts for the 15 programs in the random sample came from the 2010–2011 Common Core of Data and state education department websites.

C. Analytical Approach

In addressing each research question, we drew on any available sources of information related to that topic. This approach meant that data from more than one of the three samples described above were sometimes used to address the question. The description of the programs' residency component, for example, wove together information from the program survey (conducted with the universe of TQP-funded TRPs), the program director interviews (conducted with 15 randomly selected TRPs), and the resident and mentor surveys (conducted with the 12 TRPs in the in-depth sample). To help readers put the results of the study into context, we identify the data sources used for each of the findings presented in subsequent chapters. Readers should bear in mind that findings on some topics may represent or generalize to all TQP-funded TRPs, while other findings pertain to a non-representative set of 12 programs and their six partner districts.

1. Analysis of Teaching Residency Program Characteristics and the Characteristics and Experiences of Participants

The characteristics of TRPs and their participants, as well as the experiences of novice teachers who came into teaching through these programs, were analyzed using both qualitative and quantitative data. In quantitative analyses of program characteristics, we report percentages when the maximum number of programs is 30 (from the full sample), but we report raw numbers when the maximum number of programs is 15 (from the randomly selected interview sample). The qualitative data came from responses to open-ended questions on the program director interview. Codes were developed to characterize whether responses included particular features or types of information. The codes were applied by one study team member who reviewed the data, and were then cross-checked independently by another team member. In cases of disagreement, the two team members discussed and resolved the difference, settling on the most applicable code. This process created a set of response categories, making it possible to present frequency distributions among the program directors who completed interviews.

The analyses using quantitative or categorical data present means, frequency distributions, and ranges of responses, either for the full sample or for selected subgroups. The statistics presented are unweighted—that is, they give equal weight to the relevant set of respondents. In other words, for statistics based on data from the program survey or program director interviews, the responding programs are weighted equally. For statistics based on data from the resident, mentor, or teacher-of-record surveys, it is the residents, mentors, or novice teachers (respectively) who are weighted equally.

In describing the characteristics and experiences of novice TRP teachers (who completed a residency at one of the 12 in-depth sample programs) we compared them with novice non-TRP teachers (who took another route into teaching) in the same six districts as of spring 2012. We also examined whether TRP residents spent more or less time on certain activities in the second semester of their residency than in the first semester. Potential differences were tested for statistical significance using a two-tailed test. The analysis assessed statistical significance relative to a 5 percent critical value, meaning that a difference was classified as statistically significant only if the p -value of the difference was less than .050. In cases where we analyze subgroups, such as first-year or second-year novice teachers, or novice teachers from traditional- or alternative-route programs, the likelihood of finding statistically significant difference is lower than it would be when analyzing the full sample.

In comparing the experiences, perceptions, and retention of TRP and non-TRP novice teachers, the analysis controlled for aspects of teaching placements beyond the control of the teachers that might be related to these outcomes. For example, since TRPs are designed to provide districts with teachers in high-need schools, TRP novice teachers may be more likely than non-TRP novice teachers to work in these schools. Moreover, the experiences and perceptions of all novice teachers may be influenced by aspects of the schools in which they teach. If conditions are more challenging in high-need schools, for instance, novice teachers in these schools may feel less well prepared than those in schools without these challenges. Thus in comparing the two sets of novice teachers, the goal was to compare teachers who had similar teaching placements and hence worked under similar conditions. Another goal was to account for the possibility that the distribution of TRP and non-TRP teachers in the sample differed across the six districts and two cohorts (first- and second-year teachers as of spring 2012). In this analysis, we did not control for characteristics of the TRP and non-TRP teachers themselves (such as their race/ethnicity or educational attainment) since we believe it is possible that TRPs affect teacher retention not just with the preparation and training they provide but also on the basis of who they select into their programs. Thus, in our comparison of TRP and non-TRP teachers' retention rates, we did not control for teacher characteristics to be able to capture the influence of this aspect of the program.

A simple regression model was used to compare TRP and non-TRP novice teachers' experiences, perceptions, and retention while controlling for key aspects of their placements.²⁶ The

²⁶ We use a linear regression model for both continuous and binary dependent variables (in other words, we estimate a linear probability model for binary dependent variables). We use this model because the coefficients from a linear probability model can be interpreted as the difference between the two groups of interest (TRP and non-TRP teachers) in their probability of experiencing the binary outcome, and thus easily translated into regression-adjusted probabilities for the tables presented in the report. An alternative to a linear probability model in cases in which the dependent variable is binary is a logistic regression (or logit) model. For the analysis of differences between TRP and non-TRP novice teachers in retention outcomes, we also produced maximum likelihood estimates of logit models where possible. In terms of whether our analysis suggested significant differences between TRP and non-TRP teachers, the models yielded identical results. We present the results of the linear probability model throughout the text. See section D of the appendix for more details of our comparison between the linear probability and logit models.

model regressed these outcomes on a binary measure of whether the novice was a TRP or non-TRP teacher, along with the following set of control variables:²⁷

- A set of district indicator variables
- An indicator for being a second-year teacher
- Characteristics of the teacher's spring 2012 school, available in the Common Core of Data, as follows: percentage of students who are black; percentage of students who are Hispanic; percentage eligible for free or reduced-price meals; school level (middle school, high school, other); and indicator for missing one or more of the above school characteristics
- Characteristics of the teacher's spring 2012 classroom subject, as follows: indicator for teaching a core academic subject (English, math, science, social studies); indicator for teaching special education; and indicator for missing the above subject information

In tables reporting teachers' experiences (not including their teaching assignment), perceptions, and retention, simple mean values (that is, not regression-adjusted) are presented for TRP teachers, along with adjusted mean values for non-TRP teachers. These analyses control for characteristics of the teachers' spring 2012 school and classroom subject in addition to district and cohort indicators. In effect, the adjustment presents an estimate of what the actual mean value would be for non-TRP teachers if their teaching placements were like those of TRP teachers. In tables reporting aspects of either teacher placements (such as subject taught and school characteristics) or teacher characteristics (such as demographics, educational background, route into teaching and current certification, and work experience), the full regression model described above was not used. Instead, these analyses used a simpler model in which the only control variables were district and cohort indicators.

2. Analysis of Retention and Mobility Outcomes

In examining retention and mobility outcomes, the analysis focused on retention from spring 2012, when the sample of novice teachers was selected, to fall 2012. The analysis examined whether teachers remained in the same school over this period, as well as whether they remained in the original partner district and the teaching profession. It also examined mobility between schools in greater detail, including teachers' reasons for moving between schools and the characteristics of the schools they left following spring 2012 and those they entered in fall 2012.

The mobility survey was chosen as the primary data source for the retention and mobility analysis. Mobility survey data have several advantages over the district administrative records, which

²⁷ In addition to the variables listed here, we considered including a variable reflecting proficiency rates in a given teacher's school, grade, and subject as another dimension of conditions in the school. However, we decided not to include student proficiency rates at the school for two reasons. First, this variable was missing for a large number of teachers in our sample. For example, many teachers taught subjects or grades in which students were not routinely administered state tests, so no proficiency rate data were available. This was especially problematic among high school teachers in the sample, since testing is more irregular in high schools. Second, using current year test scores as a measure of the school conditions faced by teachers when they are placed in a school would not be appropriate because this is an endogenous variable, potentially influenced by the teachers in our sample. A suitable alternative would be to use variables based on lagged test scores (before the teacher taught in the school) but the missing data problem was even more severe for that variable. It is worth noting, however, that several of the school characteristics we do include in the model—such as student characteristics—are correlated with student achievement.

were an alternative data source for this analysis. The mobility survey data made it possible to (1) distinguish between teachers who left the district to teach elsewhere and those who left the profession entirely, (2) analyze reasons for moving between schools, and (3) include in the analysis sample TRP teachers from charter schools who did not appear on the district lists. The disadvantage of the mobility survey data, however, is that analysis based upon these data was necessarily restricted to individuals who responded to the survey. Thus large differences in the retention and mobility behavior of survey respondents and non-respondents could produce misleading results.²⁸

In analyzing the basic outcomes of retention in the school, retention in the district, and retention in the teaching profession, first- and second-year teachers (as of spring 2012) were examined together and separately. We pooled the two cohorts to simplify the analysis and maximize the sample size. The analysis also compared retention among TRP and non-TRP teachers, using the simple regression model described above and testing for the statistical significance of the differences between the groups' retention rates. In addition, we calculated retention rates separately by district (for both TRP and non-TRP teachers) and program (for TRP teachers); these results are presented in section D.5 of the appendix, though the districts and programs are not identified by name.

To approximate a cumulative district retention rate over teachers' first two years in the profession and into the third year, we used the spring-to-fall retention data for the two cohorts of teachers. This cumulative retention rate is defined as the probability of remaining as a district teacher in the third year conditional on having remained into the spring of the first year of teaching. It was calculated as the product of two terms: (1) the probability of being retained in the district into the second year conditional on appearing as a first-year teacher (in the spring of that year), and (2) the probability of being retained in the district into the third year of teaching conditional on appearing as a second-year teacher. In other words, the cumulative retention rate was set equal to the product of the retention rate from the first to the second year and the retention rate from the second to the third year.²⁹

In addition to analyzing the basic retention outcomes, we also used the mobility survey data to examine mobility in greater depth. For teachers who changed schools (within or across districts) between spring 2012 and fall 2012, we examined their reasons for changing schools. We also compared the characteristics of the schools they left (after the spring) and went to (in the fall). This analysis examined school characteristics for all teachers who had changed schools, aggregating both cohorts of teachers (those in their first and second years of teaching in spring 2012) as well as those teachers who moved between schools within the same districts and those who changed districts. These analyses were conducted separately for TRP and non-TRP teachers in order to examine whether the patterns differed for the two groups.

²⁸ As discussed in section D of the appendix, the study found that teachers who were retained in their spring 2012 districts were more likely to respond to the survey than those who left their districts—in other words, respondents were more likely to be in their original district than non-respondents. As a result, retention rates estimated using the mobility survey data were higher than those estimated using the district administrative records (these findings are also presented in the appendix). However, when comparisons were based on both mobility survey data and district administrative records, TRP and non-TRP teachers' retention and mobility behaviors were similar.

²⁹ This cumulative retention rate does not capture teacher mobility for those who leave between the fall and the spring of the school year. For example, it does not capture teachers who leave the district at the mid-point of their second year of teaching.

D. Limitations

Like any study, this one has limitations. Two of the limitations relate to the residents and novice teachers included in our analysis samples. We do not have information on the number of residents who left the 12 programs in the in-depth sample before we drew our resident sample in spring 2012, nor do we have information on the reasons why residents may have left their programs. Thus, our analysis describes the characteristics, perceptions, and experiences of those residents who remained in the program until the spring of their residency year. Similarly, the samples of novice TRP and non-TRP teachers do not include any teachers who left the participating districts before we drew the sample. One implication of this is that the retention rates of novice teachers reported in Chapter VIII capture only retention between the spring of one school year and subsequent fall and may overstate retention of novice teachers from the time they began teaching.

Another set of limitations involves the analysis of TRP and non-TRP novice teachers' perceptions, experiences, and retention. The sample of novice non-TRP teachers was drawn from all schools in the participating districts, not just high-need schools such as those where TRP teachers had been placed or might be placed in the future. Thus, the perceptions, experiences, and retention of non-TRP teachers might differ from those of TRP teachers not as a result of the teachers themselves or their preparation, but because of the circumstances in the schools and classrooms in which they are placed. To address this concern, we examine differences between TRP and non-TRP teachers in the context of a regression model in which we control for school characteristics. However, the school-level variables we used as controls in analyses of novice teachers' experiences, perceptions, and retention were limited to data available in the Common Core of Data on school level (middle school, high school, other) and student characteristics (race/ethnicity and eligibility rates for free or reduced-price meals). We did not have data on other issues that might be associated with high-need schools, such as student attendance or discipline problems. In addition, in some analyses, such as comparisons of the characteristics of schools that novice teachers left and joined, some teachers could not be included in the analysis because we did not have data on either school name or school characteristics. Thus, we likely do not fully account for differences between TRP and non-TRP teachers in the characteristics of schools in which they are placed when we compare their perceptions, experiences, and retention.

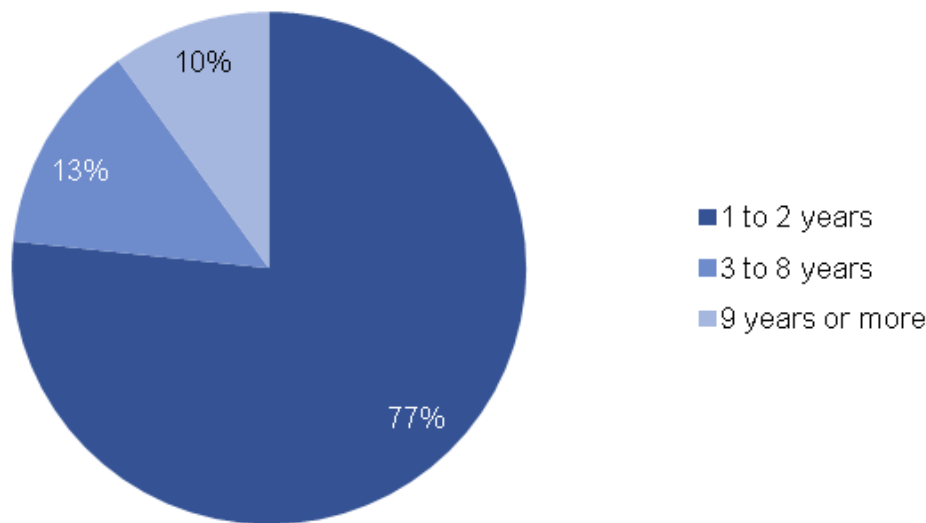
III. PROGRAM CHARACTERISTICS AND STAFF

In this chapter, we describe some basic characteristics of the teaching residency programs (TRPs) in the study. Among the characteristics we look at specifically are the number of years of program operation, the number of residents enrolled in the programs (as an indicator of program size), the amount of funding programs received from the Teacher Quality Partnership (TQP) Grants Program, the size of the stipends offered to residents and mentors, the number and roles of different types of partner organizations involved in operating the programs, the programs' overall length and structure, and the number and characteristics of key staff (classroom mentors, instructors, and coaches and other mentors). Information on programs, instructors, coaches, and mentors comes from the survey of all 30 programs and interviews with 15 directors. Additional information on mentors comes from the mentor survey.

A. Years in Operation

When surveyed in spring 2012, most TRPs in the study were in their first or second year of operation (Figure III.1)—that is, recently created after receipt of a TQP grant. Twenty-three of the 30 programs in the study (77 percent) began operating in 2010 or 2011.³⁰ The comparative newness of most programs means that any data we report for the full set of TRPs are for programs that may still be determining how best to achieve their mission; newer programs may be facing issues that more experienced programs have already resolved.

Figure III.1. Teaching Residency Programs' Years in Operation



Source: Program survey.

Note: Sample size = 30.

³⁰ The program survey asked, “In what year were participants first admitted to the teacher residency program?” The survey did not define “teacher residency program,” however. It is therefore possible that some of the programs that began operating before receiving a TQP grant did not have all the program components required under the grant, but considered themselves residency programs nonetheless. Indeed, through interviews with directors, we determined that 2 of the 12 programs in the in-depth sample neither offered participants a stipend before receiving the TQP grant nor required participants to commit to teaching in partner districts for any length of time.

B. Program Size and Service Area

According to program survey responses, the 30 programs in the study served a total of 715 new participants in 2011, or an average of 24 residents per program. The smallest program had 5 participants and the largest had 90 (Table III.1). Forty percent of the TRPs enrolled 15 to 25 new residents and 37 percent enrolled fewer than 15 residents. Differences in the size of programs partly reflect differences in programs' years in operation, with more experienced programs more likely to have expanded over time and be larger. The 23 new programs averaged 17 residents in their 2011 cohort, the 4 programs in operation for three through eight years averaged 28 residents, and the 3 programs in operation for nine or more years averaged 72 residents.

Table III.1. Size and Service Area of Teaching Residency Programs

	Mean	Range
Number of new residents in 2011 cohort	24	5 to 90
Number of districts served	2.3	1 to 8
Number of resident placement schools for 2011 cohort	10.9	2 to 38

Source: Program survey.

Note: Sample size = 30.

On average, the TRPs are considerably smaller than many other types of teacher preparation programs. For context, consider the 2011–2012 enrollments in other programs operated by the institutions of higher education (IHEs) that are part of the TRP partnerships. Traditional undergraduate teacher preparation programs at these IHEs averaged 490 participants; traditional master's programs averaged 179 participants, traditional post-baccalaureate programs averaged 159 participants, and alternative post-baccalaureate programs averaged 48 participants. To be sure, these enrollment counts are not entirely comparable to those for TRPs: many of the IHE programs require two or more years for completion, so their enrollment counts may include two or more cohorts, whereas we base TRP sizes on a single cohort. Even dividing the other programs' average enrollments by two or three, however, shows enrollments substantially larger than those for TRPs.

The number of districts served by programs varied, as did the number of schools in which residents were placed (Table III.1). The average number of districts served was 2.3, though most programs (57 percent) served a single district. The highest number of districts served was eight. The number of schools in which programs placed residents from the 2011 entry cohort ranged from 2 to 38; the average number of schools across all programs was 10.9.

C. Teacher Quality Partnership Grant Funds

Estimated TQP grant funds for programs averaged \$1,424,186 per year, with the smallest grant worth \$340,526 and the largest worth \$3,004,826. This analysis is based on data obtained from the administering office at the Department of Education; data represent actual award amounts for years 1–4 and projected amounts for year 5. Note that data are not for the full complement of 30 TRPs; the analysis is limited to the 20 grantees whose funding was for TRPs only. Eight grantees whose funding was for baccalaureate teacher preparation programs in addition to TRPs are excluded, since it was not possible to distinguish what share of the funding for these grantees went to TRPs as opposed to the other teacher preparation programs.

The amount of the TQP grant awarded to each program could have been influenced by several factors, including the number of residents and former residents active in the program in each year; the number of participants supported with grant funds as opposed to other sources (especially for programs that were operating before TQP grant funds were awarded); the program's design (the number and type of services provided); the number of staff providing services; local cost of living (which would drive labor costs); the size of residents' and mentors' stipends; and the amount of funding received from other sources.

D. Stipends for Residents and Mentors

The average living stipend offered to residents in the 2011 cohort, across all 30 programs in the study, was \$23,020. The smallest stipend was \$10,000 and the largest was \$35,000. To put the living stipend in context, it can be compared to the average salary for first-year teachers in the six districts serving as partners in the 12 in-depth sample programs. Those salary data, which are for 2011–2012 (in one case 2012–2013), show that the living stipend in the 12 programs averaged 43 percent of the average first-year teacher's salary, with the smallest stipend 22 percent of the average salary and the largest 66 percent.³¹

According to directors of the 12 programs included in the in-depth sample, virtually all residents accept the living stipend offered during their residency year. Five of the seven programs with a 2009 cohort (before receiving TQP grant funds) offered a stipend, and 100 percent of the residents in those programs reportedly accepted it. Two of the programs with a 2009 cohort (members of which are included in our study as second-year novice teachers) offered no stipend that year (hence those participants did not make a commitment to teach in the partner district after completion of their residency). All 12 program directors reported offering a stipend to residents in the 2010 cohort. In 11 of the programs, 100 percent of residents reportedly accepted the stipend, and in the remaining program, approximately 75 percent of residents reportedly accepted the stipend. We have no information on why some residents have declined stipends.

A large majority of the 30 programs (26 programs, or 87 percent) were reported by their directors as requiring participants who accept a living stipend during their residency to commit to teaching full-time in a high-need school in a high-need partner district for three years, the minimum allowed under TQP grant requirements. The remaining four programs reportedly required a four-year commitment.

All but one of the 30 program directors reported providing financial compensation (above and beyond regular salary) to teachers serving as classroom mentors of residents. On average, classroom mentors received \$1,288 per semester, with \$500 the lowest and \$3,100 the highest stipend received. Seven program directors reported providing financial compensation (above and beyond regular salary) to individuals serving as other kinds of mentors. (Programs' use of other mentors and coaches for residents is discussed below and in Chapter V.) The average stipend provided to other mentors and coaches was \$768 per semester, with \$100 the lowest and \$2,250 the highest stipend offered.

³¹ Salary data for this analysis were obtained from the districts' websites.

E. Partnership Composition and Roles of Key Partners

Six of the 15 directors interviewed for the study reported that their program partnership consisted only of IHEs and school districts, the minimum set of organizations comprising a TRP partnership under TQP grant requirements. Among the nine programs whose directors mentioned another other type of partner, eight partnered with at least one nonprofit organization, and five partnered with at least one other type of organization, such as a business or an educational service agency (Table III.2). It was not uncommon for partnerships to have more than one partner of a particular type. As shown in Table III.2, the average number of partners of a particular type ranged from 1.5 to 1.9.

Table III.2. Type and Number of Organizations Comprising Partnerships Among Teaching Residency Programs in Interview Sample

Type of Partner	Number of Programs with at Least One Partner of This Type	Average Number of Such Partners, in Programs That Have These Partners
Institution of higher education	15	1.5
District	15	1.9
Nonprofit organization	8	1.9
Other	5	1.6

Source: Program director interviews.

Note: Sample size = 15.

The analysis of randomly sampled TRPs reveals some patterns, as well as some variations, in the roles assumed by program partners. As we explain in detail in section E.4 of the appendix, the analysis sought to determine which partners had responsibility for which tasks, and whether partners responsible for a given task were understood as having primary or secondary responsibility. Several conclusions emerge:

- **In most programs, more than one type of partner in a partnership shared primary responsibility for a given activity.** This finding is illustrated in Table III.3, specifically wherever the sum of the primary counts in a given row exceeds 15. That is, if only one partner in each of the 15 sampled programs has primary responsibility for a task, the count for responsible partners will equal 15. But in six of the table's eight rows, the count is greater than 15, indicating that two or more partners within a program are sharing primary responsibility for the task. Resident recruitment, for example, is the primary responsibility of an IHE in 11 programs, of a district in 4 programs, and of a nonprofit organization in 3 programs.
- **Although institutions of higher education and districts assumed considerable responsibility for various activities, nonprofit partners also played key roles in some partnerships.** In at least half of the eight programs with a nonprofit partner, those partners shared or had sole primary responsibility for five of the eight activities inquired about (Table III.3).
- **Institutions of higher education typically had more responsibility than districts for activities that precede the residency component.** The activities are grant administration, resident recruitment, and coursework planning (Table III.4).

- **Institutions of higher education and districts typically had the same level of responsibility for activities that relate to the residency.** The activities are mentor recruitment, residency placement, and oversight of residents' experiences (Table III.4).
- **Districts typically had more responsibility than institutions of higher education for activities that follow the residency.** The activities include helping residents find full-time teaching positions and supporting teachers of record (Table III.4).

Table III.3. Level of Responsibility Among Three Types of Partner Organizations for Various Teaching Residency Program Activities

Activity	IHEs' Highest Level of Responsibility		Districts' Highest Level of Responsibility		Nonprofits' Highest Level of Responsibility	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
Grant administration	12	2	1	1	2	2
Resident recruitment/selection	11	3	4	8	3	2
Planning coursework	14	1	0	8	1	3
Mentor recruitment/selection	9	3	8	5	4	0
Residency placements	9	3	9	3	4	0
Overseeing residents' experiences	11	3	8	3	5	0
Helping find teacher-of-record placements	6	6	11	4	4	0
Supporting teachers of record	6	5	10	2	4	0

Source: Program director interviews.

Note: Sample size = 15.

Table III.4. Institutions of Higher Education and District Partners' Relative Levels of Responsibility for Various Teaching Residency Program Activities

Activity	Number of Programs		
	IHEs Had Higher Level of Responsibility	Districts Had Higher Level of Responsibility	IHEs and Districts Had Same Level of Responsibility
Grant administration	13	0	2
Resident recruitment/selection	10	1	4
Planning coursework	15	0	0
Mentor recruitment/selection	4	5	6
Residency placements	3	4	8
Overseeing residents' experiences	6	2	7
Helping find teacher-of-record placements	3	9	3
Supporting teachers of record	2	7	6

Source: Program director interviews.

Note: Sample size = 15.

F. Teaching Residency Program Timelines and Requirements

Applicants who enrolled in TRPs commonly entered a training program that extended for more than a full year. Across the study's 30 programs, the average time from start to finish—from the first major activity, whether coursework or the residency, to the point at which participants were eligible for certification—was 13.5 months. This period is considerably shorter than that associated with traditional certification programs, in which undergraduates typically devote two full academic years to fulfilling program requirements, including a semester of student teaching.

Coursework was the most common first activity for new participants. Eighty-three percent of the 30 programs required new participants to start coursework one or more months before they began their residency. The other programs required new participants to start their coursework and their residency at virtually the same time (in the same month). All but two of the programs (93 percent) adopted a model in which the residency begins at the start of the traditional school year (either August or September). In practice, then, most programs (73 percent) required new participants to start their coursework in late spring to summer (May to July). Some programs (10 percent) required participants to start coursework in the winter preceding the fall residency.

Even though TRPs' primary training components are master's degree coursework and the residency (described in detail in Chapter V), it is worth noting that coursework and residency are not always the sole requirements for program completion. Some programs require participants to engage in one or more additional activities in order to complete the program and qualify for certification. Of the 15 programs whose directors were interviewed, for example, 9 required participants to attend workshops or seminars, 7 required participants to prepare a portfolio, 4 required participants to conduct a research project, 3 required participants to pass an assessment, and 2 required participants to complete an internship.³²

G. Teaching Residency Program Staff

Below, we present information on three categories of TRP staff members who work directly with residents or former residents: classroom mentors, instructors, and coaches or other types of mentors. We present the most information on classroom mentors because of their central and unique role. Information on instructors and other staff comes from the program survey alone, whereas information on mentors comes from the program survey, the director interviews, and the mentor survey.

1. Classroom Mentors

In this section, we describe programs' mentor recruitment and selection processes, the number of mentors involved in programs, mentors' experience as teachers and mentors, and the training received by mentors. In section B of the appendix, we present additional information on mentors' characteristics, such as their demographic and educational backgrounds, the route they took into teaching, and the type of certification they possess.

³² The internship either involved hands-on experience at an organization doing work in a content area relevant to a resident's field of study, or offered residents a chance to meet and observe children of the community in a nonacademic setting.

a. Classroom Mentor Recruitment and Selection

Programs used a variety of approaches to identify teachers who might serve as classroom mentors to TRP residents, but most programs—14 of the 15 in the random sample—relied mainly on referrals from principals or other school administrators (Table III.5). Directors indicated using, on average, four of the seven approaches listed in Table III.6, and a majority of the 15 interviewed directors used five of the approaches. Programs relied on a few other approaches nearly as often as on administrator referrals; 11 programs, for example, asked teachers either to apply for or let program officials know that they might be interested in the role; 11 programs also sought referrals from district staff. But according to 11 of 15 directors, administrator referrals accounted for most of the mentors who joined their program in the past two years.

Table III.5. Approaches Used by Teaching Residency Programs to Identify Potential Mentors

Approach	Number of Programs Using Approach	Number of Programs Reporting That the Approach Accounted for Most Mentors over Preceding Two Years ^a
Ask principals or other school administrators to nominate/suggest candidates	14	11
Approach particular teachers, even if they have not expressed interest	12	3
Ask teachers to express interest/apply	11	4
Ask district officials to nominate/suggest candidates	11	3
Ask mentors to nominate/suggest candidates	10	3
Ask residents to nominate/suggest candidates	6	0
Other	3	1

Source: Program director interviews.

Note: Sample size = 15.

^aQuestion was asked in spring/summer 2012. Column sums to more than 15 because respondents were allowed to check two or more approaches if those approaches resulted in about equal numbers of mentors.

Program officials considered several factors when selecting teachers to serve as mentors, but they emphasized two factors most: school administrators' recommendations and teachers' regular or advanced certification (Table III.6). Each of these factors was considered "very important" by 90 percent of responding programs. It is noteworthy that some other factors that officials emphasized to varying degrees resemble qualifications for mentors that were specified in the TQP grant requirements. For example, officials' emphasis on years of teaching experience in a specific subject or at a specific level, and on years of teaching experience overall, is comparable to the grant's specification of teachers' experience as a qualification for mentors. Whether programs used any objective measures of teacher effectiveness, such as the academic performance of their students, is unclear; the survey did not inquire about such measures.

The process of finding and selecting mentors was not necessarily a formal one. Only 7 of 15 interviewed directors reported that they required all interested teachers to fill out a mentor application form. In addition, the mentor recruitment process sometimes posed challenges. Over

half (57 percent) of the 30 directors reported in the program survey that they found it “difficult” in 2011–2012 to identify classroom mentors with the desired amount and type of experience, compared with 37 percent who found it “easy” and 7 percent who found it “very easy;” none reported it “very difficult.”

Table III.6. Factors Considered by Teaching Residency Programs in Selecting Mentors

Factor	Of Programs Considering Factor, ^a Percentage that Rated It:	
	Slightly Important	Very Important
Principal or assistant principal recommendation	10	90
Regular/advanced certification	7	90
Performing well in classroom observation	14	83
Years of teaching experience in specific subject/level	27	70
Years of teaching experience overall	37	60
Performing well in an interview	46	46
Experience as classroom mentor	52	45
Reference checks	48	28
National Board Certification	33	3

Source: Program survey.

Note: Sample size = 30.

^aEach factor was considered by 93 to 100 percent of programs in the study. Omitted response options were “Slightly Unimportant” and “Not Important.”

b. Number of Classroom Mentors per Teaching Residency Program and Ratio of Mentors to Residents

In the 2011–2012 school year, the number of classroom mentors per program ranged from 9 to 85 across the study’s 30 programs, with an average of 27 mentors per program. The average program had 1.3 classroom mentors for every resident in its 2011 entry cohort (1.3 : 1), with a range of 0.7 : 1 (about one mentor for every 1.4 residents) to 3.6 : 1 (over three mentors for every resident). A program can have fewer mentors than residents by assigning two or more residents to a single mentor.

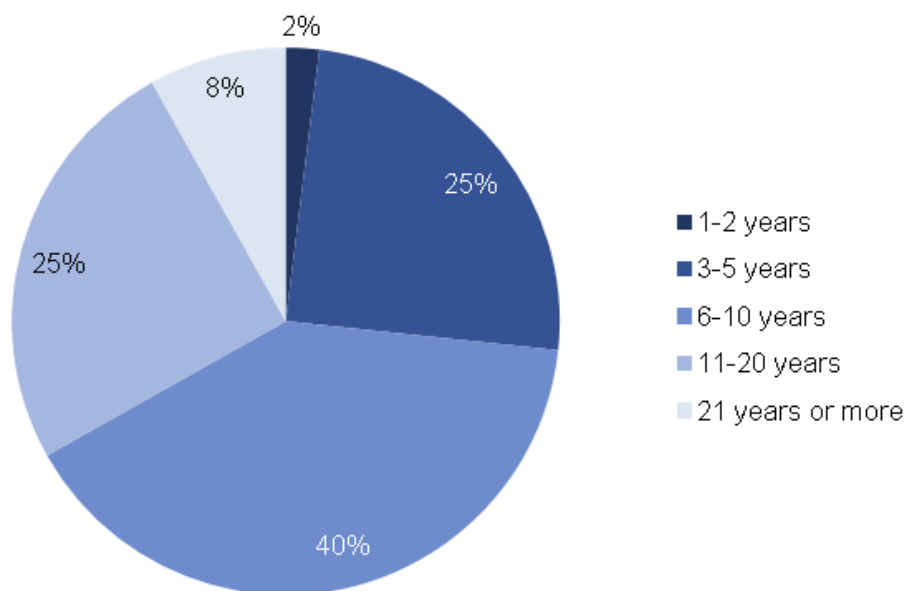
c. Classroom Mentors’ Experience in Teaching and Mentoring

Most mentors had substantial teaching experience, averaging 10.0 years of full-time teaching in either public or private schools, inclusive of the 2011–2012 school year. The least experienced mentor had a year of experience, and the most experienced mentor had 40 years. Nearly three-fourths (73 percent) reported that they had taught for 6 years or more, including 8 percent who had taught for 21 years or more (Figure III.2). Two percent reported that they had taught for just 1 to 2 years, making them novice teachers by our definition.

At the time mentors were surveyed in spring 2012, many respondents had served as mentors in a previous school year. About 25 percent of mentors reported that they had performed the role for

three or four semesters, and 19 percent had served for five or more semesters (Table III.7). Overall, mentors reported an average 3.5 semesters of service.

Figure III.2. Classroom Mentors' Years of Full-Time Teaching Experience



Source: Mentor survey.

Note: Sample size = 356.

Table III.7. Classroom Mentors' Experience in Role and Training Received for Role

Number of Semesters as TRP Mentor	Percentage	Among Those Who Received Any Training Specifically for Mentor Role, Average Hours of Training Received
1 to 2	56.1	27.7
3 to 4	24.5	41.8
5 or more	19.4	58.0
Sample Size	355	

Source: Mentor survey.

Most mentors reported that at some point in their careers, they had formally or informally mentored novice teachers who were not participants in a TRP.³³ Fifty-nine percent reported that they had been a formal mentor to at least one novice teacher unconnected with a TRP; on average, this group had worked in such capacity for 3.4 years. Fifty-one percent reported that they had been an informal mentor to at least one novice teacher unconnected with a TRP; on average, this group had worked in such capacity for 4.7 years. Altogether, TRP mentors had formally or informally mentored an average of 5.2 novice teachers. The survey also indicated that 58 percent of TRP mentors who had functioned as either a formal or informal mentor had been trained for their role.

³³ The mentor survey did not define "novice teacher."

d. Classroom Mentors' Training

Classroom mentors typically received mentor training. Virtually all the program directors in the study (28 of 30) reported that their programs trained new mentors before their first assignment; the average amount of training totaled 32 hours.³⁴ Among the mentors surveyed as part of the in-depth sample, 84 percent noted that they participated in some training; the average amount of training was 37 hours. Training, moreover, was not necessarily limited to new mentors. In fact, the longer teachers served as mentors, the more training they tended to receive. Those who had served as mentors for five or more semesters and received training reported an average of 58 hours of training, compared with an average of about 28 hours among those who had been classroom mentors for one or two semesters (Table III.7).

Mentor training covered a range of topics. Among mentors who reported receiving training, a majority reported receiving some training in almost every one of the areas listed in the mentor survey. More than 90 percent received specific training in their roles and responsibilities, coaching strategies, and the conduct of classroom observations (Figure III.3). The least common training topic was content-focused coaching in math or literacy/language arts.

2. Instructors

In describing the individuals who lead master's degree courses for TRP participants ("instructors"), we focus on the number working in each program, their professional affiliations, and their elementary and secondary teaching experience.

a. Number of Instructors per Teaching Residency Program and Ratio of Instructors to Residents

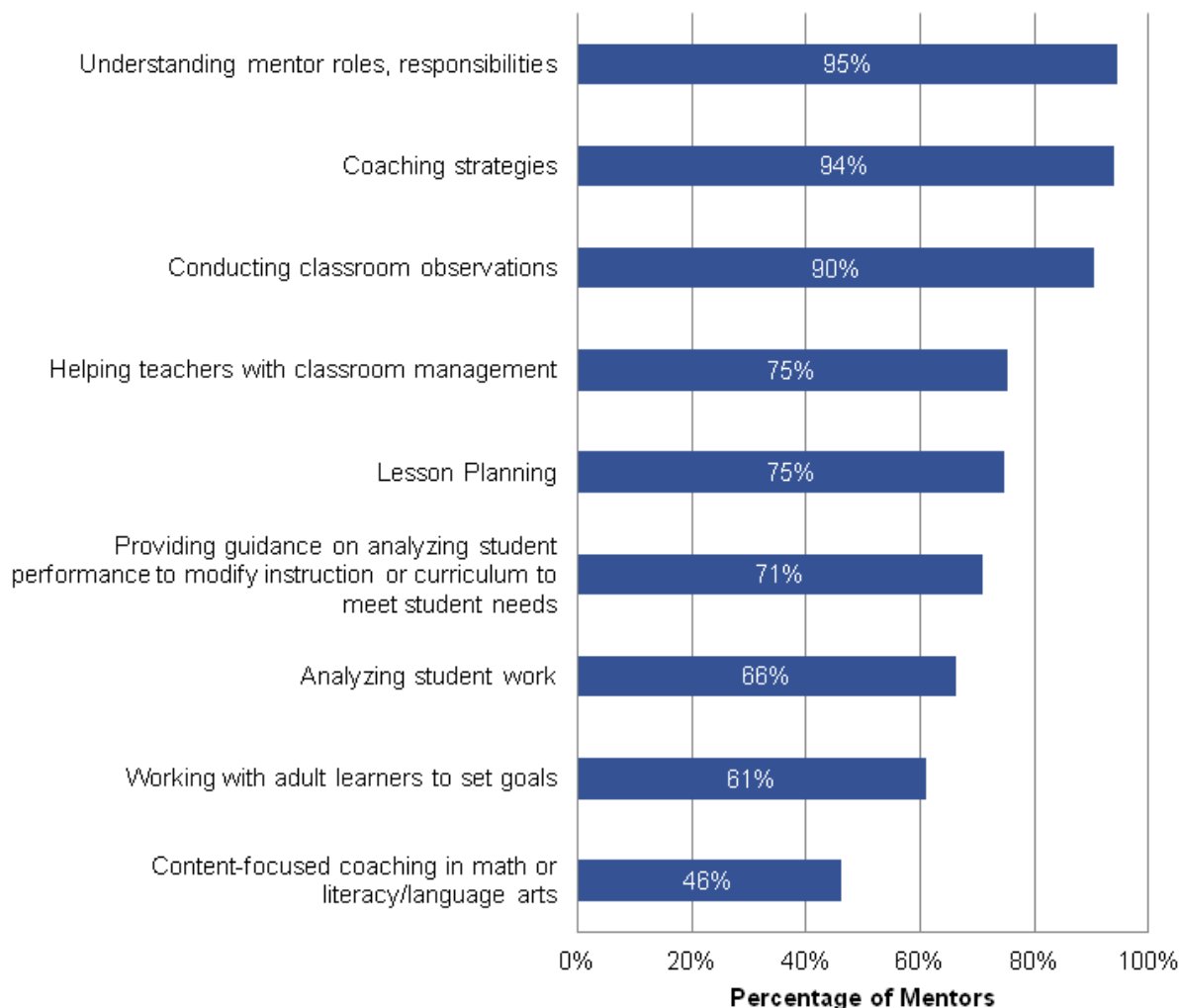
Program directors reported an average of 20 instructors (defined as individuals who taught courses or workshops that were part of the program), with the number of instructors ranging from 5 to 51. The average program had 1.1 instructors for every resident (1.1 : 1), with a range of 0.2 : 1 (about one instructor for every five residents) to 3.3 : 1 (over three instructors for every resident).

b. Professional Affiliation

Programs relied substantially on college faculty to lead their required courses. In 17 programs, more than half of the instructors reportedly were full-time faculty or adjunct faculty (excluding any district employees who might have had adjunct status and were serving as instructors in the program). Eight program directors reported using full-time faculty or adjunct faculty exclusively, but some programs relied more on instructors with other primary affiliations. In nine programs, more than half the instructors were district or school staff members, and one program director reported using only district or school staff members.

³⁴ The other two programs may train new mentors, just apparently not before their first assignment. Only programs that answered "yes" to the pre-assignment training question were asked about total hours of training.

Figure III.3. Topics in Which Classroom Mentors Received Training, Among Those Who Received Any Training for Classroom Mentor Role



Source: Mentor survey.

Note: Sample size = 269–275. Sample is limited to mentors who reported having any training specifically for their TRP classroom mentor role.

c. Elementary and Secondary Teaching Experience

Programs commonly relied on instructors with teaching experience at the same level for which residents were in training. Among the nine programs in which more than 50 percent of residents were in elementary grades (PK through 5), an average of 81 percent of instructors reportedly had elementary school teaching experience. Among the 18 programs in which more than 50 percent of residents were in secondary grades (6 through 12), an average of 56 percent of instructors reportedly had secondary-level teaching experience.

3. Coaches and Other Types of Mentors

Most program directors also reported employing staff in addition to mentors and instructors to support participants (Table III.8). Examples include coaches with expertise in certain subjects and related pedagogy (to help participants learn how to teach those subjects) and mentors who watched over several residents in a cohort (much as field supervisors in traditional certification programs

observe student teachers). Reading coaches were the least common, used by about 27 percent of the programs in the study; cohort mentors were the most common, used by about three-quarters of the programs (73 percent). The average number of staff in the various categories ranged from about three to about five, and in every case, the programs had an average of about one such staff member for every five residents.

Table III.8. Teaching Residency Programs' Use of Coaches and Other Types of Mentors to Support Participants

	Percentage of Programs with Any Staff of This Type	Average Number of Such Staff in Programs That Have Them	Average Number of Such Staff per Resident
Math coaches	40	2.8	0.2
Reading coaches	27	3.6	0.2
Coaches in another content area	47	3.6	0.2
Cohort mentor (serves residents in a cohort)	73	4.2	0.2
Other type of coach or mentor	40	4.7	0.2

Source: Program survey.

Note: Sample size = 30.

H. Summary of Key Findings

Most TRP directors reported that their programs were new and relatively small; their average stipend for residents was about \$23,000; and their programs took about 13 months to complete. More specific findings include the following:

- **Most programs in the study (77 percent) were in their first or second year of operation in spring 2012; they began operating after receiving a TQP grant.**
- **The programs served an average of 24 residents in their 2011 entry cohort, with a range of 5 to 90 residents.** The programs were considerably smaller, on average, than other teacher preparation programs offered by the colleges that were partners in the TRPs. Traditional undergraduate programs at these colleges averaged 490 participants in 2011–2012, and traditional master's programs averaged 179 participants.
- **The average living stipend offered to residents in the 2011 cohort was \$23,020, with a range of \$10,000 to \$35,000.** Among the 12 programs in the in-depth sample, the living stipend was, on average, 43 percent of the average salary for first-year teachers in the six partner districts, with a range of 22 to 66 percent.
- **The average length of the programs was 13.5 months.** This is considerably shorter than the typical undergraduate-level program, in which students typically devote two full academic years to fulfilling program requirements, including a semester of student teaching.

Classroom mentors typically had substantial teaching experience and were trained for their duties. More specific findings include the following:

- **Mentors in the in-depth sample reported having taught full time for an average of 10 years, in either public or private schools, inclusive of the 2011–2012 school year.**
- **Programs in the study reportedly provided 32 hours of training, on average, for new mentors.** Eighty-four percent of mentors said they had received some training for this role; the average amount of training they reported, in total, was 37 hours, and the longer they had served as a mentor, on average, the more hours of training they had received.

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IV. RESIDENT RECRUITMENT AND SELECTION, CHARACTERISTICS OF PROGRAM PARTICIPANTS

In this chapter, we describe how teaching residency programs (TRPs) recruit and screen applicants, the rates at which they admit applicants, the rates at which admitted applicants enroll, and the factors that influence the decision to enroll. We also outline the demographic characteristics, educational background, and work experience of novice teachers from TRPs and other teacher preparation programs.³⁵ The discussion of resident recruitment and selection draws on data collected from programs in the study and from the resident survey; the discussion of novice teachers relies primarily on data from the teacher-of-record survey (conducted in a purposeful sample of 12 programs and their six partner districts).

A. Resident Recruitment and Selection

Theoretically, before programs initiate outreach to potential participants,³⁶ they must determine how many and what types of teachers their partner districts need. TRPs are intended to be demand-driven programs that train teachers for high-need positions; they are not supposed to train teachers for just any subjects or grade levels and then hope that those individuals will find a placement somewhere. Participants must serve their residencies and, if they receive a living stipend, commit to full-time teaching for at least three years in a prescribed setting. In some instances districts involved in TRP partnerships hope to attract teachers with certain background characteristics, including various racial/ethnic minorities. Below, we describe how TRPs set targets. We then discuss programs' application and screening processes, admission rates, and the factors that influence residents to enroll in the programs.

1. Recruitment Targets

Partner districts clearly influenced TRPs' recruitment targets. Nearly all the interviewed directors (13 of 15 in the random sample) said that each year's resident recruitment effort was based on information from partner districts on the number and/or type of teachers they were especially interested in hiring. Districts reportedly expressed those preferences in terms of high-need subject areas, target grade levels, and teacher demographic characteristics. In contrast to this general tendency, one director said that the program's annual recruitment targets largely responded to the partner district's report of how many and what types of teachers were available to serve as classroom mentors to incoming residents.

Programs looked for candidates with certain characteristics or experiences:

- All 15 directors affirmed that they seek participants who reflect the communities where they will teach or participants who are underrepresented in the profession. Six other categories of characteristics or experiences were also sought by two or more directors: racial/ethnic minorities (cited by 12 directors); individuals who live in or have ties to the

³⁵ A description of the demographic characteristics, educational background, and work experience of residents in the programs during the 2011–2012 school year appears in section C of the appendix. The characteristics of residents are generally similar to those of novice TRP teachers—not surprising, because they come from the same programs, just one or two cohorts later.

³⁶ What methods programs use to reach potential applicants, and how residents first heard of the programs they joined, are described in section A of the appendix.

community—for example, attended school in the area (5 directors); bilingual candidates (4 directors); male candidates (4 directors); individuals who were the first in their family to attend college (3 directors); and persons with disabilities (2 directors).

- All 15 directors also affirmed that they seek participants with particular skills, work experience, or life experience. Three types of desirable skills or experiences were sought by two or more directors: certain content or subject knowledge developed in a career or in college coursework (cited by 10 directors); experience in working with children or in a school setting (7 directors); and a strong overall academic record (4 directors).

2. Application and Screening Process

The program directors reported using a screening process to determine which applicants should be admitted as residents. We describe below the activities, materials, and standards used to assess whether eligible applicants had strong content knowledge, strong communication skills, and other attributes that might make them effective teachers.

a. Applicant Activities

In interviews with program directors, writing samples and interviews were the most commonly cited activities used to screen applicants to the 15 programs. Some programs required applicants to demonstrate their teaching skills (see text box for a list of screening activities).

Activities Used to Screen TRP Applicants

- **Writing samples.** All 15 programs required applicants to provide writing samples, including short answers to a range of questions. Applicants were asked why they wanted to join the program or become a teacher; what they thought they would bring to the job or what prepared them to become a teacher; what their beliefs were about education; and how they would respond to a hypothetical classroom situation. Fourteen directors reported that program applications collect writing samples, but 9 also reported that, as part of the screening process, they request on-the-spot writing samples during applicants' visits to programs.
- **Interviews.** Fourteen of the 15 programs interviewed eligible candidates; all conducted interviews in person, and one interviewed some candidates by telephone as well. In 11 cases, program officials interviewed each candidate once. The average length of applicant interviews across programs totaled 33 minutes.
- **Group activities.** Eight programs put their applicants through a group activity, such as discussing possible solutions to a hypothetical education problem or classroom situation. Program staff observed the group's interactions and considered applicants' responses. The average length of group activities totaled about one hour.
- **Sample teaching lessons.** Seven of the 15 programs required applicants to demonstrate their potential teaching skills by leading a short sample lesson. The programs gave applicants varying levels of guidance on the lesson's content and grade level. Applicants in 5 programs taught their lessons to students; those in other programs taught fellow applicants or a small group of program representatives. The average length of sample lessons totaled 12 minutes.
- **Other screening methods.** One program required applicants to conduct observations of classrooms. One program required applicants to pass a math assessment.

Based on their use of the five activities described in the text box, the 15 programs in the interview sample divided about equally into two distinct groups, reflecting less extensive and more extensive screening processes. Eight TRPs relied on a less extensive screening process. They used just two of the activities listed above; seven of the eight used just interviews and writing samples. The remaining seven TRPs relied on a more extensive screening process and used four or five

screening activities. In addition to interviews and writing samples, the seven programs used a sample teaching lesson and a group activity, and two added another screening method.

Nine of the 15 programs organized multicomponent selection days, when groups of applicants visited the programs and participated in two or more of the screening activities, such as individual interviews, on-the-spot writing, and sample teaching. Such a multicomponent process is similar to the screening approach used in recent years by both Teach For America and TNTP-affiliated Teaching Fellows programs, two highly selective alternative routes to certification that, like TRPs, seek candidates without prior training in education and prepare them to teach in high-need schools (Clark et al. 2013).

b. Minimum Grade Point Average Requirements

Most TRPs used a minimum grade point average (GPA) as one criterion for eligibility, setting the bar near a B average (Table IV.1). Of the 30 programs in the study, 80 percent reportedly established an admission standard for applicants' cumulative undergraduate GPA; among these, the average minimum was 2.9. A smaller share of programs (37 percent) set a minimum GPA for applicants' final year(s) in college; the average standard set was 2.9. Although some TRPs focused on training teachers in math or science, which are often considered high-need subjects, only 10 percent of programs set a minimum requirement for GPA in courses in subject areas such as math or science.

Table IV.1. Teaching Residency Programs' Use of Minimum GPA Requirements in Application and Screening Process

Measure	Percentage of Programs Using Measure	Average Minimum GPA Required by These Programs
Overall GPA as an undergraduate	80	2.9
GPA in final year(s) as an undergraduate	37	2.9
GPA in courses toward major	30	3.0
GPA in certain subjects as an undergraduate (for example, math and science)	10	2.7

Source: Program survey.

Note: Sample size = 30.

Minimum GPA requirements have sometimes been seen as a proxy for program selectivity. For example, a recent Institute of Education Sciences study set a threshold of 3.0 to divide less selective from more selective alternative-certification programs (Constantine et al. 2009). It is difficult to know, however, what the TRPs' minimum GPA requirements reflect about their selectivity. Teach For America, widely considered a highly selective route into teaching, requires a minimum cumulative undergraduate GPA of 2.5. Moreover, even when programs specify a minimum GPA, it is sometimes not absolute; programs may make exceptions for otherwise well-qualified candidates. We did not inquire about the flexibility of the TRPs' GPA requirements. A better indicator of selectivity might be the average GPA of candidates admitted to a given program. For Teach For America, it has been 3.6 in recent years (Clark et al. 2013), a full point higher than the required minimum. For the present study, we did not collect information about the GPA of applicants admitted to TRPs; however, the resident survey asked enrolled residents to indicate their GPA, and they reported their cumulative undergraduate GPA as 3.4, on average, essentially a B-plus.

c. Importance Placed on Various Factors When Making Admission Offers

Of the factors commonly considered in admission decisions, applicants' performance in interviews and the quality or content of their writing samples were deemed very important by most programs (Table IV.2). Among the 14 program directors in the interview sample that reported interviewing applicants, 13 directors said that they considered applicants' performance during the interview very important. Ten of the 15 program directors rated applicants' writing samples as very important. Among the 7 programs requiring applicants to give a sample teaching demonstration, 5 directors reported that the demonstration was very important in their admission decisions. Fourteen of 15 programs weighed overall undergraduate GPAs, and 9 considered them very important.

Table IV.2. Factors That Teaching Residency Programs Considered in Resident Admission Decisions

Factor	Number of Programs Considering Factor	Number of These Programs That Considered Factor: ^a	
		Moderately Important	Very Important
Quality or content of writing	15	5	10
Major/minor or types of courses taken	15	3	8
Performance in interview	14	1	13
Overall undergraduate GPA	14	4	9
References	14	3	8
Applicant skills or work/life experience	14	9	5
Score on basic skills test	13	5	5
GPA on some subset of undergraduate courses	12	2	8
Quality of undergraduate institution	10	5	1
Performance in sample teaching	7	2	5
Quality of sample lesson plan	2	1	1
Other	7	1	6

Source: Program director interviews.

Note: Sample size = 15.

^aThe omitted response option is "Slightly Important."

3. Applicants and Admission Offers

In 2011, the median number of applicants per program was 46,³⁷ and the average program reportedly accepted 53 percent of applicants. One-third of programs (34 percent) accepted at least 75 percent of applicants, and 48 percent accepted half or more of applicants (Table IV.3). The programs with the largest number of applicants tended to have the lowest acceptance rates; five of

³⁷ The average number of applicants was 110, but the figure reflects a skewed distribution, with three outliers at the top of the distribution—900, 612, and 316; the next-highest number of applicants was 136.

the six programs that offered admission to fewer than 25 percent of applicants had over 100 applicants. For some comparative context on the TRPs' selectivity, it is useful to consider that two highly selective alternative routes into teaching—Teach for America and Teaching Fellows programs—have reportedly admitted about 12 to 13 percent of applicants in recent years (Clark et al. 2013).

Table IV.3. Teaching Residency Programs' Admissions Rates

Percentage of Applicants Offered Admission	Number of Programs	Percentage of Programs
Fewer than 25 percent	6	21
25 to 49 percent	9	31
50 to 74 percent	4	14
75 percent or more	10	34

Source: Program survey.

Note: Sample size = 29.

Some programs experienced difficulty in attracting as many applicants as they would have liked. Among the 15 directors we interviewed, 7 said that the 2011 applicant pool was smaller than they had hoped for, 5 said that it was about the size they had hoped for, and 3 said it was larger than they had hoped for. Moreover, when asked how their programs differed from the plan described in the TQP grant application, 5 of the 15 directors noted that they had not met their original enrollment targets either overall or for residents training to teach certain subjects.

4. Residents' Enrollment Decisions

The programs appear to have been a desirable option for the accepted applicants. In the average program, 84 percent of the applicants offered admission reportedly accepted the offer and enrolled, with 29 percent the lowest and 100 percent the highest enrollment rate.

A variety of factors or program features influenced residents' decisions to enroll in a TRP. The factor/feature most commonly cited by residents as a great influence on their enrollment decision was the residency (cited by about 79 percent of residents) (Table IV.4). Nearly as many residents (about 72 percent) said that the chance to earn a master's degree greatly influenced their decision.

Many residents were apparently committed to teaching as a career and had explored other routes into the profession. Asked what they would have done if they had not enrolled in their current program, 45 percent said that they "definitely would have chosen a different teacher training program," and 46 percent said that they "may have chosen a different teacher training program." In contrast, about 10 percent said that they "definitely would not have become a teacher." Some residents' interest in teaching led them to apply to other programs either at the same time as or earlier than they applied to their TRP. About 43 percent said that they had applied to at least one other postbaccalaureate teacher training program, including 27 percent who said that they had applied to Teach For America. As noted, Teach For America has a highly selective admission process (Clark et al. 2013) and, like TRPs, requires participants to make a formal commitment to teaching (although for two years, not three). It does not, however, include a year-long training experience parallel to the residency.

Table IV.4. Factors Influencing Residents to Enroll in Teaching Residency Program

Factor	Percentage of Residents Reporting Factor Influenced Them:	
	Moderately	Greatly
Year-long residency component in a real classroom, with mentoring by an experienced teacher	13.8	78.9
Chance to obtain a master's degree	17.4	71.6
Mentor support after becoming a teacher	25.5	52.8
Coursework integrated with teaching experience	33.1	51.6
Program's out-of-pocket costs	28.0	49.2
Other	4.5	20.9

Source: Resident survey.

Notes: Sample size = 345–356. The omitted response options are “Not at All” and “Somewhat.”

B. Novice Teacher Characteristics

Using data from the novice teacher-of-record survey, we compared the characteristics of novice TRP teachers from the 12 programs in the purposefully selected sample with the characteristics of non-TRP novice teachers in the same six partner districts. Characteristics of interest include (1) demographics, (2) educational background, (3) route into teaching and current certification, and (4) work experience.

1. Demographics

TRP and non-TRP novice teachers had similar demographic characteristics (Table IV.5), suggesting that, in recent years, the programs were not attracting teachers different from those the partner districts would have hired in the absence of TRPs. Roughly a quarter of the teachers in each group were male, and the average age of the teachers in each group was approximately 30. Non-Hispanic whites accounted for a majority of TRP and non-TRP novice teachers (about 55 percent and 60 percent, respectively), and the largest minority group among both TRP and non-TRP novice teachers was Hispanics of any race (about 19 percent and 18 percent, respectively). These were not statistically significant differences.

2. Educational Background

TRP teachers' educational backgrounds differed from those of non-TRP teachers (Table IV.6). TRP teachers were less likely than non-TRP teachers to report a bachelor's degree as their highest degree (about 4 percent versus 52 percent) and more likely to report a master's degree as their highest degree (about 94 percent versus 48 percent); both differences were statistically significant. Even though many teachers eventually earn a master's degree, it is not surprising that, given the requirement to do so, nearly all TRP teachers had earned a master's degree just one or two years into their teaching career.

Table IV.5. Novice Teachers' Demographic Characteristics

Characteristic	Percentage (unless otherwise noted)		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
Male	24.3	27.9	0.303
Race/Ethnicity			
Hispanic	19.1	17.8	0.686
Asian, non-Hispanic	10.1	9.9	0.928
Black, non-Hispanic	12.3	9.5	0.274
White, non-Hispanic	55.2	59.7	0.248
Two or more races, non-Hispanic	2.2	1.5	0.541
Other races/ethnicities	1.1	1.5	0.684
Average age (years)	30.2	29.8	0.468
Sample Size	366–378	272–278	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

Table IV.6. Novice Teachers' Educational Backgrounds

Characteristic	Percentage (unless otherwise noted)		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
Highest degree obtained			
Bachelor's	3.7	52.1	0.000
Master's	93.7	47.7	0.000
Doctorate	2.6	0.2	0.017
Average years since bachelor's degree	7.0	5.5	0.003
Years since bachelor's degree			
1 year	1.1	14.7	0.000
2 to 3 years	27.3	31.2	0.303
4 to 9 years	51.4	39.2	0.003
10 years or more	20.1	14.9	0.104
Bachelor's degree in education	9.7	28.5	0.000
As of 2007–2008, admissions competitiveness category of colleges where teachers received bachelor's degree			
1. Most competitive	25.9	11.8	0.000
2. Highly competitive	21.0	18.7	0.480
3. Very competitive	19.0	17.6	0.653
Categories 1 through 3	66.1	47.8	0.000
Self-reported cumulative undergraduate GPA (average)	3.4	3.4	0.211
Sample Size	331–382	239–276	

Sources: Teacher-of-record survey; *Barron's Profiles of American Colleges* (2009).

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II. Descriptions of admissions competitiveness categories appear in section E.2 of the appendix.

Some statistically significant differences between the two groups may reflect TRPs' different recruitment targets for individuals with specific majors and for individuals with specific experiences after college but before entering teaching. For example, TRP teachers were less likely than non-TRP teachers to report having earned their bachelor's degree in education (about 10 percent versus 29 percent) (Table IV.6). Further, TRP teachers had reportedly been out of college for an average of 18 months longer than non-TRP teachers (7.0 years versus 5.5 years). Virtually no TRP teachers (1 percent) reported receipt of their bachelor's degree just a year earlier (in spring 2011), compared to almost 15 percent of non-TRP teachers. About half of TRP teachers had been out of college for 4 to 9 years, compared to about 39 percent of non-TRP teachers.

Just under half of non-TRP teachers and about two-thirds of TRP teachers received their bachelor's degree from a college that Barron's classified as falling into one of the top three categories of admissions competitiveness among all American colleges—a statistically significant difference (Table IV.6). The overall difference is primarily attributable to the percentage of teachers in each group who graduated from a college in the most competitive category—about 26 percent of TRP teachers versus about 12 percent of non-TRP teachers.³⁸

3. Route into Teaching and Current Certification

Teachers may be divided into two broad groups based on the type of training program in which they participate: (1) those who start teaching *after* completing all requirements for initial certification, considered the traditional route to certification, and (2) those who start teaching *before* completing all requirements for initial certification, considered an alternative route to certification.

In this study, substantial majorities of both TRP teachers and non-TRP teachers—88 percent and 71 percent, respectively—reported that they started teaching after completing all requirements for initial licensing or certification.³⁹ This difference is statistically significant ($p < .001$). (At the end of the chapter, we present some analyses separately for traditional- and alternative-route teachers in the non-TRP group.)

Teacher preparation programs may also be classified according to whether they lead to a bachelor's degree, master's degree, or no degree (no degree is offered by college-based “fifth-year” postbaccalaureate programs and many alternative-route programs). By taking type of/no degree into account along with the timing of participants' entry into teaching relative to program completion, we arrive at six types of training programs (Table IV.7). Given that all TRPs in the study lead to a master's degree and that 88 percent of novice TRP teachers reported that they started teaching after completing all program requirements, it is not surprising that about 85 percent of TRP teachers reported that their route to teaching was a master's degree program in which they started teaching after completing all requirements for initial license/certification.⁴⁰

³⁸ To place the findings in context, section C of the appendix provides results of similar analyses from two other Institute of Education Sciences–sponsored studies of novice teachers.

³⁹ The survey did not use the words “alternative” or “traditional” in asking about the programs in which participants were enrolled.

⁴⁰ That a small proportion (about 2 percent) of TRP teachers reported that they trained in a bachelor's degree program could reflect an error in their response or the fact that the survey question asked about training before respondents *first* became a full-time teacher; if any such respondents had taught for a year or more before entering a TRP, such as at a private school not requiring state certification, they would most likely say that their previous training was at the bachelor's degree level.

Table IV.7. Novice Teachers' Training Programs

Route to Teaching (program level and when teacher started teaching full-time)	Percentage Following This Route		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
Bachelor's degree program, started teaching <i>after</i> completing all requirements for initial license/certification	2.3	33.9	0.000
Bachelor's degree program, started teaching <i>before</i> completing all requirements for initial license/certification	0.0	4.0	0.000
Master's degree program, started teaching <i>after</i> completing all requirements for initial license/certification	84.5	33.2	0.000
Master's degree program, started teaching <i>before</i> completing all requirements for initial license/certification	11.0	7.2	0.115
Postbaccalaureate (non-master's degree) program, started teaching <i>after</i> completing all requirements for initial license/certification	0.8	8.4	0.000
Postbaccalaureate (non-master's degree) program, started teaching <i>before</i> completing all requirements for initial license/certification	1.4	13.3	0.000
Sample Size	354	249	

Source: Teacher-of-record survey.

Notes: This analysis excludes 20 TRP teachers and 29 non-TRP teachers who could not be coded into one of the six major routes to teaching because they answered "other" for the type of program in which they trained or for when they first became a full-time teacher. The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

This analysis may provide more insight into the training backgrounds of non-TRP teachers, who took more diverse routes into teaching. About one-third reported that they completed a bachelor's degree program and started teaching after completing all certification requirements, and virtually the same proportion reported that they completed a master's degree program and started teaching after completing all certification requirements. The third-largest group, 13 percent of non-TRP teachers, reported that they participated in a postbaccalaureate program and began teaching before completing all certification requirements (the typical alternative-route program).

TRP teachers were more likely than non-TRP teachers to report having participated in student teaching as part of their training (about 93 percent versus 85 percent), a difference that was statistically significant ($p = .001$). (Note that the survey question explicitly defined the residency component of a TRP to include student teaching.) In addition, for TRP teachers who reportedly participated in student teaching, the experience lasted about twice as long, on average, as for non-TRP teachers who participated in student teaching (about 33 weeks versus 17 weeks), a statistically significant difference ($p < .001$). Thirty-three weeks is about the typical length of a full school year; 17 weeks is closer to the typical length of one semester.

At the time of the survey, TRP teachers were less likely than non-TRP teachers to report a temporary teaching certificate (18 percent versus 29 percent), a statistically significant difference

(Table IV.8). TRP teachers were not statistically more or less likely than their non-TRP counterparts to hold regular or advanced certification in a particular subject or in general/elementary education. Regardless of their training route, new teachers must often complete additional program requirements or state requirements, including one or more years of teaching, before qualifying for regular/full certification. However, the completion of additional requirements after the start of teaching is a defining characteristic of alternative-route certification programs. As reported, a higher percentage of non-TRP teachers than TRP teachers began teaching full-time before completing all program requirements.

Table IV.8. Novice Teachers' Current Certification in State in Which They Were Teaching

Type	Percentage		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
Regular or advanced certificate issued to those who completed all teacher training, certification examinations, and any required probationary period			
In particular subject(s)	42.4	37.0	0.158
In general or elementary education	37.5	30.7	0.062
Temporary certificate issued to those who need to complete additional requirements such as passing a certification examination, coursework, or a probationary teaching period	18.2	29.2	0.001
None of the above	1.9	3.1	0.304
Sample Size	373	276	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

4. Work Experience

Novice teachers' survey responses suggest that individuals who enter teaching through TRPs may be more likely than those who enter through other programs to be changing career fields. Two findings support the tentative conclusion. First, the two groups of novice teachers reported different work experience in the year(s) after graduating from college and before the 2011–2012 school year. TRP teachers were somewhat more likely than their non-TRP counterparts to have worked in a full-time job besides teaching since graduating from college (about 72 percent versus 63 percent) (Table IV.9). Second, TRP teachers were less likely than non-TRP teachers to have worked in classrooms as long-term substitutes, as short-term substitutes, and as teacher's aides, with all three differences statistically significant at the $p < .01$ level, and less likely to have worked in any of these three roles (about 33 percent versus 57 percent), a difference that also was statistically significant.

Table IV.9. Novice Teachers' Work Experience

Type/Amount of Experience	TRP Teachers		Non-TRP Teachers		p-Value of Difference
	Percentage or Years	Sample Size	Percentage or Years	Sample Size	
Worked full-time in a nonteaching job since college graduation (percent)	71.7	381	62.8	284	0.018
Among teachers with this experience, average years	5.6	273	4.8	178	0.154
Before current school year, worked:					
As long-term substitute teacher (percent)	15.1	378	30.6	284	0.000
Among teachers with this experience, average years	0.9	31	1.1	59	0.520
As short-term substitute teacher (percent)	18.0	378	31.3	284	0.000
Among teachers with this experience, average years	1.3	45	1.1	66	0.474
As teacher's aide (percent)	22.2	378	31.5	284	0.007
Among teachers with this experience, average years	1.6	68	3.0	73	0.000
In any of above three roles (percent)	32.5	378	57.4	284	0.000

Source: Teacher-of-record survey.

Notes: The means for years of experience in various positions were limited to novice teachers who had any experience in that role. The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

5. A Closer Look at the Comparison Group

It is possible that some of the differences between TRP teachers and non-TRP teachers were driven by the greater likelihood of non-TRP teachers entering teaching through an alternative route to certification. Alternative-route teachers might have less student teaching experience, for example, than traditional-route teachers. To shed more light on the backgrounds of teachers who take different pathways into teaching, we divided the non-TRP teachers into two subgroups—those from a traditional-route program and those from an alternative-route program—and compared their educational background, student teaching experience, and work experience to those of TRP teachers.⁴¹

The analysis showed that some statistically significant differences reported above (highest degree, years out of college, length of student teaching experience, and work in any of three classroom positions of interest) held true for both traditional-route and alternative-route non-TRP teachers. Some of the differences (bachelor's degree in education, bachelor's degree from a college ranked in Barron's top three competitiveness categories, work as a long-term substitute, work as a short-term substitute, and work as a teacher's aide) held true only for traditional-route non-TRP teachers. One of the differences (any participation in student teaching, reported by a higher percentage of TRP teachers than non-TRP teachers) held true only for alternative-route non-TRP

⁴¹ The TRP mean values reported in this section are not regression-adjusted. The non-TRP values for each subgroup are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP group and the non-TRP subgroup. Details about the regression controls appear in Chapter II.

teachers. Finally, one statistically significant difference reported above (full-time work in a nonteaching job after college) did not hold true for either subgroup of non-TRP teachers. In summary, some differences were apparently driven by one subgroup or the other, and some differences were not.

a. Educational Background

In most cases, separating the traditional- and alternative-route non-TRP teachers does not lead to substantively different findings.

- Both traditional-route and alternative-route non-TRP teachers were more likely than TRP teachers to report holding a bachelor's degree as their highest degree (about 49 percent and 59 percent, respectively, compared to about 4 percent of TRP teachers); these differences were statistically significant ($p < .001$ for both comparisons).
- Both traditional-route and alternative-route non-TRP teachers were less likely than TRP teachers to report holding a master's degree as their highest degree (about 52 percent and 40 percent, respectively, compared to about 94 percent of TRP teachers); these differences were statistically significant ($p < .001$ for both comparisons).
- On average, both traditional-route and alternative-route non-TRP teachers had reportedly been out of college for less time than TRP teachers (5.8 years and 4.7 years, respectively, compared to 7.0 years for TRP teachers); these differences were statistically significant ($p = .033$ for TRP versus traditional-route non-TRP teachers and $p = .002$ for TRP versus alternative-route non-TRP teachers).
- The experiences of non-TRP teachers from traditional-route programs seem to drive the overall difference in the percentage of TRP and non-TRP teachers whose bachelor's degree is in education, as reported earlier. About 35 percent of traditional-route non-TRP teachers reportedly held a bachelor's degree in education, compared to about 10 percent of TRP teachers; this difference was statistically significant ($p < .001$). The percentage of alternative-route teachers whose bachelor's degree is in education (about 11 percent) was not statistically different from the percentage of TRP teachers holding a bachelor's degree in education.
- The experiences of non-TRP teachers from traditional-route programs seem to drive the overall difference in the percentage of TRP and non-TRP teachers who earned their bachelor's degree at a college ranked in Barron's top three competitiveness categories. About 41 percent of traditional-route non-TRP teachers attended such a college, compared to 66 percent of TRP teachers ($p < .001$). The percentage of alternative-route non-TRP teachers who attended a college in the top three competitiveness categories (about 64 percent) was not statistically different from the percentage of TRP teachers who attended such a college.

b. Student Teaching

The overall difference in the rates at which TRP and non-TRP teachers participated in student teaching, as reported earlier, is driven primarily by the experiences of non-TRP teachers from alternative-route programs. Non-TRP teachers from alternative-route programs were less likely than TRP teachers to report having done student teaching (about 61 percent versus 93 percent; $p < .001$). In contrast, 95 percent of non-TRP teachers from traditional-route programs reported doing student

teaching, which was not statistically different from the TRP percentage. In addition, the duration of student teaching for both non-TRP subgroups was shorter than that for TRP teachers. Non-TRP teachers from traditional-route programs reported about 18 weeks of student teaching, and those from alternative-route programs reported about 12 weeks; in contrast, TRP teachers reported about 33 weeks. Both differences were statistically significant, $p < .001$).

c. Work Experience

The overall statistically significant difference in the percentage of TRP and non-TRP teachers who worked full-time in a nonteaching job after college graduation disappears when the latter are split into subgroups based on their route to teaching. About 64 percent of traditional-route non-TRP teachers and about 62 percent of alternative-route non-TRP teachers reported working in a post-college nonteaching position, but for neither group was the percentage statistically different from the approximately 72 percent of TRP teachers with the same work experience. Finally, about 62 percent of traditional-route non-TRP teachers and about 46 percent of alternative-route non-TRP teachers reported holding any of the three classroom positions of interest (long-term substitute, short-term substitute, or teacher's aide), compared to about 33 percent of TRP teachers; the differences between the non-TRP subgroup and TRP teachers were statistically significant in both comparisons ($p < .001$ for TRP versus traditional-route non-TRP teachers and $p = .021$ for TRP versus alternative-route non-TRP teachers).

C. Summary of Key Findings

The TRPs sought participants with certain characteristics and experiences, but while they attracted people with some different work and education experiences than other novice teachers in the same districts, they did not attract people with different demographic characteristics. In considering the key findings from this chapter, readers should bear in mind that although the interview sample of 15 programs is representative of the universe of 30 TRPs in the study, and the non-TRP teachers we surveyed are representative of all novice non-TRP teachers in the six partner districts, the residents and novice TRP teachers in these analyses were drawn from a non-representative sample of 12 programs.

- **In addition to seeking candidates suitable to fill positions in partner districts' various high-need subjects and grade levels, TRPs often looked for candidates with particular characteristics or experiences.** All 15 directors interviewed sought participants who reflect the communities they would teach in or who are underrepresented in the profession. All 15 directors also sought participants with particular skills, work experience, or life experience; for example, 10 directors mentioned looking for applicants with particular content or subject knowledge, whether from a career or college coursework.
- **Writing samples and interviews were the most commonly cited screening tools used by the 15 programs in the interview sample although sample teaching lessons were popular as well.** All 15 program directors reported using writing samples and 14 reported using interviews. Seven programs also required applicants to demonstrate their skills with a brief sample teaching lesson.
- **In the average program, 84 percent of the applicants who were offered a chance to enroll did so. Survey responses by residents in the in-depth sample, moreover, showed that many residents were committed to becoming a teacher.** Asked what they would have done if they had not enrolled in their TRP, 45 percent said they

“definitely would have chosen a different teacher training program,” and 46 percent said they “may have chosen a different teacher training program.” In addition, 43 percent said they had applied to at least one other postbaccalaureate teacher preparation program.

- **Novice TRP and non-TRP teachers had similar demographic characteristics (sex, race/ethnicity, and age).**
- **Evidence suggests that TRP teachers were more likely than non-TRP teachers to have made a distinct career change when becoming a teacher.** TRP teachers were more likely than non-TRP teachers to report having worked in a full-time nonteaching job since graduating from college (72 percent versus 63 percent). In addition, TRP teachers were less likely to report having worked as a long-term substitute teacher (15 percent versus 31 percent), a short-term substitute (18 percent versus 31 percent), or a teacher’s aide (22 percent versus 32 percent).

V. RESIDENT TRAINING: COURSEWORK, RESIDENCY ASSIGNMENTS, AND CLASSROOM RESPONSIBILITIES

In this chapter, we first describe the amount, timing, location, and nature of the coursework that teaching residency program (TRP) participants must complete in order to obtain a master's degree and to qualify for certification. We then discuss the length and structure of the residency component and how residency assignments come about. Most important, we examine the many types of activities in which residents and mentors engage as part of the clinical training process. We conclude with a brief discussion of participant persistence through the residency program and into full-time teaching. Data sources used throughout the chapter include the program, resident, and mentor surveys and director interviews.

A. Master's Degree Coursework

Programs in the director interview sample reportedly required participants to complete, on average, a total of 450 hours of coursework, with 218 the fewest and 649 the most hours required. Assuming that a typical college course involves about 45 hours of instruction (3 hours per week for 15 weeks), the average coursework in the programs equates to about 10 courses; the lower and upper ends of the range equate roughly to 4.8 and 14.4 courses, respectively.⁴²

The TRPs varied in how they structured their required coursework and distributed it over time. Ten of the 15 program directors reported requiring new participants to start courses before their residency. For these programs, the average reported amount of coursework during the pre-residency period totaled 156 hours. As mentioned in Chapter III, programs frequently initiated coursework in May, June, or July, with residencies typically starting in August or September. To put the pre-residency coursework in perspective, consider that, if participants started courses at the beginning of July and started their residency at the beginning of September, 156 hours of instruction spread across an eight-week period would average about 20 hours per week—about 5 hours a day, if participants attended classes four days a week.

Striving to provide training that integrated coursework and fieldwork, all 15 program directors reported scheduling courses during the residency period. The average reported amount of coursework during the residency period totaled 335 hours. For a typical residency lasting one full school year, or about 36 weeks, the 335 hours of instruction averaged just over 9 hours per week—about 3 hours a day—if participants attended classes three days a week. Eight of the 15 directors reported holding classes two or three days a week. One program reportedly held classes on the weekend.

⁴² As comparative context for our findings on TRPs' total coursework requirements, consider findings from a recent Institute of Education Sciences study. Specifically, Constantine et al. (2009) gathered data on coursework hours for 87 teachers who attended a purposefully selected set of 28 alternative certification programs and 88 teachers who taught in the same schools and had attended 53 traditional certification programs. In that study, the alternative-route teachers' programs reportedly ranged from 75 to 795 hours of instruction, and the mean was 249 hours; about a quarter of the teachers reportedly received 185 or fewer hours of instruction, and about a quarter reportedly received 375 or more hours of instruction. The traditional-route teachers' programs reportedly ranged from 240 to 1,380 hours of instruction, and the mean was 645 hours; about a quarter of the teachers reportedly received 405 or fewer hours of instruction, and about a quarter reportedly received 804 or more hours of instruction.

Nine of the 15 program directors in the interview sample reported requiring participants to continue taking courses in the first college term after their residency ended, which typically was in the summer. We did not collect information on the amount of post-residency summer coursework because those courses did not coincide with full-time teaching. Only one program reportedly required its participants to take master’s degree–level classes after they became full-time teachers; these participants completed the final required coursework, about 25 hours of class, during their first semester of teaching.

According to TRP directors in the interview sample, coursework placed relatively more emphasis on practical topics, such as pedagogy, classroom management, and student assessment, and relatively less emphasis on theoretical topics, such as child development and the history or philosophy of education (Table V.1).

Table V.1. Reported Emphasis on Topics in Teaching Residency Program Coursework Before Participants Become Full-Time Teachers

Topic	Number of Directors Saying the Emphasis ^a on the Topic Is:	
	Moderate	Strong
Teaching method/pedagogy	0	15
Curriculum/content areas	2	13
Classroom management	4	11
Student assessment	4	11
Child development	10	4
History or philosophy of education	8	3

Source: Director interviews.

Note: Sample size = 15.

^aThe omitted response option is “Little or No Emphasis.”

Directors were asked how the TRP coursework differed from the coursework in other master’s degree programs for new teachers (at their partner college if it offered such a program, or else in such programs generally). Twelve of 14 responding directors cited one or more differences, and two reported no major differences. Eight said that the TRP coursework was more integrated with teaching practice, four said it was more tailored to the districts/communities where candidates would teach, and four said it was more condensed and delivered more intensively over a shorter period of time or in fewer courses. No other difference was mentioned by more than one respondent.

Most of the courses attended by TRP participants met on the campus of the IHE partner, though most programs held classes in more than one location. Thirteen directors in the interview sample reported that at least some classes were held on a college campus, seven programs held at least some classes in local schools, one program used a district office for some classes, and four mentioned some other location.

B. Residency Length and Structure

This section describes programs' residencies in terms of their length and timing relative to the traditional school year calendar, the amount of time residents spent in their mentor's classroom, and whether residents were assigned to one or more classroom mentors.

1. Length and Timing of Residency Relative to School Year

Residencies typically are the equivalent of one school year in length, in line with the minimum length prescribed in the Teacher Quality Partnership (TQP) Grant Program requirements, but some are longer. Twenty-eight of the 30 program directors reported a residency lasting for one school year. Reflecting the dominance of this model, the first half of the residency, across all 30 programs, lasted an average of 18 weeks and the second half lasted an average of 20 weeks. However, two programs in the study required residencies longer than one school year. One reportedly lasted three semesters, with a break during the summer school session between the two school years, and the other lasted three semesters and included the summer school session. Although one school year (comprising two semesters) was not the uniform length of residencies, it was the dominant model; thus, for simplicity, we will henceforth refer to the residency "year" and describe it as embodying two halves.⁴³

Residencies typically start in the fall, concurrently with the traditional start of the school year, but two programs in the study reportedly followed a different timeline. One program's residency started in the spring semester of one year and went through the fall semester of the next year, including the summer semester between school years. The other program's residency started in the spring semester of one year and went through the entire next school year.

2. Where Residents Spend Their Time in a Typical School Week

Participation in a TRP residency does not necessarily require participants to spend all day, every day with their mentor. In fact, residents typically did not spend the full five days of a school week exclusively in their mentor's classroom; they commonly were required to be elsewhere for some part of the week (Table V.2). During the first half of their residency, a majority of residents (about 54 percent) reported typically spending four full days in their mentor's classroom; only about 14 percent reported typically spending five full days with their mentor. A majority of residents (almost 55 percent) reportedly spent one full day a week away from their mentor's classroom in the first half of the year. Finally, roughly 43 percent of residents reported typically spending one or two days of the week partly in their mentor's classroom and partly somewhere else during the first half of the year.

No clear pattern emerges in terms of how the structure of the residency changes from one semester to the next. Some residents' weeks were structured somewhat differently in the second half of the year than in the first half. The average number of days residents reported spending full time in their mentor's classroom increased slightly from the first to the second half of the year, and the average number of days they reported spending part time in their mentor's classroom and part time elsewhere decreased slightly over the same time period. While statistically significant, both

⁴³ Using this language is also consistent with the data collected. Several survey questions in the program, resident, and mentor surveys asked about the residency year or referred to it as having two halves. Respondents whose programs were not structured that way had to answer as best they could.

differences were small—the tenth of a day increase in the number of days spent full time in the mentors’ classroom corresponds to the average resident spending roughly an hour more time in the mentor’s classroom, for example..

What did residents do on the days they were not in their mentor’s classroom full time or taking courses? Observing other teachers’ classes was one common activity that took the residents out of their mentor’s classroom (see section E below).

Table V.2. How Residents Spent Their Time in a Typical Five-Day School Week

Number of Days Spent	Percentage of Residents	
	First Half of Year	Second Half of Year
Full time in mentor’s classroom		
0	4.5	5.7
1	0.9	0.3
2	9.6	5.4
3	17.4	10.8
4	53.9	59.9
5	13.8	17.8
Mean number of days full time in mentor’s classroom	3.6	3.7*
Part time in mentor’s classroom, part time elsewhere		
0	49.8	55.8
1	31.1	31.0
2	11.4	8.6
3	3.1	0.0
4	1.9	3.1
5	2.8	1.5
Mean number of days part time in mentor’s classroom, part time somewhere else	0.8	0.7*
Full time out of mentor’s classroom		
0	43.1	45.5
1	54.5	52.6
2	2.5	0.0
3	0.0	0.3
4	0.0	0.9
5	0.0	0.6
Mean number of days full time out of mentor’s classroom	0.6	0.6

Source: Resident survey.

Notes: Significance tests were conducted to compare the mean number of days spent full time in mentor’s classroom, part time in mentor’s classroom, and full time out of mentor’s classroom in the two halves of the residency year. Sample size = 325–334.

*Statistically different from the mean for the first half of the year ($p < .050$, two-tailed test).

3. Structure and Number of Resident–Classroom Mentor Matches

The 30 programs in the study implemented three models for matching residents with mentors:

- **Resident assigned to one classroom mentor all year.** In the most common model, 20 programs paired one resident with one mentor for the full year.
- **Resident assigned to different classroom mentors each half of the year.** In the second most common model, nine programs relied on sequential matches by pairing each resident with more than one mentor—most typically, with one mentor in the fall

semester and a different mentor in the spring semester. In addition to changing mentors midyear, some programs may have intentionally changed residents' assignments in other ways to provide them with more experiences. Asked how the typical second residency assignment compared with the first, seven directors in the nine programs said that the assignment involved a different school, eight said that the assignment involved a different grade, four said it covered different subject(s) or course(s), and six said it involved students with different characteristics or performance levels.

- **Resident assigned to several classroom mentors all year.** The third model, used by one program, matched each resident with several mentors simultaneously, with the assignments lasting for the whole residency period. Residents apparently divided their time between two or more classrooms or were assigned to team teachers in the same classroom.

The first model apparently places a premium on consistent, long-term associations between mentors and residents as a way to foster residents' teaching skills. In contrast, both the second and third models apparently place a premium on diverse experiences and the chance to learn from observing different mentors, possibly in different circumstances.

The first model was the most common for the residents we surveyed in the 12 purposefully selected programs. About 70 percent of residents said they had been assigned to a single mentor for the full residency; about 17 percent said they had been assigned to two mentors, spending one half of the residency with each; and 13 percent indicated some "other" type of residency experience.⁴⁴ Examples of these "other" experiences include being assigned to more than two mentors (4 percent), having two mentors simultaneously for the entire year (3 percent), and becoming the teacher of record before completion of the residency year (1 percent).

C. Residency Assignment Process

Residency assignments involve three entities—residents, mentors, and schools—but the process for finding and bringing these entities together can play out differently across or even within programs. The 15 programs randomly chosen for interviews followed one of two approaches:

1. **Target schools first.** Thirteen programs first target a particular set of high-need schools, identify potential mentors in those schools, and then facilitate matches between particular residents and particular mentors.
2. **Target classroom mentors first.** The other two programs look first for potential mentors—not necessarily in a defined set of schools, perhaps in almost any high-need school—and then facilitate resident-mentor matches.

Directors of programs that targeted a particular set of schools in which to place residents reported an average of about eight schools in the set and placed an average of 90 percent of their

⁴⁴ Administrative data collected from the 12 purposefully selected programs generally substantiate residents' reports. According to the programs, more than 80 percent of residents remained with their mentor for the entire year; they were mentored either in a one-on-one relationship (about 53 percent) or simultaneously with another resident for at least a portion of the year (29 percent). Programs reported that, compared with the proportion that remained with their mentors for the entire year, a smaller proportion of residents switched mentors midyear. According to the programs, about 15 percent of residents had two mentors—one for fall and one for spring; these residents were mentored either one-on-one or through sharing with another resident for at least part of the year.

2011 residents in these schools. In making assignments, program staff may consider and emphasize a variety of both tangible and intangible factors to varying degrees, as follows:

- **Tangible factors.** Directors mentioned trying to find a mentor in the appropriate grade level (11 directors) and subject area (9 directors) for the resident’s teaching interest, and trying to select a location convenient for the resident (5 directors).
- **Intangible factors.** Ten directors said they consider the mentor’s personality or teaching style and look for a match that complements the resident’s personality or needs.

In addition, program staff may exert varying levels of control over resident-mentor matches, giving residents and mentors more or less say in assignment decisions.

- **Program staff generally appeared to have the primary voice in deciding on residency placements, but some considered residents’ or classroom mentors’ wishes.** Of the 15 directors interviewed, 8 said that residents have some say about the *school* to which they would like to be assigned, and 5 said that residents have some say about the *mentor* to whom they would like to be assigned. In addition, 7 directors said mentors have some say about the residents assigned to them.
- **Classroom mentors typically had residents assigned to them.** In the purposeful sample of 12 programs, 86 percent of mentors reported that their current or most recent resident was assigned to them; the others (14 percent) indicated that they selected their current or most recent resident.
- **Most residents were involved in determining certain aspects of their residency assignment.** In the purposeful sample of 12 programs, half of the residents reported some level of involvement in the decision regarding the school to which they were assigned; 80 percent reported some involvement in the decision regarding the grade level for their residency, including about 16 percent who said they were very involved in the decision; and 84 percent reported some involvement in the decision regarding the subject area of their residency, including about 44 percent who said they were very involved (Table V.3).

Table V.3. Residents’ Level of Involvement in Determining Key Aspects of Residency Placements

Area of Involvement	Percentage of Residents Saying They Were:			
	Not Involved at All	Somewhat Uninvolved	Somewhat Involved	Very Involved
Residency school	50.3	15.2	24.4	10.1
Residency grade	20.5	20.2	43.8	15.6
Residency subject area	15.9	9.1	31.4	43.6

Sources: Resident survey.

Note: Sample size = 352–356.

D. Residency Assignments of 2011 Entry Cohort

In this section, we describe the characteristics of the schools where residencies took place as well as the grade levels and subject areas taught by classroom mentors.

1. School Characteristics

In the schools where residents served their residency, substantial proportions of students were racial/ethnic minorities, came from low-income families, and were below proficiency in reading and math (Table V.4). In the average resident's school, about 36 percent of students were black, about 51 percent were Hispanic, and 19 percent were English-language learners. About three-quarters of students in the average resident's school were eligible for the free and reduced-price lunch program. Proficiency rates on state reading and math exams were about 52 percent and 58 percent, respectively. Some of these characteristics may reflect the TRPs' requirement to serve high-need schools. (A comparison of the characteristics of residents' schools and other schools in the same districts appears in section C of the appendix.)

Table V.4. Characteristics of Residents' Schools

	In the Average Resident's School, Percentage of Students Who Were:
Black	35.7
Hispanic	50.6
Eligible for free or reduced-price lunch	76.1
English-language learners	18.7
Proficient in reading	52.1
Proficient in math	57.5
Sample Size	265–340

Sources: Common Core of Data for 2010–2011 and state and district websites.

2. Grade Levels

Judging from the grade levels their mentors reported teaching, residents were placed across the full range of elementary and secondary grade levels, from pre-kindergarten to grade 12 (Table V.5). A plurality of mentors (about 40 percent) reportedly taught students in grades 9–12; slightly fewer (39 percent) taught students in elementary grades, and just under a fifth (19 percent) taught students in middle grades.

Although mentor survey respondents spanned the full range of grade levels, it was fairly common for TRPs to specialize in placing residents in certain grade levels. For example, 30 percent of program directors reported placing a majority of their 2011 residents in elementary grades (PK–5), including three programs with all their residents at this level. One program director reported placing a majority of its residents in grades 6–8, and one-third of programs reportedly placed more than half of their residents in grades 9–12, including four with all of their residents at the high school level. Possible explanations for this type of specialization include the small size of many programs and their attendant lack of capacity for training teachers for every level, and the preference of some partner districts to focus on certain high-need grade levels.

Table V.5. Grade Levels Taught in Classroom Mentors' Classes

Grades	Percentage Teaching Each Level
Elementary only (grades pre-K through 5)	38.8
Middle only (grades 6 through 8)	18.8
High school only (grades 9 through 12)	39.9
Several grade-level categories (checked grades in 2 or 3 of the above categories)	2.5

Source: Mentor survey.

Note: Sample size = 356.

3. Subject Areas

The majority of mentors (55 percent) reported most recently mentoring residents in departmentalized classes, defined as classes in which the mentor taught “several classes of different students all or most of the day in one or more subjects.” The remaining mentors reportedly taught self-contained classes, defined as “the same group of students all or most of the day in multiple subjects” (39 percent), or taught in pull-out/push-in settings, defined as “a small number of selected students released from their regular classes in specific skills to address specific needs” (6 percent). Given that self-contained and pull-out teachers often teach more than one subject (and could have checked many of the subjects listed in the survey), we examined only the subjects identified by departmentalized teachers; this approach allowed us to identify with greatest precision the subject areas taught in residency placement classrooms. Among these mentors, the two most common subjects taught were math and science, each reported by about 37 percent of mentors (Table V.6). About a third taught English, language arts, or reading; about a quarter taught social studies. Almost 15 percent were special education teachers. These findings provide some sense of what subjects the six partner districts of the 12 programs considered high need.

Table V.6. Subject Areas Covered in Classroom Mentors' Departmentalized Residency Placement Classes

Subject	Percentage Teaching Subject ^a
Math	37.5
Science	37.0
English, language arts, or reading	32.8
Social studies	24.5
Special education	14.6
English as a second language, or special instruction for English-language learners or limited English-proficient students	16.7
Art, music, or physical education	3.1
Resource	2.6
Foreign language	0.0

Source: Mentor survey.

Note: Sample size = 192. Sample is limited to mentors who reported teaching departmentalized classes in their residency placement classes.

^aColumn does not sum to 100 because respondents selected all that applied.

E. Resident Activities and Experiences

In describing residents' activities during their residencies, we now focus on (1) residents' instructional responsibilities, (2) their interactions with classroom mentors, (3) their interactions with other mentors or coaches, (4) their observations of teachers other than their classroom mentors, and (5) their interactions with other residents.

1. Residents' Instructional Responsibilities

Given that residencies aim to prepare TRP participants to become full-time teachers—to learn the craft of teaching through discussion, observation, coaching, and increasing practice—we first describe the degree of responsibility assumed by residents for various instruction-related activities in the two halves of a residency year. We also describe the amount of time they devoted to delivering instruction. In a few instances, we delve deeper into the data, examining program-level variation in the findings.

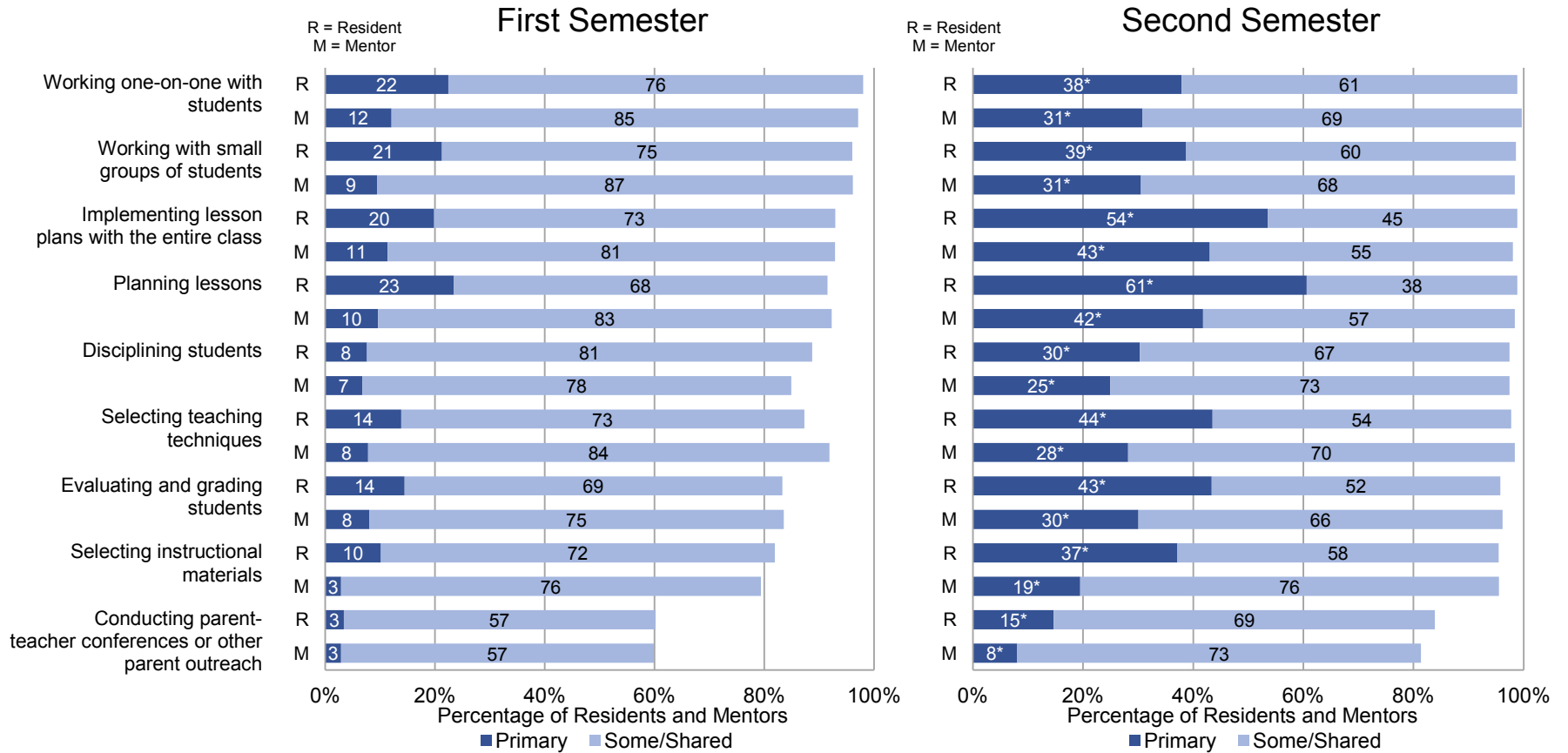
a. Level of Responsibility for Instruction-Related Activities in Residency Classroom

In the first half of the year, residents rarely had primary responsibility for any given instructional activity (Figure V.1). In every case, a majority of both residents and mentors reported that residents either assumed partial responsibility for an instructional activity or shared responsibility equally with their mentors. Lesson planning was the activity for which the largest share of residents reported having primary responsibility (23 percent).

Over time, according to their own report and that of their mentors, residents appeared to take on increasing levels of responsibility for instructional activities. In the second half of the year, in the case of all nine activities we asked about, the percentage of residents reporting primary responsibility increased, compared with the first half of the year; in all cases the increases were statistically significant. In the second half of the year, more than 40 percent of residents reported primary responsibility for four of the nine activities listed on the surveys: selecting teaching techniques, planning lessons, evaluating and grading students, and implementing lessons with the entire class. Also, for every activity we asked about, the percentage of mentors reporting that their residents had primary responsibility increased in the second semester relative to the first; in all cases the increases were statistically significant.

For more insight into residents' self-reported responsibilities, we examined variation across programs for seven activities—those most closely related to instruction—in the second half of the year. The results appear in section C.3 of the appendix.

Figure V.1. Residents' Level of Responsibility for Nine Instruction-Related Activities, from Residents' and Classroom Mentors' Perspectives, by Semester



Source: Resident and mentor surveys.

Notes: Sample size = 351–354 for residents and 307–313 for mentors. The “Some/Shared Responsibility” category includes two response options from the survey: “Some Responsibility” and “Responsibility Shared Equally with Mentor.” The omitted response option is “Little or No Responsibility.”

*Percentage reporting primary responsibility in second semester is larger than percentage reporting primary responsibility in first semester by a statistically significant margin ($p < .001$, two-tailed test).

b. Amount of Time Spent Delivering Instruction

Before summarizing what the purposeful sample of residents reported on the amount of time they spent in charge of instruction, we provide a broader perspective on programs' expectations for the time residents would spend delivering instruction.

Teaching Residency Programs' Expectations

Forty-three percent of program directors in the full sample reported that they expected residents to be fully in charge of the classroom for a minimum number of days in the first half of the residency (an average of 10.2 days), and 57 percent of programs had such an expectation in the second half of the year (an average of 19.2 days). Of the 12 purposefully selected programs, five directors (42 percent) reported that they expected residents to be fully in charge for a minimum number of days in the first half of the year (an average of 7.8 days), and 33 percent expected residents to be fully in charge in the second half of the year (an average of 24.8 days). As a point of comparison, it is worth considering another recent Institute of Education Sciences project. Constantine et al. (2009), in studying a purposeful sample of 88 elementary teachers from 53 traditional certification programs, found that these teachers were reportedly expected to spend a minimum of 23 days, on average, fully in charge of their classrooms during their student teaching experience, which typically lasted one college term (ranging from 10 to 21 weeks).

Residents' Reports

Residents' reports suggest that they spent a substantial proportion of their residency year engaged in instruction, and that their involvement in instruction increased over time.

Number of days in charge of instruction. Residents in the 12 purposefully selected programs reported being fully in charge of their residency classroom for 21 full-length school days, on average, during the first half of their residency. Residents also reported that they were fully in charge of their residency classroom for an average of 37 days during the second half of their residency, a 76 percent increase. With the assumption of a 36-week residency year divided in equal halves, the numbers average about 1.2 days per week fully in charge during the first half and about 2.1 days per week fully in charge during the second half.

A plurality of residents (29 percent) reported spending between 10 and 19 full-length days in charge of their residency classroom during the first half of the year, and a slight plurality (28 percent) reported spending between 20 and 39 days in charge during the second half, although a virtually equal proportion (27 percent) reported spending 60 days or more in charge (Figure V.2, top panel). Another indicator of rising instructional responsibilities is that the mean number of days residents reported spending fully in charge of their residency classroom increased from approximately 21 days in the first semester to 37 days in the second semester. This difference was statistically significant ($p < .050$, two-tailed test).

Percentage of time in charge of instruction. Residents reported teaching or leading instruction for about 40 percent of the time, on average, during the first half of their residency, and about 64 percent of the time, on average, during the second half. The distributions around these means ranged from 0 to 100 percent.

Asked about the share of their time they spent in charge of their residency classroom, teaching or leading instruction, 39 percent of residents reported spending between 25 percent and 49 percent of their time this way during the first half of the year; more responses fell in this range than in any other range used in the analysis (Figure V.2, bottom panel). For the second half of the year, more responses (38 percent) fell in the range of 50 to 74 percent of time in charge of instruction than in any other range used in the analysis. Another indicator of increasing instructional responsibilities is that the percentage of time residents reported teaching or leading instruction increased from 40 percent in the first semester to 64 percent in the second semester. This difference was statistically significant ($p < .001$, two-tailed test).

These analyses suggest considerable variation in the amount of time residents spent teaching and leading instruction. To explore whether some of this variation might be a function of varying practices across programs, we examined residents' reports separately by program in the second half of the residency. Across programs, the mean number of days that residents reported being fully in charge of instruction ranged from 20 days (about 4 weeks) to 57 days (close to 12 weeks). The percentage of time residents reported teaching or leading instruction ranged from about 50 percent to 80 percent across programs. These data suggest that some of the variation in the full sample of residents could have resulted from average differences among the 12 programs.

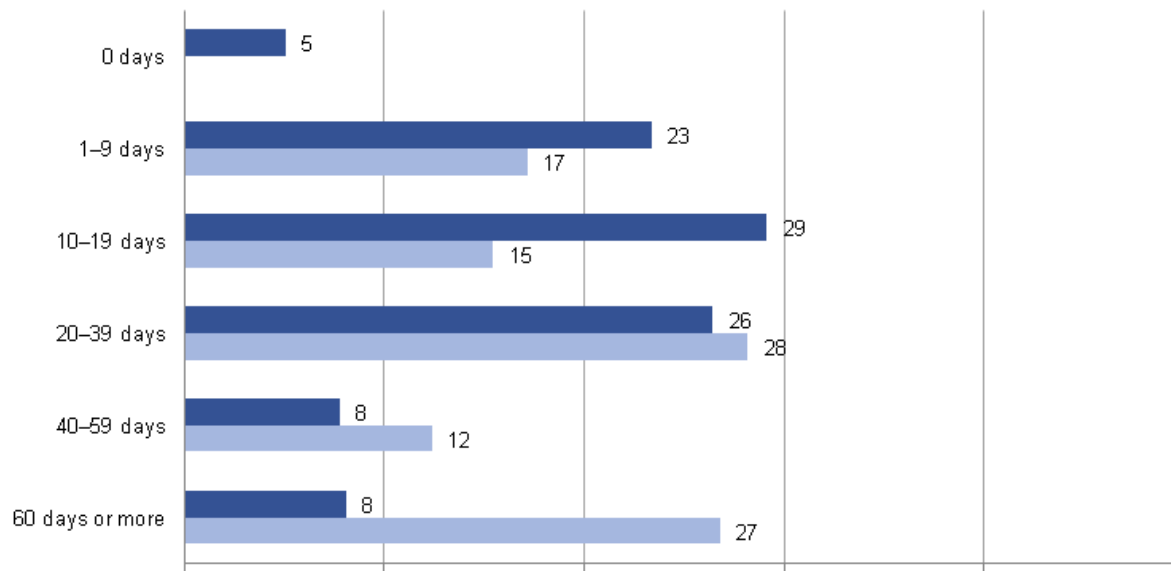
2. Resident-Classroom Mentor Interactions

Residents and mentors appear typically to have interacted for a variety of purposes on at least a weekly basis in both the first and second halves of the residency year (Figure V.3). According to both residents and mentors, the two issues discussed most often in both halves of the year were strategies for effective instruction and strategies for effective classroom management. Substantial majorities of the two groups (from about 70 percent to more than 90 percent) reported that at least weekly, they discussed students' learning needs or styles, students' progress, and how to assess students' progress. These interactions suggest that mentors were providing frequent guidance on a range of topics that may help residents cope with the demands of teaching.

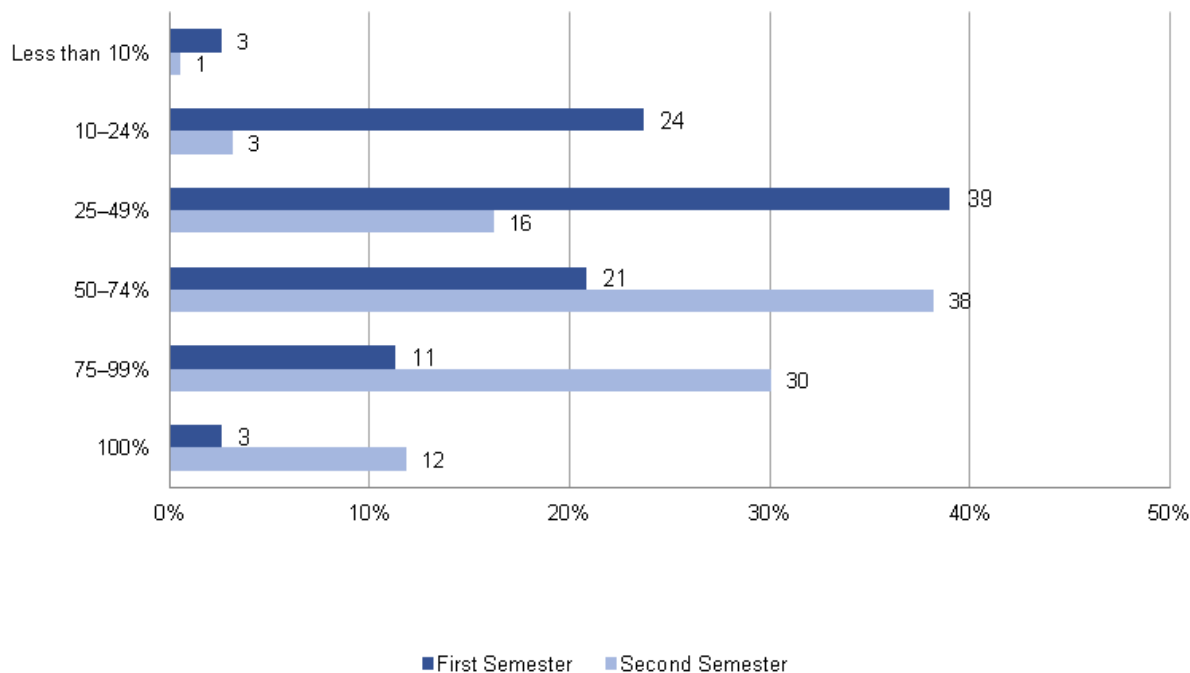
Overall, the results presented in Figure V.3 also suggest that patterns of resident-mentor interactions tend to be relatively stable over time. Aggregate responses from each group appear to have been fairly consistent across the two halves of the year. For all interactions reported separately by mentors and residents, a larger proportion of mentors than residents reported that interactions took place daily or weekly. Whatever level of guidance mentors provided to their residents—through discussions or other forms of assistance—they appear to maintain roughly that same level over time, even as residents take on more teaching duties.

Figure V.2. Number of Days Residents Were Fully in Charge of Classroom and Percentage of Time Residents Spent Teaching or Leading Instruction, by Semester

Days Fully in Charge



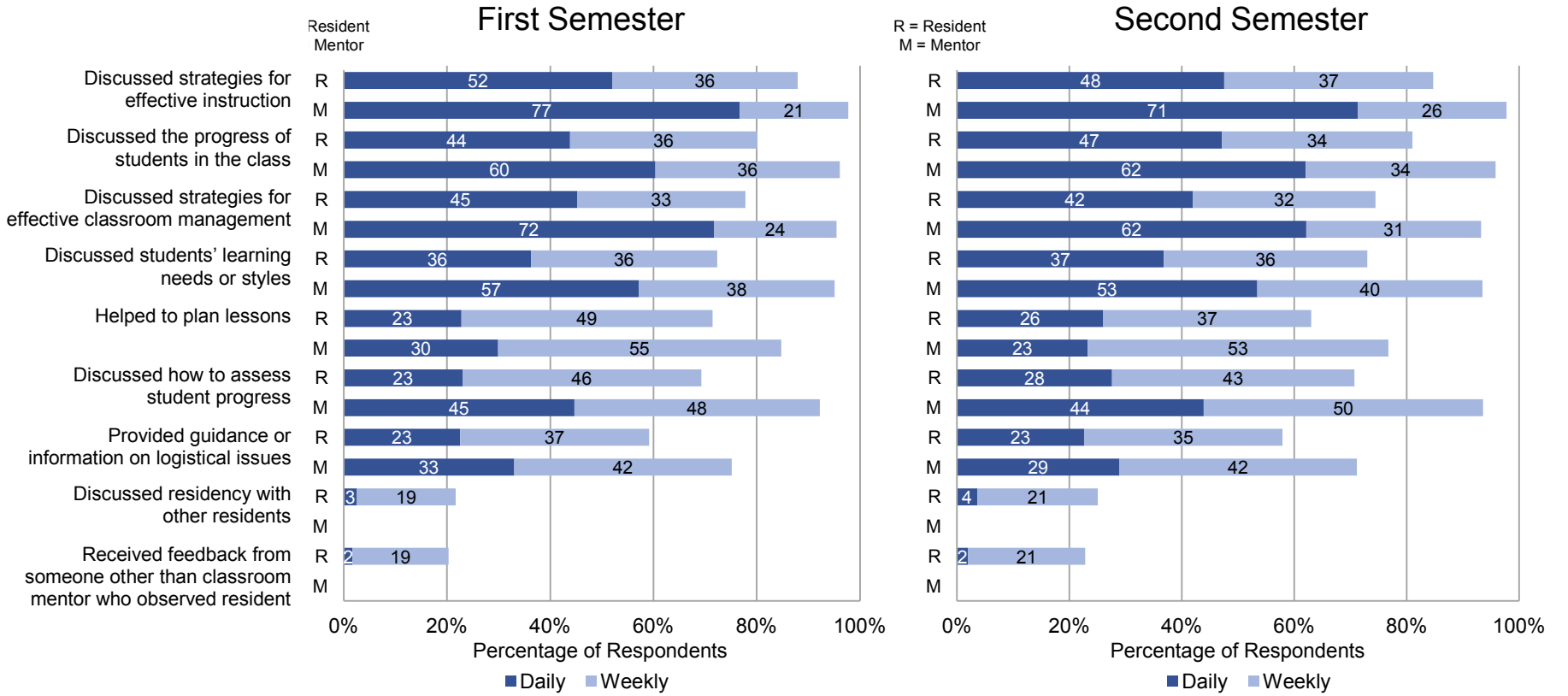
Percentage of Time Teaching/Leading Instruction



Source: Resident survey.

Notes: Sample size = 295-346.

Figure V.3. How Often Residents and Classroom Mentors Interacted with One Another



Source: Resident and mentor surveys.

Notes: Sample size = 346–355 for residents and 305–310 for mentors.

3. Residents' Interactions with Other Mentors or Coaches

Classroom mentors typically were not the only program-provided support staff who offered support to residents during their residencies. Virtually all residents reportedly interacted in one way or another with a program-provided coach or mentor other than their classroom mentor. About 24 percent of all residents reported working with a TRP math content coach, and about 31 percent had a TRP reading content coach.⁴⁵ In addition, about 94 percent of all residents reported being assigned to some other type of TRP coach or mentor, a category encompassing three types of support staff listed in the resident survey: (1) informal coaches (someone who provides mentoring, listening, advice, sounding-board reactions, or other help in an unstructured, casual manner on a regular basis, usually not assigned to a particular resident); (2) TRP cohort coaches (advisors or coordinators assigned by the program to the group of residents entering the program in the same year who may provide formal or informal mentoring, listening, or advice related to the residency, coursework, or connections between the two, either to residents individually or in a group); and (3) any other type of mentor or coach specified by the respondent.

Overall, residents' interactions with support staff reportedly tended to occur on a daily or weekly basis. Residents reported that the least common type of support received daily or weekly from support staff in all three categories was useful feedback on lesson plans. We provide additional details below on residents' interactions with support staff, based on data shown in Table V.7.

- **Interactions with teaching residency program math content coaches.** About three-fourths (74 percent) of residents with a math content coach reported receiving at least one type of support (out of 10 types listed in the survey) daily or weekly. The support that most residents received daily or weekly from these coaches was encouragement or moral support (60 percent).
- **Interactions with teaching residency program reading content coaches.** About 59 percent of residents with a reading content coach reported receiving at least one type of support daily or weekly. The support type that most residents received daily or weekly from these coaches was opportunities to raise issues/discuss individual concerns (51 percent).
- **Interactions with other coaches or mentors.** About three-fourths (78 percent) of residents with another type of coach or mentor reported receiving at least one type of support daily or weekly. The support that most residents received daily or weekly from the other coaches or mentors was encouragement or moral support (71 percent).

4. Residents' Observations of Teachers Other than Their Classroom Mentor

A common activity for residents was to conduct observations in classrooms other than their mentor's, suggesting that even residents with one mentor for the whole year often had exposure to other teaching models. More than 9 out of 10 residents (92 percent) reported observing a teacher other than their own mentor at least once during their residency. These residents reported conducting an average of 12.6 observations, which equates to one observation roughly every three

⁴⁵ As shown in Table III.8, 60 percent of programs did not have math coaches on staff and 73 percent did not have reading coaches on staff. Also, some residents may not have needed math or reading content coaches because they were not being trained to teach these subjects. Just 58 percent and 57 percent of mentors reported teaching math and reading, respectively, regardless of classroom format (departmentalized, self-contained, pull-out, or some other format).

Table V.7. Type and Frequency of Support Residents Received from Teaching Residency Program Coaches and Mentors Other than Their Classroom Mentor

Type and Frequency of Support	Among Residents with Each Type of Coach, Percentage Receiving Support		
	TRP Math Content Coach	TRP Reading Content Coach	Any Other Type of Mentor or Coach ^a
Any supports daily or weekly ^b from coach	74.1	59.3	77.5
Specific supports daily or weekly ^b from coach:			
Useful suggestions to improve resident's practice	56.6	47.7	63.4
Encouragement or moral support	59.5	50.5	71.4
Opportunities to raise issues/discuss individual concerns	55.4	51.4	67.6
Useful guidance on teaching to meet state or district standards	56.6	35.8	47.3
Assistance in identifying teaching challenges and possible solutions	54.8	43.0	58.6
Discussion of instructional goals and help in developing realistic plans for achieving them	48.8	37.4	51.1
Useful guidance on how to assess students informally on a daily basis	47.6	41.5	48.5
Sharing of lesson plans, assessments, or other instructional activities	47.6	38.0	41.7
Useful feedback on lesson plans	31.8	28.7	38.1
Encouragement to develop teaching style	54.1	44.4	62.5
Sample Size	83–85	106–108	331–333

Source: Resident survey.

^aThis category includes TRP cohort coaches, informal coaches, and any other type of coach or non-classroom mentor.

^bOmitted response options are "Monthly," "A Few Times During the Residency Year," "Upon Request as Needed," and "Never."

weeks during a 36-week school year. The typical observation lasted 77 minutes, on average. Together, these findings suggest that residents who conducted such observations spent, on average, a total of 16.2 hours engaged in this activity over the residency period. Moreover, for many residents, these observations appear to have been optional. Forty-two percent of residents indicated that all of the observations were optional or suggested. The remainder reported that some or all of the observations were required as a part of the TRP.

Even though the observations may not have been mandatory, findings suggest that they were a fairly structured development activity for residents. A large majority of residents who observed teachers other than their own mentor reportedly received guidance from a mentor or instructor on what to observe in the classroom (86 percent), and a similar proportion debriefed with a mentor or instructor afterward (86 percent).

5. Resident-Resident Interactions

Most residents met at least monthly with other residents in their program—both those assigned to their own school and those assigned to other schools—to discuss various topics, such as lesson plans or assessments (Table V.8). The most common subject for resident meetings, among the four listed in the resident survey, was lesson plans; 87 percent of residents reportedly had at least one such meeting, and about 38 percent discussed lesson plans with one another at least once a week. The least common subject for resident meetings was curriculum development; 77 percent met at least once with peers to discuss this subject, and of this group about 27 percent reported discussing it at least weekly. Residents may have met with their peers when they were not in their mentor’s classroom or engaged in program activities (such as conducting observations in another teacher’s classroom, interacting with other mentors or coaches, or attending required courses or workshops). If two or more residents were assigned to a single mentor simultaneously, they might have met with one another while they were in their mentor’s classroom. Various interactions could have taken place because of program requirements, such as scheduled meetings, but also could have occurred more naturally among residents assigned to the same school. Regardless, meetings among residents were one sign of collaboration among participants—a goal of the cohort grouping practice described in Chapter I. Finally, interactions among residents also could have taken place in formats or settings they would not consider “meetings,” so the results presented here may be a lower bound on an estimate of the frequency of resident-resident interactions.

Table V.8. Frequency and Purpose of Residents’ Meetings with Other Residents

Purpose of Meeting	Percentage of Residents Meeting Other Residents:		
	Never	Three Times a Month or Less ^a	Weekly or More Often ^b
To discuss lesson plans	12.6	49.7	37.7
To discuss curriculum development	23.5	50.0	26.5
To discuss individual children	21.6	37.3	41.1
To discuss assessments	20.8	50.3	28.9
Other	88.4	2.3	9.3

Sources: Resident survey.

Note: Sample size 342–344.

^aIncludes response options “Once a Month or Less” and “Two or Three Times a Month.”

^bIncludes response options “Weekly,” “Once or Twice a Week,” and “Daily.”

F. Residents’ Persistence Through Residency and Placement as Teachers

Not all residents complete their residency or become full-time teachers. Among programs in the study whose directors reported data on participants admitted in 2010, of the 23 individuals who enrolled on average, about 20 reportedly completed the residency and about 18 became full-time teachers (Table V.9). The same pattern held for programs reporting on a 2009 entry cohort, though the net retention rate was higher. It is unclear how these retention rates compare to those of other types of teacher preparation programs.

Data collection for the study did not address the reasons for participant attrition. Thus, we do not know the extent to which residents left entirely of their own accord or were encouraged to

withdraw or “counseled out” by program staff. In addition, we do not know whether residency completers who did not become full-time teachers faced a lack of suitable job openings, postponed their entry into teaching, became *part-time* teachers, or simply were not hired to fill positions for which they applied. Partner districts were supposed to have sufficient demand for the teachers trained in the TRPs so they could hire the participants who committed to teaching there for at least three years, as a condition of accepting a living stipend.

Programs apparently had different ways of working with partner districts when securing full-time teaching placements for their graduates. Fewer than a third of the programs (30 percent) indicated in the program survey that they “had a contract with any school district(s) to employ a certain number of graduates from [their] program per year.” The other programs might have entered into different types of agreements or arrangements with their partner districts, perhaps not as formal or official as a “contract.” In addition, some contracts might not have specified the number of program graduates to be hired by the districts each year.

Table V.9. Retention of Residents in Teaching Residency Program and Placement into Teaching

Stage	Average Number of Participants to Reach Stage	
	2010 Entry Cohort	2009 Entry Cohort
Enrolled	23	28
Completed residency	20	26
Became full-time teacher	18	24
Sample Size (number of programs reporting)	25–27	5–7

Source: Program survey.

Programs also offered different levels of assistance to individuals seeking a teaching placement. Eleven of the 15 directors in the interview sample agreed with a statement posed in the interview, that residency completers typically have to look for a position “but receive a fair amount of guidance or assistance from partner organizations”; three directors agreed that in their programs, residency completers typically are “assigned to a school and don’t have to look” for a position; and one director agreed with the statement that residency completers “are mostly on their own, with relatively little help from partner organizations.”

G. Summary of Key Findings

Most TRPs assigned each resident to one classroom mentor for the full residency year, during which residents typically spent four days per week full time with their mentor and had to complete an average of 335 hours of coursework.

- **Each program in the study reportedly used one of three models for residency assignments.** One model (used by 20 programs) paired a resident with one mentor for the full residency. A second model (used by 9 programs) paired a resident with two or more mentors sequentially—most typically with one mentor in the fall semester and another in the spring semester. A third model (used by one program) paired a resident with multiple mentors simultaneously, with the assignments lasting for the whole residency.

- **Most residents did not spend all five days of a typical school week full time with their mentor.** During the first half of their residency, for example, most residents (about 54 percent) reported typically spending four days full time in their mentor's classroom. Activities that took place outside the classroom included master's degree coursework, workshops and other meetings, and observations of other teachers. About 92 percent of residents said they had observed a teacher other than their mentor during their residency, and they reported doing so an average of 12.6 times, which equals about one observation every three weeks during a 36-week school year.
- **Program directors in the interview sample reported requiring their participants to complete an average of 450 hours of coursework, with a range of 218 to 649 hours.** Assuming that a typical college course involves about 45 hours of instruction (3 hours per week for 15 weeks), the average program's total coursework is roughly equivalent to 10 courses. Coursework scheduled during the residency period averaged 335 hours. For a typical residency lasting one full school year (about 36 weeks), 335 hours of instruction would average out to just over 9 hours per week.

Residents reportedly took on substantial instructional responsibilities, and their responsibilities increased over time.

- **Residents reported being fully in charge of their residency classroom for an average of 21 full-length school days during the first half of the year and an average of 37 days during the second half.** In addition, the percentage of residents and mentors reporting that residents had primary responsibility for each of nine instruction-related activities, such as planning lessons and working with small groups of students, increased from the first to the second half of the year.

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VI. TEACHING ASSIGNMENTS AND EXPERIENCES OF NOVICE TEACHERS FROM TEACHING RESIDENCY PROGRAMS AND OTHER PROGRAMS

In this chapter, we describe some major on-the-job experiences of novice teachers from the 12 purposefully selected teaching residency programs (TRPs) and novice teachers from other programs who teach in the same six partner districts. In the first section, we describe the characteristics of the schools where they taught in spring 2012, as well as the grade levels and subjects they were teaching. In the second section, we focus mainly on the type and extent of support services they received during the 2011–2012 school year, including coaching, mentoring, professional development, and administrators’ observations of their classrooms. In the final section, we describe the teachers’ interactions with other novice teachers. The teacher-level analyses compare TRP and non-TRP teachers and assess whether the differences in the groups’ responses were statistically significant. Some analyses were performed separately for first- and second-year teachers.

A. Teaching Assignments

TRP teachers’ assignments differed from those of non-TRP teachers in one or more ways in each of the three dimensions we examined: school characteristics, grade levels taught, and subject areas taught.

1. School Characteristics

The characteristics of the schools where the two groups taught differed in some ways that may reflect TRPs’ and partner districts’ practice of placing program graduates in high-need schools (Table VI.1). Note, however, that districts did not necessarily use these same characteristics in determining which schools were high need. The differences between schools specified below are statistically significant.

- **Race/ethnicity.** The two groups’ schools had differing racial/ethnic profiles. In the average TRP teacher’s school, about 43 percent of the students were black, whereas in the average non-TRP teacher’s school, about 26 percent were black. In the average TRP teacher’s school, about 45 percent of the students were Hispanic, whereas in the average non-TRP teacher’s school, about 55 percent were Hispanic.
- **English-language learners.** TRP teachers’ schools had a smaller proportion of students who were English-language learners. In the average TRP teacher’s school, about 18 percent of the students were English-language learners, whereas in the average non-TRP teacher’s school, 24 percent were English-language learners.
- **Low-income families.** The schools where TRP teachers taught were somewhat more economically disadvantaged, based on the average eligibility rate of their students for the national school lunch program. In the average TRP teacher’s school, about 79 percent of the students were eligible for a free or reduced-price lunch, whereas in the average non-TRP teacher’s school, 73 percent were eligible.
- **Academic performance.** Based on the percentage of students deemed proficient in reading and math, academic performance was about the same at TRP teachers’ schools and non-TRP teachers’ schools. In both sets of schools, reading and math proficiency rates were roughly 50 percent.

The proportion of teachers who were in a primary, middle, or high school did not differ between the two groups. Approximately half of the teachers in each group were assigned to a primary school, and almost 30 percent of each group taught in a high school.

Table VI.1. Characteristics of Novice Teachers' Schools

Characteristic	TRP Teachers' Schools	Non-TRP Teachers' Schools	<i>p</i> -Value of Difference
Average percentage of students in school who are:			
Black	42.8	26.3	0.000
Hispanic	44.9	54.8	0.000
Eligible for free or reduced-price lunch	78.7	73.1	0.000
English-language learners	17.9	24.4	0.000
Proficient in reading	48.9	50.5	0.300
Proficient in math	53.5	51.4	0.218
School Level ^a			
Primary	50.1	52.7	0.473
Middle	10.6	13.9	0.187
High school	29.3	27.1	0.525
Other level	10.0	6.2	0.084
Sample Size	255–341	230–274	

Sources: Teacher-of-record survey, Common Core of Data for 2010–2011, and state and district websites.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^aThe Common Core of Data definitions of these levels are as follows. “Primary” is a school with a low grade of PK–3 and a high grade of PK–8; “middle” is a school with a low grade of 4–7 and a high grade of 4–9; “high school” is a school with a low grade of 7–12 and a high grade of 12; “Other level” is a school that did not fit into any of these categories, including ungraded schools.

2. Grade Levels

Novice TRP teachers and their non-TRP counterparts were about equally likely to report teaching students in elementary grades and middle grades (Table VI.2). However, TRP teachers were more likely than non-TRP teachers to be teaching in grades 9–12 (about 42 percent versus 31 percent), a difference that was statistically significant.

3. Subject Areas

Overall, TRP teachers were more likely than non-TRP teachers to be teaching one or more core subjects, defined to include math, science, social studies, English language arts, and English as a second language (about 95 percent versus 83 percent, a statistically significant difference, $p < .001$). This finding gives some sense of what subjects the six partner districts of these 12 programs considered to be high need when placing TRP teachers.

Table VI.2. Grade Levels Taught by Novice Teachers

Grades	Percentage Who Teach This Level ^a		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
Elementary grades (pre-K to 5)	38.8	35.1	0.296
Middle grades (6 to 8)	17.1	22.8	0.062
Elementary and middle grades (pre-K to 8)	2.4	9.3	0.000
High school grades (9 to 12)	41.5	30.5	0.002
Other ^b	0.3	2.3	0.013
Sample Size	381	285	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^aThe grade ranges listed in this table were created to simplify the presentation.

^bRespondents in this category checked either (1) one or more grades in the elementary range and one or more in the high school range, (2) one or more grades in the middle grade range and one or more in the high school range, or (3) one or more grades in all three ranges.

We limited our examination of subjects taught by novice teachers to departmentalized teachers only, who accounted for about 59 percent of TRP novices and 53 percent of non-TRP novices. This approach excluded self-contained and pull-out/push-in teachers, who often teach multiple subjects and could have checked many of the individual subjects listed in the survey; it therefore allows a cleaner look at subjects taught by novice teachers than would otherwise be possible.⁴⁶ Both TRP and non-TRP teachers were spread widely across subject areas rather than concentrated in any one or two subjects, but a plurality of each group—about 37 percent of TRP novices and 29 percent of non-TRP novices—reported teaching math (Table VI.3). In only three cases were there statistically significant differences between the subjects taught by departmentalized teachers from each group. First, departmentalized TRP novices were more likely to be teaching science (about 32 percent versus 22 percent). Second, departmentalized TRP novices were less likely to be teaching art, music, or physical education (about 2 percent versus 13 percent). Third, departmentalized TRP novices were less likely to be teaching a foreign language (about 1 percent versus 5 percent). Departmentalized TRP teachers were also more likely to report teaching math and English language arts, but these were not statistically significant differences. These findings give another sense of what the six districts viewed as high-need subjects when placing TRP teachers.

⁴⁶ As defined in the survey, “self-contained classes” involve “the same group of students all or most of the day in multiple subjects”; “pull-out/push-in classes” involve “a small number of selected students released from their regular classes in specific skills to address specific needs”; and “departmentalized classes” involve “several classes of different students all or most of the day in one or more subjects.” About 35 percent of TRP teachers and 38 percent of non-TRP teachers were teaching self-contained classes.

Table VI.3. Subjects Taught by Novice Teachers of Departmentalized Classes

Subject	Percentage Who Teach This Subject ^a		p-Value of Difference
	TRP Teachers	Non-TRP Teachers	
Math	36.7	28.6	0.114
Science	31.7	22.0	0.050
English, language arts, or reading	31.7	23.2	0.082
Social studies	18.6	19.6	0.813
Special education	16.7	12.4	0.242
English as a second language, or special instruction for English-language learners or limited English-proficient students	12.7	6.2	0.051
Art, music, or physical education	1.8	12.5	0.000
Resource	0.9	1.6	0.536
Foreign language	0.9	5.3	0.010
Other	6.8	13.3	0.037
Sample Size	221	145	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^aColumns do not sum to 100 because respondents selected all that applied.

B. Type and Extent of Support for Novice Teachers

TRP directors reported offering various support services to their novice teachers, and some of those teachers reported receiving more support than non-TRP novices. The Teacher Quality Partnership Grants Program guidelines specify that TRP teachers are supposed to receive two years of induction support and that programs may, but are not required to, offer support services to other teachers in the same districts where program participants are teaching.

1. Services Provided by Teaching Residency Programs

The 30 programs in the study generally made certain support services available to all of their participants and, in some cases, to other teachers as well. Those that offered a given service to their participants tended to do so less than once a week (Table VI.4). The most common support, reportedly offered by 90 percent of the programs, was formal mentoring. All the programs offering this support said they made it available to all their participants, and a quarter of this group (seven programs) offered it to other new teachers at the same schools as well. Most of the programs offering formal mentoring (56 percent) provided it to their participants either monthly or one or two times per semester. The least common support, though it was still offered by 73 percent of the programs, was content area professional development. All the programs offering this support said they made it available to all their participants, and about 64 percent of this group (14 programs) also offered it to other new teachers at the same schools. About two-thirds of the programs offering content area professional development (68 percent) said they provided it to their participants either monthly or one or two times per semester.

Table VI.4. Types of Support That Teaching Residency Programs Made Available to Their Graduates and Other Teachers

Availability	Percentage of Programs Offering		
	Formal Mentoring	Content Area Professional Development	Pedagogical Professional Development
Provided or made available at all	90	73	80
Among programs that provide or make it available:			
Provided to all participants or any who want it	100	100	96
Participants receive it daily or weekly ^a	26	23	21
Participants receive it monthly or 1–2 times per semester	56	68	71
Provided or made available to other new teachers at the TRP novice teachers' schools	26	64	61

Source: Program survey.

Note: Sample size = 30.

^aFive respondents marked “other”; of these, four indicated the service was provided as needed or on request.

2. Support Reported by Novice Teachers

The type and amount of support that first- and second-year TRP teachers reported does not appear, on the whole, to be substantially different from that reported by their non-TRP peers in the same districts. As discussed below, relatively few of the comparisons yielded statistically significant differences. In contrast with their comparison groups, first-year TRP teachers more often were observed teaching by a school administrator, and second-year TRP teachers more often were observed teaching by a mentor/coach. Second-year TRP teachers were also more likely than their non-TRP counterparts to be assigned to a mentor/master teacher or field supervisor, and to report that this support person was affiliated with their program.

a. Working with Various Types of Support Staff

Large majorities (about 80 percent) of both TRP and non-TRP first-year teachers reported being assigned during the study year to a mentor/master teacher or a field supervisor (defined in the survey as individuals who “have teaching experience or expertise and provide information, advice, support, coaching, and feedback to newer teachers”) (Table VI.5). In contrast, a minority of both TRP and non-TRP second-year teachers reported being assigned to a mentor/master teacher or a field supervisor during the study year; in this case, however, the difference between the two groups was statistically significant (49 percent versus about 37 percent). This finding suggests that TRP teachers maintain these support relationships longer than non-TRP teachers, perhaps because TRPs provide a two-year induction program to their former residents. Among second-year novices with a mentor/master teacher or a field supervisor, TRP teachers were more than twice as likely as non-TRP teachers to report that the support person was affiliated with their teacher preparation program (46 percent versus 21 percent). First-year TRP teachers were also more likely than first-year non-TRP teachers to report being supported by someone affiliated with their program, but this was not a statistically significant difference.

Table VI.5. Types of Support Staff Who Worked with Novice Teachers During the 2011–2012 School Year

	First-Year Teachers			Second-Year Teachers		
	TRP (Sample size)	Non-TRP (Sample size)	p-Value of Difference	TRP (Sample size)	Non-TRP (Sample size)	p-Value of Difference
Percentage assigned to a mentor/ master teacher or field supervisor ^a	81.5 (243)	79.2 (131)	0.621	49.3 (138)	36.5 (149)	0.046
Among those assigned a mentor/ master teacher or field supervisor, percentage whose mentor/master teacher or field supervisor was a: ^b						
Teacher from same school	46.2 (197)	49.8 (102)	0.507	44.8 (67)	48.3 (52)	0.703
Administrator from same school	14.2 (197)	23.5 (102)	0.060	19.4 (67)	18.0 (52)	0.866
Teacher or administrator not from same school and not affiliated with teacher preparation program	25.9 (197)	28.5 (102)	0.625	11.9 (67)	12.7 (52)	0.926
Faculty or staff member affiliated with teacher preparation program	44.2 (197)	34.1 (102)	0.092	46.3 (67)	21.2 (52)	0.010
Percentage who worked with: ^b						
Math coach	22.4 (241)	18.4 (133)	0.396	18.8 (138)	20.5 (147)	0.748
Reading/literacy coach	31.1 (241)	33.6 (133)	0.632	34.1 (138)	29.9 (147)	0.503
Other type of coach ^c	73.4 (241)	66.4 (133)	0.194	60.1 (138)	55.7 (147)	0.513

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^aMentor/master teachers and field supervisors were defined in the survey as individuals who “have teaching experience or expertise and provide information, advice, support, coaching, and feedback to newer teachers.”

^bRespondents marked all the types of mentor/master teachers, field supervisors, or coaches they had, so percentages may not sum to 100.

^cThis category includes cohort coaches (undefined in the survey), and informal coaches (someone who “provides mentoring, listening, or advice in an unstructured, casual manner on a regular basis”).

Among the TRP teachers in each cohort, roughly 20 percent reported working with a math coach and roughly 30 percent with a reading coach. In addition, majorities of each TRP cohort (73 percent of first-year teachers and 60 percent of second-year teachers) reported working with some other kind of coach—a category that included both cohort coaches (undefined in the survey) and informal coaches (defined as someone who “provides mentoring, listening, or advice in an unstructured, casual manner on a regular basis”). The non-TRP teachers were roughly equally likely to report working with these support staff.

b. Type and Extent of Support Services from Mentors/Coaches

A large majority of both first-year TRP teachers (93 percent) and second-year TRP teachers (80 percent) reported working formally or informally with some type of mentor or coach during the study year, compared with about 89 percent and 70 percent, respectively, of their non-TRP peers. These were not statistically significant differences (Table VI.6). For the various types of support we

asked about (having a chance to observe a mentor/coach or being observed by one, getting oral or written feedback after observations, or discussing professional issues formally or informally), first-year TRP teachers generally received about the same amount of support as their non-TRP counterparts. The one exception was that, after being observed, first-year TRP teachers reportedly received more total hours of oral feedback (5.5 versus 3.2 hours), a difference that was statistically significant. Second-year TRP teachers were reportedly observed by a mentor/coach for more total hours than their non-TRP peers (6.5 versus 3.7 hours) and received more total hours of oral feedback following observations (3.5 versus 2.0 hours). They also reported formally discussing professional issues with their mentor/coach for significantly more total hours (6.8 versus 3.2 hours). These differences were statistically significant and are consistent with the finding, reported above, that second-year TRP teachers were more likely than their non-TRP counterparts to have a mentor/master teacher or a field supervisor.

Table VI.6. Type and Amount of Support Novice Teachers Received from Mentors or Coaches During the 2011–2012 School Year

	First-Year Teachers			Second-Year Teachers		
	TRP (Sample size)	Non-TRP (Sample size)	p-Value of Difference	TRP (Sample size)	Non-TRP (Sample size)	p-Value of Difference
Percentage who worked formally or informally with any type of mentor/coach	93.4 (242)	88.6 (131)	0.154	80.4 (138)	69.5 (148)	0.060
For novices who worked with any mentor/coach, average number of times or hours various activities occurred, if applicable:						
Mentor/coach observed classroom teaching (Total number of hours)	8.7 (217)	6.8 (110)	0.151	6.5 (106)	3.7 (94)	0.038
Mentor/coach gave oral feedback following observations of classroom teaching (Total number of hours)	5.5 (207)	3.2 (106)	0.005	3.5 (103)	2.0 (86)	0.031
Mentor/coach gave written feedback based on observations (Number of times)	6.4 (222)	5.5 (112)	0.381	5.0 (110)	4.1 (96)	0.312
Met with mentor/coach formally to discuss professional issues (Total number of hours)	8.1 (205)	6.3 (106)	0.134	6.8 (97)	3.2 (94)	0.016
Met with mentor/coach informally to discuss professional issues (Total number of hours)	3.3 (201)	3.2 (102)	0.948	2.8 (97)	1.8 (87)	0.118
Observed the classroom teaching of mentor/coach (Total number of hours)	0.7 (217)	1.3 (108)	0.158	1.1 (106)	1.8 (94)	0.576
Mentor/coach provided other kinds of support (Number of times)	9.0 (222)	10.9 (112)	0.311	18.0 (110)	6.3 (96)	0.306

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^a“Mentoring” was defined in the survey as “a formal or informal learning relationship, usually between two individuals, where the mentor has experience or expertise in a particular area and provides information, advice, support, and feedback to the teacher. Literacy and mathematics coaches or lead teachers often take on the role of mentor for teachers.”

c. Observations by School Administrators

First-year TRP teachers reported being observed by their principal or assistant principal more times than their non-TRP counterparts (Table VI.7). A plurality of the TRP teachers, or 37 percent, reported being observed five or more times during the school year, compared with about 21 percent of their non-TRP counterparts—a difference that was statistically significant. Second-year TRP teachers were also more likely than their non-TRP counterparts to report being observed five or more times (about 24 percent versus 14 percent), although this difference was not statistically significant.⁴⁷

Table VI.7. Number of Times Principals or Assistant Principals Observed Novice Teachers' Teaching During the 2011–2012 School Year

Number of Classroom Observations	Percentage of First-Year Teachers			Percentage of Second-Year Teachers		
	TRP	Non-TRP	<i>p</i> -Value of Difference	TRP	Non-TRP	<i>p</i> -Value of Difference
0	5.8	7.5	0.526	4.3	5.5	0.707
1–2	29.0	37.9	0.108	31.9	37.6	0.356
3–4	27.8	34.0	0.251	39.9	43.0	0.633
5 or more	37.3	20.5	0.002	23.9	13.8	0.065
Sample Size	241	132		138	149	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

d. Participation in Professional Development

First-year TRP novices reported participating in district- or school-sponsored professional development on more days than their non-TRP counterparts in the same six districts (Table VI.8). Across the full sample of first-year teachers, TRP novices reported attending such sessions on about 50 percent more days (17.6 versus 11.8 days)—a statistically significant difference. The first-year TRP teachers who participated in this type of professional development reportedly did so for an estimated total of about 78 hours, on average—more than their non-TRP counterparts, who totaled about 48 hours, although this was not a statistically significant difference. Second-year TRP teachers' involvement in district- or school-sponsored professional development was not statistically greater or less than that of second-year non-TRP teachers.

⁴⁷ Comparative context for some of the findings reported in this section and the preceding one is offered by a recent Institute of Education Sciences study (Constantine et al. 2009), which gathered information on the training and first-year teaching experiences of 87 elementary teachers who attended a purposefully selected set of 28 alternative certification programs, and 88 teachers from the same schools who had attended 53 traditional certification programs. That study found that traditional certification teachers were reportedly observed in action during their student teaching experience an average of seven times, for a total of about 10 hours. Roughly 92 percent of the alternative certification teachers and 72 percent of the traditional certification teachers reported having a mentor during their first year of teaching.

Table VI.8. Novice Teachers' Participation in District- or School-Sponsored Professional Development During Summer 2011 and the 2011–2012 School Year

	First-Year Teachers			Second-Year Teachers		
	TRP	Non-TRP	<i>p</i> -Value of Difference	TRP	Non-TRP	<i>p</i> -Value of Difference
Average number of days of participation for any length of time, for full sample (including those who reported participating on 0 days)	17.6	11.8	0.000	13.2	12.1	0.455
Percentage who participated in any (reported attending for at least 1 day)	97.0	93.1	0.113	93.5	92.7	0.812
Average total hours of professional development (only for those who received any) ^a	77.8	47.5	0.091	49.4	44.5	0.344
Sample Size	227–237	120–134		128–138	135–146	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^aTotal hours of professional development are calculated by multiplying number of days reported by average hours per session reported.

C. Interactions with Other Novice Teachers

Compared to their non-TRP counterparts, first-year TRP teachers appeared to meet more often with other first- or second-year teachers to discuss various teaching matters (Table VI.9). Three differences were statistically significant: (1) a higher percentage of TRP teachers than non-TRP teachers met with novice peers at least weekly to discuss lesson plans, (2) a lower percentage of TRP teachers than non-TRP teachers never met to discuss curriculum, and (3) a lower percentage of TRP teachers than non-TRP teachers never met to discuss assessments. It is unclear whether these possibly greater interactions reflect a continuation of the collaboration among TRP teachers begun when they were in their residencies, as the survey question did not specify interactions with teachers from the same training program the respondent had attended. These first-year TRP teachers simply could have developed the habit of discussing matters with their colleagues and carried it over to their full-time teaching assignments on their own, or they could have been in schools where leaders fostered such interaction—possibly in relation to their status as high-need schools. However, it should be noted that second-year TRP teachers did not meet with other novice teachers more or less often for any of the four listed purposes than did their non-TRP counterparts.

Table VI.9. Purpose and Frequency of Novice Teachers' Meetings with Other Novice Teachers During the 2011–2012 School Year

Purpose of Meeting Frequency	Percentage of First-Year Teachers			Percentage of Second-Year Teachers		
	TRP	Non-TRP	<i>p</i> -Value of Difference	TRP	Non-TRP	<i>p</i> -Value of Difference
To discuss lesson plans						
Never	13.8	21.7	0.074	19.0	13.3	0.290
Three times a month or less ^a	33.5	39.2	0.304	35.0	35.4	0.952
Weekly or more often ^b	52.7	39.1	0.020	46.0	51.3	0.444
To discuss curriculum development						
Never	13.0	28.1	0.001	18.8	12.4	0.220
Three times a month or less ^a	43.9	39.4	0.435	49.3	43.8	0.427
Weekly or more often ^b	43.1	32.5	0.063	31.9	43.8	0.073
To discuss individual children						
Never	10.4	18.1	0.052	17.4	10.0	0.140
Three times a month or less ^a	32.9	31.5	0.796	31.2	33.3	0.745
Weekly or more often ^b	56.7	50.4	0.278	51.4	56.7	0.444
To discuss assessments						
Never	12.5	21.6	0.035	17.5	9.5	0.117
Three times a month or less ^a	53.3	50.1	0.592	57.7	57.2	0.948
Weekly or more often ^b	34.2	28.3	0.288	24.8	33.2	0.175
Sample Size	239–240	134–135		137–138	145–147	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^aThis category includes the response options “Once a Month or Less” and “Two or Three Times a Month.”

^bThis category includes the response options “Once a Week” and “More Than Once a Week.”

D. Summary of Key Findings

Assignments for novice TRP teachers and other novices in the same districts differed in ways that may reflect the TRP teachers' greater likelihood of being placed in high-need grades, subjects, and schools.

- **Novice TRP teachers were more likely than non-TRP teachers to report teaching grades 9 to 12 in spring 2012 (about 42 percent versus 31 percent).** They were no more or less likely to report teaching grades PK to 5, and no more or less likely to report teaching grades 6 to 8.
- **Novice TRP teachers differed from novice non-TRP teachers in subjects taught.** Among the novice teachers who led departmentalized instruction (about 59 percent of the TRP teachers and 53 percent of the non-TRP teachers), TRP novices were more likely than non-TRP novices to report teaching science (about 32 percent versus 22 percent); less likely to teach art, music, or physical education (about 2 percent versus 13 percent); and less likely to teach a foreign language (about 1 percent versus 5 percent). A plurality of each group—about 37 percent of TRP novices and 29 percent of non-TRP novices—taught math, but this was not a statistically significant difference.

- **The schools of novice TRP and non-TRP teachers differed in terms of the percentage of students eligible for a free or reduced-price lunch and the percentage of English-language learners, but did not differ based on a measure of student achievement.** In the average TRP teacher's school, more students were eligible for a free or reduced-price lunch than in the average non-TRP teacher's school (79 percent versus 73 percent). In contrast, the proportion of students that were English-language learners was lower in the average TRP teacher's school than in the average non-TRP teacher's school (about 18 percent versus 24 percent). In both groups of schools, about 50 percent of the students were proficient in reading, and about 50 percent were proficient in math.

Novice TRP and non-TRP teachers in the same six districts often reported receiving support services and, in a few instances, the TRP teachers received more.

- **About 80 percent of both TRP and non-TRP first-year teachers reported being assigned to a mentor/master teacher or field supervisor during the 2011–2012 school year. Second-year TRP teachers, however, were more likely than their non-TRP counterparts to have worked with these support staff (49 percent versus about 37 percent).** In addition, among those who worked with this type of support staff, the second-year TRP teachers were more likely than their non-TRP counterparts to describe the supporter as affiliated with their teacher preparation program (46 percent versus about 21 percent). These findings suggest that TRP teachers maintain these support relationships longer than non-TRP teachers, possibly reflecting the TRPs' delivery of a two-year induction program to former residents.
- **TRP teachers in each cohort were neither more nor less likely than their non-TRP counterparts to report having worked with a math or reading coach during 2011–2012.**
- **First-year TRP teachers were observed by their principal or assistant principal more times than were their non-TRP counterparts during the 2011–2012 school year.** TRP teachers were more likely to report having been observed five times or more (37 percent versus about 21 percent). Among second-year teachers, we found no statistically significant differences in the reported number of such observations.
- **First-year TRP teachers reported participating in professional development sessions more frequently during the 2011–2012 school year, on average, than their non-TRP counterparts (about 18 versus 12 days).** Nearly all members of these two groups (97 percent and 93 percent, respectively) participated in professional development on at least one day. First-year TRP teachers who participated in professional development did so for more total hours than their non-TRP counterparts (about 78 versus 48 hours), although this was not a statistically significant difference. Similar analyses of second-year teachers showed no statistically significant differences in any measures of their participation in professional development.

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VII. RESIDENTS' AND NOVICE TEACHERS' VIEWS ON TEACHING RESIDENCY PROGRAMS AND TRAINING EXPERIENCES

In this chapter, we first describe resident teachers' views on their experiences in the teaching residency programs (TRPs). Second, we present residents' and their mentors' views on how prepared the residents were to teach. Third, we compare TRP and non-TRP novice teachers' opinions on their respective training programs and on how prepared they felt when they first started teaching. Finally, we compare the two novice groups' overall job satisfaction and their estimates of how likely they were to leave teaching within a few years. All information is drawn from surveys conducted in the 12 purposefully selected programs and their six partner districts. Comparisons of TRP and non-TRP teachers assess whether differences between the groups were statistically significant.

A. Residents Had Largely Favorable Views on Their Training Experiences

Residents had favorable views on their mentors. A majority of residents agreed or strongly agreed with each of 14 positively phrased statements about their mentor's contribution to their training (Figure VII.1); for 6 items, a majority strongly agreed. Residents seemed especially to appreciate their mentors for being easily approachable and providing encouragement—both in general and in helping them to develop their own teaching style.

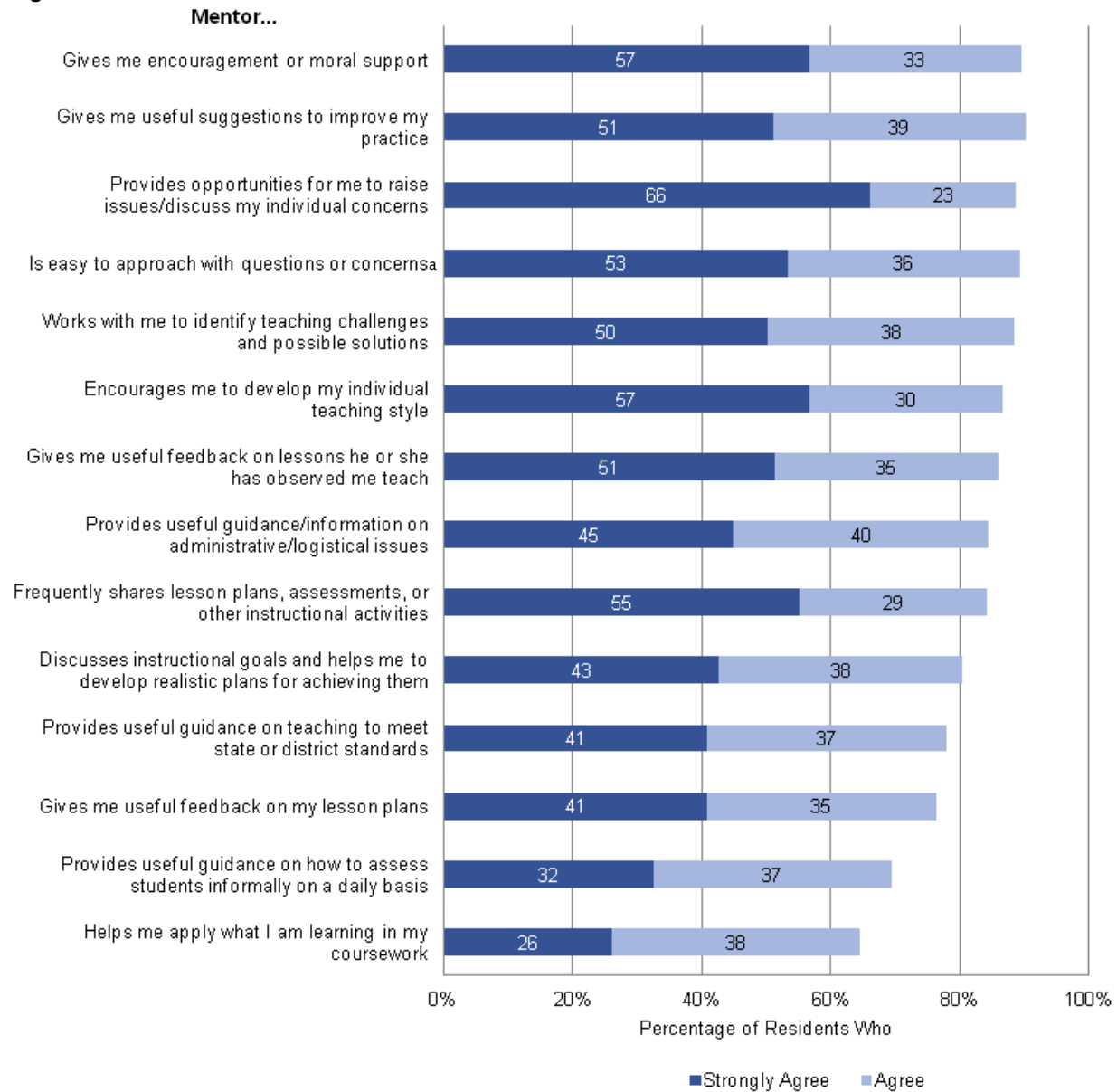
The statement with which the smallest percentage of respondents agreed was “Helps me apply what I am learning in my coursework.” This result is worth remarking on, given that integration of coursework and practice teaching is considered a key objective of TRPs. It suggests that having mentors help their residents apply what they are learning in their coursework may be relatively more difficult to achieve than other objectives, such as having mentors be supportive or offer useful guidance and feedback. We return to the issue of integration of coursework and fieldwork below.

Residents also had positive views of other components or aspects of their programs, including the usefulness of the courses and the usefulness of interactions with other residents. They were somewhat less positive about the integration of coursework and fieldwork and the time commitment required by these programs, as detailed below.

1. Instructional Offerings

Residents generally felt that their courses were useful, ranging from 65 percent who agreed or strongly agreed that the coursework prepared them well to teach English-language learners to 91 percent who agreed or strongly agreed that the coursework on pedagogy was useful (Figure VII.2).

Figure VII.1. Residents' Views on Their Classroom Mentors

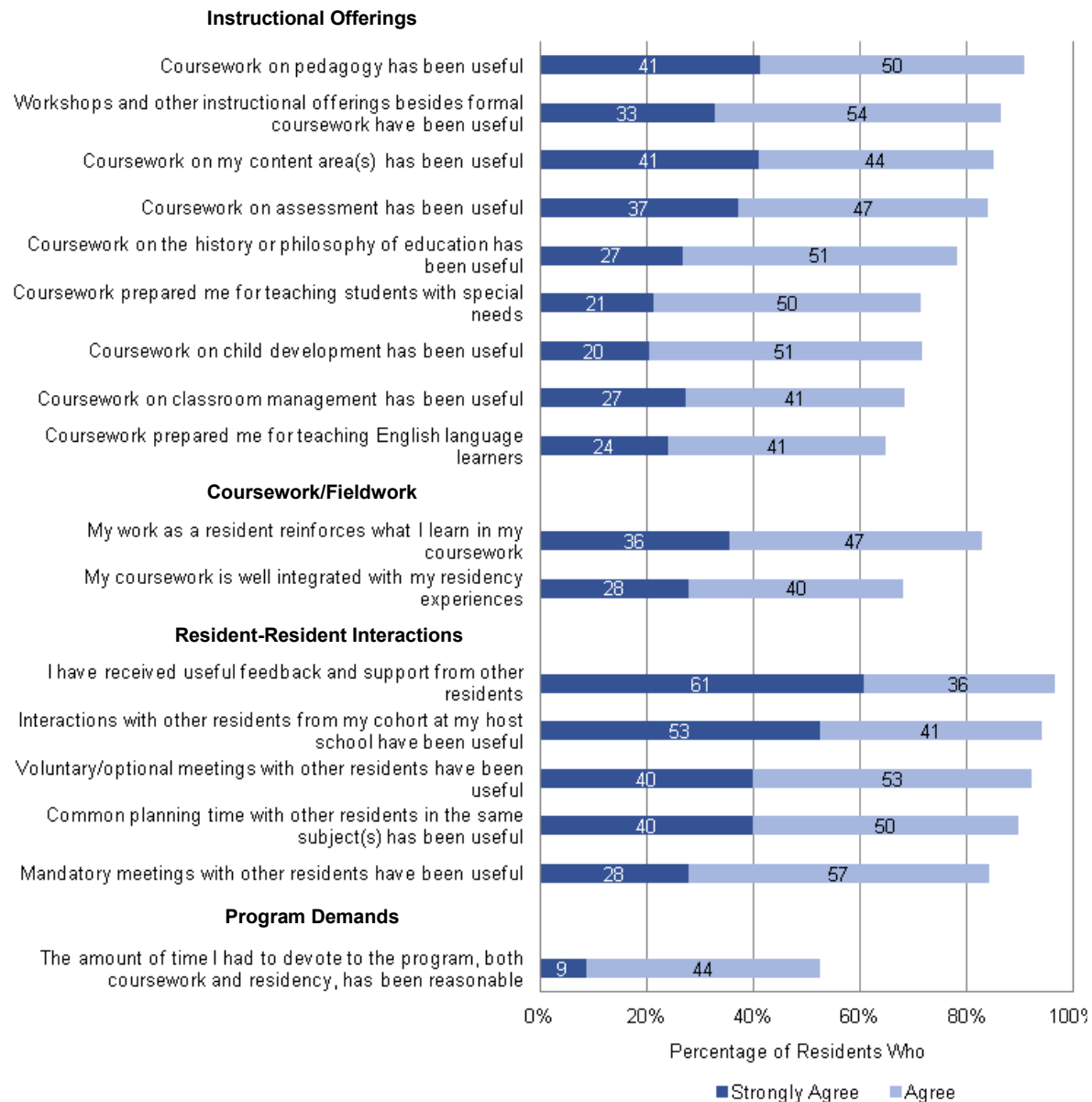


Source: Resident survey.

Notes: Sample size = 353–356. Omitted response options are “Disagree” and “Strongly Disagree.” The question instructed residents to “think about your current or most recent classroom mentor.”

^aThe original wording of this item was “I feel comfortable approaching my classroom mentor with questions or concerns”; the wording was changed for this figure to make it consistent with all of the other items, which began with the phrase “My classroom mentor...”

Figure VII.2. Residents’ Views on Their Experiences in Teaching Residency Programs



Source: Resident survey.

Notes: Sample size = 279–354; for the most part, the variability in sample size across items is not due to missing data but to the fact that we dropped respondents who checked “Not Applicable,” which was a response option for all but three items listed (“My coursework is well integrated with my residency experiences”; “My work as a resident teacher reinforces what I learn in my coursework”; and “The amount of time I had to devote to the program, both coursework and residency, has been reasonable”). Omitted response options are “Disagree” and “Strongly Disagree.”

2. Integration of Coursework and Fieldwork

Just over four-fifths of residents agreed or strongly agreed that their work as a resident teacher reinforced what they learned in their coursework (Figure VII.2). This assessment implies a more integrative experience than the one reflected in residents' response to the statement, reported above, that mentors helped them apply what they were learning in their coursework. About two-thirds of residents agreed or strongly agreed with that statement. In addition, two-thirds agreed or strongly agreed with the statement "My coursework is well integrated with my residency classroom experiences." Because integrating coursework with the classroom experience is a key goal of the TRPs, we explored whether certain factors might be associated with residents' responses to these three survey items. The evidence from this analysis is only suggestive, since an association between a particular program characteristic and the degree of integration between coursework and fieldwork need not be a causal relationship.

- **Continuous or sequential mentoring.** Might residents who remain with one mentor all year be more likely to feel their coursework and residency are well integrated than those who switch mentors midyear? We found no evidence to support this supposition. In fact, residents who stayed with one mentor the entire year were less likely than their peers who switched mentors to agree with two of the three survey statements about integration. Specifically, 79 percent of residents who switched mentors reported that their coursework was well-integrated with their residency classroom experiences, compared to 64 percent of residents who stayed with one mentor ($p = .005$); 93 percent of residents who switched mentors reported that their work as a resident teacher reinforced what they learned in their coursework, compared to 79 percent of residents who stayed with one mentor ($p = .002$). These differences were statistically significant. For the third survey statement, about mentors helping residents apply what they are learning in coursework, about equal proportions of residents in the two groups agreed or strongly agreed.
- **Program age.** Might older programs generally have more success in integrating coursework and fieldwork than younger programs? We found no evidence to support this supposition. Residents in older programs (those that were operating prior to 2009) were *less* likely than those in programs that began in 2009 or later to report that they agreed or strongly agreed with three statements about the integration of the residency and coursework experiences. Specifically, 61 percent of residents in older programs reported that their coursework was well-integrated with their residency classroom experiences, compared to 77 percent of residents in newer programs ($p = .001$); 78 percent of residents in older programs reported that their work as a resident teacher reinforced what they learned in their coursework, compared to 88 percent of residents in newer programs ($p = .013$); and 60 percent of residents in older programs reported that their classroom mentor helped them to apply what they were learning in their coursework, compared to 70 percent of residents in newer programs ($p = .038$). All three differences were statistically significant.
- **Program.** Might some programs succeed more than others at creating integrative experiences for residents, regardless of program age? The evidence suggests that residents in some programs felt their coursework and fieldwork were better integrated than did residents in others. For the item "My coursework is well integrated with my

residency experiences,” the percentage of residents agreeing or strongly agreeing ranged from 43 percent to 94 percent, with a generally even distribution in between. For the item “My work as a resident teacher reinforces what I learn in my coursework,” the percentage of residents in agreement ranged from 65 percent to 96 percent across programs, again with a relatively even distribution.

3. Interactions with Other Residents

Residents generally felt that their interactions with their peers were useful, ranging from 85 percent who agreed or strongly agreed that mandatory meetings with other residents were useful to 97 percent who agreed or strongly agreed that they had received useful feedback and support from other residents (Figure VII.2).

4. Teaching Residency Program Demands

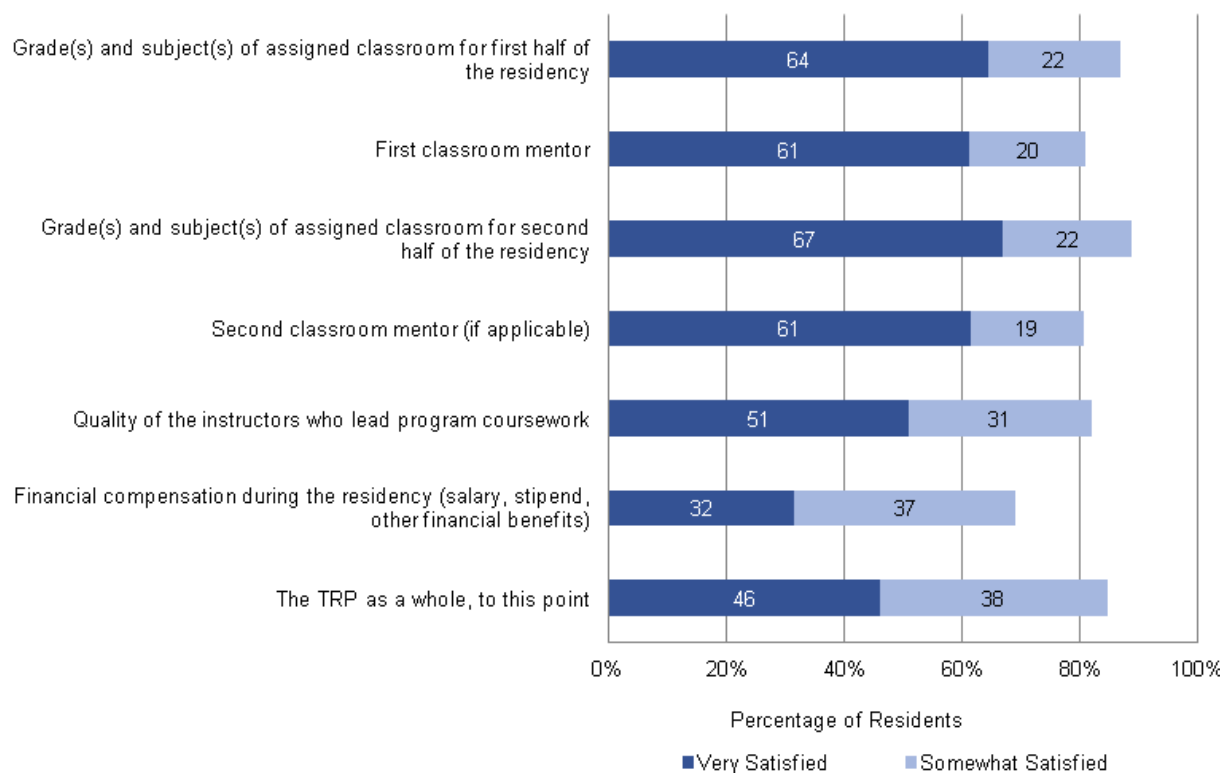
A bare majority (53 percent) agreed or strongly agreed that the amount of time they had to devote to the coursework and residency was reasonable, with only 9 percent strongly agreeing (Figure VII.2). To view this another way, 47 percent felt that the time commitment was not reasonable.

Finally, most residents were satisfied with their residency experiences, key program staff, and their TRPs overall. Almost half (46 percent) reported being “very satisfied” with their program as a whole, and another 38 percent reported being “somewhat satisfied” (Figure VII.3). (The level of overall satisfaction among residents varied by program, with a range of 67 percent to 100 percent.) Eighty-six percent to 89 percent were satisfied with the grade level and subject in the classroom(s) where they served their residency (first and second half of residency, respectively). Eight of 10 residents were satisfied with their first mentor (which for most was also their only mentor); those who had a second mentor were about equally satisfied with him or her. Eight of 10 of residents also were satisfied with the quality of course instructors. Just over two-thirds (69 percent) were satisfied with the financial benefits they received.

Perhaps more important than opinions about past experiences in TRPs are opinions about the future—specifically, how prepared the residents felt they were to handle a range of possible duties when they became teachers-of-record in a few months. We discuss this topic next.

B. Residents Saw Themselves, and Classroom Mentors Saw Their Residents, as Generally Well Prepared to Become Full-Time Teachers

In spring 2012, the residents, most of them nearing the end of their residency, felt that they were prepared to teach on their own, and more generally felt confident in their abilities as they entered the profession. Most reported feeling either “well prepared” or “very well prepared” to take on each of nine instruction-related activities (listed in Figure VII.4). The two activities for which residents most frequently reported being well or very well prepared were collaborating with others on curriculum, planning, and student issues (87 percent); and teaching the subject matter (88 percent). The activity for which they felt least prepared was using technology in their teaching (68 percent).

Figure VII.3. Residents' Satisfaction with Specific Elements of Their Teaching Residency Programs, and Overall

Source: Resident survey.

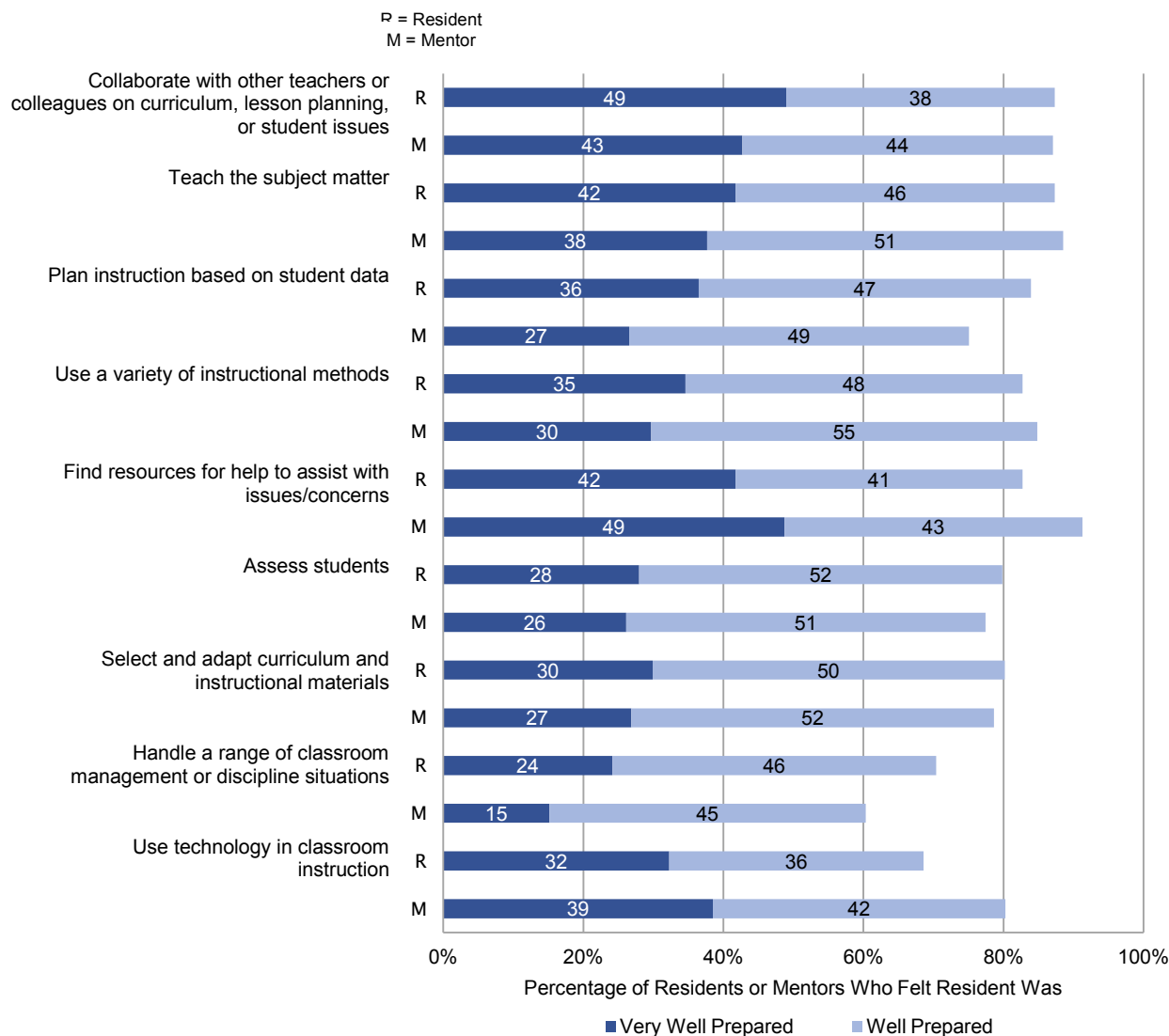
Notes: Sample size = 334–345 for all items except for “Second classroom mentor,” which had a sample size of 205 because it was not applicable for some residents. Omitted response options are “Neither Satisfied nor Dissatisfied,” “Somewhat Dissatisfied,” and “Very Dissatisfied.”

For more insight into how prepared residents felt to take on various teaching activities, we examined variation across programs for nine activities—those listed in Figure VII.4. The results appear in section C.4 of the appendix.

Mentors' survey responses suggest that mentors were roughly as confident in their residents as the residents were in themselves (Figure VII.4). Summed across the two response categories, the mentors' responses were lower than those of the residents in all but two cases, but all of the results were within 10 percentage points. The two items on which mentors appeared to have more confidence in their residents than the residents had in themselves were the residents' abilities to find helpful resources (92 percent versus 83 percent) and to use technology in classroom instruction (81 percent versus 68 percent).

Residents' opinions about their level of preparedness could, of course, prove unfounded. After they begin teaching, they might find themselves more or less prepared than they anticipated. As an indicator of how well the TRPs prepare their participants, the opinions of those who actually made the transition to full-time teaching would be particularly important. We address novice teachers' opinions in the next section.

Figure VII.4. How Prepared Residents Were to Take on Various Teaching Activities, as of Spring 2012, According to Themselves and Their Classroom Mentors



Sources: Resident and mentor surveys.

Notes: Sample size = 347–348 for residents, 305–310 for mentors. Omitted response options are “Somewhat Well Prepared” and “Not Prepared.” This analysis includes responses from mentors only if they served as a mentor in the second half of the residency year for their program’s 2011 entry cohort. We dropped other mentors because they would have been rating their resident’s preparedness for only the first half of the training process, which presumably would exert a downward bias on the results.

C. Novice Teaching Residency Program Teachers Generally Were More Satisfied with Their Training Experiences Than Other Novice Teachers and Felt More Prepared When They Started Teaching

TRP novice teachers were more satisfied with their programs overall than their non-TRP counterparts (Table VII.1). About 87 percent of TRP novices reported being somewhat or very satisfied once they became full-time teachers, compared with about 74 percent of their non-TRP counterparts—a statistically significant difference. The level of overall satisfaction among TRP

teachers varied by program; in the program with the lowest satisfaction level, 65 percent of residents were somewhat or very satisfied, while in the program with the highest, 100 percent were satisfied.

The TRP teachers were also more satisfied than the non-TRP teachers with the fieldwork component of their programs (86 percent somewhat or very satisfied versus 70 percent); this difference was statistically significant. Both groups were largely satisfied with their program's coursework (about 73 percent versus 69 percent), but this was not a statistically significant difference.

Table VII.1. Novice Teachers' Satisfaction with Specific Elements of Their Programs, and Overall

Program/Element	Percentage Who Reported That They Were Somewhat or Very Satisfied		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
Training program overall	86.6	73.6	0.000
Training program's coursework	72.9	69.3	0.356
Training program's student teaching and any other fieldwork experience	86.2	70.3	0.000
Sample Size	374–376	282–284	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

A higher percentage of TRP teachers than non-TRP teachers felt that their program had covered the curricula they taught as first-year teachers. About 63 percent of TRP teachers reported that their program had covered the relevant curricula to a moderate or great extent, compared with about 50 percent of the non-TRP teachers—a statistically significant difference ($p = .002$). This finding supports the conclusion that by training candidates to teach in particular districts, TRPs may be increasing the chances that their novice teachers will be more familiar with the material for their initial teaching assignments than graduates of other programs.

Recollecting their first year of full-time teaching, one or two years earlier, a majority of the novice TRP teachers reported that they had felt well or very well prepared for each of eight teaching activities (listed in Table VII.2). The proportion reporting having been prepared ranged from 57 percent, for handling classroom management and discipline, to 86 percent, for creating lesson plans. Furthermore, for seven of the eight activities, the percentage of TRP novice teachers who felt prepared was higher than the percentage of non-TRP novice teachers who felt prepared; six of these differences were statistically significant.

In interpreting these results, some caution is necessary. TRP novice teachers' retrospective views on their level of preparedness at the start of their full-time teaching careers cannot be directly compared with the views of the residents reported earlier. The novice TRP teachers in the study were in their programs at a different time (one to two years earlier than the residents), and both the programs and the participants could have changed over time.

Table VII.2. How Prepared Novice Teachers Felt to Take On Various Teaching Activities at the Start of Their First Year as a Full-Time Teacher

Activity	Percentage Who Reported That They Had Felt Well or Very Well Prepared		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
Create lesson plans	86.4	73.7	0.000
Teach the subject matter	73.1	73.5	0.902
Use a variety of instructional methods	71.3	52.5	0.000
Assess students	69.5	49.0	0.000
Use technology in classroom instruction	64.6	60.7	0.347
Interact with parents	64.0	53.7	0.013
Select and adapt curriculum and instructional materials	64.0	49.3	0.000
Handle a range of classroom management or discipline situations	57.4	39.8	0.000
Sample Size	374–376	280–284	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

For more insight into how prepared TRP teachers felt to take on various teaching activities at the start of their teaching careers, we examined variation across programs for eight activities—those listed in Table VII.2. The results appear in section D.4 of the appendix.

A closer look at the comparison group. Just as in Chapter IV, we explored whether any of the differences between TRP teachers and non-TRP teachers were driven by the greater likelihood of non-TRP teachers entering teaching through an alternative route to certification. Alternative-route teachers might, for example, have been more or less satisfied with their programs than traditional-route teachers, or felt more or less prepared to teach.⁴⁸

In most cases, separating the traditional- and alternative-route non-TRP teachers did not lead to substantively different findings. Some statistically significant differences reported above held true for both traditional-route and alternative-route non-TRP teachers (satisfaction with student teaching and fieldwork and overall satisfaction with the program; feeling prepared to create lesson plans, use a variety of instructional methods, assess students, and handle a range of classroom management or discipline situations). Some of the differences held true only for alternative-route non-TRP teachers (feeling that their program had covered their district’s curriculum to a moderate or great extent, feeling prepared to interact with parents, feeling prepared to select and adapt curriculum and instructional materials). One measure that showed no difference above (feeling prepared to teach the subject matter) showed a difference for the alternative-route non-TRP subgroup. In summary, some

⁴⁸ The TRP mean values reported in this section are not regression-adjusted. The non-TRP values for each subgroup are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP group and the non-TRP subgroup. Details about the regressions controls appear in Chapter II.

differences between TRP and non-TRP novice teachers' responses to survey items about their sense of their own preparedness to teach were apparently driven by the alternative-route subgroup, and some differences were not.

- **Satisfaction with specific elements of programs, and overall.** Both traditional- and alternative-route non-TRP teachers were statistically less likely than the TRP teachers to be satisfied with their training program overall—about 78 percent and 64 percent, respectively, compared with about 87 percent of TRP teachers ($p = .025$ for the first comparison and $p < .001$ for the second comparison). Similarly, both traditional- and alternative-route non-TRP teachers were statistically less likely than the TRP teachers to be satisfied with their program's student teaching and fieldwork—about 78 percent and 57 percent, respectively, compared with 86 percent of TRP teachers ($p = .029$ for the first comparison and $p < .001$ for the second comparison).
- **Program's coverage of district curriculum.** The overall difference in the percentage of TRP and non-TRP teachers who felt that their program had covered their district's curriculum to a moderate or great extent seems to have been driven by the responses of the alternative-route non-TRP teachers. About 42 percent of them responded this way, compared with about 63 percent of TRP teachers ($p = .001$). The percentage of traditional-route non-TRP teachers who responded this way (about 54 percent) was not statistically different from the percentage of TRP teachers who did.
- **Preparedness to teach.** Both traditional- and alternative-route non-TRP teachers were statistically less likely than the TRP teachers to say they felt well or very well prepared to create lesson plans, use a variety of instructional methods, assess students, and handle a range of classroom management or discipline situations when they first started teaching. However, separating the traditional- and alternative-route non-TRP teachers led to three findings that are different from the overall analysis presented earlier. First, whereas traditional-route non-TRP teachers did not feel statistically more or less prepared to teach the subject matter (79 percent versus 73 percent), alternative-route non-TRP teachers felt less prepared (60 percent versus 73 percent), a difference that was statistically significant ($p = .022$). Second, the overall difference in the percentage of TRP and non-TRP teachers who felt prepared to interact with parents seemed to be driven by non-TRP teachers from alternative-route programs. About 50 percent of them felt prepared, compared with 64 percent of TRP teachers, a statistically significant difference ($p = .021$). Traditional-route non-TRP teachers felt neither more nor less prepared (about 58 percent versus 64 percent). Third, the overall difference in the percentage of TRP and non-TRP teachers who felt prepared to select and adapt curriculum and instructional materials also seems to be driven by non-TRP teachers from alternative-route programs. About 34 percent of them felt prepared, compared with 64 percent of TRP teachers, a statistically significant difference ($p < .001$). Traditional-route non-TRP teachers felt neither more nor less prepared than TRP teachers (about 58 percent versus 64 percent).

D. Novice Teaching Residency Program Teachers Were No More or Less Satisfied with Teaching Than Other Novice Teachers, and No More or Less Likely to Expect to Leave Teaching

Although the TRP group felt more prepared as new teachers and more satisfied with their programs than the non-TRP group, these differences did not translate into higher overall job

satisfaction. About 86 percent of the TRP novices reported being somewhat or completely satisfied with teaching as a career, as of spring 2012, compared with about 83 percent of the non-TRP novices—not a statistically significant difference.

Finally, about 18 percent of TRP teachers reported that they were fairly or very likely to leave the teaching profession voluntarily within the next three years, compared with about 17 percent of non-TRP teachers—also not a statistically significant difference. In Chapter VIII, we present results on observed attrition from teaching between the school year ending in spring of 2012 and the one starting in fall 2012, according to teachers' responses on the mobility survey.

E. Summary of Key Findings

Residents and novice TRP teachers viewed their programs favorably, and novice TRP teachers had more-favorable views of their programs than their non-TRP counterparts in the same districts.

- **Residents were generally satisfied with their TRPs.** Almost half of the residents (46 percent) said they were very satisfied with their program as a whole, and another 38 percent said they were somewhat satisfied. As for particular elements of their experiences, about 80 percent were satisfied with their mentors; 85 percent or more were satisfied with the grade levels and subjects of their residency assignments; 82 percent were satisfied with the quality of course instructors; and 69 percent were satisfied with the financial benefits they received. In addition, residents had favorable views of the courses they took, ranging from 65 percent who agreed that the coursework prepared them well to teach English-language learners, to 91 percent who agreed that the coursework on pedagogy was useful.
- **Eighty-three percent of residents agreed that their work as a resident teacher reinforced what they learned in their coursework, and 68 percent agreed that their coursework was well-integrated with their residency classroom experiences.** Responses on these items varied substantially by program—from 65 to 96 percent on the former and 43 percent to 94 percent on the latter. These results suggest that some programs may succeed more than others at integrating coursework and fieldwork.
- **Novice TRP teachers expressed greater satisfaction with the program they had attended than did novice non-TRP teachers.** TRP novice teachers were more likely to report being satisfied overall with the programs they had attended than their non-TRP counterparts (about 87 percent versus 74 percent). The TRP teachers were also more likely to report being satisfied with the fieldwork component of their programs (86 percent versus 70 percent).

Residents and novice TRP teachers felt prepared for full-time teaching, and the TRP teachers felt more prepared than non-TRP teachers in the same districts.

- **Nearing the end of their residencies, the residents appeared to feel ready for their future teaching duties and their mentors concurred.** When asked about nine instruction-related activities, such as teaching the subject matter and assessing students, at least two-thirds of residents reported feeling prepared to take on each activity, and this ranged up to almost 90 percent for some activities. In addition, the mentors were roughly as confident in their residents as the residents were in themselves. For eight of

nine activities, the proportion of mentors reporting their resident was well or very well prepared was within 10 percentage points of the result for residents' self-reports.

- **TRP teachers were more likely than non-TRP teachers to report having felt prepared at the start of their teaching career for a variety of teaching activities.** For six of eight teaching activities asked about, TRP teachers were more likely than non-TRP teachers to report having felt prepared: creating lesson plans (86 percent versus 74 percent), using a variety of instructional methods (71 percent versus 53 percent), assessing students (70 percent versus 49 percent), interacting with parents (64 percent versus 54 percent), selecting and adapting curriculum and instructional materials (64 percent versus 49 percent), and handling a range of classroom management or discipline situations (57 percent versus 40 percent).
- **TRP teachers were more likely than non-TRP teachers to report that their program had to a moderate or great extent covered the curricula they taught as a first-year teacher (63 percent versus 50 percent).**

VIII. NOVICE TEACHER RETENTION

In this chapter, we present findings on the retention of novice teaching residency program (TRP) teachers and other novice teachers from spring 2012 to fall 2012. We first describe retention in the school, district, and profession. Next, to illuminate the career moves of teachers who did not stay in the same school, we present teachers' reasons for changing schools. Finally, we describe the characteristics of the teachers' former and current schools. All of the analyses in this chapter draw on data from the mobility survey. Additional results—including retention rates estimated using district records, and rates estimated separately by district and by TRP—are presented in section D.5 of the appendix.

A. Novice Teaching Residency Program Teachers and Other Novice Teachers Had Similar Retention Rates

Novice TRP and non-TRP teachers were retained at similar rates (Table VIII.1). About 82 percent of TRP teachers and 83 percent of non-TRP teachers remained in the same schools from spring 2012 to fall 2012. Most teachers who changed schools remained in the district—92 percent of TRP teachers stayed in their spring 2012 district, while about 4 percent moved to another district. In comparison, 90 percent of non-TRP teachers remained in the district and 3 percent moved to teach elsewhere. Four percent of TRP teachers left the teaching profession, compared with about 6 percent of non-TRP teachers. None of these was a statistically significant difference.

Table VIII.1. Novice Teachers' Retention Rates, Spring 2012 to Fall 2012

Retention Outcome	Percentage of TRP Teachers	Percentage of Non-TRP Teachers	p-Value of Difference
Retained in school	81.8	83.2	0.666
Retained in district	92.2	90.4	0.428
Retained in profession	96.0	93.7	0.219
Sample Size	373	274	

Sources: Teacher mobility survey, teacher-of-record survey, Common Core of Data for 2010–2011.

Notes: The TRP retention rate is not regression adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

The pattern of results remains the same when first- and second-year teachers are examined separately (Table VIII.2). About 80 percent of first-year and 85 percent of second-year TRP teachers remained in their spring 2012 school; 92 percent of both TRP cohorts remained in their spring 2012 district; and about 96 percent of both cohorts remained in the teaching profession. All except one of these TRP retention rates exceeded those of non-TRP teachers, but none of these was a statistically significant difference.

Table VIII.2. Novice Teachers' Retention Rates, Spring 2012 to Fall 2012, by Cohort

Retention Outcome	Percentage of First-Year Teachers			Percentage of Second-Year Teachers		
	TRP	Non-TRP	<i>p</i> -Value of Difference	TRP	Non-TRP	<i>p</i> -Value of Difference
Retained in school	79.7	83.6	0.401	85.1	78.5	0.179
Retained in district	92.2	90.9	0.667	92.2	86.9	0.178
Retained in profession	96.1	92.7	0.159	95.7	93.6	0.488
Sample Size	232	132		141	142	

Sources: Teacher mobility survey, teacher-of-record survey, Common Core of Data for 2010–2011.

Notes: The TRP retention rate is unadjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

The finding that novice TRP teachers' retention rates were not distinctly higher than those of novice non-TRP teachers in the same districts should be interpreted with caution. Importantly, this result is *not* evidence that TRPs failed to improve teacher retention. Their respective routes into teaching were not the only differences between the TRP and non-TRP teachers. For example, because TRPs aim to place their former residents in high-need schools, the typical school working conditions of the two groups may differ on dimensions such as types of students taught or school climate. Although our methodology accounts for some aspects of the teachers' placements, unmeasured differences between the placements of TRP and non-TRP teachers may influence their retention and may be outside the control of the teachers or their preparation programs. As a result, differences in the retention rates between the two groups cannot be attributed solely to the training programs they attended.⁴⁹

In addition, it is worth noting that the retention rates reported above for second-year teachers are not cumulative two-year retention rates. Consider, for example, the district retention rate, which is presumably the retention level of primary interest to the districts that partner with TRPs. The *cumulative* two-year district retention rate for TRP and non-TRP second-year teachers—that is, the percentage of teachers in each group who began teaching during the 2010–2011 school year and remained in the same district into fall 2012—will likely differ from the district retention rates for second-year teachers shown here. This difference arises because some attrition may have already occurred among this cohort before they were first surveyed in spring 2012. If one assumes that the cohort of second-year teachers had retention rates in their first year of teaching similar to the retention rates found for first-year teachers, multiplying the district retention rates shown in Table VIII.2 implies a cumulative two-year district retention rate of 85 percent for TRP teachers and 79 percent for non-TRP teachers. This was not a statistically significant difference.

A future publication will shed more light on retention outcomes by including another year of data. Specifically, it will present analyses of retention from spring 2012 to fall 2013.

⁴⁹ Results shown in section D of the appendix raise another caution. Mobility survey non-response bias may dampen the magnitude of the differences between TRP and non-TRP teachers. This bias, however, does not appear to substantively affect the results.

B. Novice Teaching Residency Program Teachers and Other Novice Teachers Cited Similar Reasons for Changing Schools

To provide insight into teachers' mobility decisions, we examine the reasons that novice teachers cited for changing schools.⁵⁰ Understanding the reasons for their decisions may clarify the extent to which teacher preparation programs or policymakers can influence teacher mobility, and may also suggest how policies should be focused. For example, TRPs and districts could work to influence some factors, such as how adequately prepared or how adequately supported by administrators teachers feel, but life factors, such as the need or wish to move out of the area, would be beyond their control.

Novice TRP and non-TRP teachers who changed schools from spring 2012 to fall 2012 cited similar reasons for the school change (Table VIII.3). More than half of TRP teachers reported that inadequate support from administration (62 percent), workplace conditions (62 percent), and poor principal leadership (56 percent) were very or extremely important factors in their decisions to change schools. These were also the reasons most frequently reported as very or extremely important by non-TRP teachers. Relatively few teachers in either group reported that feeling inadequately prepared was a very or extremely important factor in their decision to change schools (12 percent for TRP teachers versus 7 percent for non-TRP teachers). We found no statistically significant differences between groups.

No single reason stood out as being of utmost importance in either group's decision to change schools. Among TRP teachers, the top reason reported as the *single most important* reason for changing schools was poor principal leadership, cited by 19 percent of teachers in this group. Other top reasons among TRP teachers included moving out of the area (13 percent), opportunities for a more desirable teaching assignment (12 percent), and not being asked to return to their position (10 percent); all other reasons were cited by less than 10 percent of TRP teachers. The top reasons reported by non-TRP teachers were moving out of the area (19 percent), being involuntarily transferred (15 percent), not being asked to return (11 percent), and opportunities for professional advancement (11 percent).⁵¹

C. No Evidence That Schools Novice Teachers Leave and Enter Have Substantially Different Characteristics

To help illuminate the context of teacher mobility between schools, we describe the characteristics of the schools that teachers left following spring 2012 and joined in fall 2012. If TRP teachers who moved tended to move to schools that were less disadvantaged than the ones they left, this might raise concerns about whether they were still fulfilling the program's goal to serve high-need schools. This analysis focuses on the same school characteristics examined earlier: student achievement indicators (percentage of students who scored proficient or better on state math or

⁵⁰ Reasons for leaving the profession may be of even greater interest to stakeholders than reasons for changing schools. However, the sample of teachers who left the profession between spring 2012 and fall 2012 was too small for meaningful analysis (15 TRP teachers and 16 non-TRP teachers).

⁵¹ The reasons reported here were the most frequently cited among the specific reasons listed on the survey. The catchall "Some other reason" was cited as the single most important reason by 13 percent of TRP teachers and 22 percent of non-TRP teachers. Sample sizes for this analysis were 53 TRP and 28 non-TRP teachers who changed schools between spring 2012 and fall 2012.

Table VIII.3. Novice Teachers' Reasons for Changing Schools, Spring 2012 to Fall 2012

Reason	Percentage Who Reported the Reason Was Very or Extremely Important ^a		p-Value of Difference
	TRP Teachers	Non-TRP Teachers	
Felt inadequately prepared	11.5	7.4	0.570
School factors			
Inadequate support from administration	61.5	55.6	0.613
Workplace conditions	61.5	48.1	0.260
Poor principal leadership	55.8	44.4	0.346
Student discipline problems	26.9	29.6	0.802
Challenges of implementing new reform measures	23.1	15.4	0.434
Poor student motivation	17.3	22.2	0.603
Inadequate time to prepare lesson plans	15.4	14.8	0.947
Lack of autonomy over my classroom	11.8	22.2	0.229
Difficulty with colleagues	9.6	14.8	0.497
Career factors			
Opportunities for more desirable teaching assignment	50.0	40.7	0.441
Opportunities for professional advancement	36.5	40.7	0.719
Job security	19.2	37.0	0.086
Salary or benefits	3.8	3.7	0.975
Personal decision/life factors			
Moved of the area	19.2	22.2	0.757
Other life event (e.g., parenthood, marriage)	11.5	14.8	0.683
Involuntary factors			
Involuntarily transferred	17.3	22.2	0.603
Not asked to return	17.3	18.5	0.895
Some other reason	21.2	29.6	0.410
Sample Size	51-52	26-27	

Source: Teacher mobility survey.

^aOther answer choices were "not at all important" and "somewhat important."

reading tests) and student demographics (percentage black, Hispanic, eligible for free or reduced-price lunch, or English-language learners). The analysis is conducted separately for TRP and non-TRP teachers.

The evidence suggests no substantial differences in the characteristics of schools novice TRP teachers joined relative to the schools they left (Table VIII.4). Of the six characteristics examined, a statistically significant difference was found for only one, the average percentage of students who were black. This average was about 45 percent for the schools that TRP teachers left, compared with about 35 percent for the schools they joined. The percentage of students scoring proficient or better

on state tests was about seven percentage points higher for reading and six percentage points higher for math in the schools joined. The percentages of students who were Hispanic, English-language learners, or eligible for free or reduced-price lunch differed by about two to three percentage points in the two sets of schools. The analysis for non-TRP teachers found no statistically significant differences between the characteristics of the schools they left and the schools they joined. The biggest difference was about eight percentage points (for percentage Hispanic). By way of comparison, prior research has suggested that teachers who move between schools in a district typically move to schools in which a somewhat lower proportion of students come from economically disadvantaged families, a lower proportion of the students are black or Hispanic, and in which achievement levels are higher (Boyd et al. 2008; Jackson et al. 2013; Steele et al. 2010).⁵² However, the magnitude is modest. For example, on average, teachers move to schools in which the percentage of students eligible for free or reduced-price school meals is 1 to 5 percentage points lower than that in their former school, depending on the study.

In considering these results, two important cautions should be noted. First, the school characteristics used in this analysis do not necessarily correspond to the districts' and TRPs' definitions of high-need. Second, a sizable percentage of teachers who changed schools were excluded from the analysis of each characteristic due to missing data on school name or school characteristics (26 to 47 percent of TRP teachers and 25 to 54 percent of non-TRP teachers, depending on the characteristic examined). The differences between schools left and schools joined for the remaining teachers (for whom school information was available) may not be representative of the differences that would be found for all teachers who changed schools. Furthermore, the smaller sample sizes decrease the ability to detect differences between the schools.

Table VIII.4. Characteristics of Former and Current Schools of Novice Teachers Who Changed Schools, Spring 2012 to Fall 2012

Characteristics	Novice TRP Teachers			Novice Non-TRP Teachers		
	School Left	School Joined	p-Value of Difference	School Left	School Joined	p-Value of Difference
Percentage black	44.7	34.7	0.045	27.7	29.7	0.790
Percentage Hispanic	45.4	47.7	0.620	55.5	48.0	0.348
Percentage eligible for free or reduced-price lunch	80.4	77.5	0.443	79.1	79.2	0.984
Percentage English-language learners	17.3	20.3	0.457	24.8	25.4	0.927
Percentage proficient in reading	41.7	48.5	0.120	49.0	54.4	0.308
Percentage proficient in math	45.4	51.4	0.172	52.3	57.5	0.336
Sample Size	28–39			13–21		

Sources: Teacher mobility survey, Common Core of Data, state and district websites.

Notes: Percentage black, Hispanic, and eligible for free or reduced-priced lunch were measured using the Common Core of Data for the 2010–2011 school year. Percentage English-language learners, proficient in reading, and proficient in math were measured using 2012 data from state and district websites.

⁵² One exception is a study by Hanushek et al. (2005), which finds that although teachers tend to move to lower poverty schools, their new and former schools do not differ significantly in their racial/ethnic composition and mean achievement levels.

D. Summary of Key Findings

Novice TRP teachers and other novice teachers in the same districts had similar retention rates. TRP teachers in the in-depth sample of 12 programs did not have statistically higher or lower retention rates—from spring 2012 to fall 2012, into their second or third year of teaching—than non-TRP teachers in the same six districts. About 92 percent of TRP teachers stayed in the same district, and about 4 percent were no longer teaching. Among non-TRP teachers, about 90 percent stayed in the same district, and about 6 percent were no longer teaching.

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APPENDIX

ADDITIONAL INFORMATION ON TEACHING RESIDENCY PROGRAMS, THEIR PARTICIPANTS, AND NOVICE TEACHERS

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In this appendix, we present four types of information that may be of interest to various readers: (1) the names of the Teacher Quality Partnership grantees whose teaching residency programs (TRPs) were included in this study; (2) additional findings that were not essential to answering the research questions and therefore not included in the main body of the report; (3) survey response rates by district or program, in support of analyses at these levels presented in the main body; and (4) additional technical information, such as an analysis of non-response bias in retention outcomes associated with our use of the mobility survey in the main body. The first four major sections of this appendix focus on the subjects of the study: section A focuses on programs, section B on mentors, section C on residents, and section D on novice teachers. Section E provides additional details on measurement and analysis.

The Teacher Quality Partnership grantees whose TRPs were included in this study are:

- Arizona State University—Tempe
- Bard College—Annandale-on-Hudson, New York
- Boston Plan for Excellence—Massachusetts
- California State University—Chico
- California State University—Dominquez Hills
- California State University—Los Angeles
- California State University—Northridge
- Denver School District No. 1—Colorado
- Georgia State University—Atlanta
- Governors State University—University Park, Illinois
- Heritage University—Toppenish, Washington
- Hunter College—New York, New York
- Indiana University—Bloomington, Indiana
- Louisiana State University & A&M College—Baton Rouge
- Montclair State University—New Jersey
- National Louis University—Chicago, Illinois
- The Ohio State University—Columbus
- Old Dominion University—Norfolk, Virginia
- Questa Independent Schools—New Mexico
- Teachers College, Columbia University—New York, New York
- Texas State University—San Marcos
- University of California—Los Angeles
- University of Chicago—Illinois
- Western Kentucky University—Bowling Green
- Wichita State University—Kansas
- William Patterson University—Wayne, New Jersey
- University of North Carolina—Greensboro
- Virginia Commonwealth University—Richmond

A. Teaching Residency Program Characteristics, Activities, and Experiences

Using data primarily from the program survey and director interviews, we first compare the characteristics of the programs selected for the random sample with those of programs not selected

for this sample, and the characteristics of the programs purposefully selected for the in-depth sample with those of programs not selected. Second, we present information on how much experience the institution of higher education (IHE) partners had with teacher training programs other than the teaching residency programs. Third, we discuss resident recruitment and selection. Fourth, we describe programs' plans for increased enrollments in the future. Finally, we summarize the implementation and operational challenges that TRP directors described in interviews.

1. Comparisons of Teaching Residency Program Samples

The 15 programs randomly selected for director interviews were similar to the 15 programs not selected for this sample. Comparisons of the groups on 13 basic characteristics did not reveal any statistically significant differences (Table A.1).

Table A.1. Characteristics of Teaching Residency Programs in and out of the Random Sample

Characteristic	Programs in Random Sample	Programs Not in Random Sample	p-Value of Difference
Years in operation	3.8	2.5	0.227
Number of partner districts that have hosted 2011 residents ^a	1.9	2.7	0.345
Number of 2011 residents ^a	28.2	19.4	0.224
Number of classroom mentors for 2011 residents ^a	31.2	23.4	0.289
Hours of training provided to classroom mentors	33.1	30.2	0.782
Compensation paid to classroom mentors per semester (\$)	1,275	1,215	0.823
Duration of first half of residency year (weeks)	17.7	18.1	0.648
Duration of second half of residency year (weeks)	19.9	19.6	0.785
Percentage of programs that have a minimum requirement of full-length school days that resident is fully in charge of a classroom during first half of residency year	40.0	46.7	0.724
Among those programs that have a minimum requirement, average minimum days residents spent fully in charge of classroom during first half of residency year	10.2	10.1	0.992
Percentage of programs that have a minimum requirement of full-length school days that resident is fully in charge of a classroom during second half of residency year	46.7	66.7	0.285
Among those programs that have a minimum requirement, average minimum days residents spent fully in charge of classroom during second half of residency year	21.9	16.5	0.564
Annual stipend paid to residents (\$)	21,507	24,533	0.339
Sample Size	13–15	15	

Source: Program survey.

Note: Characteristics were measured at the program level; the table reports mean values calculated by averaging across programs. Unless otherwise noted, characteristics were measured in spring 2012.

^aThe program characteristic is measured with respect to residents who entered the program in 2011.

The 12 programs purposefully selected for the in-depth sample (where we conducted the mentor, resident, teacher-of-record, and mobility surveys) were dissimilar to the 18 programs not selected for this sample. Consequently, the in-depth sample is not representative of the full set of 30 TRPs included in the study. We compared the groups on the same 13 basic characteristics reported above; mean differences were statistically significant for 7 characteristics (Table A.2).

Table A.2. Characteristics of Teaching Residency Programs In and Out of the Purposeful In-Depth Sample

Characteristic	Programs in In-Depth Sample	Programs Not in In-Depth Sample	p-Value of Difference
Years in operation	5.1	1.8	0.002
Number of partner districts that have hosted 2011 residents ^a	1.1	3.1	0.007
Number of 2011 residents ^a	37.9	14.4	0.000
Number of classroom mentors for 2011 residents ^a	42.3	17.3	0.000
Hours of training provided to classroom mentors	33.5	30.2	0.755
Compensation paid to classroom mentors per semester (\$)	1,500	1,088	0.128
Duration of first half of residency year (weeks)	17.8	17.9	0.915
Duration of second half of residency year (weeks)	20.2	19.5	0.593
Percentage of programs that have a minimum requirement of full-length school days that resident is fully in charge of a classroom during first half of residency year	41.7	44.4	0.885
Among those programs that have a minimum requirement, average minimum days residents spent fully in charge of classroom during first half of residency year	3.3	14.8	0.088
Percentage of programs that have a minimum requirement of full-length school days that resident is fully in charge of a classroom during second half of residency year	33.3	72.2	0.036
Among those programs that have a minimum requirement, average minimum days residents spent fully in charge of classroom during second half of residency year	8.3	26.4	0.049
Annual stipend paid to residents (\$)	18,800	25,833	0.024
Sample Size	11–12	17–18	

Source: Program survey.

Note: Characteristics were measured at the program level; the table reports mean values calculated by averaging across programs. Unless otherwise noted, characteristics were measured in spring 2012.

^aThe program characteristic is measured with respect to residents who entered the program in 2011.

2. Institution of Higher Education Partners' Experience Operating Other Teacher Preparation Programs

Some readers may wonder about IHEs' ability to develop the type of curriculum envisioned for TRPs. Although TRPs represent a distinct model, and may represent a break from the way most teacher preparation programs are structured, the study found that the partner IHEs (one per TRP) generally had experience developing curricula to fit a variety of program models. All but one of the programs in the study had an IHE partner with experience operating another kind of teacher preparation program besides the TRP. The most common other type of teacher program the partner IHEs operated was a traditional master's program (70 percent), followed closely by a traditional undergraduate program (63 percent) (Table A.3). The least common other type of program was a traditional postbaccalaureate program/fifth-year program (37 percent). In addition, most of the IHE partners had experience with more than one other type of program (Figure A.1). About three-fourths of the IHEs (77 percent) were operating two or more other programs

Table A.3. Other Types of Teacher Preparation Programs Operated by Institution of Higher Education Partners

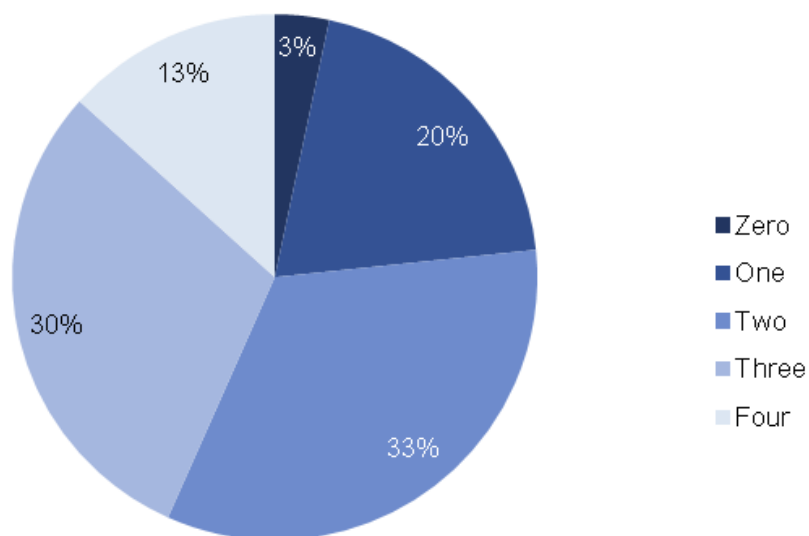
Program Type ^a	Percentage Operating
Traditional undergraduate program (Candidates complete all requirements, earn bachelor's degree, receive certification, then beginning teaching)	63
Traditional master's program (Candidates complete all requirements, earn master's degree, receive certification, then begin teaching)	70
Traditional postbaccalaureate program/5th-year program (Candidates complete all requirements, receive certification, then begin teaching; do not receive master's)	37
Alternative postbaccalaureate program (Candidates begin teaching before completing all requirements, before receiving certification)	60

Source: Program survey.

Note: Sample size = 30. For the one program whose director reported information on more than one IHE, we used the data from the IHE that was the primary partner.

^aThe program types listed here represent the response options in the program survey.

Figure A.1. Number of Other Teacher Preparation Programs, Besides Teaching Residency Programs, Operated by Institution of Higher Education Partners



Source: Program survey.

Note: Sample size = 30.

3. Resident Recruitment and Selection

Program directors in the interview sample reported using a variety of approaches to reach potential applicants. Of the seven specific methods we asked about in our interview, six were used by a majority of the programs (Table A.4). They used hard-copy media such as fliers, letters, and newspapers, as well as newer technology such as websites and email. Most of the approaches we asked about involved broadly distributing information with the hope of drawing the attention of the type of applicants they sought. But 11 of the 15 program directors reported also reaching out more directly to potential candidates through targeted mailings or e-mail.

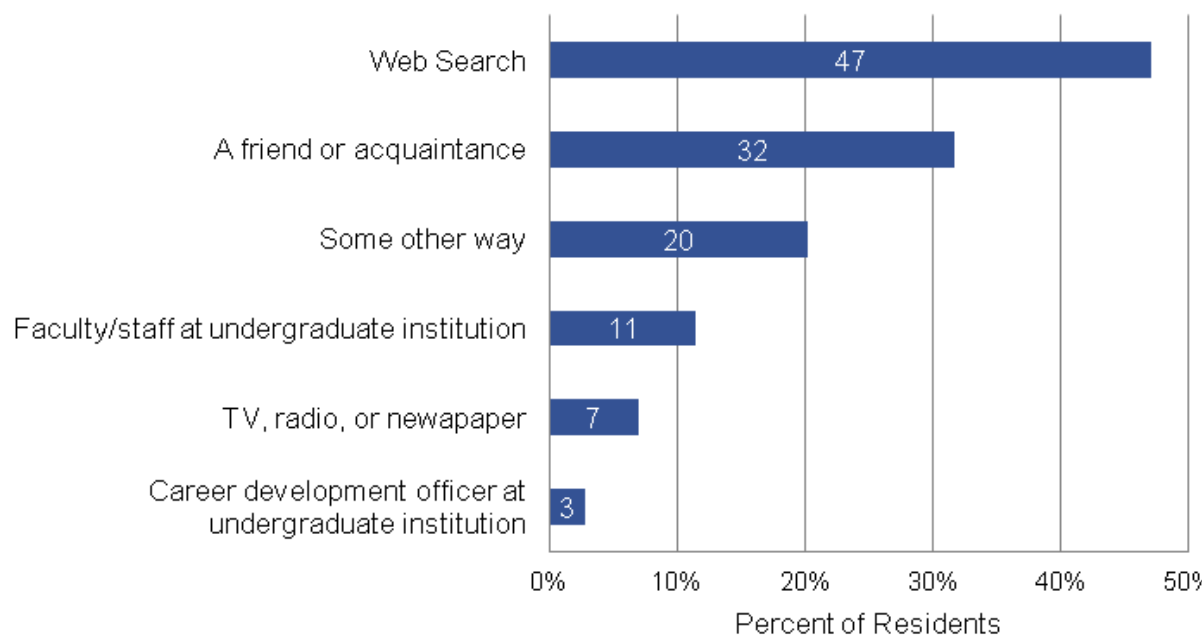
Almost half the residents we surveyed (47 percent) reported learning about their TRP on the Internet, and about a third heard about the program from a friend or acquaintance (Figure A.2).

Table A.4. Methods Teaching Residency Programs Used to Promote or Advertise Programs to Potential Applicants

Method	Number of Programs Using
Program or college website	14
Fliers, posters, or brochures	13
Online ads or social networking sites	12
Targeted mailings or e-mail	11
Newspapers or other print media	10
College fairs	8
Electronic media including TV or radio	6
Other	10

Source: Program director interviews.

Note: Sample size = 15.

Figure A.2. Sources Through Which Residents First Heard About Their Teaching Residency Program

Source: Resident survey.

Note: Sample size = 357.

4. Teaching Residency Programs' Future Growth Plans

The 30 programs in the study typically expected to continue growing. Their projected enrollment called for an average of 29 residents in 2012 and 33 in 2013, an increase from the average of 24 enrolled in 2011 (Table A.5). Not all the surveyed programs provided estimates beyond 2013, perhaps because they were unsure about either continued operation or future cohort sizes, but the programs that provided estimates indicated that, on average, they expected further growth.

Table A.5. Teaching Residency Programs Expect Resident Enrollments to Increase

Cohort Entry Year	Number of Programs Providing Data	Average Number Expected to Enroll
2012	30	29
2013	30	33
2014	24	35
2015	20	36

Source: Program survey.

5. Teaching Residency Programs' Implementation and Operational Challenges

Policymakers and practitioners alike may be interested in the issues that potentially arise in operating a TRP. In our 2012 interviews with 15 randomly selected program directors, we invited them to list up to three of the biggest implementation challenges they had faced since being awarded a Teacher Quality Partnership (TQP) grant in late 2009 or early 2010. We also invited them to list up to three challenges they expected to face over the next year (2012–2013). Because a few of the issues came up in answers to both questions, we present a unified discussion of challenges mentioned at least twice.

- **Working with partner colleges.** Nine directors reported challenges in working with partner colleges since grant award, and one director mentioned it as a challenge going forward. The key issues had to do with getting the colleges to adapt to the residency program model or accommodate the program's needs (such as using faculty's time or structuring courses a certain way). Moreover, these challenges were not cited just by respondents affiliated with districts or other organizations in the partnerships; virtually all the directors who raised this point were themselves college employees.
- **Dealing with bureaucracy or red tape.** Eight directors mentioned bureaucratic challenges since grant award. Their complaints about red tape pertained to the bureaucracy in colleges (for example, invoicing, salaries, space issues), in districts (for example, funding, salaries), and in the state (for example, certification requirements, state approval). No one mentioned bureaucracy or red tape at the federal level.
- **Recruiting residents.** Five directors mentioned resident recruitment as a past challenge and seven mentioned it as a future challenge. A more common concern than simply attracting enough applicants was attracting enough of the *types* of applicants they sought—for example, those with subject matter expertise or those representative of the communities in which they will teach.
- **Assessing participant performance.** Two directors reported past difficulty and three directors anticipated future difficulty in formally evaluating their residents' and graduates' performance. In some cases, the challenges revolved around finding good assessments or being able to collect the right type of data to measure the academic gains of students in residency classrooms.
- **Placing former residents into full-time teaching positions.** Two directors noted challenges in finding placements since grant award and three expected to face this challenge over the next year.

- **Managing program expansion.** Looking forward, four directors were concerned about the challenges involved in managing a growing program, such as keeping track of how their residents and program graduates are doing, hiring additional staff to accommodate the larger numbers of residents coming into the program, and finding meeting spaces large enough to accommodate everyone.
- **Placing residents.** Three directors said they had had difficulty finding residency placements since grant award. Challenges in this category were related to the logistics of developing and keeping relationships with partner schools that accept residents.
- **Planning for program sustainability.** Three directors expected to face challenges over the next year in identifying and securing funds that would allow the TRP to continue operating after TQP grant funds end.⁵³
- **Accommodating program components.** Two directors mentioned past challenges in providing all the program components in a short period of time, or implementing new components, not originally planned, such as adding a summer institute before the start of the residency period in order to better prepare new residents for the residency classroom.
- **Adapting to new teacher evaluation systems.** Two directors anticipated future challenges related to a new evaluation tool used in their partner district. One director felt that the new evaluation tool could make it harder to find willing mentors; since the tool would evaluate mentors' performance based on the achievement of their students, they might be less willing to let residents lead instruction in their class. Another director foresaw a challenge in aligning coursework to the new evaluation system in a way that prepared residents appropriately.

B. Classroom Mentors

Using data from the mentor survey, in this section we describe the mentors of residents in the 2011 entry cohort in the purposefully selected sample of 12 programs. We focus first on the mentors' background characteristics (demographics, educational background, route into teaching, and certification). Next we describe their interactions with other mentors and TRP staff. Finally, we present their views on how prepared they were for this role and their experiences in these programs.

1. Background Characteristics

a. Demographics

Just under a quarter of the mentors were male (Table A.6). A majority of the mentors (about 62 percent) were white, non-Hispanic; the second largest racial/ethnic group was Hispanics of any race (about 18 percent), followed by black, non-Hispanics (about 13 percent).

⁵³ Although not mentioned by more directors during our interviews, sustainability seems to be an issue of concern generally among the grantees. The TQP Grants Program office in the Department of Education convened a meeting on this issue in late January 2013. It was facilitated by Urban Teacher Residency United and attended by representatives of seven grantees.

Table A.6. Classroom Mentors' Demographic Characteristics

Characteristic	Percentage
Male	23.7
Race/Ethnicity	
Hispanic	17.6
Asian, non-Hispanic	5.5
Black, non-Hispanic	12.7
White, non-Hispanic	61.6
Two or more races, non-Hispanic	1.7
Other races/ethnicities ^a	0.9

Source: Mentor survey.

Note: Sample size = 346–359.

^aIncludes the response options “American Indian” and “Pacific Islander.”

b. Educational Background and Route into Teaching

All mentors apparently had a bachelor's degree.⁵⁴ It had been, on average, 13 years since the mentors had received this degree (Table A.7). About a quarter of them reported receiving their bachelor's degree in education. Seventy-nine percent of mentors had a master's degree. The large majority of master's degree recipients (88 percent) reported earning this degree in education.

Table A.7. Classroom Mentors' Educational Backgrounds

Characteristic	Percentage (unless otherwise noted)
Highest Degree Obtained	
Bachelor's	18.2
Master's	78.9
Doctorate	2.9
Average years since bachelor's degree	13.2
Bachelor's degree is in education ^a	25.4
Master's degree is in education ^a	88.0

Source: Mentor survey.

Note: Sample size = 275–346.

^aThe specific education-related response options that mentors indicated most frequently included “Early childhood or pre-K, general;” “Special education, any;” “Secondary grades, general;” “Other education: administration;” and “Other education: non-subject-matter-specific-education.”

Mentors' most common route to teaching was reportedly completing a master's degree program and starting to teach after completing all requirements for initial license or certification (31 percent) (Table A.8). Only slightly fewer mentors reported completing a bachelor's degree program and starting to teach after completing all requirements for initial license or certification (28 percent). The third-largest group reported completing a master's degree program, but starting to teach before completing all requirements for initial license/certification (18 percent).

⁵⁴ Some respondents did not provide requested information about a bachelor's degree, but did report having a master's degree or higher degree; we assume they received a bachelor's degree en route to these higher degrees.

Table A.8. Classroom Mentors' Routes into Teaching

Route to Teaching (program level and when teacher started teaching full-time)	Percentage That Followed Route
Bachelor's degree program, started teaching <i>after</i> completing all requirements for initial license/certification	28.3
Bachelor's degree program, started teaching <i>before</i> completing all requirements for initial license/certification	4.5
Master's degree program, started teaching <i>after</i> completing all requirements for initial license/certification	30.7
Master's degree program, started teaching <i>before</i> completing all requirements for initial license/certification	17.9
Postbaccalaureate (non-master's) program, started teaching <i>after</i> completing all requirements for initial license/certification	4.5
Postbaccalaureate (non-master's) program, started teaching <i>before</i> completing all requirements for initial license/certification	14.1

Source: Mentor survey.

Notes: Sample size = 290. This analysis excludes respondents who could not be coded into one of the six major routes to teaching because they (1) checked "other" for the survey question on the type of program in which they trained or for the survey question on when they first became a full-time teacher (33 mentors), or (2) checked more than one answer option on these questions (28 mentors). The six routes to teaching listed here were not presented this way in the mentor survey; they represent the combination of responses to two questions.

c. Certification

Nearly all mentors (96 percent) reported having a regular or advanced teaching certificate in general or elementary education or in a particular subject area (Table A.9). Only 3 percent of mentors reported having a temporary certificate. In addition, 11 percent of mentors reported having National Board Certification in at least one of the subjects they taught at the time of the survey or when they most recently mentored a TRP resident (not shown).

Table A.9. Classroom Mentors' Current Certification in State Where They Were Teaching

Type	Percentage
Regular or advanced certificate issued to those who have completed all teacher training, certification exams, and any required probationary period	
In a particular subject(s)	54.2
In general or elementary education	42.1
Temporary certificate issued to those who need to complete additional requirements such as passing a certification exam, coursework, or a probationary teaching period	3.2
None of the above	0.6

Source: Mentor survey.

Note: Sample size = 349.

2. Interactions with Other Classroom Mentors and Teaching Residency Program Staff

Mentors' responsibilities were not limited to direct interactions with their residents. One of the additional activities they engaged in most frequently was meeting with program staff to discuss their resident's progress. About 79 percent of mentors reported having such meetings at least monthly (Table A.10). Some mentors may have supported one another in their role. In schools with more than one mentor, about 80 percent of mentors met with other mentors at least monthly—though 10 percent reported never meeting with the other mentors in their schools. A majority of mentors (56 percent) reportedly met once a month with mentors from other schools, and about half (49 percent) met once a month with TRP staff to discuss their mentoring duties or performance.

Table A.10. Classroom Mentors' Activities Other than Working with Their Resident

Activity	Percentage Reporting They Did This:			
	Never	At Least Once but Less than Monthly	Once a Month	2 or 3 Times per Month or More Often
Met with TRP staff to discuss the progress of the resident teachers	1.4	19.3	46.9	32.4
Met with other TRP mentors in the same school (if applicable)	9.8	10.1	35.8	44.3
Met with mentors from other schools in district (if applicable)	15.3	25.5	56.4	2.9
Met with TRP staff to discuss their roles and responsibilities or their performance as a mentor	3.4	33.4	48.6	14.6
Required to submit to TRP staff a formal evaluation of the resident teacher assigned to them	5.1	41.8	36.4	16.7

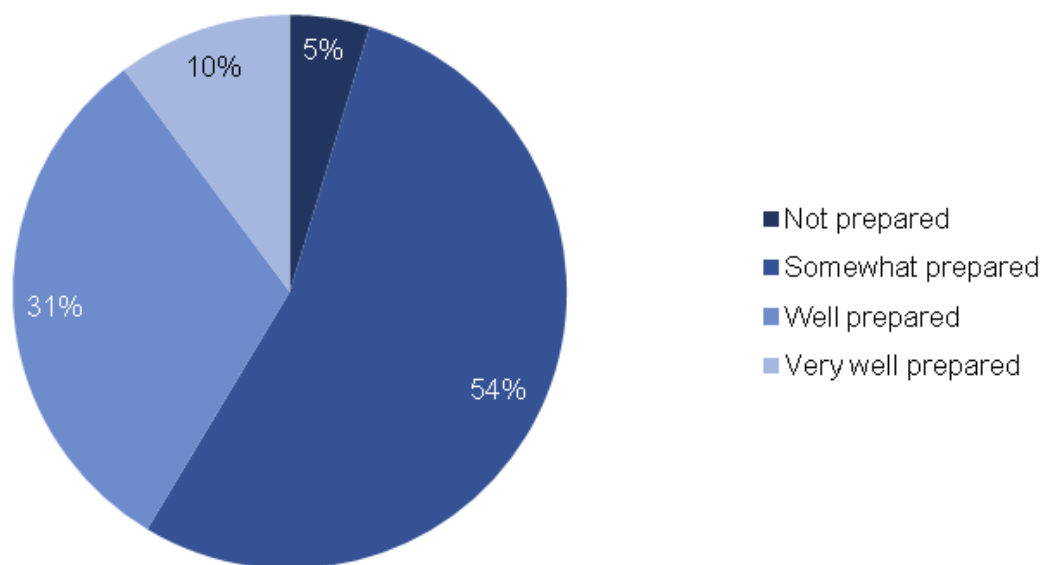
Source: Mentor survey.

Note: Sample size = 314–356. Mentors who selected "other" were coded into one of the five categories, if possible; otherwise they were treated as missing.

3. Self-Reported Preparedness for Role and Views on Experiences in Teaching Residency Programs

The majority of mentors (about 54 percent) reported that they felt somewhat prepared when they first became a mentor to a resident teacher (Figure A.3). About 41 percent reportedly felt well or very well prepared.

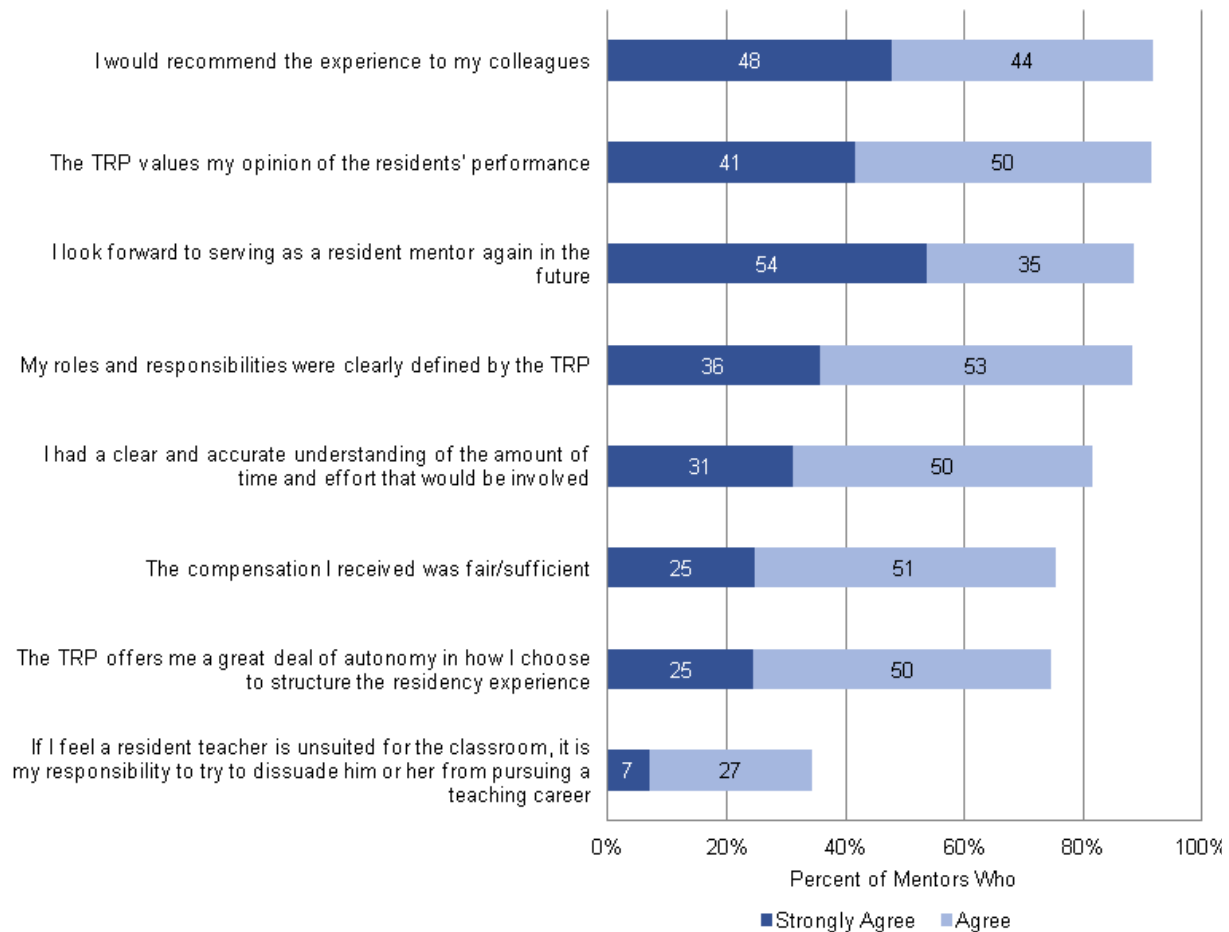
Figure A.3. Classroom Mentors' Self-Reported Preparation When They First Became a Teaching Residency Program Mentor



Source: Mentor survey.

Note: Sample size = 343.

Mentors generally had favorable views on their current or most recent mentoring experience. Two overall opinions seem to be positive indicators of their programs' ability to fill classroom mentor positions in the future: about 92 percent of mentors indicated they would recommend the experience to their colleagues, and about 89 percent reported looking forward to serving again as a mentor (Figure A.4). Mentors also seemed to understand what the position entailed. About 89 percent indicated that their roles and responsibilities had been clearly defined, and about 81 percent felt they had had a good understanding of the time and effort required (Figure A.4).

Figure A.4. Classroom Mentors' Views on their Role, Responsibilities, and Experiences in Teaching Residency Programs

Source: Mentor survey.

Notes: Sample size = 352–359. Omitted response options are “Disagree” and “Strongly Disagree.” The survey asked mentors to think about their current or most recent mentoring experience when responding to these statements.

C. Residents

Using data from the resident survey, in this section we describe the residents in the 2011 entry cohort in the purposefully selected sample of 12 TRPs. We first present supplementary information on resident survey response rates. Then we focus on residents' background characteristics (demographics, educational background, and work experience).

1. Resident Survey Response Rates, by Program

Because this report presents findings from the resident survey at the program level, here we present survey response rates at this level. Response rates ranged from 71 percent to 100 percent (Table A.11).

Table A.11. Resident Survey Response Rates, by Program

Program	Percent Responding
A	100.0
D	100.0
I	100.0
J	100.0
L	97.1
E	94.7
F	92.0
K	91.4
C	87.5
B	76.3
H	75.0
G	70.6

2. Background Characteristics and Experiences

a. Demographics

About a third of the residents (32 percent) were male, and their average age was 29 (Table A.12). Non-Hispanic whites accounted for a majority of the residents (54 percent); the next two largest racial/ethnic groups were Hispanics of any race (18 percent) and non-Hispanic blacks (13 percent).

Table A.12. Residents' Demographic Characteristics

Characteristic	Percentage (unless otherwise noted)
Male	32.1
Race/Ethnicity	
Hispanic	17.5
Asian, non-Hispanic	10.8
Black, non-Hispanic	12.9
White, non-Hispanic	53.8
Two or more races, non-Hispanic	3.2
Other races/ethnicities ^a	1.8
Average age (years)	28.5

Source: Resident survey.

Note: Sample size = 340–352.

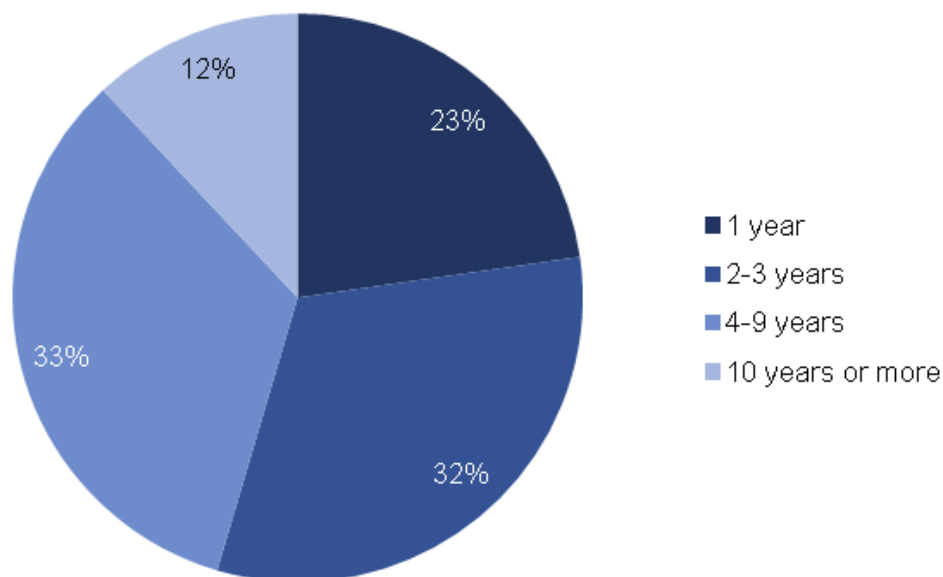
^aIncludes the response options “American Indian” and “Pacific Islander.”

b. Educational Background

A bachelor's degree was a criterion for admission to a TRP, and residents reported having received their degree an average of 4.9 years ago, with a range of 1 to 34 years. About a quarter of

the residents (23 percent), were fresh out of their undergraduate program, having received their bachelor's degree one year earlier, in 2011; another third of the residents (32 percent) were recent college graduates, having been out for 2 to 3 years (Figure A.5). Other residents reported having been out of college for longer; about a third (33 percent) had been out of college for 4 to 5 years, and 12 percent had been out for 10 years or more.

Figure A.5. Number of Years Since Residents Received Their Bachelor's Degree



Source: Resident survey.

Note: Sample size = 317.

About 68 percent of residents received their bachelor's degree from a college that, for 2007–2008, was classified by Barron's as falling into one of the top three categories of admissions competitiveness among all American colleges, including 28 percent in the top category (Table A.13).

Table A.13. Competitiveness of Admissions, as of 2007–2008, of Colleges Where Residents Received Their Bachelor's Degree

Admissions Competitiveness Category	Percentage of Residents
1. Most competitive	28.0
2. Highly competitive	19.4
3. Very competitive	20.7

Sources: Resident survey, *Barron's Profiles of American Colleges*, 2009; descriptions of these categories are provided in section E, below.

Note: Sample size = 304.

The relevance of Barron's 2007–2008 ratings for residents depends on the year they actually entered the college from which they graduated and the stability of the ratings over time. We did not explore the ratings' stability over time, but we note that the actual freshman year for nearly all the residents would have been one or more years before the 2007–2008 academic year; 2007–2008 would have been the freshman year for the 23 percent of residents who received their bachelor's

degree in 2011, assuming they had completed that degree in four years. For residents who graduated five years before spring 2012, their freshman year of college would have been 2003–2004 or earlier.

As context for the findings on college competitiveness, consider the results of similar analyses from two recent Institute of Education Sciences studies.

- The first study focused on elementary teachers. About half the teachers were from a purposive sample of non-selective alternative certification programs, divided into subgroups based on having lower or higher coursework requirements. The other half were teachers from traditional certification programs teaching in the same grade levels and schools as the former group. Constantine et al. (2009) found that about 15 percent of those in the lower-coursework alternative-certification programs and 26 percent of those in the higher-coursework alternative-certification programs had graduated from a college listed in the top three competitiveness categories in Barron's ratings published in 2003. In the comparison group of teachers with traditional certification, the figures were 31 percent and 33 percent, respectively.
- The second study focused on secondary math teachers. About half the teachers were purposively selected from either Teach For America or a Teaching Fellows program, and half were from either a non-selective alternative certification program or a traditional certification program, but teaching in same grade levels and schools as the former group. Clark et al. (2013) found that about 81 percent of Teach For America teachers and 72 percent of Teaching Fellows had graduated from a college listed in the top three competitiveness categories in Barron's ratings published in 2003, compared with 23 and 34 percent of their comparison teachers, respectively.

About 13 percent of residents reported receiving their bachelor's degree in education. (The study does not have good measures of other subjects in which they may have majored.) The specific education-related response options that residents indicated most frequently included Elementary grades, general; Secondary grades, general; Special education, any; Other Education: non-subject-matter-specific-education; and ESL or bilingual education: General.

c. Work Experience

A majority of residents reported having worked full-time before beginning their residency, and many of them had experience in the education field. About 57 percent of residents said they had held a full-time non-teaching job at some point after finishing college; these residents had held such jobs for an average of 5.2 years (Table A.14). About three-fourths of residents said they had served, at some point or other, as a paid or unpaid tutor. Among the three types of classroom work experience we asked about, the most common among the residents was serving as a teacher's aide, which about 23 percent of residents had done, for an average of 1.9 years. Fewer residents said they had worked as a long-term substitute teacher (7 percent) or a short-term substitute teacher (15 percent).

Table A.14. Residents' Pre-Residency Work Experience

Type of Experience	Percentage of Residents	Among Residents with this Experience, Average Years
Worked full-time in a non-teaching job, since graduating from college	56.9	5.2
Served as a paid or unpaid tutor before becoming a teacher	75.2	n/a
Before the current school year:		
Worked as a long-term substitute teacher	7.1	1.1
Worked as a short-term substitute teacher	15.0	1.2
Worked as a teacher's aide	23.1	1.9
Worked in any of the above three roles	37.2	n/a

Sources: Resident survey.

Notes: Sample size = 350–355 for the percentage of residents column. For years of full-time nonteaching work experience, sample size was 201; for years of long-term substitute work experience, sample size was 24; for years of short-term substitute work experience, sample size was 51; and for years of teacher's aide work experience, sample size was 81. Residents reported experience as a long-term substitute, a short-term substitute, and a teachers' aide in years and months. Individual responses were rounded to the nearest year and then averaged. Finally, "n/a" = not available.

3. Residents' Schools Compared with Other Schools in the Same Districts

The schools where residents were placed generally had similar characteristics, on average, as those that did not host residents (Table A.15). Of the six characteristics we examined, the sole characteristic for which we found a statistically significant difference was the percentage of students in the school that were Hispanic (about 58 percent in residents' schools and 52 percent in other schools).

Table A.15. Characteristics of Schools Hosting and Not Hosting Residents in the In-Depth Sample of Districts

Characteristic	Schools that Hosted Residents	Schools that Did Not Host Residents	p-Value of Difference
Percentage black	27.8	29.7	0.502
Percentage Hispanic	58.1	51.9	0.029
Percentage eligible for free or reduced-price lunch	73.5	70.0	0.120
Percentage English-language learners	20.7	23.5	0.094
Percentage proficient in reading	49.9	51.6	0.439
Percentage proficient in math	47.9	52.6	0.058
Sample Size	101–113	2,843–3,336	

Sources: Common Core of Data for 2010–2011 and state and district websites.

Notes: Percentage black, Hispanic, and eligible for free or reduced-priced lunch were measured using the Common Core of Data for the 2010–2011 school year. Percentage English-language learners, proficient in reading, and proficient in math were measured using 2012 data from state and district websites. The percentage for schools that hosted residents is unadjusted. The percentage for schools that did not host residents is a regression-adjusted percentage, calculated as the unadjusted percentage for schools that hosted residents minus the regression coefficient for the difference between the two groups of schools from a regression that includes a set of district indicator variables.

4. Instructional Responsibilities During the Residency

For more insight into residents' self-reported responsibilities during their residency, we examined variation across programs for seven activities—those most closely related to instruction—in the second half of the year. The results suggest that the overall percentages encompass considerable program-level variation in the percentage of residents reporting primary responsibility for various activities (Table A.16).

Table A.16. Variation in the Percentage of Residents Within Programs Who Reported Having Primary Responsibility for Instruction-Related Activities During the Second Semester of their Residency

Instruction-Related Activity	Overall Percentage for Residents	Range Across Programs (percentage)	
		Minimum	Maximum
Working one-on-one with students	38	15	65
Working with small groups of students	39	20	75
Implementing lessons with the entire class	54	28	92
Planning lessons	61	35	82
Selecting teaching techniques	44	10	61
Evaluating and grading students	43	24	100
Selecting instructional materials	37	11	68

Source: Resident survey.

Note: Overall percentages for residents are based on sample sizes of 351–354. Sample size for programs included in the analysis is 12—those in the in-depth sample, whose residents participated in this study.

5. Sense of Preparedness to Teach

For more insight into how prepared residents felt to take on various teaching activities, we examined variation across programs for nine activities—those listed in Figure VII.4. The results suggest that TRPs may have varying levels of success in helping their participants feel prepared for certain teaching tasks (Table A.17).

Table A.17. Variation in the Percentage of Residents Within Programs Who Reported Feeling Well or Very Well Prepared to Take On Various Teaching Activities, as of Spring 2012

Teaching Activity	Overall Percentage for Residents	Range Across Programs (percentage)	
		Minimum	Maximum
Collaborate with other teachers on curriculum, lesson planning, or student issues	87	71	96
Teach the subject matter	86	71	100
Plan instruction based on student data	83	67	100
Use a variety of instructional methods	83	67	100
Find resources for help, to assist with issues/concerns	83	70	94
Assess students	80	61	100
Select and adapt curriculum and instructional materials	80	70	100
Handle a range of classroom management or discipline situations	70	40	97
Use technology in classroom instruction	68	54	89

Source: Resident survey.

Note: Overall percentages for residents are based on sample sizes of 347–348. Sample size for programs included in the analysis is 12—those in the in-depth sample, whose residents participated in this study.

D. Novice Teachers

In this section, in support of program-level analyses presented in the main body, we first present response rates of TRP teachers on the teacher-of-record survey, by program. Second, we describe the extent to which novice teachers were engaged in job-related coursework during the 2011–2012 school year. Third, we list the types of non-teaching responsibilities that novice teachers had taken on during this same year. Finally, we present additional technical information on retention analyses, retention rates at the district and program level using the mobility survey, and retention rates using district administrative records.

1. Teacher-of-Record Survey Response Rates for Teaching Residency Program Teachers, by Program

Because this report presents findings from the teacher-of-record survey at the program level for TRP teachers, here we present survey response rates for these teachers at this level. Response rates ranged from 77 percent to 100 percent (Table A.18).

Table A.18. Teacher-of-Record Survey Response Rates, for Teaching Residency Program Teachers, by Program

Program	Percent Responding
C	100.0
K	95.4
I	95.2
E	94.7
J	93.8
F	92.2
D	88.2
G	87.1
A	84.0
H	83.5
L	81.6
B	77.2

2. Job-Related Coursework

Novice TRP teachers were less likely than their non-TRP counterparts to report taking classes related to their job as a teacher during the 2011–2012 school year (about 35 versus 54 percent, a statistically significant difference) (Table A.19). However, among those who reported taking classes, the total hours of coursework during the year (94 versus 77 hours for TRP and non-TRP teachers, respectively) did not represent a statistically significant difference.

Table A.19. Novice Teachers' Job-Related Coursework During 2011–2012 School Year

	TRP Teachers	Non-TRP Teachers	<i>p</i> -Value of Difference
Percentage enrolled in classes related to job as a teacher	34.9	54.0	0.000
Among those enrolled, average total hours spent in classes	94.4	77.2	0.293
Sample Size	126–375	123–280	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

Because teachers who take an alternative route to certification are more likely than traditional-route teachers to have program-required coursework to complete after becoming a teacher of record, we divided the non-TRP sample into subgroups based on which of these two routes they had taken into teaching, and compared them separately with the TRP teachers. The overall difference in the percentage of TRP and non-TRP teachers enrolled in job-related coursework during the school year appears to have been driven by alternative-route non-TRP teachers. About 78 percent of these teachers were enrolled during the school year, compared with about 35 percent

of TRP teachers ($p < .001$). The percentage of traditional-route non-TRP teachers who were enrolled (40 percent) was not statistically different from the percentage of TRP teachers. Among those who reported taking classes, the average hours of coursework reported by TRP teachers (94 hours) did not differ from the average hours reported by traditional-route non-TRP teachers (50 hours) or alternative-route non-TRP teachers (87 hours) by statistically significant margins.

TRP teachers who reported taking job-related classes may have been less likely than the non-TRP teachers to be taking them as part of a program requirement toward their master's degree. As summarized in Chapter V, just one of the 15 randomly selected TRPs in the interview sample had its participants take classes after they became full-time teachers, and in that case the coursework ended within one semester.

We collected and analyzed data on the amount of coursework novice teachers were taking because of findings reported in two recent national studies for the Institute of Education Sciences, both of which raise questions about the wisdom of teachers early in their careers taking job-related courses while teaching. Our study cannot explore the relationship between teaching effectiveness and the course loads of novice TRP teachers or their counterparts, but it may be an issue for future investigation.

- The first study focused on elementary teachers from a variety of non-selective alternative-certification programs and their counterparts from traditional-certification programs at the same grade level and in the same schools (Constantine et al. 2009). All teachers selected for the study had five or fewer years of teaching experience when they entered the study. Among alternative-certification teachers in low-coursework programs, about 32 percent were taking courses during the study year; among alternative-certification teachers in high-coursework programs, about 57 percent were taking courses; and among the comparison traditional-certification teachers, roughly 25 percent were taking courses. (The study did not report the hours of coursework these teachers were engaged in.) The study found that “students of [alternative-certification] teachers who were taking coursework toward certification or a degree scored lower in reading (effect size -0.13) than did students of their [traditional-certification] counterparts who were not taking coursework” (p. xxx).
- The second study focused on secondary math teachers from Teach For America and Teaching Fellows programs, both considered highly selective alternative routes to certification, and their counterparts from other training programs teaching the same subjects, at the same grade level, and in the same schools (Clark et al. 2013). It did not restrict years of teaching experience for inclusion in the sample, but half the sample were early in their careers: the Teach For America teachers averaged 1.9 years of experience and their counterparts averaged 10.1 years; the Teaching Fellows averaged 4.0 years of experience and their counterparts averaged 13.0 years. Fifty percent of Teach For America teachers reported taking courses related to their teaching job during the study year (an average of 89 hours), compared with 21 percent of control teachers (taking an average of 50 hours). Twenty-nine percent of Teaching Fellows reported taking courses (an average of 60 hours), compared with 23 percent of control teachers (taking an average of 37 hours). The study found that teachers' effectiveness was negatively associated with teachers' engagement in coursework during the school year. For each additional 10 hours of teachers' coursework, whether for initial certification or any other certification or degree, the math achievement of their students was predicted to drop by 0.002 standard deviations.

3. Novice Teachers' Non-Teaching Responsibilities

We asked novice teachers whether they had engaged in seven different non-teaching tasks during the 2011–2012 school year, and compared responses of TRP and non-TRP teachers (Table A.20). For only one of the seven non-teaching items, serving as a department or grade-level chair, was the difference between the two sets of responses statistically significant—12 percent of TRP teachers reportedly served in this capacity, compared to about 7 percent of non-TRP teachers.

Table A.20. Novice Teachers' Non-Teaching Responsibilities During 2011-12 School Year

Responsibility	Percentage ^a		p-Value of Difference
	TRP Novices	Non-TRP Novices	
Serve on a school-wide or district-wide committee or task force	38.8	35.1	0.366
Sponsor any student groups, clubs, or organizations	32.6	37.6	0.210
Coach a sport	13.4	16.6	0.284
Serve as department or grade-level chair	12.2	6.5	0.029
Serve as a mentor or master teacher for a newer teacher	7.9	7.6	0.911
Serve as a lead curriculum specialist	3.8	6.4	0.140
Participate in any other school leadership activity	32.9	25.1	0.049
Sample Size	368–374	277–282	

Source: Teacher-of-record survey.

Notes: The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^aRespondents marked all that applied, so percentages may not sum to 100.

4. Teaching Residency Program Teachers' Sense of Preparedness to Teach

For more insight into how prepared TRP teachers felt to take on various teaching activities at the start of their teaching careers, we examined variation across programs for eight activities—those listed in Table VII.2. The results suggest that TRPs may have varying levels of success in helping their participants feel prepared for certain teaching tasks (Table A.21).

Table A.21. Variation in the Percentage of Novice Teachers Within Programs Who Reported Feeling Well or Very Well Prepared to Take On Various Teaching Activities at the Start of Their First Year as a Full-Time Teacher

Activity	Overall Percentage for Novice TRP Teachers	Range Across Programs (percentage)	
		Minimum	Maximum
Create lesson plans	86.4	67	96
Teach the subject matter	73.1	33	100
Use a variety of instructional methods	71.3	45	84
Assess students	69.5	40	81
Use technology in classroom instruction	64.6	47	81
Interact with parents	64.0	31	75
Select and adapt curriculum and instructional materials	64.0	45	77
Handle a range of classroom management or discipline situations	57.4	31	74

Source: Teacher-of-record survey.

Note: Overall percentages for teachers are based on sample sizes of 374–376. Sample size for programs included in the analysis is 12—those in the in-depth sample, whose teachers participated in this study.

5. Retention Rates

In this section we present additional information from the two data sources available for analyzing retention—the mobility survey data and district administrative records. We first report mobility survey response rates by program and by district. We then explore the bias that non-response to the mobility survey may produce in the retention estimates. Next we present retention rates estimated separately by district and by program using mobility survey data. Turning the focus to district administrative records, we then discuss the potential bias arising from the inclusion of veteran teachers in district records. We conclude by presenting retention rates estimated with district records.

a. Mobility Survey Response Rates, by Program and by District

Because this report presents findings from the mobility survey at the program level, here we present survey response rates at this level. The response rates for TRP teachers, the group for which we present data by program, ranged from 72 percent to 100 percent (Table A.22).

Table A.22. Mobility Survey Response Rates of Teaching Residency Program Teachers, by Program

Program	Percent Responding
I	100.0
J	100.0
K	91.7
A	90.5
B	89.1
D	88.2
G	87.1
C	85.0
L	81.6
F	79.7
E	75.8
H	72.2

Because this report presents findings from the mobility survey at the district level, here we present survey response rates at this level. For all but one district, the response rate among TRP teachers was higher than that among their non-TRP counterparts (Table A.23). The response rates for TRP teachers ranged from 77 percent to 100 percent, and the response rates for non-TRP teachers ranged from 53 percent to 96 percent.

Table A.23. Mobility Survey Response Rates, by District

District	Percent Responding	
	TRP Teachers	Non-TRP Teachers
III	100.0	84.8
V	89.0	86.5
VI	88.8	53.0
I	85.0	95.7
II	83.7	80.6
IV	76.7	65.4

b. Exploration of Non-Response Bias from Using Mobility Survey Data

The retention rates presented in Chapter VIII may be biased—that is, they may systematically over- or underestimate true retention among novice teachers—if mobility survey respondents differ from non-respondents in ways that are related to retention. A key concern is that retention status itself may influence the likelihood of responding to the survey. Presumably, teachers who remained in their spring 2012 district (“district stayers”) were more readily locatable in fall 2012 and thus more likely to be successfully surveyed than teachers who had left their district (“district leavers”). To explore non-response bias, we first used district administrative records—which are available for all

teachers who appeared on spring 2012 district lists, regardless of whether they completed the mobility survey—to compare mobility survey response rates for district stayers to district leavers. We then compared retention rates estimated with district records to retention rates estimated with mobility survey data.

The district records are not a true “gold standard” source of novice teacher retention data for two reasons. First, the sampled teachers’ retention status based on administrative data could have errors. Second, while a survey screener question made it possible to confirm that mobility survey respondents were true novice teachers, it was not possible to confirm the novice status of any teachers in the district records who did not complete a screener question; thus, district records may contain veteran teachers.⁵⁵ (We address below the possible bias arising from the inclusion of veteran teachers in district records.) Nevertheless, district records provide a useful point of comparison because they include retention information for both survey respondents and non-respondents.

As expected, teachers who remained in their spring 2012 district in fall 2012 were more likely to complete the mobility survey than were teachers who had left their original district by fall 2012 (Table A.24). This finding suggests that mobility survey data somewhat overstate retention. Moreover, because the magnitude of the difference between district stayers and leavers was larger for non-TRP teachers than for TRP teachers, the mobility survey data tend to overstate retention to a greater extent for non-TRP teachers. As a result, TRP/non-TRP differences in retention rates tend to be lower than what would be expected if all mobility survey sample members had completed the survey. Nevertheless, the practical effect of this bias is mitigated by two factors: (1) overall response rates were relatively high, and (2) teachers who left the district represent a relatively small proportion of all sampled novice teachers.

Table A.24. Mobility Survey Response Rates, by Spring 2012 to Fall 2012 District Retention Status

District Retention Status	Percentage Responding		
	TRP Teachers	Non-TRP Teachers	All Teachers
Retained in district	88.1	77.6	82.9
Left district	70.7	41.3	55.2
Sample Size	377	376	753

Sources: District data on teacher employment, teacher-of-record survey, mobility survey.

Notes: District retention status was calculated using only teacher employment verification data obtained from districts. Individuals who indicated on the teacher-of-record or mobility survey that they were experienced teachers in spring 2012 were removed from the sample. The mobility survey response rates do not adjust for the estimated proportion of survey non-respondents who were experienced teachers and therefore ineligible. Among the TRP group, 336 teachers were retained in the district and 41 teachers left the district; among the non-TRP group, 330 teachers were retained in the district and 46 teachers left the district.

⁵⁵ We resolved two other issues affecting the comparability of findings generated by using district records versus mobility survey data. First, the mobility survey data included TRP teachers who in spring 2012 were in charter schools that did not appear in the district records. We addressed this issue by excluding these teachers from the mobility survey analysis sample when estimating the retention rates presented in this subsection. Second, district administrative data did not distinguish between teachers who left the district to teach elsewhere and teachers who left the profession entirely. Consequently, in this subsection we present only school and district retention rates, omitting the profession retention rates that could be estimated with mobility survey data.

Comparing retention rates estimated from the two available sources suggests that the mobility survey non-response did not substantively affect the results (Tables A.25 and A.26). Retention rates estimated using mobility survey data were within about five percentage points of those estimated using district records. The sign, magnitude, and statistical significance of the differences between the TRP and non-TRP groups were similar across the two data sources.

Table A.25. Novice Teachers' Retention Rates, Spring 2012 to Fall 2012, Estimated with District Records

Retention Outcome	Percentage		<i>p</i> -Value of Difference
	TRP Teacher	Non-TRP Teachers	
Retained in school	77.2	79.2	0.541
Retained in district	89.1	87.0	0.402
Sample Size	377	376	

Sources: District data on teacher employment, teacher-of-record survey, mobility survey, Common Core of Data for 2010–2011.

Notes: Retention outcomes were calculated using only teacher employment verification data obtained from districts. Individuals who indicated on the teacher-of-record or mobility survey that they were experienced teachers in spring 2012 were removed from the sample. The TRP retention rate is not regression-adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

Table A.26. Novice Teachers' Retention Rates, Spring 2012 to Fall 2012, Estimated with Mobility Survey Data

Retention Outcome	Percentage		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
Retained in school	82.3	83.9	0.627
Retained in district	92.8	91.2	0.502
Sample Size	333	274	

Sources: Mobility survey, teacher-of-record survey, Common Core of Data for 2010–2011.

Notes: Individuals who in spring 2012 were in charter schools that did not appear on spring 2012 district lists were removed from the sample to increase comparability with the estimates obtained using district records; consequently, the estimates reported here differ from those reported in chapter VIII. The TRP retention rate is not regression-adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

c. Additional Retention Rates Estimated from Mobility Survey Data

The main finding from Chapter VIII—that novice TRP and non-TRP teachers had similar retention rates—persists when retention is examined separately by district. School retention rates for TRP teachers across districts ranged from about 79 percent to 100 percent (Table A.27). District retention rates ranged from about 87 percent to 100 percent (Table A.28). Profession retention rates ranged from about 93 percent to 100 percent (Table A.29). The TRP and non-TRP retention rates were not statistically different, with one exception—TRP teachers in District IV were statistically more likely to remain in the teaching profession than non-TRP teachers in the same district (100 percent versus 94 percent).

Table A.27. Novice Teachers' School Retention Rates, Spring 2012 to Fall 2012, by District

District	Percentage		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
I	100.0	89.1	0.352
II	83.3	81.9	0.839
IV	80.9	86.3	0.559
III	80.4	91.3	0.285
V	79.8	82.1	0.761
VI	78.7	80.6	0.857
Sample Size	373	274	

Sources: Mobility survey, teacher-of-record survey, Common Core of Data for 2010–2011.

Notes: The TRP retention rate is not regression-adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

Table A.28. Novice Teachers' District Retention Rates, Spring 2012 to Fall 2012, by District

District	Percentage		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
I	100.0	89.1	0.352
IV	97.9	95.5	0.539
III	93.5	96.2	0.692
II	93.5	93.8	0.944
VI	90.2	85.2	0.524
V	87.2	83.6	0.575
Sample Size	373	274	

Sources: Mobility survey, teacher-of-record survey, Common Core of Data for 2010–2011.

Notes: The TRP retention rate is not regression-adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

Table A.29. Novice Teachers' Profession Retention Rates, Spring 2012 to Fall 2012, by District

District	Percentage		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
I	100.0	100.0	-
IV	100.0	93.6	0.027
II	97.2	96.4	0.795
III	95.7	96.0	0.943
VI	95.1	93.3	0.749
V	92.6	86.7	0.302
Sample Size	373	274	

Sources: Mobility survey, teacher-of-record survey, Common Core of Data for 2010–2011.

Notes: The TRP retention rate is not regression-adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

We also present TRP retention rates separately by program. School retention rates ranged from 68 percent to 100 percent (Table A.30). District retention rates ranged from 79 percent to 100 percent (Table A.31). Profession retention rates ranged from 85 percent to 100 percent (Table A.32). It is worth noting that these estimates are based on relatively small samples sizes, ranging from 12 to 80 teachers per program.

Table A.30. Novice Teaching Residency Program Teachers' School Retention Rates, Spring 2012 to Fall 2012, by Program

Program	Percentage
C	100.0
B	86.7
A	85.7
H	84.4
E	83.3
K	82.7
L	82.5
J	80.4
G	76.9
D	73.3
I	71.4
F	68.4

Source: Mobility survey.

Notes: Sample size = 373. Sample sizes by program range from 12 to 80.

Table A.31. Novice Teaching Residency Program Teachers' District Retention Rates, Spring 2012 to Fall 2012, by Program

Program	Percentage
C	100.0
D	100.0
H	96.9
I	95.2
L	93.8
J	93.5
A	92.9
E	91.7
K	89.3
B	86.7
G	84.6
F	78.9

Source: Mobility survey.

Notes: Sample size = 373. Sample sizes by program range from 12 to 80.

Table A.32. Novice Teaching Residency Program Teachers' Profession Retention Rates, Spring 2012 to Fall 2012, by Program

Program	Percentage
A	100.0
B	100.0
C	100.0
D	100.0
E	100.0
H	100.0
L	96.3
J	95.7
I	95.2
K	93.3
F	89.5
G	84.6

Source: Mobility survey.

Notes: Sample size = 373. Sample sizes by program range from 12 to 80.

d. Exploration of Bias Due to Inclusion of Veteran Teachers in District Records

Because some districts could determine only the number of years a sample member taught *in the district* rather than the total number of years in the teaching profession, it is possible that the district employment information obtained for purportedly novice teachers actually included veteran teachers who had taught elsewhere prior to coming to the district. Previous research has shown lower rates of attrition among more experienced teachers (prior to reaching retirement age) than among newer teachers (Guarino et al. 2006). Consequently, retention rates estimated solely from district administrative records may overstate the retention rates for true novice teachers.

To explore this potential bias, we used data from the teacher-of-record and mobility surveys' screener questions to estimate the percentage of veteran teachers in the district administrative records. Ten percent of TRP teachers who completed one of the screener questions indicated that they were veteran teachers. TRP teachers with unconfirmed novice teacher status (that is, those who did not complete a screener question) accounted for about 5 percent of all TRP teachers in the final sample. Assuming that the percentage of veteran teachers among those who did not complete a screener question was the same as among those who did, it is possible to estimate that 0.5 percent of all TRP teachers in the final sample were veteran teachers. This relatively low percentage indicates little scope for bias when estimating retention with district records that include teachers whose novice teacher status had not been confirmed.

Similar calculations suggest that about 3 percent of all non-TRP teachers in the final sample were veteran teachers, which raises more concern about bias. However, even if veteran teachers had a 100 percent retention rate—which would lead to the maximum possible positive bias in our estimate of the non-TRP teachers' retention rate—the bias would be only about 0.5 percentage points. The inclusion of veteran teachers is thus unlikely to significantly bias the retention rates estimated with district records.

e. Retention Rates Estimated from District Records

As with the main report findings derived from mobility survey data, estimating retention with district records indicates that TRP and non-TRP teachers had similar retention rates. Among the first-year cohort, 74 percent of TRP teachers remained in the same school from spring 2012 to fall 2012, and 87 percent remained in the same district (Table A.33).⁵⁶ Retention rates for second-year TRP teachers were about 82 percent at the school level and about 92 percent at the district level. All these retention rates were within about four percentage points of those for non-TRP counterparts, not constituting statistically significant differences.

⁵⁶ Retention rates for the full sample (that is, with both cohorts combined) appear in Table A.25.

Table A.33. Novice Teachers' Retention Rates, Spring 2012 to Fall 2012

Retention Outcome	Percentage of First-Year Teachers			Percentage of Second-Year Teachers		
	TRP	Non-TRP	<i>p</i> -Value of Difference	TRP	Non-TRP	<i>p</i> -Value of Difference
Retained in school	74.0	77.1	0.517	81.6	79.2	0.623
Retained in district	87.2	86.7	0.890	91.8	87.7	0.292
Sample Size	219	180		158	196	

Sources: District data on teacher employment, teacher-of-record survey, mobility survey, Common Core of Data for 2010–2011.

Notes: Retention outcomes were calculated using only teacher employment verification data obtained from districts. Individuals who indicated on the teacher-of-record or mobility survey that they were experienced teachers in spring 2012 were removed from the sample. The TRP retention rate is not regression-adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear Chapter II.

Across districts, school retention rates for TRP teachers ranged from about 66 percent to 85 percent (Table A.34), and district retention rates ranged from about 84 percent to 93 percent (Table A.35). The retention rates for TRP and non-TRP teachers were not statistically different.

Table A.34. Novice Teachers' School Retention Rates, Spring 2012 to Fall 2012, by District

District	Percentage		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
I	85.0	81.7	0.828
V	80.6	80.6	0.999
II	79.6	72.8	0.364
III	76.6	85.8	0.404
IV	76.3	88.6	0.149
VI	65.5	75.0	0.402
Sample Size	377	376	

Sources: District data on teacher employment, teacher-of-record survey, mobility survey, Common Core of Data for 2010–2011.

Notes: Retention outcomes were calculated using only teacher employment verification data obtained from districts. Individuals who indicated on the teacher-of-record or mobility survey that they were experienced teachers in spring 2012 were removed from the sample. The TRP retention rate is not regression-adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

Table A.35. Novice Teachers' District Retention Rates, Spring 2012 to Fall 2012, by District

District	Percentage		<i>p</i> -Value of Difference
	TRP Teachers	Non-TRP Teachers	
IV	93.2	91.0	0.695
II	91.8	87.6	0.429
III	91.5	90.2	0.882
I	90.0	83.7	0.652
V	85.7	83.8	0.743
VI	83.6	91.0	0.425
Sample Size	377	376	

Sources: District data on teacher employment, teacher-of-record survey, mobility survey, Common Core of Data for 2010–2011.

Notes: Retention outcomes were calculated using only teacher employment verification data obtained from districts. Individuals who indicated on the teacher-of-record or mobility survey that they were experienced teachers in spring 2012 were removed from the sample. The TRP retention rate is not regression-adjusted. The non-TRP retention rate is a regression-adjusted rate, calculated as the unadjusted TRP retention rate minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

We also present retention rates for TRP teachers separately by program. School retention rates ranged from about 46 percent to 85 percent (Table A.36). District retention rates ranged from about 64 percent to 100 percent (Table A.37). These estimates are based on relatively small samples sizes, ranging from 9 to 89 teachers per program.

Table A.36. Novice Teaching Residency Program Teachers' School Retention Rates, Spring 2012 to Fall 2012, by Program

Program	Percentage
C	85.0
K	81.8
L	79.8
H	79.1
A	77.8
G	76.9
J	76.6
F	76.2
I	73.7
D	68.8
E	58.3
B	45.5

Sources: District data on teacher employment, teacher-of-record survey, mobility survey.

Notes: The school retention rate was calculated using only teacher employment verification data obtained from districts. Individuals who indicated on the teacher-of-record or mobility survey that they were experienced teachers in spring 2012 were removed from the sample. The TRP retention rate is not regression-adjusted. Sample size = 377. Sample sizes by program range from 9 to 89.

Table A.37. Novice Teaching Residency Program Teachers' District Retention Rates, Spring 2012 to Fall 2012, by Program

Program	Percentage
D	100.0
I	100.0
L	93.3
J	91.5
H	90.7
C	90.0
K	87.0
G	84.6
F	81.0
A	77.8
E	75.0
B	63.6

Sources: District data on teacher employment, teacher-of-record survey, mobility survey.

Notes: The district retention rate was calculated using only teacher employment verification data obtained from districts. Individuals who indicated on the teacher-of-record or mobility survey that they were experienced teachers in spring 2012 were removed from the sample. The TRP retention rate is not regression-adjusted. Sample size = 377. Sample sizes by program range from 9 to 89.

f. Comparison of Linear Probability and Logit Model Estimates

All retention estimates were obtained using a linear probability model. As a sensitivity check, we also analyzed the results using maximum likelihood estimation of a logit model, where possible. Maximum likelihood estimates of the logit do not exist when TRP status perfectly (or nearly perfectly) predicts retention for at least one of the two teacher groups, as was sometimes the case when we examined retention separately by district. For example, all TRP teachers in District I who responded to the mobility survey remained in the district as teachers (in other words, the retention variable was equal to 1 for all TRP teachers in the sample from this district). Because TRP status perfectly predicts retention for TRP teachers in District I, we could not obtain logit estimates of differences between TRP and non-TRP teachers in school, district, and profession retention rates for this district.

In the 59 cases in which we were able to examine TRP versus non-TRP differences in retention outcomes using both the linear probability and logit models, the results of the two models were consistent. In particular, the linear probability model produced no statistically significant differences in all 59 cases, and the same was true of the logit model.

Logit estimates of TRP/non-TRP differences could not be obtained for the following seven outcomes: school, district, and profession retention rates in District I using mobility survey data (Tables A.27–A.29); district and profession retention rates in District IV using mobility survey data (Tables A.28 and A.29); and, school and district retention rates in District I using district records (Tables A.34 and A.35). The linear probability model showed no statistically significant differences

between TRP and non-TRP teachers in these cases, with one exception—TRP teachers in District IV were statistically more likely to be retained in the profession than non-TRP teachers in the same district.

E. Additional Details on Measurement and Analysis

1. Defining Novice Teachers and Measuring Their Response Rate

Districts differed in their ability to identify true first- and second-year teachers, since some districts maintain data that track teachers' experience level only within the district. Thus, their lists may have included teachers in their first or second year in the district who had prior teaching experience in other districts or in private schools. To identify true novice teachers, we included a screener question on our novice teacher-of-record survey. We defined teachers who reported being in their third year of teaching or beyond as ineligible for the sample. Among teachers who did not respond to the teacher-of-record survey, we examined information from a similar screener question on the mobility survey to confirm their novice teacher status. For remaining teachers, we relied on the information provided by the district, understanding that a small proportion of those teachers might in fact have been in their third year of teaching or beyond and thus ineligible for our sample.

Given our ability to confirm the eligibility only of those sample members who completed the teacher-of-record survey (or later, the mobility survey), survey non-respondents likely included some ineligible teachers. This likelihood presented complications in determining the true survey response rates, since these should be based only on eligible sample members. Thus, to calculate the response rates on the teacher-of-record survey (and mobility survey), we adjusted the overall sample size used in the calculation by estimating the number of non-respondents who actually were ineligible. We calculated the estimated number of ineligible non-respondents by multiplying the total number of survey non-respondents whose eligibility we could not determine by an estimate of the proportion likely to be ineligible. This estimated proportion likely to be ineligible was assumed to be equal to the proportion of survey respondents from the original sample whom we found to be ineligible (based on their response to the screener questions). This approach to calculating the response rate is based on the recommended approach by the American Association of Public Opinion Research (AAPOR 2011).

2. Barron's Rankings

Barron's categories reflect colleges' "degree of admissions competitiveness," not their academic standards or the quality of the education they provide. The criteria Barron's used in categorizing colleges were (1) "median entrance examination scores"; (2) "percentages of 2007–2008 freshmen scoring 500 and above and 600 and above on the critical reading, math, and writing sections of the SAT"; (3) "percentages of 2007–2008 freshmen scoring 21 and above and 27 and above on the ACT"; (4) "percentages of 2007–2008 freshmen who ranked in the upper fifth and the upper two-fifths of their high school graduating class"; (5) "minimum class rank and grade point average required for admission (if any)"; and (6) "percentage of applicants to the 2007–2008 freshman class who were accepted" (Barron's 2009, p. 247). We measured whether or not sample members' colleges were in one of the top three categories out of six, which included the following:

- **Most competitive:** "Even superior students will encounter a great deal of competition for admission to the colleges in this category. In general, these colleges require high school rank in the top 10% to 20% and grade averages of A to B+. Median freshman test scores at these colleges are generally between 655 and 800 on the SAT and 29 and

above on the ACT. In addition, many of these colleges admit only a small percentage of those who apply—usually fewer than one third” (p. 247).

- **Highly competitive:** “Colleges in this group generally look for students with grade averages of B+ to B and accept most of their students from the top 20% to 35% of the high school class. Median freshman test scores at these colleges generally range from 620 to 654 on the SAT and 27 or 28 on the ACT. These schools generally accept between one third and one half of their applicants” (p. 248).
- **Very competitive:** “The colleges in this category generally admit students whose averages are no less than B- and who rank in the top 35% to 50% of their graduating class. They generally report median freshman test scores in the 573 to 619 range on the SAT and from 24 to 26 on the ACT. These schools generally accept between one half and three quarters of their applicants” (p. 249).

3. Examining the Sensitivity of the Novice Teacher Results to the Inclusion of Charter School TRP Teachers

As described in Chapter II, our sample of TRP novice teachers included those who in spring 2012 were in charter schools that did not appear on district lists, while the non-TRP novice teacher sample did not include teachers in these charter schools. The teacher-of-record survey analysis sample included 42 such TRP teachers (33 first-year and 9 second-year teachers), and the mobility survey analysis sample included 40 such TRP teachers (30 first-year and 10 second-year teachers). To determine whether our results were sensitive to the inclusion of these teachers, we conducted two sensitivity tests. First, we added a control variable for teaching in a charter school not included on district lists to the regression model we used to compare the characteristics, experiences, perceptions, and retention outcomes of TRP and non-TRP teachers. Second, we excluded the TRP teachers in these charter schools from the estimation sample. In this way, we could determine whether our results were being substantively affected by the inclusion of this subset of teachers in the TRP sample but not in the non-TRP sample.

The sensitivity analyses found that the inclusion of these charter school TRP teachers did not substantively affect the vast majority of results. Of the 249 comparisons conducted using teacher-of-record survey data, the statistical significance of the difference between TRP and non-TRP teachers changed for only 11 (4.4 percent) of the comparisons. More specifically, for nine comparisons, results for the two novice teacher groups were not statistically different in the main analysis but were statistically different in at least one of the sensitivity tests; for two comparisons, the reverse was true. Table A.38 shows the results for these 11 comparisons.

The main finding from Chapter VIII—that novice TRP and non-TRP teachers had similar retention rates—was robust to the sensitivity tests. In no cases were the retention rates of the TRP and non-TRP teachers statistically different.

Table A.38. Sensitivity Analysis Results for Outcomes Whose Statistical Significance Changed, by Sample

Outcome	Main Analysis			Sensitivity Test 1 ^a			Sensitivity Test 2 ^b		
	Percentage of Novices		p-Value of difference	Percentage of Novices		p-Value of Difference	Percentage of Novices		p-Value of Difference
	TRP	Non-TRP		TRP	Non-TRP		TRP	Non-TRP	
All TRP teachers versus all non-TRP teachers									
10 years or more since bachelor's degree	20.1	14.9	0.104	20.1	13.4	0.040	21.8	15.0	0.042
Among teachers of departmentalized classes, taught:									
English, language arts, or reading	31.7	23.2	0.082	31.7	21.4	0.039	33.8	23.5	0.040
English as a second language, or special instruction for English-language learners or limited English proficient students	12.7	6.2	0.051	12.7	5.6	0.035	14.1	7.0	0.041
Other	6.8	13.3	0.037	6.8	12.5	0.071	7.6	13.3	0.080
First-year TRP teachers versus first-year non-TRP teachers									
Among those assigned a mentor/master teacher or field supervisor, mentor/master teacher or field supervisor was an administrator from the same school	14.2	23.5	0.060	14.2	24.2	0.047	12.9	23.3	0.037
Met with other novice teachers during the 2011–2012 school year to discuss curriculum development weekly or more often	43.1	32.5	0.063	43.1	31.5	0.044	44.7	31.9	0.031
Second-year TRP teachers versus second-year non-TRP teachers									
Assigned to a mentor/master teacher or field supervisor	49.3	36.5	0.046	49.3	38.6	0.098	47.3	37.2	0.120
All TRP teachers versus traditionally certified non-TRP teachers									
Worked full-time in a nonteaching job since college graduation	71.7	64.3	0.078	71.7	62.5	0.032	73.5	64.3	0.029
Felt program covered district curriculum to a moderate or great extent	62.6	53.6	0.063	62.6	52.9	0.048	63.0	53.8	0.061
All TRP teachers versus alternatively-certified non-TRP teachers									
Worked full-time in a nonteaching job since college graduation	71.7	61.5	0.073	71.7	61.7	0.077	73.5	62.1	0.042
Before current school year, worked as teacher's aide	22.2	31.8	0.067	22.2	32.9	0.040	21.3	31.6	0.048

Source: Teacher-of-record survey.

Note: For all TRP versus all non-TRP teacher comparisons, sample sizes were 198–348 TRP teachers and 145–259 non-TRP teachers; for first-year TRP versus first-year non-TRP teacher comparisons, sample sizes were 171–239 TRP teachers and 102–135 non-TRP teachers; for second-year TRP versus second-year non-TRP teacher comparisons, sample sizes were 129–138 TRP teachers and 149 non-TRP teachers; for all TRP versus traditionally certified non-TRP teacher comparisons, sample sizes were 335–381 TRP teachers and 194–195 non-TRP teachers; and for all TRP versus alternatively certified non-TRP teacher comparisons, sample sizes were 338–381 TRP teachers and 81–82 non-TRP teachers. The TRP mean values are not regression-adjusted. The non-TRP values are regression-adjusted means, calculated as the unadjusted TRP mean minus the regression coefficient for the difference between the TRP and non-TRP groups. Details about the regression controls appear in Chapter II.

^aSensitivity test 1 adds to the main analysis regression model a control variable for the teacher’s spring 2012 school being a charter school that did not appear on district lists.

^bSensitivity test 2 uses the main regression model but excludes teachers who in spring 2012 were in charter schools that did not appear on district lists.

4. Analyses of Roles Taken On By District and Institution of Higher Education Partners

Explanation of analysis in Table III.3. We asked the 15 directors in the interview sample whether each individual partner had primary, secondary, or no responsibility for each of eight major tasks. If a program had two or more partners of a particular type, we aggregated up and credited that type of partner with the highest level of responsibility mentioned for any of the individual partners. To illustrate, if a program had three nonprofit partners, one with primary responsibility for grant administration, one with secondary responsibility, and one with no responsibility, we counted that program as one in which the nonprofit partner(s) had primary responsibility for grant administration. In Table III.3, we present the results for primary and secondary levels of responsibility, omitting any cases in which all partners of a given type had no responsibility for a given activity. The analysis also omits data on responsibilities of “other” types of partners; the category was too diverse to be meaningful, and only a third of the programs had such a partner. To simplify the discussion, we focus on which types of partners had primary responsibility for given activities. Whenever the sum of the primary counts in a given row exceeds 15, as is the case for six of the eight rows in Table III.3, it indicates that two or more types of partners shared primary responsibility.

Explanation of analysis in Table III.4. Recognizing that all TRPs had at least one IHE partner and at least one district partner, and that the way these partners divide or share certain responsibilities could be of interest to potential partners in future programs, we examined these partners’ division of labor—their relative levels of responsibility. The logic of the analysis worked as follows: We credited the IHEs in a partnership with more responsibility for a given activity (1) if they had *primary* responsibility and the district had *secondary* responsibility or *no* responsibility, or (2) if the IHE had *secondary* responsibility and the district had *no* responsibility. If they both had primary, both had secondary, or both had no responsibility for a given activity, we credited them with an equal level of responsibility. We present the results in Table III.4, the first row of which indicates that, in 13 of the 15 programs, the IHE partner(s) had a higher level of responsibility than the district partner(s) for grant administration; in 2 programs, the IHE and district partners had the same level of responsibility; and in no programs did the district have a higher level of responsibility than the IHE partner(s).

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