

# Exploring Early Implementation of Pennsylvania's Innovative Teacher and Principal Residency Grants

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# Exploring Early Implementation of Pennsylvania's Innovative Teacher and Principal Residency Grants

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To improve educator diversity and address educator shortages, the Pennsylvania Department of Education (PDE) awards grants to universities in the state to develop and implement teacher and principal residency preparation programs. The programs must offer aspiring teachers and principals a residency of at least a year, consisting of clinical practice in schools with trained mentors, aligned coursework, and financial aid. The programs must focus on improving diversity and must partner with districts with chronic teacher or principal shortages, high proportions of students of color or in poverty, or that have been identified for state support.

This study examines eight residency programs that received grants for the 2019/20 school year. The study interviewed program staff, collected program data, and conducted focus groups with residents and mentors. The study sought to provide preliminary information early in the implementation of the programs on how well they were preparing teachers and principals, where the teachers and principals were getting jobs after completing the programs, whether the programs were improving diversity, and how they could be improved.

Four key findings emerged from the study. First, recruiting diverse candidates was difficult. Teacher residents were mostly White, although more than a third of participants in one of the programs were people of color. Principal residents were more diverse. Second, for five of the six programs with available employment data, at least half of the residents were hired in high-need districts after completing the programs. Third, residents and mentors felt the residents were prepared for most teaching or school leadership responsibilities, although principal mentors felt some principal residents were not as well prepared. Finally, program staff, residents, and mentors described several lessons learned, including that communication and the balance of the time commitment between the coursework and the residency could be improved.

The findings will inform PDE's plans for future grants and help the funded programs improve. The findings may also be relevant to other states, districts, or preparation programs that are developing residency programs.

## Why this study?

The Pennsylvania Department of Education (PDE), like many state departments of education, faces persistent teacher and principal shortages in certain districts, schools, and teaching positions, and faces the potential for future, larger shortages. These shortages are concentrated in high-need districts, including those in urban and rural areas, and hard-to-staff teaching positions, including special education and science, technology, engineering, and math (PDE, 2018a; U.S. Department of Education, n.d.). Meanwhile, the supply of teachers and principals trained in the state has steadily shrunk. The number of teacher candidates completing their degrees at preparation programs in Pennsylvania and earning teaching certificates in the state has dropped by 63 percent from 15,031 in 2010/11 to 5,505 in 2018/19 (PDE, 2021). Similarly, the number of principal candidates completing their degrees at preparation programs in Pennsylvania and earning school administrator certificates has dropped 37 percent from 980 in 2010/11 to 621 in 2018/19 (PDE, 2021).

In addition to addressing persistent shortages, PDE would like to improve the racial/ethnic diversity of teachers in the state and their ability to deliver culturally responsive instruction. Evidence suggests several benefits of a higher proportion of students taught by at least one teacher of the same race, including higher student test scores, fewer suspensions and expulsions, and higher graduation and college enrollment rates (Dee, 2004; Egalite et al., 2015; Gershenson et al., 2018; Holt & Gershenson, 2015; Lindsay & Hart, 2017). Some research also points to benefits of culturally responsive instruction, including improved reading skills and achievement, and fewer disciplinary

incidents (Bradshaw et al., 2018; Portes et al., 2017). However, educator diversity is limited in Pennsylvania. In 2017/18, only 6 percent of Pennsylvania teachers were racial/ethnic minorities compared with about 34 percent of public school students (PDE, 2018a).

PDE is funding the development and implementation of teacher and principal residency programs in the hope that they can prepare diverse, culturally responsive, and effective teachers and principals to fill openings in high-need districts and hard-to-staff teaching positions. Residency programs differ from traditional preparation programs by offering longer, more intensive clinical practice; typically involving an expectation that successful residents will be hired for full-time positions in the partnering districts after completing their residencies; and often recruiting candidates outside of the typical pool recruited by traditional teacher preparation programs (Guha et al., 2016). PDE's investment is based on a small body of non-experimental research suggesting the potential promise of educator residency programs. That research provides some evidence consistent with the aims of residency programs, suggesting that some residency programs may produce educators who are more likely to fill hard-to-staff positions, may recruit and prepare more diverse educators, may prepare educators who stay in their districts longer, and may prepare educators who are better at improving test scores, at least after several years, than those prepared by other types of preparation programs (Garrison, n.d.; Papay et al., 2012; Silva et al., 2015; Wan et al., 2021).

This report, prepared by the Regional Educational Laboratory Mid-Atlantic in partnership with PDE, examines the early efforts of PDE-funded residency programs to prepare diverse, well-prepared teachers and principals for openings in high-need districts and hard-to-staff positions and explores ways the programs might improve. The evaluation focused on eight residency programs, five of which were in their first year of implementation, that received grants for the 2019/20 school year. The findings provide preliminary information early in the implementation of the programs to inform PDE's plans for the grants and provide information to help the funded programs improve. The findings may also inform other states, districts, or educator preparation programs that are considering developing or refining their residency programs.

### **The Innovative Teacher and Principal Residency Programs grants**

PDE launched the Innovative Teacher and Principal Residency Programs grants starting in the 2018/19 school year using \$2 million of Pennsylvania's federal Title II, Part A funding. Each year PDE awards three types of grants to undergraduate and graduate universities in the state: planning grants, which provide up to \$75,000 to develop a teacher or principal residency program; implementation grants, which provide up to \$550,000 to support the implementation of a new residency program; and expansion grants, which provide up to \$200,000 to expand an existing program. The grants allow for substantial flexibility in the design and implementation of the residencies, but require the following characteristics:

- Are designed and implemented in partnership with at least one high-need district, which PDE defines as a district with (a) schools with high proportions of students of color or in poverty, (b) schools with chronic teacher shortages, or (c) schools that are designated for Comprehensive Support and Improvement or Additional Targeted Support and Improvement (PDE, n.d.).
- Include a full-year residency in a classroom or school alongside a trained mentor teacher or school leader.
- Include relevant coursework that is closely integrated with the residency.
- Provide financial support that eliminates or significantly reduces the financial burden for residents.
- Focus on increasing racial/ethnic diversity, as well as the number of residents with low income, residents who are first-generation college students, and residents from other underrepresented groups.
- Are sustainable long term.



In selecting the universities that receive grants, PDE also prioritizes programs that incentivize or require residents to teach in or lead schools in the high-need partner districts after completing the program, focus on producing candidates for hard-to-staff positions in the partner districts, train residents to serve a diverse group of students, and provide support to the residents after they complete the programs (PDE, 2018b; J. Wakeem, personal communication, August 17, 2021). In 2019/20, the second year of the grant program, PDE issued three planning and eight implementation grants.

## Research questions

The study focused on the residency programs at the eight universities that received implementation grants for the 2019/20 school year. Of the eight residency programs receiving implementation grants, four were teacher residency programs and four were principal residency programs.

The study addressed five research questions, each analyzed separately for the teacher and principal programs:

1. What were the core components of each program, how did they recruit and select participants, how did they differ from the traditional preparation programs at the same universities, and what was the grant cost per resident and per graduate?
2. How racially/ethnically diverse were the residency program participants?
3. What were the employment outcomes of the residents after completing the programs?
4. From the perspective of residents and mentors, how prepared were the residents to teach or lead schools?
5. From the perspective of program staff, residents, and mentors, what worked well, what did not work well, and what lessons were learned?

Definitions of key terms used in this report are in box 1. The study's data sources, sample, and methods are described in box 2 and in appendix A.

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### Box 1. Key terms

**Cultural responsiveness.** Using cultural knowledge, experiences, and references to make instruction relevant to all students (Council of Chief State School Officers, n.d.).

**Diversity.** Racial/ethnic diversity.

**Hard-to-staff positions.** Teaching positions with statewide shortages. In this study, hard-to-staff positions include special education and science, technology, engineering, and math (Pennsylvania Department of Education [PDE], 2018a; U.S. Department of Education, n.d.).

**High-need districts.** Districts that PDE determines have schools with high proportions of students of color or in poverty, schools with chronic teacher shortages, or schools that are designated for Comprehensive Support and Improvement or Additional Targeted Support and Improvement (PDE, n.d.).

**Mentors.** Experienced teachers, sometimes referred to as cooperating teachers, or principals who guide and support the residents. Residents typically do their residencies in their mentors' classrooms or schools.

**Participants or residents of color.** Refers to residency program participants who listed their race/ethnicity as Black, American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, Latino or Latina, or other.

**Partner districts.** The high-need districts that the residency programs partner with to develop and implement the programs. Residents typically do their residencies in schools in the partner districts.

**Program faculty.** University faculty who teach courses or oversee or administer the residency program. Program faculty does not refer to mentor teachers or principals, or school staff at the mentors' schools or from the partner districts.

**Program staff.** Staff at the residency programs who were interviewed as part of the study. The staff were typically the residency program directors, but in some cases were program faculty or program administrators.

### Box 1. Key terms (*continued*)

**Residency.** The component of the residency program during which the residents spend time in their mentors' classrooms or schools and receive mentoring.

**Residents.** Aspiring teachers or principals who participate in the residency programs.

**Site directors or supervisors.** Program staff who oversee residents' experiences in the programs. Not all programs have site directors or supervisors.

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### Box 2. Data sources, sample, methods, and limitations

**Data sources.** The study data came from the following sources:

- **Interviews with program staff.** The study team interviewed one program staff member from each of the eight residency programs. During the interviews, the study team asked about each program's partner districts; number of participants; program and residency length; financial aid; core components; the program's processes for recruiting residents, selecting mentors, and matching residents and mentors; the program's process for recruiting program faculty; the support the program provides to residents after they complete the program; the training the program provides to mentors; the impacts of the COVID-19 pandemic on the program; and lessons learned (see appendix E). The information from the interviews was used to answer research questions 1 and 5.
- **Study tables completed by residency program staff on the participants of each program and their employment outcomes.** The study team asked program staff to provide the race/ethnicity of each resident, whether they did their residency in a high-need district in Pennsylvania, whether they completed their residency and were certified, their certification area, whether they were employed as a teacher or principal in Pennsylvania after completing the program, whether they were employed in a high-need district in Pennsylvania, and for teachers, whether they were employed in a hard-to-staff position (see appendix D). These data were used to answer research questions 2 and 3. The study team also asked the program staff to provide data on program cost, but the team did not use the data received.
- **Focus groups with residents and mentors.** The study team conducted four sets of video conference focus groups with teacher residents, principal residents, teacher mentors, and principal mentors. The focus groups took place separately for each type of respondent. Due to scheduling challenges, the study team conducted a total of 13 focus groups, some with only one participant, to include all of the residents and mentors who agreed to participate in the focus groups. During the focus groups, the study team asked the residents or mentors why they participated in the program, their perceptions of how prepared the residents were to teach or lead schools, their perceptions of their residency or mentorship experiences, their thoughts on the major aspects of the programs, and suggestions on how the programs can improve (see appendix E). This information was used to answer research questions 4 and 5.

**Sample.** The study sample comprises program staff, residents, and mentors from the eight residency programs (four teacher programs and four principal programs) that received implementation grants for the 2019/20 school year. The study presents demographic and employment information on 96 teacher residents and 18 principal residents across the eight programs. The interview and focus group samples include eight residency program staff members, five teacher residents, three teacher mentors, seven principal residents, and six principal mentors. Although the study attempted to include residents and mentors from all eight programs, it did not succeed in recruiting participants from every program. The teacher residents and mentors were from three of the four teacher programs, the principal residents were from all four principal programs, and the principal mentors were from two of the four principal programs (see appendix A).

**Methodology.** The study analysis methods are briefly described below (see appendix A for more details). The study team analyzed each research question separately for the teacher and principal programs.

**Research question 1.** The study team summarized data from the program staff interviews on the core components of each program, how each recruits and selects participants, and how each differed from the traditional preparation programs at the same university. For the teacher residencies, to calculate the grant cost per resident and per graduate, the study team divided the total grant amount for each program (see appendix A) by the number of residents enrolled and by the number of residents who completed the program.

**Research question 2.** Using data provided by the programs on the race/ethnicity of their participants, the study team calculated the number of White participants and the number of participants of color at each of three stages: enrollment, program completion, and certification.

## Box 2. Data sources, sample, methods, and limitations (*continued*)

*Research question 3.* Using the data provided by the programs, the study team reported the number of residency program participants who were employed as a teacher or principal in Pennsylvania after completing the program, were employed in a high-need district in Pennsylvania, and for teachers, were employed in a hard-to-staff position.

*Research question 4.* The study team calculated residents' and mentors' average responses on a 5-point scale for each teaching or school leadership responsibility by adding the numerical value of each rating and dividing the total by the number of ratings. During the focus groups, residents and mentors rated residents' preparedness after completing the programs for each of several common teaching or school leadership responsibilities (see appendix E). The residents provided self-ratings of their preparedness and the mentors rated the preparedness of the residents they mentored for each responsibility on a 5-point scale: 1 (very unprepared), 2 (unprepared), 3 (neutral), 4 (prepared), and 5 (very prepared).

*Research question 5.* The study team analyzed the information collected from the interviews and focus groups with program staff, residents, and mentors. To produce the most generalizable findings, the study team looked for instances where more than one respondent discussed a similar topic. The study team then summarized those responses. The study team summarized the most relevant findings in the findings section of the report. Appendix C includes additional relevant findings.

**Limitations.** The study has several limitations (see appendix A). First, the study had limited or no data on several important outcomes. The study team was not able to collect reliable employment data on teacher residents from two of the four teacher programs, limiting the study's analysis of that outcome. The study had no data on teacher or school leader effectiveness—instead relying on residents' and mentors' perceptions of how well prepared the residents were—or on whether the programs were producing teachers capable of delivering culturally responsive instruction, which PDE hoped the residency programs might accomplish. The study was also unable to calculate grant costs per graduate for the principal residency programs because some principal residents were still in their residencies or in the certification process when the study data were collected.

Second, the study team was not able to collect reliable data on participants in *non-residency* preparation programs at the same universities, which the study team hoped to collect. This prevented the study from comparing the residency and non-residency programs to explore whether the residency programs were better at producing diverse, well-prepared teachers and school leaders who filled positions in high-need districts in higher rates.

Third, the study's findings on residents' preparedness to teach or lead schools and on ways the programs can improve are based on small sample sizes, participants from most but not all eight programs, and data from only one year. PDE needed the study results as soon as possible to inform the funded programs and future grants, necessitating smaller sample sizes to conduct the interviews and focus groups sooner. In addition, the study team was not able to recruit focus group participants from all eight programs. In particular, the study team was not able to recruit residents and mentors from one of the teacher residency programs that differed from the other three in important ways, although the study team believes the missing program was similar enough to the other three that the study findings were not substantially affected. Additionally, the focus group participants were from only one year, 2019/20, and participants from other years may have had different views.

Finally, the study team could only report what the program staff, residents, and mentors discussed during the interviews and focus groups. The study team focused on topics that multiple respondents discussed; however, not all respondents discussed the same topics, and the study team does not know the views of those who did not mention a topic.

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## Teacher residency findings

### *The teacher residency programs shared several common elements but varied in important ways*

Three of the four teacher programs involved modifying existing undergraduate teacher preparation programs to extend the time working in a classroom from one semester to two; recruited participants from among students already enrolled in the undergraduate teacher preparation programs; and provided scholarship assistance—and in some cases a modest stipend—but did not pay a salary to residents (table 1; see appendix B). Drexel University's residency program with the School District of Philadelphia, in contrast, differed substantially from the other programs. Drexel's program was a self-contained, one-year graduate program, placing residents in their residency classrooms five days per week for the entire year, providing a salary and benefits from the district during the residency, and requiring a commitment to continue teaching in the district for three years after the residency.

Other differences across the four programs included the application process; the number of residents, which ranged from 7 to 57; and the inclusion of a summer induction or orientation. The amount of the PDE grants per resident and per graduate also differed, ranging from \$3,509 to \$27,273 per resident and \$3,571 to \$37,500 per graduate.

**Table 1. Components of the teacher residency programs**

Component	Clarion University	Drexel University	Indiana University of Pennsylvania	Penn State Harrisburg
Undergraduate or graduate	Undergraduate (resulting in teacher certification)	Graduate (resulting in teacher certification)	Mostly undergraduate (resulting in teacher certification)	Undergraduate (resulting in teacher certification)
Partner schools or districts	Clarion Area Elementary School	School District of Philadelphia	Pittsburgh Public Schools and seven districts near Indiana, Pennsylvania	Three districts in Harrisburg, Pennsylvania area
Application process and program recruitment and resident selection process	Recruited from university student body. Residents completed an application process that included questions about teaching and management approaches and classroom scenarios. Program staff and mentors selected residents.	Recruited from university student body, social media, and local organizations, and through informational sessions. Residents completed an application process that included a demo lesson, interviews, and a survey collecting personality information. Program and district staff selected residents.	Recruited from university student body and local school districts. No application process; only an interest form. Based on number of mentors available, program accepted all with good academic standing and appropriate disposition.	Recruited from university student body. Residents completed an application process that included a questionnaire. Three program and district staff selected residents. Also helped recruit nearby high school seniors into the university student body.
Number of residents	7	21	57	11
Program core components	Coursework, residency, mentoring, weekly meetings with supervisor	Summer induction, coursework, residency, mentoring, monthly training sessions, support from site directors	Coursework, residency, mentoring, frequent meetings with program faculty and supervisors, teaching practice assignment	Orientation before start of school year, coursework, spring seminars, residency, mentoring, meetings with program faculty
Total program length	1 school year (fourth year of 4-year undergraduate program)	1 calendar year (of a 1-year graduate program)	1 school year (fourth year of 4-year undergraduate program)	1 school year (fourth year of a 4-year undergraduate program)
Amount of time in residency classrooms	1 school year (4 or 5 days per week)	1 school year (5 days per week)	1 school year (part time in fall, full time in spring)	1 school year (3 days per week in fall, 5 days per week in spring)
When coursework occurred	First half of each semester	Summer, fall, and winter quarters	Fall semester	Fall semester
Mentor selection process	School principal listed candidates. Program staff interviewed and selected mentors.	School district and principals listed candidates. Candidates completed questionnaire. Program staff selected mentors.	Teachers expressed interest to principals. Principals chose candidates. Program staff selected mentors.	School principals selected mentors.
Resident and mentor matching process	Residents and mentors filled out profiles, mentors ranked residents, program staff made matches. Residents were assigned a different mentor each semester.	Mentors and residents interviewed each other. Program staff used results to make matches.	Program staff matched residents and mentors based on grade/subject and who they thought would work well together.	Residents ranked the districts they wanted to do their residencies in. District staff and principals made matches based on residents' applications.
Requirements after graduating	None	Teach 3 years in School District of Philadelphia	Required to interview for teaching position or stay for master's degree	If did well, offered substitute teaching position or interview for permanent teaching position
Financial aid to residents and mentors	Approximately \$2,500 for residents; \$1,500 for mentors	Tuition stipend and \$40,000 salary for residents; \$2,500 for mentors	Approximately \$2,900–\$5,200 for residents; \$1,080 for mentors	\$8,000 for residents; \$2,000 for mentors
Grant amount per resident	\$10,657	\$9,524	\$3,509	\$27,273
Grant amount per graduate	\$10,657	\$10,526	\$3,571	\$37,500

Source: Authors' summary of data provided by residency program staff during the study's interviews.



*The teacher residency programs primarily differed from the traditional preparation programs at the same universities in the amount of teaching experience provided, the number of classrooms the teaching experience was conducted in, and the amount of oversight by supervisors and site directors*

The four teacher residency programs differed from the traditional preparation programs at their host universities in several important ways (table 2; see appendix B). In particular, the residency programs provided substantially more teaching experience, which was often conducted in a single classroom, unlike the non-residency programs. In addition, two of the programs provided substantially more oversight to the residents in the form of meetings with supervisors and site directors and observations.

**Table 2. Differences between each residency program and the traditional programs at the same university**

Clarion University	Drexel University	Indiana University of Pennsylvania	Penn State Harrisburg
Residents received 32 weeks of teaching experience compared to 16 weeks for non-residents. Non-residents did not have weekly meetings with their supervisors and may have only met with their supervisors four times in total. The residency course content was delivered in a condensed time period (one day per week for 9 weeks rather than over an entire semester).	Residents received substantially more teaching experience, were observed weekly by the site director (compared to six times total for non-residents), received more intensive coaching, and attended more meetings with mentors and site directors.	Residents spent more time in their residency classrooms than non-residents. Residents did their residencies in only one classroom, while non-residents were placed in two different classrooms.	Residents were in their residency classrooms for an entire year, while non-residents spent only 12 to 13 weeks in the classroom, mostly in the spring. Residents were in the same classroom across both semesters, while non-residents may have been in multiple classrooms.

Source: Authors' summary of data provided by residency program staff during the study's interviews.

*The majority of teacher residency participants were White in three of the programs, but participants in Drexel's program in Philadelphia were more diverse*

Across the four programs, most of the participants were White (table 3). Specifically, across three of the programs, 68 of the 75 (91 percent) participants enrolled and 65 of the 71 (92 percent) participants who completed the programs and were certified were White, which roughly corresponds to the characteristics of all teachers in the three programs' partner districts in 2019/20 (Shaw-Amoah et al., 2020). However, Drexel's program, which was in the most urban environment of the four programs and which did not rely on a pipeline of candidates already enrolled in teacher education, was much more diverse. For Drexel's program, 8 of the 21 (38 percent) participants enrolled and 8 of the 19 (42 percent) participants who completed the program and were certified were participants of color, slightly higher than the proportion of teachers of color in the School District of Philadelphia, Drexel's partner district, in 2019/20 (Shaw-Amoah et al., 2020).

**Table 3. Racial characteristics of teacher residency program participants, 2019/20**

Program	Number of participants at each stage in the residency program					
	Enrolled		Completed residency		Certified	
	White participants	Participants of color	White participants	Participants of color	White participants	Participants of color
Clarion University	7	0	7	0	7	0
Drexel University	13	8	12	8	11	8
Indiana University of Pennsylvania	51	6	51	5 <sup>a</sup>	51	5 <sup>a</sup>
Penn State Harrisburg	10	1	10	1	7 <sup>b</sup>	1
<b>Total across the four programs</b>	<b>81</b>	<b>15</b>	<b>80</b>	<b>14</b>	<b>76</b>	<b>14</b>

a. The participant of color who did not complete the residency or receive certification passed away before completing the program.

b. The program is awaiting the results from the certification test for one participant.

Source: Authors' analysis of data from the residency programs on the number and race/ethnicity of participants in 2019/20.

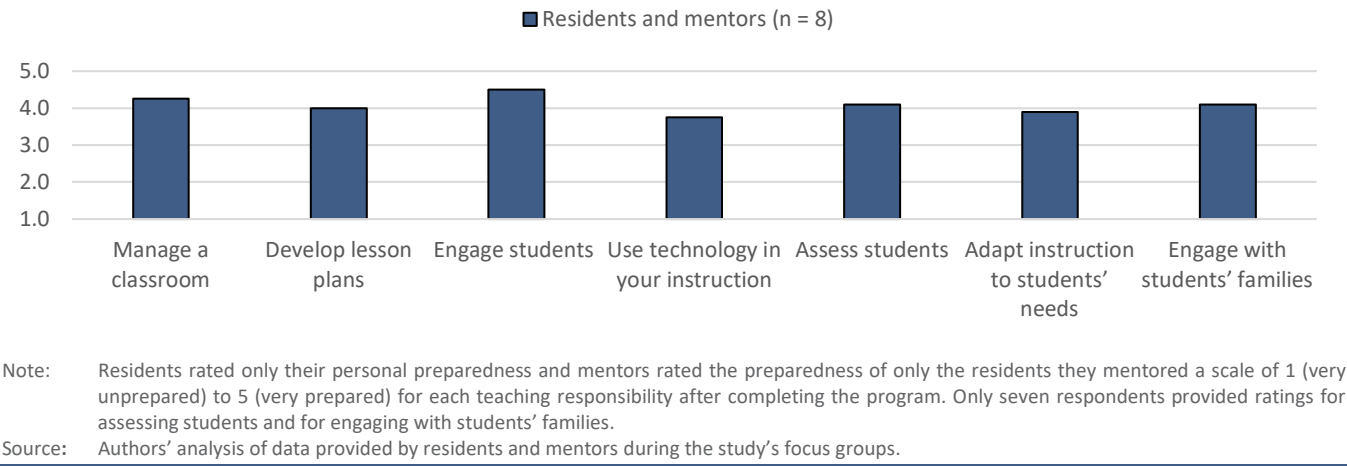
*For the two teacher residency programs reporting job placements, a large proportion of those enrolled got teaching jobs in high-need districts in the state after completing the program*

Data on residents’ employment outcomes after finishing the programs were only available for Drexel’s and Penn State Harrisburg’s programs. Of the 21 residents enrolled in Drexel’s program in 2019/20, 18 had teaching jobs in the state during the 2020/21 school year, all of which were in high-need districts and hard-to-staff positions. Of the 11 residents enrolled in Penn State Harrisburg’s program in 2019/20, 9 had teaching jobs in the state during the 2020/21 school year, all of which were in high-need districts and 2 of the 9 were in hard-to-staff positions.

*Residents and mentors perceived residents as prepared to take on teaching responsibilities*

The five residents and three mentors participating in the study focus groups felt the residents were prepared for typical teaching responsibilities. On average, the residents, who were asked to rate only their personal preparedness, and the mentors, who were asked to rate the preparedness of only the residents they mentored, rated the residents around a 4 (prepared) for each responsibility (figure 1). However, some residents felt they were less prepared for some of the responsibilities. For each responsibility at least one resident gave a self-rating of 2 (unprepared) or 3 (neutral). The residents’ ratings seem roughly in line with similar preparedness ratings from former residents of other teacher residency programs and possibly slightly higher than ratings from non-residents; however, the current study’s small sample size prevents rigorous comparisons (Silva et al., 2014). Mentors’ ratings did not differ substantially from residents’ ratings (residents’ and mentors’ ratings are not shown separately due to small sample sizes).

**Figure 1. Residents and mentors perceived residents as prepared for teaching responsibilities**  
Average rating (from 1 to 5) of residents’ preparedness for typical teaching responsibilities after the program



*Key findings from the interviews and focus groups*

The remaining teacher residency findings focus on lessons learned and ways the programs might improve based on the interview and focus group responses of the four teacher residency program staff members, five teacher residents, and three teacher mentors.

*Residents and mentors thought the length of the residency was beneficial.* All of the residents and mentors who participated in the study’s focus groups indicated that being in classrooms for an entire year was beneficial. The residents said that the length helped them ease into the role, become more comfortable co-teaching in classrooms, and build their teaching skills. The residents also indicated that the length of the classroom experience was one of the reasons they chose to participate in the programs. Mentors said that placing residents in classrooms for a full year allows the residents to get involved in planning and teaching from the beginning of the

year, helps the residents become more comfortable being in a classroom, lets the students view the residents as co-teachers from the beginning of the year, and exposes residents to a wider range of teaching experiences.

*Recruiting residents of color was difficult.* Most of the program staff said their programs struggled to recruit candidates of color. Program staff found that recruiting candidates of color to programs in rural areas (Clarion and Indiana University of Pennsylvania) was difficult because the populations of those areas that the programs recruited from were not diverse.

*Residents and mentors wanted better communication from the programs.* Communication was a commonly mentioned issue. Several residents and mentors requested better communication from the programs. They wanted clearer guidance on the programs' expectations for them, including what the residents needed to do to successfully complete their residency experiences and be recommended for certification and how the mentors were supposed to conduct the residencies. They also thought that better communication with the mentors would allow the mentors to create greater alignment between the residency and the coursework and improve their understanding of what to expect from the residents, particularly because the residents were starting their classroom experiences a semester earlier than non-residents typically do. The residents also wanted clearer communication on the timing and amount of financial aid.

*Balancing the time commitments of the coursework and residency was a challenge.* A few residents and mentors talked about the difficulty of balancing the coursework and the residency. The residents wanted to be in their classrooms five days per week but found that doing so while taking evening courses was difficult. The residents discussed several possibilities to ease the issue, including reducing the number of days they were in their residency classrooms (they suggested that they be in their classrooms on consecutive days during the week if so) and shifting some of the coursework to earlier in the program before the residency year.

Two program staff talked about their efforts to address this issue. One said their program shortened course lengths to try to ease the burden on the residents but realized that trying to teach the same amount of material in a shorter time did not work well. In response, the program redesigned the courses to fit the shorter time period. A second program staff member said their program shifted most of the coursework to the first half of the first semester. During the first half of the semester, residents took three courses and were in their residency classrooms in the mornings only. In the second half of the semester, the residents took one course and were in their residency classrooms three full days per week.

*Sustaining financial aid for residents after the end of the grant is a concern in programs where partner districts are not paying a salary to residents.* Financial aid was particularly important in the three programs in which residents did not receive salaries from the partner school district, because spending additional time in an unpaid residency made it difficult for residents to earn outside income through part-time employment. In this context, program staff regarded financial aid as an important recruiting tool. Some of the program staff were concerned about their ability to continue offering financial aid after the conclusion of the PDE grants and were looking for other funding sources, including other grants and money from their partner districts and university financial aid programs. The financial aid offered by the programs that was not paid for by the partner district ranged from \$2,500 to \$8,000 for residents and \$1,080 to \$2,000 for mentors.

*Several respondents highlighted the importance of selecting mentors who can provide feedback effectively.* A program staff member and several residents discussed the importance of selecting mentors who can provide feedback effectively. The program staff member said their program learned it was important to look for mentors who could explain their teaching practices well, could communicate openly with residents, and could provide constructive feedback. Residents agreed. They said receiving feedback delivered in a constructive manner and with concrete examples and specific information on what to improve and how was especially helpful and, for some of the residents, was a highlight of the program.

*Making mentors feel like they were part of the program community was beneficial according to some program staff.* Some of the program staff discussed the benefits of including mentors in their program communities. The program staff found that engaging the mentors and making them feel like they were part of the program helped them retain mentors better, improved communication between the programs and the mentors, made the mentors more receptive to training and support from the program, and made the mentors more engaged in the programs, with some mentors even becoming guest speakers and adjunct program faculty for one of the programs. One of the program staff said their program used the following approaches to engage their mentors and include them in the program community: allowing the mentors to provide input on the program and make programmatic decisions; providing professional development and support, such as on co-teaching methods; and financially compensating the mentors.

*Residents suggested aligning the coursework to their residency experiences and reducing busy work.* The residents discussed several ways that the coursework could be improved, including the following:

- **Align the coursework to what is happening in the residency classrooms.** Several residents mentioned that some of the coursework did not feel relevant to real-world teaching or was not well aligned with their residency experiences. The residents suggested making the coursework as practical and as closely aligned with the residency experiences as possible.
- **Reduce busy work.** Several residents said that many of the coursework assignments, such as discussion board posts, felt like busy work. The residents suggested trying to make the assignments as practical as possible or related to the residency experiences.

*Residents expressed a desire to have groups of residents in each residency school to collaborate with.* Several residents talked about the benefits of or desire for a resident community within the residency schools. One resident said that having another resident in her school was one of the most beneficial aspects of her residency because she had multiple mentors to go to for support and another resident to discuss issues with. A few residents talked about feeling isolated in their schools and wanting more time with other residents. A mentor also mentioned that the residents in her school seemed isolated and thought providing common time for residents to meet with one another in their schools, such as aligning their lunch breaks, would be beneficial.

*The pandemic caused some residencies to end early, although residents were usually able to continue working with their mentors to some degree.* The program staff indicated they made relatively few changes to their programs because of the pandemic beyond moving classes online. However, some residents mentioned more substantial disruptions. Most residents continued working with their mentors without disruption, but a few residents and mentors said the residencies ended early because of the pandemic. To compensate, one of the residents taught online lessons to residency program classmates. Some of the mentors mentioned that their residents helped prepare materials for asynchronous learning activities and kept in touch with the students.

## Principal residency findings

*The principal residency programs had many similarities, including that the partner districts paid residents salaries and had substantial control over selecting and matching residents and mentors*

The four principal residency programs shared many similar aspects (table 4; see appendix B). In particular, the partner districts paid residents a salary and benefits during their residency and controlled or had a substantial role in recruiting, selecting, and matching the residents and mentors. The residents were generally current teachers aspiring to become principals. The courses generally occurred in the evenings and residents were mostly in their residency schools full time. However, the programs had important differences, including their length and residency activities. Two of the programs lasted two years, and two lasted one year. There was also a range of residency activities, including school visits, observations and meetings with a floating master principal or university

mentor (a retired, experienced former principal or district superintendent who served as a second mentor), partner district–developed or focused training sessions, journals and time logs to inform discussions with supervisors or university mentors, and a capstone project. The amount of the PDE grants per resident also differed, ranging from \$28,488 to \$99,866.



**Table 4. Components of principal residency programs**

Component	Lehigh University	Millersville University	Robert Morris University	University of Pennsylvania
Certificate or degree	Principal certification and optional master's	Principal certificate and master's degree	Principal certificate and optional master's	Principal certificate and optional master's
Partner schools or districts	Allentown School District	School District of Lancaster	Propel Schools (a charter school network in the Pittsburgh region)	School District of Philadelphia
Program recruitment and resident selection process	District staff selected the residents among current teachers who wanted to be principals. The program then ensured they were appropriate candidates for the program.	District posted application on its website. Current teachers who wanted to be principals applied in writing. Program held information sessions to encourage applications. Program staff, district staff, and mentors interviewed applicants and selected the best candidates. District superintendent then selected the residents from among the candidates.	Propel held a recruitment fair and interviewed candidates. Propel also recruited from outside its schools. Propel selected the residents. No details on the selection process were provided.	District advertised and screened those interested. Program screened further and interviewed candidates, looking for those interested in staying in the district and asking about their principal-related abilities and perceptions.
Number of residents	4	3	7	4
Program core components	Coursework, residency, mentoring, weekly meetings with supervisor, visits to other schools, a time diary	Initial summer training, coursework, residency, mentoring, quarterly trainings, meetings with master principal (additional, floating mentor)	Coursework, residency, mentoring, observations and support from supervisor, Propel-developed trainings, capstone project	Initial summer training, coursework, residency, mentoring, weekly journals and time logs, six site visits, monthly meetings with second university-provided mentor, monthly trainings
Total program length	2 school years	2 calendar years	1 calendar year	1 calendar year
Amount of time in residency schools	1 school year (full time 5 days per week in second year of program)	2 calendar years (full time 5 days per week)	1 school year (5 days per week, part time or full time each day)	1 school year (full time 5 days per week)
When coursework occurred	Evenings during residency years and summer between years	Initial summer and evening courses during residency years	Summer before residency and during residency year	Evenings and weekends during year and summer after
Mentor selection process	District selected the mentors.	District selected the mentors.	Propel selected the mentors.	District selected the mentors.
Resident and mentor matching process	District matched the residents and mentors.	Mentors and residents were matched based on the residents' application process interviews.	Propel matched the residents and mentors.	District matched the residents and mentors.
Requirements after graduating	Pay back district tuition support or work in district	Work in School District of Lancaster for 2 years	Work in Propel Schools for 3 years	Expected (but not required) to work in district for 3 years
Financial aid to residents and mentors	Salary and benefits from district and \$3,000–\$18,645 in tuition support for residents; \$4,750 for mentors	Salary and benefits from district and full tuition paid for residents; no aid for mentors	Salary and benefits and full tuition paid for residents; no aid for mentors	Salary and benefits from district and full tuition paid for residents; \$2,500 for mentors
Grant amount per resident	\$74,666	\$99,866	\$28,488	\$74,967

Note: The study does not report the amount of the grants per graduate for the principal residency programs because participants in several of the programs were still in their residencies or the certification process and had not been certified yet when the study data were collected. The study team was thus unable to calculate an accurate amount of the grant per graduate for most of the programs.

Source: Authors' summary of data provided by residency program staff during the study's interviews.

*The principal residency programs primarily differed from the traditional preparation programs at the same universities in the amount of school leadership experience provided*

For the three principal residency programs that had traditional preparation programs at their host university, the main difference between the residency and the traditional programs was the amount of time spent in schools (table 5). Residents in the three programs were in their schools full time, while non-residents maintained their teaching responsibilities and could only participate in the non-residency program outside of their usual workdays.

**Table 5. Differences between each residency program and the traditional programs at the same university**

Lehigh University	Millersville University	Robert Morris University	University of Pennsylvania
Residents were in their schools full time, unlike non-residents, who were typically teaching full time and participating in the non-residency program during off hours. Residents had a dedicated clinical supervisor to support them, which non-residents did not have.	Residents did not have teaching responsibilities and were at their residency schools full time while taking evening courses. Non-residents were full-time teachers who participated in the program at night. In addition, non-residents received mentoring that was less extensive than what residents received.	Robert Morris University did not have a non-residency principal preparation program.	Residents participated in the program full time, whereas non-residents taught full time and participated in the program in the evenings and on weekends. Residents conducted four more site visits than non-residents and received additional professional development specific to the school district.

Source: Authors’ summary of data provided by residency program staff during the study’s interviews.

*Principal residency participants were racially/ethnically diverse*

The principal residency programs were small but racially/ethnically diverse. Across the four principal residency programs, 9 of the 18 (50 percent) enrolled, 6 of the 15 (40 percent) who completed their residencies, and 4 of the 11 (36 percent) who completed their residencies and were certified were participants of color (table 6). In comparison, approximately 88 percent of all principals in Pennsylvania were White in 2017/18, the most recent year data were available (National Center for Education Statistics, n.d.).

**Table 6. Racial characteristics of principal residency program participants, 2019/20**

Program	Number of participants at each stage in the residency program					
	Enrolled		Completed residency		Certified	
	White participants	Participants of color	White participants	Participants of color	White participants	Participants of color
Total across all four programs	9	9	9	6	7	4

Note: Data are not presented separately by program to protect the privacy of the residency program participants. Three participants of color were still completing their residencies, and two White participants and one participant of color were still in the certification process when the study data were collected in January 2021.

Source: Authors’ analysis of data from the residency programs on the number and race/ethnicity of participants in 2019/20.

*Most of the principal residents had been hired as school leaders in high-need districts in Pennsylvania after completing the programs*

Across the four principal residency programs, 10 of the 15 enrolled had completed the programs and been hired as school leaders (principals or assistant principals) in high-need districts in Pennsylvania (table 7). In particular, for three of the four programs, at least half of those enrolled were hired as school leaders in high-need districts after finishing the programs (not shown in table 7 to protect residents’ privacy). A smaller proportion of those enrolled in the remaining program were hired as school leaders in high-need districts after the program, but this may have been because hiring was substantially disrupted in the program’s partner district because of the pandemic.

**Table 7. Post-program employment outcomes of 2019/20 principal residents**

Program	Number of those enrolled in the programs who are now a:	
	School leader in Pennsylvania	School leader in a high-need district in Pennsylvania
<b>Total across all four programs</b>	<b>10 of 15</b>	<b>10 of 15</b>

Note: Data are not presented separately by program to protect the privacy of the residency program participants. For the two-year programs (Lehigh and Millersville), the numbers who were school leaders in Pennsylvania and school leaders in a high-need district in Pennsylvania were based on the number of residents who were expected to have completed the two-year program by the time the study data were collected in January 2021. High-need districts are those with schools with high proportions of students of color or in poverty, schools with chronic teacher shortages, or schools designated for Comprehensive Support and Improvement or Additional Targeted Support and Improvement.

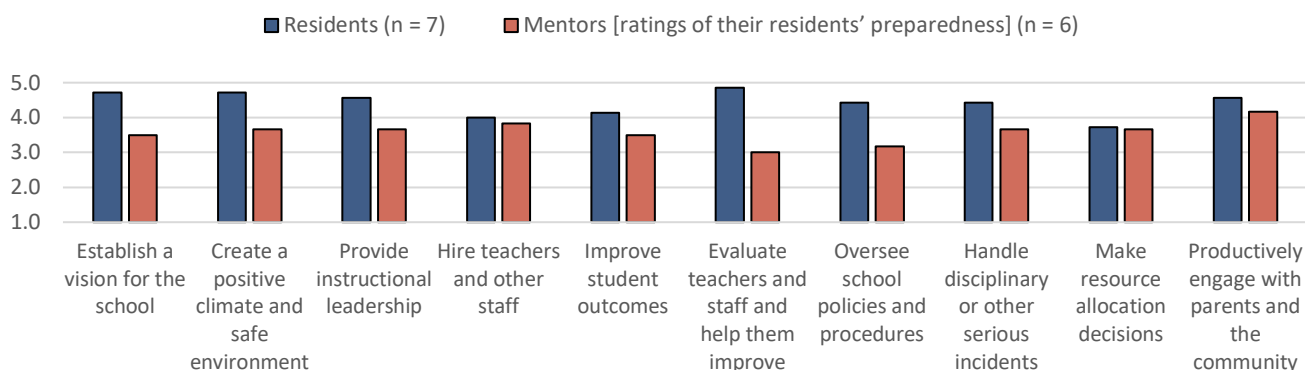
Source: Authors' analysis of data from the residency programs on the employment outcomes of those enrolled in 2019/20.

### ***Residents felt well prepared for most school leadership responsibilities, but mentors suggested at least some residents may not have been as well prepared***

The study team asked the residents participating in the focus groups to rate their personal preparedness for each of 10 school leadership responsibilities after completing the program. The study team also asked the mentors participating in the focus groups to rate the preparedness of the residents they mentored for the same school leadership responsibilities after the program. The seven residents who participated in the focus groups rated themselves as well prepared for most school leadership responsibilities, but the six mentors rated their residents as less well prepared for some of the responsibilities. On average, the residents rated their personal preparedness around 4.5 (between prepared and well prepared) for most of the responsibilities (figure 2), which was roughly aligned with similar ratings from a survey of principals in 2018 (Johnston & Young, 2019). The mentors, who were mostly rating the preparedness of different residents from the seven who participated in the focus groups, rated the residents they mentored around 3.5 (between neutral and prepared) for most of the responsibilities.

**Figure 2. Residents felt well prepared, but mentors felt their residents were less well prepared**

*Average rating (from 1 to 5) of residents' preparedness for common school leadership responsibilities after the program*



Note: Residents rated only their personal preparedness and mentors rated the preparedness of only the residents they mentored on a scale of 1 (very unprepared) to 5 (very prepared) for each school leadership responsibility after completing the program. Most of the mentors were not the mentors of the residents who provided ratings. Two residents had prior school leadership experience from out of state or in a position that did not require certification, which may have influenced their ratings.

Source: Authors' analysis of data provided by residents and mentors during the study's focus groups.

### ***Key findings from the interviews and focus groups***

The remaining principal residency findings focus on lessons learned and ways the programs might improve based on the interview and focus group responses of the four principal residency program staff members, seven principal residents, and six principal mentors.

***Strong collaboration between programs and their partner school districts was important.*** Several program staff said that developing a strong partnership between their programs and their partner school districts was crucial and helped the programs overcome issues that arose and more effectively implement their residencies. The

partner school districts had large roles in the principal residency programs, especially in selecting residents, choosing residency schools and mentor principals, and matching residents and mentors. The program staff said they found that building strong partnerships created a sense of shared ownership and shared responsibilities. The program staff said that discussing expectations with the districts, identifying the roles of the programs and the partner districts, and maintaining strong communication was helpful.

*Programs need sufficient time between the grant award and the start of the school year to effectively plan and implement the programs.* Several program staff said they encountered difficulties in implementing their programs because the grants were announced too close to the start of the school year, in some cases only a few weeks before the start of the school year. The program staff said there was not much time to recruit residents and mentors, build relationships with the partner districts, plan the residencies, and train mentors.

*Communication among the programs, mentors, and residents can be improved.* Many of the residents and mentors discussed communication issues. In particular, the residents and mentors requested better communication about what the residencies were supposed to involve. They said that communication on the expectations for the residencies was not always clear, which sometimes led to residents and mentors having to decide how to implement the residencies themselves. The residents suggested that programs develop a formal plan for the skills the residents are supposed to learn in their residencies and provide mentors with the topics the residents are learning in their coursework. The residents and mentors also suggested regular check-in meetings with the program staff to discuss the residencies.

*Recruiting principal residents was difficult.* Staff from some of the programs talked about the difficulties of recruiting principal residents. They mentioned that principal residents were usually teachers who had to leave their classrooms to participate in the programs and that partner districts sometimes struggled to find replacement teachers. They said that some residents were not able to participate because the district could not find a replacement teacher. Some of the program staff also said that recruiting residents of color was a challenge. One program staff member mentioned that their program attempted to recruit outside the state to find more diverse candidates but encountered issues because of Pennsylvania's principal certification requirements. The program staff also said that the limited time between the grant announcement and the start of the school year made recruiting more difficult. A mentor suggested that programs might consider recruiting residents a year or two in advance, which would give them more time to recruit and find diverse candidates.

*Training for mentors would be helpful.* Most of the program staff and mentors said mentors received little training, in part due to the short period between the announcement of the grant and the start of the school year. The programs learned that mentors could benefit from training on the program, the residency, and on expectations for the mentors. Several residents also suggested that training for the mentors would be beneficial. The residents said that some mentors did not know what the residents were learning, what the residency was supposed to involve, and what the mentors needed to do, and that training on these topics would be beneficial.

*Placing residents in their residency schools full time was beneficial.* Several residents and program staff said the residents found it very beneficial to be in their residency schools full time because they were able to experience a wider range of issues that principals confront, were more involved in the running of the schools, and built stronger relationships with their mentors. The residents felt that they were able to gain deeper experience than they would have in non-residency programs.

*Programs might consider ways to balance the time commitments of the coursework and the residency.* Several mentors said their residents struggled to balance the coursework, residency, and their personal lives. They suggested that programs consider ways to ease the burden on residents. Specifically, they discussed reducing the course load by giving residents course credits for their residency experiences and allowing residents to submit evidence of comparable work from their residencies in place of course assignments, such as writing papers.

*Residents wanted opportunities to observe and learn from multiple principals.* Several residents talked about the importance of learning from multiple principals. The residents said they found visits to other schools to observe and shadow principals very helpful, especially when they could talk with the other principals and ask questions. The residents found the visits helpful because they could learn what other principals were doing and broaden their experience and knowledge of principal practice. One of the residents suggested monthly visits.

*Residents valued collaboration with other residents.* In discussing aspects of the coursework that they found most helpful, several residents mentioned the parts of the coursework involving collaboration with other residents. One resident said she felt she learned as much from collaborating with the other residents as she did from the program faculty.

*The pandemic did not impact the coursework much but disrupted the residencies, limited some experiences, and delayed certification for some residents.* Residents mentioned that the pandemic did not have a substantial effect on the coursework, which was moved online. But some of the program staff mentioned impacts on the residencies and some program components. One program said the pandemic altered the focus of the residencies from instructional leadership to management and required the residents to take on responsibilities faster than intended. A second program cancelled site visits to other schools and said that its partner district was closed for a period, during which the residencies were paused. Some mentors also mentioned that their residents missed several experiences because of the pandemic, including facilitating end-of-year meetings, conducting state testing, and helping complete final evaluations. Several program staff and residents also mentioned that certification centers were closed, delaying residents' certification.

## Implications

The study findings suggest that, early in the implementation of the programs, the outcomes of the teacher and principal residency programs receiving grants in Pennsylvania were mostly consistent with PDE's goals. This includes preparing teachers and school leaders for high-need districts and hard-to-staff teaching positions as well as preparing diverse principals. However, because the study did not have a comparison group, the study team could not determine whether the residency programs were more (or less) successful or cost-effective in accomplishing these outcomes than other preparation programs, including the traditional preparation programs at the same universities.

The study findings also suggest that improvements are possible. PDE and the programs might work together to discuss ways the programs can more effectively recruit residents of color, such as creating standalone programs that could recruit residents from outside university student bodies and geographic areas and exploring whether incentives could help attract diverse candidates. The programs could focus on additional improvements, such as more clearly communicating expectations with the residents and mentors, balancing the time commitments of the residency and the coursework, and forming strong partnerships with their partner districts. PDE might also consider awarding future grants with more advance notice, which may help the programs recruit residents, build relationships with their partner districts, plan the residencies, train mentors, and find replacement teachers for those participating in the programs. To further facilitate program improvement, PDE and the residency programs could consider organizing communities of practice so staff from the funded programs can communicate with each other and discuss ways to address issues and improve.

Further study of the programs is also needed to provide additional information on ways the programs can improve and to conduct a more detailed examination of whether the funded residency programs are accomplishing the grant program's goals. The current study was conducted early in the implementation of the programs to garner preliminary information; however, a larger, more rigorous study conducted several years into the programs' implementation is needed to better capture how the programs can improve and to more fully examine how well the residency programs are accomplishing the grant program's goals. Such a study should involve a comparison



group, potentially consisting of traditional preparation programs across the state, to allow the study to examine whether the residency programs are more successfully and cost-effectively accomplishing the grant programs' goals than other preparation options. The study should involve multiple years of data and larger interview and focus groups to collect the views of a larger number of program staff, residents, and mentors across multiple years. The study should also assess additional, important outcomes, including how effective the residency graduates are in improving student test scores and how long they stayed in their teaching and school leadership positions. The study might also collect better information on the costs of the programs to assess their cost-effectiveness. To aid such a study, PDE could work with the programs and the study team to develop uniform data collection processes. For example, PDE might encourage programs to track their residents for at least two years after graduating from the programs and to collect cost information in a standard manner. Furthermore, PDE might work with the programs, partner districts, and educator-focused organizations to develop a measure of instructional cultural responsiveness, which could allow the study to examine how well the residency programs are at producing teachers capable of delivering culturally responsive instruction.

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# Exploring Early Implementation of Pennsylvania's Innovative Teacher and Principal Residency Grants

Appendix A. Methods

Appendix B. Program descriptions

Appendix C. Additional findings

Appendix D. Data collection tables on the race/ethnicity and employment outcomes of residents and non-residents and program cost

Appendix E. Interview and focus group protocols

## Appendix A. Methods

This appendix describes the study's sample, data, and methods.

### Data sources

The study collected data from the following three sources:

- **Interviews with program staff.** The study team conducted approximately one-hour calls with the identified program staff member from each of the four teacher and four principal residency programs. The interviews were conducted using a video conferencing platform. During the interviews, the study team asked about each program's partner districts; number of participants; program and residency length; financial aid; core components; the program's processes for recruiting residents, selecting mentors, and matching residents and mentors; the program's process for recruiting program faculty; the support the program provides to residents after they complete the program; the training the program provides to mentors; the impacts of the COVID-19 pandemic on the program; and lessons learned (see appendix E). The information from the interviews was used to answer research questions 1 and 5.
- **Study tables completed by residency program staff on the participants of each program and their employment outcomes.** The study team asked each program to provide the race/ethnicity of each resident who participated in the program in 2019/20 and information on whether they did their residency in a high-need district in Pennsylvania; whether they completed their residency and were certified, and if so, their certification area; whether they were employed as a teacher or principal in Pennsylvania after completing the program; whether they were employed in a high-need district in Pennsylvania; and for teachers, whether they were employed in a hard-to-staff position. The study team also asked program staff for the total cost of each program; however, the team did not end up using these reported costs. This was due to concerns that staff were using different approaches to determine the total cost, and thus the reported costs were not comparable across programs. To request this information on program participants, their employment outcomes, and program cost, the study team sent table templates to the program staff using a secure file transfer site (see appendix D). The data from the study tables were used to answer research questions 2 and 3.
- **Focus groups with residents and mentors.** The study team conducted four sets of approximately one-hour focus groups with the teacher residents, principal residents, teacher mentors, and principal mentors who participated in the programs in 2019/20 and agreed to participate in the study. The focus groups took place separately with teacher residents, teacher mentors, principal residents, and principal mentors. Due to scheduling challenges, the study team had to conduct 13 focus groups, sometimes with only one participant,

to reach every resident or mentor who agreed to participate in the focus groups. During the focus groups, the study team asked the residents or mentors why they participated in the program or became a mentor, their perceptions of how prepared the residents were to teach or lead schools, their perceptions of their residency or mentorship experiences, their thoughts on the major aspects of the programs, and suggestions on how the programs can improve (see appendix E). This information was used to answer research questions 4 and 5. The focus groups were conducted using a video conferencing platform. During the focus groups, residents and mentors were asked to provide answers to a subset of the questions using Mentimeter, an interactive data collection service. This subset of questions included questions on factors that were important in their decisions to become residents or mentors, their level of satisfaction with aspects of the residency program or their mentorship, and residents’ level of preparedness to teach or lead schools.

### Study sample

The study focused on the four teacher residency programs and four principal residency programs that received implementation grants for the 2019/20 school year (table A1).

Table A1. Residency programs receiving implementation grants for the 2019/20 school year	
Program	Grant amount
<i>Teacher residencies</i>	
Clarion University	\$74,598
Drexel University	\$200,000
Indiana University of Pennsylvania	\$200,000
Penn State Harrisburg	\$300,000
<i>Principal residencies</i>	
Lehigh University	\$298,665
Millersville University	\$299,599
Robert Morris University	\$199,416
University of Pennsylvania	\$299,869

Source: Data provided by the Pennsylvania Department of Education.

The study sample was composed of the program staff, residents, and mentors from the eight programs who participated in the study’s interviews and focus groups and the larger group of residents from the programs for whom the study team collected demographic and employment information. The sample for the focus groups and interviews included eight residency program staff members, five teacher residents, three teacher mentors, seven principal residents, and six principal mentors from the four teacher and four principal residency programs that received implementation grants for the 2019/20 school year. The program staff members included one staff member from each of the eight programs. The teacher residents and mentors were from three of the four teacher programs, the principal residents were from all four principal programs, and the principal mentors were from two of the four principal programs. The study also collected demographic and employment information on the teacher and principal residents. The demographic information came from 96 teacher residents and 18 principal residents across all eight programs. The employment information came from 32 teacher residents from two of the four teacher programs and 15 principal residents from all four principal programs (table A2).

**Table A2. Data sources and assessable outcomes, by program**

Program	Data sources					Assessable outcomes				
	Program staff interviews	Program study tables	Resident focus groups	Mentor focus groups	Program core components	Grant cost per completed resident	Resident race/ethnicity	Resident employment	Resident preparedness	Program improvement
<b><i>Teacher residencies</i></b>										
Clarion University	✓	✓	✓	✓	✓	✓	✓		✓	✓
Drexel University	✓	✓			✓	✓	✓	✓		✓
Indiana University of Pennsylvania	✓	✓	✓	✓	✓	✓	✓		✓	✓
Penn State Harrisburg	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b><i>Principal residencies</i></b>										
Lehigh University	✓	✓	✓		✓		✓	✓	✓	✓
Millersville University	✓	✓	✓	✓	✓		✓	✓	✓	✓
Robert Morris University	✓	✓	✓		✓		✓	✓	✓	✓
University of Pennsylvania	✓	✓	✓	✓	✓		✓	✓	✓	✓

Note: The study team knew the grant amounts for the four principal residency programs but could not calculate the grant amount per graduate for the programs because participants in several of the programs were still in their residencies or the certification process and had not been certified yet when the study data were collected. The study team was thus unable to calculate an accurate amount of the grant per graduate for most of the principal residency programs.

Source: Authors' summary of study data.



The study team worked with the Pennsylvania Department of Education (PDE) and staff from the eight programs to recruit the study sample. PDE provided the study team with contact information for staff members from each residency program. The study team contacted those staff members and asked them to identify one staff member from each program with extensive knowledge of that program who would participate in the study's interviews. In addition, the study team asked the program staff to securely provide the names, gender, race, ethnicity, and email addresses of residents participating in the programs in 2019/20 and the names and contact information for mentors in the programs in 2019/20. For each mentor, the program staff also identified which residents they mentored. The study team contacted each resident and mentor provided by the program staff to recruit them to participate in the study's focus groups. The study team attempted to recruit as many residents and mentors of color and as many male participants as possible to ensure the study collected the views of a diverse group of residents and mentors; however, most residents and mentors in the sample were White women. The study team also tried to recruit residents and mentors who were matched together during the residencies, but most who participated in the study were not matched together.

The study provided \$25 gift cards to the program staff, residents, and mentors who participated in the study's interviews and focus groups.

## Methods

The study answered the following research questions:

1. What were the core components of each program, how did they recruit and select participants, how did they differ from the traditional preparation programs at the same universities, and what was the grant cost per resident and per graduate?
2. How racially/ethnically diverse were the residency program participants?
3. What were the employment outcomes of the residents after completing the programs?
4. From the perspective of residents and mentors, how prepared were the residents to teach or lead schools?
5. From the perspective of program staff, residents, and mentors, what worked well, what did not work well, and what lessons were learned?

The study's analysis methods for each research question are described below. The study team analyzed each research question separately for teacher and principal residency programs.

*Research question 1: What were the core components of each program, how did they recruit and select participants, how did they differ from the traditional preparation programs at the same universities, and what was the grant cost per resident and per graduate?* The study team summarized data from the program staff interviews on the core components of each program, how each recruits and selects participants, and how each differed from the traditional preparation programs at the same university. The study team primarily focused on summarizing program staff responses to the interview questions in the "Questions for the program descriptions" and "Description of the program" sections of the teacher and principal program staff interview protocols in appendix E. The study team also summarized responses to select questions from the "Recruiting participants," "Selecting mentors," "Recruiting and training program faculty," and "Support to complete the program and find jobs" sections of the teacher and principal program staff interview protocols.

To provide information on each program's cost, the study team calculated the grant cost per resident and per graduate by dividing the total grant amount for each program (shown in table A1) by the number of residents enrolled and by the number of residents who completed each program and were certified. The study team calculated the grant cost per certified graduate for only the teacher residency programs. The study team did not do similar calculations for the principal residency programs because the number of certified graduates could not be determined for some of the programs because some principal residents were still in their residencies or in the certification process when the study data were collected.

*Research question 2: How racially/ethnically diverse were the residency program participants?* Using data provided by the program staff on the race/ethnicity of participants from each program (see table D1 in appendix D), the study team calculated for each program the number of White participants and the number of participants of color at each of three stages: enrollment, program completion, and certification. The study team calculated the number of participants of color by adding the number of participants with non-White race/ethnicity. The study presented the numbers separately for each teacher residency program and the totals across all four teacher residency programs. The study presented the totals across all four principal residency programs but did not present the numbers separately for each principal residency program to protect the privacy of the principal residents because the principal residency programs were small and had only 3 to 7 residents each (compared to 7 to 57 residents in the teacher residency programs).

*Research question 3: What were the employment outcomes of the residents after completing the programs?* Using data provided by the program staff on residents' employment outcomes after completing the program (see table D1 in appendix D), the study team reported the number of those enrolled in each program who, after completing the program, were employed as a teacher or principal in Pennsylvania, employed in a high-need district in Pennsylvania, and for teacher residents, were employed in a hard-to-staff position. The study presented the numbers separately for each teacher residency program and across all four programs. The study presented the numbers across all four principal residency programs but did not present the numbers separately for each principal residency program to protect the privacy of the principal residents.

*Research question 4: From the perspective of residents and mentors, how prepared were the residents to teach or lead schools?* During the focus groups, the study team asked the residents and mentors to rate the residents' preparedness after completing the programs for each of several common teaching or school leadership responsibilities. Using Mentimeter, the residents rated their personal preparedness and the mentors rated the preparedness of the residents they mentored for each responsibility on a 5-point scale: 1 (very unprepared), 2 (unprepared), 3 (neutral), 4 (prepared), and (very prepared). The study team calculated residents' and mentors' average responses on the 5-point scale for each teaching or school leadership responsibility by adding the numerical value (from 1 to 5) of each response and dividing the total by the number of respondents.

*Research question 5: From the perspective of program staff, residents, and mentors, what worked well, what did not work well, and what lessons were learned?* The study team analyzed the information collected from the interviews and focus groups with program staff, residents, and mentors. The study team examined responses to all questions asked during the interviews and focus groups but focused especially on program staff members' responses on aspects of the programs that worked well, challenges they faced, and lessons they learned, and on residents' and mentors' responses on aspects of the programs they were most and least satisfied with and their suggestions for improvement (see appendix E). The study team took detailed notes during the interviews and focus groups and viewed recordings of the interviews and focus groups to confirm the notes were accurate. The study team then compiled the responses from the interviews and focus groups into two documents, one for the responses from the teacher residency program staff, residents, and mentors, and one for the responses from the principal residency program staff, residents, and mentors. The two documents were organized based on the interview and focus group protocols (see appendix E). The study team then reviewed the two documents, highlighting common topics discussed by more than one respondent. The study team did not have a list of pre-determined topics of interest and marked any topic as common if more than one respondent mentioned it. At least two study team members reviewed most of the topics marked as common to confirm they were discussed by more than one respondent. The study team then compiled the responses on common topics into two separate documents—one for common topics related to the teacher residency programs and one for common topics related to the principal residency programs—and summarized themes of the responses, which became the study findings. If there was disagreement in the responses on a common topic, the study team captured the disagreement in the summary of the responses, although disagreement was rare. At least two study team

members reviewed most of the findings to confirm they were accurate. The study team summarized the most relevant findings in the findings section of the main body of the report. Appendix C includes additional relevant findings.

### **Limitations**

*The study had limited or no data on several important outcomes.* The study team was not able to collect employment data on the teacher residents from two of the four teacher programs because the programs did not track the residents' employment after they graduated. This limited the study's ability to assess whether the teacher residency programs were producing teachers who filled openings in high-need districts and hard-to-staff positions in Pennsylvania. The study was also unable to assess the effectiveness of the residency program graduates in improving student test scores because the graduates had not been employed long enough to have effectiveness data associated with them. Instead the study used residents' and mentors' perceptions of how well prepared the residents were to teach or lead schools, which provides useful information, but which may differ from residents' effectiveness measured using test scores. Similarly, the study had no data on whether the programs were producing teachers capable of delivering culturally responsive instruction, which prevented the study from assessing one of the grant program's goals. Finally, the study team was not able to calculate the grant cost per graduate for the principal residency programs because the number of graduates could not be determined for some of the programs.

*The study team was unable to collect reliable data on the participants in the non-residency preparation programs at the residency program universities.* The study team attempted to collect this information through two of the tables the study team sent the residency program staff to complete (see tables D3 and D4 and in appendix D); however, most of the program staff were unable to fill in the tables or provided data that were potentially inaccurate. This prevented the study from comparing the residency and non-residency programs to explore whether the residency programs were better at producing diverse, well-prepared teachers and school leaders who filled positions in high-need districts in higher rates.

*The study's findings on residents' preparedness to teach or lead schools and on ways the programs can improve were based on small sample sizes.* The interview and focus group samples were small because PDE needed the study results as soon as possible to inform the funded programs and future grants. To conduct the interviews and focus groups sooner, the study team recruited fewer interview and focus group participants. The study team also encountered difficulties recruiting residents and mentors to participate in the focus groups. Program staff, residents, and mentors who did not participate in the study interviews and focus groups may have had different views than those who did.

*The study team was not able to recruit focus group participants from all eight programs.* Although the study team was able to recruit principal residents from all four principal programs, the team was only able to recruit teacher residents and mentors from three of the four teacher programs and principal mentors from two of the four principal programs (see table A2). In particular, the study team was unable to recruit teacher residents and mentors from Drexel University's program, which was different from the other three teacher programs in important ways. The study team believes the programs without focus group participants, including Drexel, were similar enough to the programs with focus group participants that the lack of focus groups participants from all eight programs did not substantially impact the study findings; however, it is possible that residents and mentors from the missing programs had different views that the study did not capture.

*The study's findings are based on data from only one year of program implementation.* The study findings are based on the residency programs as they were implemented in the 2019/20 school year, which was the first year that most of the programs were implemented and was an unusual year due to the COVID-19 pandemic. The study team attempted to collect data on the three programs that also received implementation grants for the 2018/19

school year, but it was unable to collect much of the requested data so that year was dropped from the study. The study team was only able to collect limited data on the participants from one of the three programs that received grants for the 2018/19 school year and was not able to recruit any residents and mentors to participate in the focus groups from that year. It is possible that program staff, residents, and mentors from other years would have had different views that the study did not capture.

*The study team could only report on the topics that the participating program staff, residents, and mentors discussed during the interviews and focus groups.* In analyzing interview and focus group responses on ways the programs can improve, the study team attempted to produce the most generalizable findings by focusing on topics discussed by more than one study participant. However, because only a portion of the interview and focus group participants typically discussed each topic, the study team generally did not know the views of every study participant on each topic. It is possible that those who did not mention a topic would have disagreed with the views of those who mentioned the topic.

## Appendix B. Program descriptions

Tables B1 and B2 describe the programs as they were implemented during the 2019/20 school year.

**Table B1. Teacher residency programs**

Clarion University	
Undergraduate or graduate	Undergraduate
Partner schools or districts	Clarion Area Elementary School
Program focus areas	Early childhood/elementary education (grades 1–4) and middle-level math (grades 4–8)
Resident recruitment and selection process	Program recruited from the current and incoming university undergraduate population. Program faculty and current residents helped with recruitment. Potential residents completed an application asking for demographic information, teaching and instructional philosophies, management approaches, and responses to classroom scenarios. Program faculty and the mentor teachers, selected before the residents, reviewed the applications and selected the residents.
Recruitment focuses	Racially/ethnically diverse candidates and those who can manage simultaneously participating in the coursework and the residency
Number of residents	7
Program length	One school year (the fourth year of a four year-undergraduate program)
Program core components	Coursework, residency, and weekly meetings with a university supervisor (a program faculty member). Coursework included subject area content knowledge and methods, educational leadership, community development, and technology. Other courses, such as classroom management, were provided during the first three years of the four-year undergraduate program.
Length of time in residency classrooms	One school year (August to May). In residency classroom for four days per week for the first nine weeks of each semester and five days per week for the last seven weeks of each semester.
When coursework occurred	During the residency. During the first nine weeks of each semester, residents spent four days in their school placements and one day taking coursework.
Mentor selection process	The partner school's principal provided a list of possible mentor teachers. The program faculty then met each candidate in person to determine the final list of mentors.
Resident and mentor matching process	The chosen residents and mentors filled out profiles, which requested information such as instructional and management styles and about their personalities. Residents also filmed five-minute videos. Mentors ranked residents in order of preference. The program director made the final matching decisions and considered the information collected in the profiles. Residents have two mentors (one each semester) during the residency year.
Mentor training	Biweekly face-to-face trainings about what residents were learning in their coursework, assignments residents were completing, and ways mentors could assess their residents' progress. The program also included monthly meetings to discuss any issues or changes that were needed. Mentors had to complete a mandatory online training module each semester on mentor strategies, resident assessments, and useful resources.
Other mentors or supervisors provided	For the last seven weeks of each semester when residents were in the residency classrooms full time, they met weekly with university supervisors, who were program faculty members.
Financial aid to residents	Approximately \$2,500 stipend per resident
Financial aid to mentors	Approximately \$1,500 stipend per mentor
Requirements after graduating	None
Support to become certified or find jobs	Program had a career office and a dedicated liaison for education students. They held job fairs, conducted mock interviews, and disseminated job postings.
Follow-up support to graduates	Informal support was available for graduates who requested it.
How residency program differed from non-residency program at the university	The residency provided 32 weeks of teaching experience compared to 16 weeks in the non-residency program. Non-residents did not have weekly meetings with their supervisors and may only have met with their supervisors four times in total. The course content was the same but was delivered to the residents during a condensed time period (one day per week for 9 weeks rather than over an entire semester), and assignments were intended to be immediately applicable to the residency classroom.

Table B1. Teacher residency programs (*continued*)

Drexel University	
Undergraduate or graduate	Graduate (Drexel also had a small, pilot undergraduate program that placed residents in a small number of charter schools.)
Partner schools or districts	School District of Philadelphia
Program focus areas	Primarily middle and secondary grades science, technology, engineering, and mathematics
Resident recruitment and selection process	Program advertised on social media and through local connections and organizations (including the Philadelphia Public School Notebook, a local councilperson's newsletter, City Year, The Fellowship: Black Male Educators for Social Justice, Philadelphia Higher Education Network for Neighborhood Development, Philadelphia Education Fund, and Urban League). Program also hosted information sessions with current and former residents in attendance. Applicants had to meet basic university eligibility requirements and submit an application that asked for a resume, letters of recommendation, Praxis scores, transcripts, and an essay. Applicants also conducted a demo lesson (to assess openness to feedback and coachability), interviewed with program faculty and the district (to assess resilience and time/stress management), and filled out a survey (to assess disposition, mindset, and level of commitment). Program faculty and the district then identified the candidates to admit into the program.
Recruitment focuses	Racially/ethnically diverse candidates, individuals committed to teaching in Philadelphia, or those with strong content knowledge
Number of residents	21
Program length	One calendar year (June to June, of a one-year graduate program)
Program core components	Coursework (60 percent conducted online, 40 percent in person once monthly), intensive summer institute, full-time residency, and monthly professional development. Coursework focused on foundational aspects, content methods, special education, teaching English learners, and literacy/content skill development. Residents did not have teaching responsibilities on Wednesday afternoons so they could focus on coursework or attend office hours. The summer institute and monthly professional development included segments on cultural responsiveness and teaching in urban contexts. Residents received monthly benchmarks (such as attending a school staff meeting) to ensure growth and gradually assumed more responsibility over the year.
Length of time in residency classrooms	One school year (September to June). Residents were in their residency classroom five days per week.
When coursework occurred	During summer before residency and during the fall and winter quarters. Residents could take additional, optional courses in the spring quarter to earn a master's degree.
Mentor selection process	Program sought mentors who valued mentee relationships, were open to growth, and had teaching and content expertise. The program often reuses mentors.
Resident and mentor matching process	Mentors completed a questionnaire, and mentors and residents interviewed each other. Program staff used the results to make matches.
Mentor training	Mentors attended an orientation (explaining the residency and gradual release model), two professional development sessions (covering evaluation practices and coaching conversations/relationship building), and two check-in meetings with program staff. Program staff observed mentors at least once during the residency year.
Other mentors or supervisors provided	Additional program staff, called site directors, were assigned to oversee all residents within each school and to provide extra support to the residents as needed.
Financial aid to residents	All residents received a district salary (approximately \$40,000), benefits, and tuition stipend.
Financial aid to mentors	\$2,500 (\$1,000 from the district and \$1,500 from the program) per mentor
Requirements after graduating	Graduates were required to teach in the School District of Philadelphia for three years after graduating and were guaranteed a teaching position.
Support to become certified or find jobs	District principals talked to residents about what they look for in hiring. Program reviewed resumes and portfolios, provided interview guidance, conducted mock interviews, and hosted a website for residents to share resources with each other.
Follow-up support to graduates	Program provides two years of support after graduation, including twice-monthly on-site coaching, professional development, and networking events. The program attempted collaborative inquiry groups but stopped due to low participation.
How residency program differed from non-residency program at the university	Residents received substantially more teaching experience, were observed weekly by the site director (compared to six times total for non-residents), received more intensive coaching, and attended more meetings with mentors and site directors.



Table B1. Teacher residency programs (*continued*)

Indiana University of Pennsylvania	
Undergraduate or graduate	Undergraduate and graduate
Partner schools or districts	Pittsburgh Public Schools; the Greater Johnstown, Blairsville-Saltsburg, Indiana Area, Freeport Area, Leechburg Area, Penns Manor Area, and Homer-Center School Districts; and ARIN Intermediate Unit 28
Program focus areas	Undergraduate: early childhood education (preK–4), special education (preK–12), early childhood special education (preK–8), English education (7–12), family consumer science education (7–12), social studies education (7–12), and biology education (7–12) Graduate: Reading specialist/master’s in literacy (preK–12)
Resident recruitment and selection process	Program recruited from the university population through word of mouth, with help from local teachers and school leaders. No formal application. Interested students only had to complete an interest form and have a minimum 3.0 grade point average, successful background check, and recommendations from an advisor or program faculty coordinator. Program accepted all students. Acceptance was constrained only by the number of mentor teachers.
Recruitment focuses	Racially/ethnically diverse candidates
Number of residents	57
Program length	One school year (the fourth year of a four-year undergraduate program)
Program core components	Each of the program focus areas had different coursework and components but similar residencies. Each involved coursework (sequenced to align with the residency experience and include cultural responsiveness), the residency, meetings with program coordinators and resident supervisors, and a work sample assignment. The work sample assignment required residents to teach a lesson and conduct pre- and post-assessments of students’ progress. Some residents, such as those in the special education program, were required to complete additional projects focusing on specific students.
Length of time in residency classrooms	One school year (August to mid-May, with some variation across focus areas). Hours varied by focus area from 5 to 10 hours per week to full time five days per week. Before the school year, residents worked with the mentors to prepare the classroom and attended training sessions. Residents were in the residency classrooms part time in the fall while taking coursework and full time in the spring.
When coursework occurred	During the fall semester of the residency (usually included two daytime courses and a couple of evening classes each week)
Mentor selection process	Interested teachers notified school leaders that they wanted to be mentors. School leaders selected promising mentors, and program faculty vetted the final list. Mentors had to be tenured teachers who had been in their current positions for at least a year.
Resident and mentor matching process	Program staff made matches based on grade and subject area. Personality was also considered.
Mentor training	Mentors were trained on how to observe, co-teach, and support residents through online training modules. Mentors were also taught how to use the Danielson Framework.
Other mentors or supervisors provided	District liaisons helped support the mentor teachers. They received similar training as the mentors with an additional focus on growth mindset and grit.
Financial aid to residents	Living expense of \$324–\$575 per month per resident
Financial aid to mentors	\$1,080 per mentor and \$550 per district liaison
Requirements after graduating	Graduates were required to interview for a teaching position or participate in the reading specialist/master’s in literacy program.
Support to become certified or find jobs	Program provided tips for writing cover letters, writing resumes, and interviewing.
Follow-up support to graduates	Graduates did not receive any follow-up support.
How residency program differed from non-residency program at the university	Residency students spent more time in their residency classrooms than non-residents. Non-residents’ time in the classroom was split across two classrooms, unlike residents who were in the same classroom during the entire school year.

Table B1. Teacher residency programs (*continued*)

Penn State Harrisburg	
Undergraduate or graduate	Undergraduate
Partner schools or districts	Steelton-Highspire, Middletown Area, and Central Dauphin School Districts
Program focus areas	Grades preK–4, 4–8, and 7–12
Resident recruitment and selection process	Program recruited from the undergraduate population at the university. Program faculty encouraged undergraduates with undeclared majors, particularly Black undergraduates, to pursue an education major and consider the residency program. The program also encouraged declared education majors in their junior year to apply. Program faculty explained the program components, requirements, and the application. Program faculty also attended high school open houses to recruit future program participants. All candidates applied to the program in the second half of their undergraduate junior years. The application included written prompts, such as why the candidate was interested in the program. A committee composed of program faculty and leaders from partner districts selected the residents.
Recruitment focuses	Racially/ethnically diverse candidates and candidates interested in teaching hard-to-staff subjects
Number of residents	11
Program length	One school year (the fourth year of a four-year undergraduate program)
Program core components	Two-day orientation and training; residency; coursework in fall; educational seminars in spring; visits from program faculty; meetings between program faculty and mentors, school leaders, and district superintendents; and two “resident celebration” days (December and May) where those involved with the program met as a large group. Residents and mentors attended orientation and training to get to know one another and begin planning for the year. Coursework mostly focused on methods, with general training on diversity and inclusiveness throughout.
Length of time in residency classrooms	One school year (August to June). Three days per week in the fall and five days per week in the spring.
When coursework occurred	In the fall. Residents were in their residency classrooms full time the first week and then three days per week the rest of the semester while taking five courses on the other two days. In the spring, residents attended occasional seminars.
Mentor selection process	Principals selected the mentors. Mentors were required to have at least three years of teaching experience and be willing to mentor for the entire school year.
Resident and mentor matching process	Residents ranked the districts in which they wanted to do their residencies. District staff and principals made the matches based on the rankings, as well as grade and subject area. Matches were revealed at a match day celebration.
Mentor training	Mentors are trained to use the St. Cloud State University co-teaching model to train mentors. The model includes seven co-teaching strategies, which the residents and mentors implement gradually.
Other mentors or supervisors provided	No other mentors or supervisors were involved.
Financial aid to residents	\$8,000 (\$5,000 scholarship and \$3,000 stipend) per resident
Financial aid to mentors	\$2,000 per mentor
Requirements after graduating	The partner districts agreed to offer interviews to residents who performed well during their residencies if open teaching positions were available or hire them as substitute teachers if not.
Support to become certified or find jobs	Residents participated in mock interviews with school leaders. Partner districts agreed to offer an interview to residents who showed sufficient growth over the year if open positions were available. If open positions were not available and residents could not find a job elsewhere, districts hired them as substitute teachers.
Follow-up support to graduates	The program offered voluntary monthly seminars for graduates.
How residency program differed from non-residency program at the university	Residents were in their residency classrooms for an entire year, while non-residents spent only 12 to 13 weeks in the classroom, mostly in the spring. Residents were in the same classroom across both semesters, while non-residents may have been in multiple classrooms.

**Table B2. Principal residency programs**

<b>Lehigh University</b>	
Partner schools or districts	Allentown School District
Program focus areas	Preparing principals for elementary and middle schools
Certificate or degree	Principal certificate and optional master's degree
Resident recruitment and selection process	District staff identified individuals and ensured they were ready, willing, and able to participate. Program is intended for current teachers preparing to become principals.
Recruitment focuses	Racially/ethnically diverse candidates, women, those with good reputations in the district
Number of residents	4
Program length	If no coursework was previously completed, two school years (five semesters including the summer in the middle). Residents who completed all or some coursework before starting the program could finish in less time. Residents graduated when they finished coursework and residency.
Program core components	Coursework, residency, weekly meetings with a clinical supervisor (an experienced principal from another district), visits to other schools to observe, and a time log. Coursework focused on organizational leadership and change management, school resources management, instructional leadership, school law and ethics, data-based decisionmaking, curriculum management, inclusive learning systems (which covers diversity and cultural responsiveness), supervision, and professional development. Two courses were specifically designed to align with the residency experience. Residents visited several schools during the year to observe, including a rural school, a middle school, and a school for students with social-emotional or behavioral difficulties. Residents also completed a log indicating how they spent their time.
Length of time in residency schools	One school year
When coursework occurred	Residents who had not completed coursework before the program took courses in the first of their two years in the program. They took two courses in the evenings during the fall and spring semesters the first year (while they continued to teach full time) and three courses during the summer. All residents took two courses each in the fall and spring semesters of the residency year while they were in their residency schools full time.
Mentor selection process	The school district determined the mentor principals.
Resident and mentor matching process	The school district matched residents and mentors.
Mentor training	Mentors received substantial informal support from a program clinical supervisor and from the program director, including training on involving residents in all aspects of school leadership.
Other mentors or supervisors provided	A clinical supervisor (an experienced principal from another district) and a retired superintendent provided additional support. Residents met with the clinical supervisor weekly. During the residency, mentors, clinical supervisors, and the retired superintendent ensured residents experienced a variety of school leadership responsibilities.
Financial aid to residents	Residents received a salary and benefits from the district and \$3,000 to \$18,645 in tuition support. The amount of tuition support varied based on the amount of coursework the resident completed before participating in the program. Some of the tuition support came from the program and some came from the partner district. The program also paid for a long-term substitute to take over teaching each resident's former classroom during the residency year.
Financial aid to mentors	\$4,750 per mentor
Requirements after graduating	If residents received tuition support from Allentown School District, they were required to pay the support back or stay in the district for an unspecified amount of time.
Support to become certified or find jobs	Some residents received tuition support from the district. These residents were required to serve in the district for a period of time after graduating or pay back the tuition support. The program supported residents with the certification process and interviews.
Follow-up support to graduates	Graduates could contact the clinical supervisor, program director, program faculty, and district staff involved in the program to receive informal support.
How residency program differed from non-residency program at the university	Residents spent more time in their schools than non-residents, who were typically still teaching full time and were participating in the non-residency preparation program during off hours. Residents had a dedicated clinical supervisor to support them, which non-residents did not have.

Table B2. Principal residency programs (*continued*)

Millersville University	
Partner schools or districts	School District of Lancaster
Program focus areas	Principals for the urban School District of Lancaster
Certificate or degree	Principal certificate and master's degree
Resident recruitment and selection process	School leaders and teachers helped recruit through word of mouth. The district also posted information about the program and the application to its website. Program faculty held information sessions for prospective applicants. Program faculty, district staff, and mentor principals (selected in advance) collaboratively screened applications using a rubric to determine who they would interview. They looked for diverse candidates who demonstrate leadership qualities. The group provided a final list of applicants to the district superintendent, who met with the candidates and made the final decision on who was admitted.
Recruitment focuses	Racially/ethnically diverse candidates
Number of residents	3
Program length	Two years
Program core components	Coursework, residency, quarterly professional development, and meetings with a master principal. Residents and mentor principals met in the spring before the start of the residency school year. Over the summer, residents attended a four-day training, took a course on administrative supervision, and started working with the mentor principal. Residents could earn a certificate, master's degree, or both depending on the coursework they completed. Some topics highlighted in the courses included leadership theory and organizational behavior, school and community relations, school law, research methods, and cultural responsiveness. Residents were guided by program faculty and slowly took on responsibilities over time.
Length of time in residency schools	Two years. Residents were in their residency schools full time both years.
When coursework occurred	Residents took one five-week course during summer before the first school year and two evening courses per semester during the two school years of the program.
Mentor selection process	The district chose mentors based on schools it thought needed help. No details were provided on the process the district used to choose the mentors.
Resident and mentor matching process	Mentors and residents were matched based on information gathered during the resident interviews that were part of the resident selection process.
Mentor training	Mentors did not receive any training.
Other mentors or supervisors provided	A floating master principal provided additional support to the residents and helped deliver the quarterly professional development sessions.
Financial aid to residents	Residents received a salary and benefits from the district. The program covered tuition costs and reimbursed the district for the salary of one of the residents.
Financial aid to mentors	Up to \$8,000 per mentor
Requirements after graduating	Must work in the School District of Lancaster for two years.
Support to become certified or find jobs	Graduates were required to be a school leader or teacher in the district for two years after they graduated. Graduates were guaranteed an interview for a school leadership position or, if they could not get a school leadership position, were guaranteed a teaching position. The program provided coaching on resumes and interviews.
Follow-up support to graduates	Graduates did not receive follow-up support.
How residency program differed from non-residency program at the university	Residents did not have teaching responsibilities and were at their residency schools full time while taking evening courses. Non-residents were full-time teachers who participated in the program at night. In addition, non-residents received mentoring that was less extensive than what residents received.

Table B2. Principal residency programs (*continued*)

<b>Robert Morris University</b>	
Partner schools or districts	Propel Schools (some residents were placed in Pittsburgh Public Schools)
Program focus areas	Principals for urban schools
Certificate or degree	Principal certificate and optional master's degree
Resident recruitment and selection process	Propel Schools, a charter school network in the Pittsburgh region, recruited and selected the residents who were placed in their schools. Robert Morris University also recruited three participants in 2019/20 who were placed in Pittsburgh Public Schools. Propel advertised outside the Pittsburgh area and recruited candidates from other states. It also hosted a recruitment fair to advertise the opportunity and conduct initial interviews. The program staff member did not describe the recruitment of residents placed in Pittsburgh Public Schools. Candidates had to meet basic criteria (such as two years of teaching experience) necessary to meeting the state's principal certification requirements and have a minimum 3.0 grade point average, a teaching certification, recommendation letters, and verification of their employment.
Recruitment focuses	Racially/ethnically diverse candidates
Number of residents	7
Program length	One year (summer to spring)
Program core components	Coursework, residency, observations and support from a university supervisor, training modules provided by Propel Schools (which continued for a year after graduation and were also provided to the residents placed in Pittsburgh Public Schools), and a capstone project. There were five courses, starting in the summer and continuing once weekly during the residency school year. Courses focused on preparation, school improvement, student achievement, special education, professional development, and cultural responsiveness. The residencies were guided by plans developed for each resident over the summer before the residency. There was also a university supervisor who observed residents and worked with the mentors to provide feedback and support. Residents had to complete a capstone project that involved developing and implementing a school initiative and examining the outcomes.
Length of time in residency schools	One school year
When coursework occurred	The summer before the start of the residency school year and during the residency school year. Residents took courses one day per week. Residents took five courses, each lasting eight weeks.
Mentor selection process	Propel Schools selected the mentors. The mentors needed to meet the state's requirements, such as being a certified principal, meeting the required years of experience, and having been a principal in their current position for at least a year. The program staff member did not describe the mentor selection process for the residents placed in Pittsburgh Public Schools.
Resident and mentor matching process	Propel Schools' superintendent matched the residents and mentors placed in Propel Schools. The program staff member did not describe the matching process for those placed in Pittsburgh Public Schools.
Mentor training	The program provided training to mentors on program expectations, what the residency year should involve, and on evaluating residents' progress. A Propel Schools staff member provided additional support to the Propel Schools mentors.
Other mentors or supervisors provided	A program supervisor observed the residents and provided additional support.
Financial aid to residents	All residents received a salary and benefits provided by Propel Schools or Pittsburgh Public Schools. The program paid for the cost of all coursework.
Financial aid to mentors	Mentors did not receive financial aid.
Requirements after graduating	Those who did their residencies in Propel Schools had to work in Propel Schools for three years. Other graduates were encouraged to work in urban districts initially.
Support to become certified or find jobs	Residents placed in Propel Schools were required to work in the district for three years. The other residents were encouraged to work in an urban district after graduating but were not required to do so. Residents practiced being both the interviewer and the interviewee in mock interviews. A career center was also available for additional support.
Follow-up support to graduates	The program provided graduates with membership to the state's principal association and hosted an annual conference for graduates. Propel Schools provided graduates with access to training modules for a year after completing the program.
How residency program differed from non-residency program at the university	Not applicable. Robert Morris University does not have a non-residency principal preparation program.

Table B2. Principal residency programs (*continued*)

University of Pennsylvania	
Partner schools or districts	School District of Philadelphia
Program focus areas	Preparing principals for high-need schools in the School District of Philadelphia
Certificate or degree	Principal certificate and optional master's degree
Resident recruitment and selection process	The district advertised the program, screened those interested, and provided the program with a list of potential residents. The program faculty further screened the list and ensured the candidates met the eligibility requirements, including three years of teaching experience. The program focused on recruiting residents who were interested in remaining in the district after completing the program. The program staff interviewed candidates, asking about their leadership styles, understanding and ability to use data, perceptions of the principal job, experience working with the community, experience attempting to close achievement gaps, their priorities as a leader, and their ideas on acquiring additional funding for schools.
Recruitment focuses	Racially/ethnically diverse candidates and those who wanted to work in the district
Number of residents	4
Program length	11 months (August to July)
Program core components	Coursework, residency, weekly journals and time logs, site visits, monthly meetings with university mentors, and monthly professional development. Before the school year, residents attended an introductory session. During the school year, residents took courses on organizational, data-informed, instructional, public, and reflective leadership, and on school law, special education law, and diversity (also covered during the professional development). The residencies were guided by plans developed by the school mentors and university mentors (retired, experienced former principals or district superintendents) to ensure each resident experienced each of 12 required aspects of school leadership. Residents completed weekly journals documenting progress, the school leadership aspects they experienced that week, and how they spent their time. Residents met with their university mentors monthly to share their weekly journals and receive additional support. Residents attended six visits to other schools and monthly professional development sessions. Residents also received additional district-specific training, such as on the School District of Philadelphia's school budgeting process.
Length of time in residency schools	One school year
When coursework occurred	During and after the residency. Residents attended courses on one weekend (all day Saturday and Sunday) and one evening per month during the school year and took a two-week course in the summer after the school year ended.
Mentor selection process	The district selected the mentors. The program staff member did not provide details on the process the district used to select the mentors.
Resident and mentor matching process	The district matched the residents and mentors. The program staff member did not provide details on the process the district used to match the residents and mentors.
Mentor training	The program provided training on mentoring. The program staff member did not describe the training.
Other mentors or supervisors provided	University mentors (retired, experienced former principals or district superintendents) provided additional mentoring to the residents. The program looked for university mentors with recent experience in urban schools, a record of success, and sufficient availability.
Financial aid to residents	The program covered tuition costs and funded additional professional development opportunities (e.g., conferences, webinars). The district paid residents a salary with benefits.
Financial aid to mentors	\$2,500 per mentor
Requirements after graduating	Strongly expected (but not required) to work in the School District of Philadelphia for three years
Support to become certified or find jobs	Residents were expected, but not required, to stay in the district for three years after graduating. The program and the district conducted mock interviews with the candidates.
Follow-up support to graduates	The program provided professional development and mentoring to help graduates address challenges in their schools.
How residency program differed from non-residency program at the university	Residents participated in the program full time, whereas non-residents taught full time and participated in the program in the evenings and on weekends. Residents conducted four more site visits than non-residents and received additional professional development specific to the school district.



## Appendix C. Additional findings

Tables C1 and C2 provide additional findings on the teacher and principal residency programs.

### Additional teacher residency findings

**Table C1. Supplemental teacher residency findings**

Topic	Supplemental findings
Recruiting residents	<b>The residents most commonly decided to participate in the residency because they could gain substantial classroom experience as part of the program and because of the job prospects after graduating.</b> Other reasons included the program length, the program faculty, the financial support, the perception that conventional preparation programs do not provide adequate preparation, the program's focus on improving diversity, and the curriculum. Later in the focus groups, several of the residents also said they liked that they were guaranteed an interview for an open teaching position after completing the program.
Recruiting and training mentors	<b>Some mentors said they liked that they could learn new ideas and techniques from the residents.</b> <b>A program staff member said their program found that its mentor teachers were not well enough trained on cultural responsiveness to incorporate it into their mentoring with their residents.</b>
Coursework and the residency	<b>Several residents were not satisfied with the special education courses.</b> In particular, the residents said the courses went into more detail on special education than was needed for general education teachers. The residents suggested that special education courses for general education teachers might focus more on inclusion and helping general education teachers understand how they can use individualized education programs and adapt their instruction for special education students in their classrooms. <b>A few mentors and residents said that the residents did not know how to use the technology systems used in their residency classrooms, such as Google Classroom or SMART Board, and had to teach themselves. They said it might be helpful for programs to teach residents how to use the technology systems used in their residency classrooms before they start their residencies.</b> <b>A resident thought it would have been beneficial to see other classrooms get more exposure to different types of students during the residency.</b> The resident suggested starting in their official residency classroom to build relationships with the mentor and students and then occasionally visiting other classrooms while still spending most of their time in the official classroom. <b>Three residents said that their mentors attended after-school activities with them, such as basketball games, and allowed the residents to communicate with students' families.</b> The residents said this was great family engagement practice. <b>A program staff member said their program learned that heavily involving their partner school district early in the development of the program strengthened the partnership and improved communication.</b>
Helping residents find jobs	<b>A program staff member said that their program found that encouraging principals in the partner districts to see the residents as potential hires may have helped their residents find jobs after completing the program.</b> The program staff member said that the principals would often hire residents who showed sufficient growth over their residency year.

Source: Authors' analysis of data provided during the study's interviews and focus groups with program staff, residents, and mentors who participated in the programs in 2019/20.

## Additional principal residency findings

**Table C2. Supplemental principal residency findings**

Topic	Supplemental findings
Recruiting and matching residents and mentors	<p><b>When asked to select factors that were important in their decisions to participate in the programs, principal residents most commonly selected financial support, program length, the ability to gain leadership experience, and the job prospects.</b> Those who selected program length said they liked that the programs lasted only one or two years. Other factors included the perception that conventional programs do not provide adequate preparation, the program's focus on improving diversity, and program size. Two residents indicated that they were required to participate in the program to accept a job offer.</p> <p><b>The mentors most commonly decided to be mentors because they felt conventional principal preparation programs do not provide adequate preparation, they wanted to share their knowledge and experience with an aspiring principal, they wanted to help their school or district find and prepare principals for openings, and they wanted to promote diversity.</b></p> <p><b>Program staff and mentors from one of the programs found that interviewing the residents and mentors was helpful in matching them.</b> The interviews provided data on the mentors' leadership styles and mentoring approaches and on residents' needs.</p>
Coursework and the residency	<p><b>Some residents said they wished the program had more program faculty so they could learn from a larger number of former leaders with different experiences as leaders.</b> They suggested that programs could include more guest speakers to provide a greater array of experiences.</p> <p><b>A resident who had prior school leadership experience suggested that programs might consider developing novice and experienced resident tracks</b> to accommodate residents with varying degrees of prior school leadership experience.</p>

Source: Authors' analysis of data provided during the study's interviews and focus groups with program staff, residents, and mentors who participated in the programs in 2019/20.

**Appendix D. Data collection tables on the race/ethnicity and employment outcomes of residents and non-residents and program cost**

The study team sent the following tables to staff from each program to collect data on the race/ethnicity and employment outcomes of each residency program’s participants and of participants in non-residency programs at the same university, and to collect information on each program’s total cost. Table D1 collected data on the race/ethnicity, program completion, and employment outcomes of residency program participants. Table D2 attempted to collect data on each program’s total cost; however, the study team believed the programs used different approaches to calculate the total cost, so the study team did not use the resulting data. Tables D3 and D4 attempted to collect data on the race/ethnicity and employment outcomes of participants in non-residency preparation programs at the residency universities. These data would have allowed the study to conduct comparative analyses to explore whether the residency programs produced higher rates of more diverse, better-prepared teachers and school leaders who ended up filling positions in high-need districts than participants in the non-residency programs. The study team did not use the data the program staff provided in tables D3 and D4 because the team was concerned about the accuracy of the data.

For programs receiving implementation grants in both 2018/19 and 2019/20, the study team sent two versions of each table, one for each year. For the two-year principal residency programs, the year in the study tables was set to 2018–2020, and the program staff were instructed to provide data across the two years.

**Table D1. Number of [teacher or principal] residents reaching key milestones**

For each person enrolled in the residency program in [2018/19, 2019/20, or 2018–2020] please provide the following information (one row per person):

Name	Gender (male, female, non-binary)	Race/ethnicity (Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, Latino/a, White, Other)	Did residency in a high-need LEA in Pennsylvania? (Yes/No)	Completed residency? (Yes/No)	Received certification? (Yes/No)	Certification area	Employed as a [teacher or school leader] in a Pennsylvania LEA after receiving certification? (Yes/No)	Employed as a [teacher or school leader] in a <u>high-need</u> Pennsylvania LEA? (Yes/No)	[For teacher residency programs only] Job is in a special education, science, technology, engineering, or math subject (Yes/No)
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Note: LEA = local education agency. High-need LEAs are those with schools with high proportions of students of color or in poverty, schools with chronic teacher shortages, or schools designated for Comprehensive Support and Improvement or Additional Targeted Support and Improvement. This definition is intended to match the Pennsylvania Department of Education’s definition of high need.

Source: Authors’ construction.

**Table D2. Total cost of the [teacher or principal] residency program**

Year	Total cost
[2018/19, 2019/20, or 2018–2020]	

Note: Total cost includes all costs associated with preparing the residents through completion of the program (e.g., program faculty salaries and costs associated with recruiting residents and mentors, training the residents, training the mentors, any other supports or services offered to the residents, financial aid or support).

Source: Authors’ construction.

If your university did not have non-residency (or traditional) [teacher or principal] preparation programs in [2018/19, 2019/20, or 2018–2020], please indicate that below this sentence and leave tables D3 and D4 blank.

**Table D3. Counts of individuals enrolled in non-residency [teacher or principal] preparation programs at your university in [2018/19, 2019/20, or 2018–2020]**  
*For each race/ethnicity group, please provide the number enrolled and the number certified.*

Race/ethnicity	Number enrolled	Number certified
Black or African American		
American Indian or Alaska Native		
Asian		
Native Hawaiian or other Pacific Islander		
Latino/a		
White		
Other		

Source: Authors' construction.

**Table D4. Estimated percentages of those enrolled in the non-residency [teacher or principal] preparation programs at your university in [2018/19, 2019/20, or 2018–2020] who achieved each of three employment outcomes**

*For each row in the table, put an X in the column that matches your best estimate of the percentage enrolled in the non-residency [teacher or principal] preparation programs at your university in [2018/19, 2019/20, or 2018–2020] who achieved that employment outcome. For example if 85 percent of those enrolled in the non-residency programs were employed in a Pennsylvania LEA after becoming certified, put an X in the More than 80% column.*

Employment outcomes after receiving certification	For each row, put an X in the column that matches your best estimate of the percentage enrolled who met that employment outcome				
	Less than 20%	21 to 40%	41 to 60%	61 to 80%	More than 80%
Percentage employed as a [teacher or school leader] in a Pennsylvania LEA					
Percentage employed as a [teacher or school leader] in a <u>high-need</u> Pennsylvania LEA					
[For teacher residency programs only] Percentage employed as a teacher in special education, science, technology, engineering, or math subjects in a Pennsylvania LEA					

Note: LEA = local education agency. High-need LEAs are those with schools with high proportions of students of color or in poverty, schools with chronic teacher shortages, or schools designated for Comprehensive Support and Improvement or Additional Targeted Support and Improvement. This definition is intended to match the Pennsylvania Department of Education's definition of high need.

Source: Authors' construction.

## Appendix E. Interview and focus group protocols

The study team used the following protocols (lists of questions) to guide the interviews with residency program staff and the focus groups with residents and mentors. The study team instructed the program staff to provide answers based on the program as it was implemented in the 2019/20 school year. The study team instructed the residents and mentors to answer based on their experiences in the program in the 2019/20 school year.

### *Protocol for interviews with teacher residency program staff*

#### *Questions for the program descriptions*

- What are the partner organizations? For example, the school districts you partner with and any other organizations involved in preparing the residents.
- What are the subjects or grades that the program focuses on preparing teachers for?
- What is the average number of residents or the typical range?
- How long does the program last? (a school year, a calendar year, some other period)
- How long are participants in their residency classrooms? (how many semesters, months, weeks, etc.)
- Do you provide training to the mentors? (yes or no)
- What financial aid do you provide to residents?
- What financial support do you provide to mentors, if any?
- Do you provide any type of follow-up support to the graduates? If so, can you very briefly describe the support.

#### *Program components, strengths, weaknesses, challenges, lessons learned*

##### *Recruiting participants*

- When recruiting participants, what characteristics or populations does the program focus on? (such as African Americans or Hispanics, men, people from rural or urban areas, etc.)
- Is diversity an explicit focus for recruitment?
- How does the program find and appeal to potential participants?
- Which of the recruitment strategies appear to be most successful in getting potential participants to apply?
- Once participants have applied, how does the program select those it will accept? What factors does the program consider?
- Do any of the criteria appear to be particularly successful in selecting candidates that end up completing the program?
- What challenges are you facing, if any, in recruiting, selecting, and enrolling the program's target participants?
- Do you have any lessons learned that might help other programs recruit, select, and enroll their target participants?

##### *Selecting mentors*

- How do you select mentors?
- What is working well in selecting mentors?
- Are there any challenges?



- Are there any lessons learned that might help other programs?

#### Recruiting and training program faculty

- What do you look for when recruiting program faculty?
- Are there any lessons learned in recruiting and training program faculty that might help other programs?

#### Description of the program

- What are the main components of the program? Coursework and residency? Anything else?
- Can you talk about the sequence of the program and when everything occurs? For example, do participants start with coursework over the summer, then go into their residency classrooms part time in the fall while continuing to take courses, and then are in the residency classrooms full time in the spring?
- What coursework does the program provide and what does it focus on?
- Is cultural responsiveness taught? If so, can you briefly describe the training?
- How does the clinical practice in the residency classrooms work? Are there any requirements? Is there a gradual release model?
- How do you match residents and mentors?
- What type of training do you provide to mentors, if any?
- What are the high-level differences between the residency and non-residency programs at your university? For example, in terms of partners, recruitment, size, length, coursework, time in a classroom, financial support, etc. We don't need a detailed answer. A high-level response is enough.
- Were there any changes to the residency program in the 2019/20 year due to the pandemic?
- What aspects of the program are working well?
- What aspects are not working as well or what challenges is the program encountering? Is there anything that seems to be helping?
- Are there any lessons learned that might help other programs?

#### Support to complete the program and find jobs

- Does the program provide any support to help participants get certified and find jobs (especially in high-need schools and hard-to-staff subjects)? If so, please describe the support.
- Is there anything especially successful in this area?
- Are there challenges?
- Any lessons learned for other programs?

#### Other strengths, weaknesses, challenges, lessons learned?

- Are there any other strengths, weaknesses, challenges, or lessons learned that might help other programs improve?

## ***Protocol for focus groups with teacher residents***

### ***Factors influencing your decision to participate in the residency program***

- How important was the residency program in you deciding to pursue a teaching career in 2019/20? For example, if the residency didn't exist, would you still have become a teacher?
- Without the residency program, would you have attended a traditional, non-residency teacher preparation program instead?
- What factors were important in your decision to participate in the teacher residency program in 2019/20?
  - The program length
  - The program size
  - The curriculum
  - The ability to gain classroom experience as part of the training
  - The program faculty
  - The financial support
  - The job prospects after graduating
  - The program's focus on improving diversity
  - The perception that conventional preparation programs don't provide adequate preparation
  - Other (a free-response option)
- What about these factors were important?
- Were there any other important factors not listed?
- Is the teacher residency program doing a good job in attracting non-White candidates, or is there more the program might do?

### ***Perceptions of the program***

- On a scale of 1 (very unsatisfied), 2 (unsatisfied), 3 (neutral), 4 (satisfied), and 5 (very satisfied), with a skip option, how satisfied were you with the following aspects of the teacher residency program you participated in during the 2019/20 year?
  - The program faculty
  - The coursework
  - The training on diversity or cultural responsiveness
  - The mentoring
  - The program overall
- Based on your experience with the teacher residency program you participated in during the 2019/20 year:
  - What aspects of the program faculty were you most satisfied with? Least satisfied with?
  - Which types of courses did you find most helpful?
  - What aspects of the coursework could have been improved?
  - If you received any training on diversity or cultural responsiveness, were you satisfied with it, and if not, why not?
  - What aspects of the mentoring did you find most helpful? Least helpful?
- Are there any other aspects of the teacher residency program that you participated in during the 2019/20 year that stand out as particularly strong or needing improvement that you want to mention?

### *Preparedness to teach*

- On a scale of 1 (very unprepared), 2 (unprepared), 3 (neutral), 4 (prepared), and 5 (very prepared), with a skip option, how well did the teacher residency program that you participated in during the 2019/20 year prepare you to do the following?
  - Manage a classroom
  - Develop lesson plans
  - Engage students
  - Use technology in your instruction
  - Assess students
  - Adapt your instruction to students' needs
  - Engage with students' families

### *Suggestions for improvement*

- What changes would you suggest to strengthen the teacher residency program that you participated in during the 2019/20 year? For example, to recruit better or more diverse candidates, better prepare teachers, help participants complete or stay in the program, help participants get certified and find jobs, improve financial support, etc.

### *Impacts of the pandemic*

- What effects did the pandemic have on the teacher residency program?
- Did the pandemic impact your ability to become certified or find a teaching job?

### *Protocol for focus groups with teacher mentors*

#### *Factors influencing your decision to be mentor*

- What factors were important in your decision to be a teacher mentor for the residency program in 2019/20?
  - The opportunity to share your knowledge and experience with an aspiring teacher
  - The opportunity to promote diversity in the profession
  - The opportunity to help your school or district find and prepare teachers for openings
  - The belief that conventional teacher training programs do not provide adequate preparation
  - A pay supplement
  - Other (a free-response option)
- What about these factors were important?
- Were there any other important factors not listed?
- Is the teacher residency program doing a good job attracting good mentors, or are there ways the program can better attract mentors?

### *Perceptions of the program*

- On a scale of 1 (very unsatisfied), 2 (unsatisfied), 3 (neutral), 4 (satisfied), and 5 (very satisfied), with a skip option, based on your experience as a teacher mentor in 2019/20, how satisfied were you with the following?
  - The mentoring training and support you received from the program
  - The mentor–resident matching process
  - The time commitment
  - The financial support
  - The mentorship as a whole

- Based on your experience as a teacher mentor in 2019/20:
  - Of any training and support you received, what did you find most helpful?
  - Were there any aspects of the training and support that you thought were lacking or unnecessary?
  - What about the mentor–resident matching process worked well?
  - Are there ways the mentor–resident matching process could be strengthened? For example, are there aspects of the matching process that you think are important that weren't part of the process?
  - What aspects of being a mentor were most challenging? Is there anything that could help reduce those challenges?
  - How many additional hours per week did being a teacher mentor require of you in 2019/20, on top of your standard responsibilities as a teacher?
  - Are there any other aspects of being a mentor for the teacher residency program that stand out as particularly strong or that need improvement that you want to mention?
  - Would you be a mentor again? Why or why not?

#### *Preparedness of residents to teach*

- On a scale of 1 (very unprepared), 2 (unprepared), 3 (neutral), 4 (prepared), and 5 (very prepared), with a skip option, by the end of the residency in 2019/20, how well prepared was your teacher resident to do the following?
  - Manage a classroom
  - Develop lesson plans
  - Engage students
  - Use technology in instruction
  - Assess students
  - Adapt instruction to students' needs
  - Engage with students' families

#### *Suggestions for improvement*

- Based on your experience as a teacher mentor in 2019/20, what changes would you suggest to strengthen the residency or the program?

#### *Impacts of the pandemic*

- What effects did the pandemic have on the residency and your mentoring of the teacher candidate?

#### ***Protocol for interviews with principal residency program staff***

##### *Questions for the program descriptions*

- What are the partner organizations? For example, the school districts you partner with and any other organizations involved in preparing the residents.
- What are the types of schools that the program focuses on preparing principals for?
- What is the average number of residents or the typical range?
- How long does the program last? (a school year, a calendar year, some other period)
- How long are participants in their residency classrooms? (how many semesters, months, weeks, etc.)
- Do you provide training to the mentors? (yes or no)
- What financial aid do you provide to residents?

- What financial support do you provide to mentors, if any?
- Do you provide any type of follow-up support to the graduates? If so, can you very briefly describe the support.

### *Program components, strengths, weaknesses, challenges, lessons learned*

#### Recruiting participants

- When recruiting participants, what characteristics or populations does the program focus on? (such as African Americans or Hispanics, men, people from rural or urban areas, etc.)
- Is diversity an explicit focus for recruitment?
- How does the program find and appeal to potential participants?
- Which of the recruitment strategies appear to be most successful in getting potential participants to apply?
- Once participants have applied, how does the program select those it will accept? What factors does the program consider?
- Do any of the criteria appear to be particularly successful in selecting candidates that end up completing the program?
- What challenges are you facing, if any, in recruiting, selecting, and enrolling the program's target participants?
- Do you have any lessons learned that might help other programs recruit, select, and enroll their target participants?

#### Selecting mentors

- How do you select mentors?
- What is working well in selecting mentors?
- Are there any challenges?
- Are there any lessons learned that might help other programs?

#### Recruiting and training program faculty

- What do you look for when recruiting program faculty?
- Are there any lessons learned in recruiting and training program faculty that might help other programs?

#### Description of the program

- What are the main components of the program? Coursework and residency? Anything else?
- Can you talk about the sequence of the program and when everything occurs? For example, do participants start with coursework over the summer, then go into their residency schools part time in the fall while continuing to take courses, and then are in the residency schools full time in the spring?
- What coursework does the program provide and what does it focus on?
- Is cultural responsiveness taught? If so, can you briefly describe the training?
- How does the clinical practice in the residency school work? Are there any requirements? Is there a gradual release model?
- How do you match residents and mentors?
- What type of training do you provide to mentors, if any?

- What are the high-level differences between the residency and non-residency programs at your university? For example, in terms of partners, recruitment, size, length, coursework, time in a school, financial support, etc. We don't need a detailed answer. A high-level response is enough.
- Were there any changes to the residency program in the 2019/20 year due to the pandemic?
- What aspects of the program are working well?
- What aspects are not working as well or what challenges is the program encountering? Is there anything that seems to be helping?
- Are there any lessons learned that might help other programs?

#### *Support to complete the program and find jobs*

- Does the program provide any support to help participants get certified and find jobs (especially in high-need schools and subjects)? If so, please describe the support.
- Is there anything especially successful in this area?
- Are there challenges?
- Any lessons learned for other programs?

#### *Other strengths, weaknesses, challenges, lessons learned?*

- Are there any other strengths, weaknesses, challenges, or lessons learned that might help other programs improve?

### ***Protocol for focus groups with principal residents***

#### *Factors influencing your decision to participate in the residency program*

- How important was the residency program in your decision to pursue becoming a principal in 2019/20? For example, if the residency didn't exist, would you still have become a principal?
- Without the residency program, would you have attended a traditional, non-residency principal preparation program instead?
- What factors were important in your decision to participate in the principal residency program in 2019/20?
  - The program length
  - The program size
  - The curriculum
  - The ability to gain school leadership experience as part of the training
  - The program faculty
  - The financial support
  - The job prospects after graduating
  - The program's focus on improving diversity
  - The perception that conventional preparation programs don't provide adequate preparation
  - Other (a free-response option)
- What about these factors were important?
- Were there any other important factors not listed?
- Is the principal residency program doing a good job in attracting non-White candidates, or is there more the program might do?



### *Perceptions of the program*

- On a scale of 1 (very unsatisfied), 2 (unsatisfied), 3 (neutral), 4 (satisfied), and 5 (very satisfied), with a skip option, how satisfied were you with the following aspects of the principal residency program you participated in during the 2019/20 year?
  - The program faculty
  - The coursework
  - The training on diversity or cultural responsiveness
  - The mentoring
  - The program overall
- Based on your experience with the program you participated in during the 2019/20 year:
  - What aspects of the program faculty were you most satisfied with? Least satisfied with?
  - Which types of courses did you find most helpful?
  - What aspects of the coursework could have been improved?
  - If you received any training on diversity or cultural responsiveness, were you satisfied with it, and if not, why not?
  - What aspects of the mentoring did you find most helpful? Least helpful?
- Are there any other aspects of the principal residency program that you participated in during the 2019/20 year that stand out as particularly strong or needing improvement that you want to mention?

### *Preparedness to lead a school*

- On a scale of 1 (very unprepared), 2 (unprepared), 3 (neutral), 4 (prepared), and 5 (very prepared), with a skip option, how well did the principal residency program that you participated in during the 2019/20 year prepare you to do the following?
  - Establish a vision for the school
  - Create a positive climate and safe environment
  - Provide instructional leadership
  - Hire teachers and other staff
  - Improve student outcomes
  - Evaluate teachers and staff and help them improve
  - Oversee school policies and procedures
  - Handle disciplinary or other serious incidents
  - Make resource allocation decisions
  - Productively engage with parents and the community

### *Suggestions for improvement*

- What changes would you suggest to strengthen the principal residency program that you participated in during the 2019/20 year? For example, to recruit better or more diverse candidates, better prepare principals, help participants complete or stay in the program, help participants get certified and find jobs, improve financial support, etc.

### *Impacts of the pandemic*

- What effects did the pandemic have on the principal residency program? Did the pandemic impact your ability to become certified or find a school leadership job?

## *Protocol for focus groups with principal mentors*

### *Factors influencing your decision to be a mentor*

- What factors were important in your decision to be a principal mentor for the residency program in 2019/20?
  - The opportunity to share your knowledge and experience with an aspiring principal
  - The opportunity to promote diversity in the profession
  - The opportunity to help your district find and prepare principals for openings
  - The belief that conventional principal training programs do not provide adequate preparation
  - A pay supplement
  - Other (a free-response option)
- Were there any other important factors not listed?
- What about these factors were important?
- Is the principal residency program doing a good job attracting good mentors, or are there ways the program can better attract mentors?

### *Perceptions of the program*

- On a scale of 1 (very unsatisfied), 2 (unsatisfied), 3 (neutral), 4 (satisfied), and 5 (very satisfied), with a skip option, based on your experience as a principal mentor in 2019/20, how satisfied were you with the following?
  - The mentoring training and support you received from the program
  - The mentor–resident matching process
  - The time commitment
  - The financial support
  - The mentorship as a whole
- Based on your experience as a principal mentor in 2019/20:
  - Of any training and support you received, what did you find most helpful?
  - Were there any aspects of the training and support that you thought were lacking or unnecessary?
  - What about the mentor–resident matching process worked well?
  - Are there ways the mentor–resident matching process could be strengthened? For example, are there aspects of the matching process that you think are important that weren't part of the process?
  - What aspects of being a mentor were most challenging? Is there anything that could help reduce those challenges?
  - How many additional hours per week did being a principal mentor require of you in 2019/20, on top of your standard responsibilities as a principal?
  - Are there any other aspects of being a mentor for the principal residency program in 2019/20 that stood out as particularly strong or that need improvement that you want to mention?
  - Would you be a mentor again? Why or why not?

### *Preparedness of residents to lead schools*

- On a scale of 1 (very unprepared), 2 (unprepared), 3 (neutral), 4 (prepared), and 5 (very prepared), with a skip option, by the end of the residency in 2019/20, how well prepared was your principal resident to do the following?
  - Establish a vision for the school
  - Create a positive climate and safe environment
  - Provide instructional leadership

- Hire teachers and other staff
- Improve student outcomes
- Evaluate teachers and staff and help them improve
- Oversee school policies and procedures
- Handle disciplinary or other serious incidents
- Make resource allocation decisions
- Productively engage with parents and the community

#### *Suggestions for improvement*

- Based on your experience as a principal mentor in 2019/20, what changes would you suggest to strengthen the residency or the program?

#### *Impacts of the pandemic*

- What effects did the pandemic have on the residency and your mentoring of the principal candidate?