In the following report, Hanover Research summarizes strategies for addressing critical shortages in teaching staff, including grow your own programs.
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EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

This report discusses strategies that districts can implement to address critical teacher shortage areas. The Texas Education Agency (TEA) listed seven specific state-wide teacher shortage areas for the 2015-16 school year – Bilingual/English as a second language, career and technical education (CTE), computer science, English as a second language (ESL), mathematics, science, and special education – at both the elementary and secondary levels.¹ The pipeline of qualified teacher candidates from colleges and universities nationally and in Texas is shrinking, making it difficult for many districts to fill teaching vacancies. For instance, teacher training programs in Texas, California, and New York, some of the largest pools of new teachers, have all reported declining enrollment in recent years.²

This report contains both a broad overview of teacher shortages as well as a detailed look at one particular strategy for addressing this issue – grow your own programs. This information is presented in two sections:

- **Section I: Addressing Critical Teacher Shortages** discusses the scope of critical shortages in the teaching workforce and research on various strategies for addressing these shortages.
- **Section II: Grow Your Own Programs** provides additional details on grow your own programs, including profiles of four state-wide and three district-based programs cited by secondary sources as having important or promising models.

KEY FINDINGS

- **Research suggests that teacher recruitment incentive programs are most effective when implemented as part of a broader, holistic retention strategy, rather than as standalone initiatives.** Compensation is not the only, or even primary, factor that teachers consider in their decisions regarding where to work. Many identify workplace conditions as main priorities, and common teacher-identified priorities include: strong principals, skilled and supportive colleagues, adequate resources for teaching, smaller student loads, autonomy, and high-quality professional development. Such factors should be incorporated into incentive programs geared toward recruitment and retention in high-need areas.

- **While teacher transfer incentives may be effective in persuading quality teachers to work in high-need schools or subject areas, money alone is typically not enough to retain them.** Signing and retention bonuses work to encourage teachers to move


to high-needs schools. Indeed, one study demonstrated that teacher retention during the payment period can be significantly higher than average. However, at the end of the payment period, retention will likely return to its previous rate, suggesting that purely financial incentives are not sufficient to retain teachers in challenging settings.

- A small body of research and program evaluations suggests that some state- and district-wide grow your own programs have successfully retained their trainees. A 2011 evaluation of the Teacher Cadet program operated by the South Carolina Center for Education Recruitment, Retention, and Achievement (CERRA) found that 41 percent of its high school participants planned on choosing teaching after college. Further, in 2015, Teach Tomorrow Oakland, a program operated by Oakland Unified School District, had a 78 percent retention rate of participants completing their five-year commitment to teach in the district.

- However, other reports suggest that grow your own programs have struggled to meet recruitment goals, retain participants, and in some cases manage their finances. In particular, Grow Your Own Illinois, a prominent $20 million statewide program, only produced 80 teachers after setting a goal of creating 1,000 teachers. Further, the Urban Teaching Academy, operated by Hillsborough County Public Schools in Florida, failed to raise adequate funding even as it continued to recruit high school students for participation.

- Although grow your own programs do not follow a universal model, some prominent districtwide programs that target high school students tend to recruit students in middle school and offer extensive training in high school. Arlington ISD’s Ready, Set, Teach! program allows Grade 8 students to take a professional exploration class before entering a professional career education course for teaching. Similarly, the Urban Academies program in Broward County Public School District in Florida recruits candidates as early as elementary school and enrolls them in a four-year high school professional development program. Both districts offer participating students guaranteed teaching jobs after college.

- Statewide grow your own programs that target high school and middle school students have developed standardized curricula that individual districts and schools can implement. In Maryland, the Teacher Academy of Maryland has a four-part curriculum that helps high school students develop core competencies in teaching. The curriculum culminates in a classroom internship where the student works under a mentor. Likewise, the South Carolina Center for Educator Recruitment, Retention, and Advancement’s middle school program uses a seven-module curriculum that provides students with knowledge about the teaching profession and helps them to develop their career aspirations.
SECTION I: ADDRESSING CRITICAL TEACHER SHORTAGES

This section first examines the issue of teacher shortages in general, followed by a review of strategies for addressing teacher shortages through recruitment incentives and by strengthening the pipeline of qualified teacher candidates.

OVERVIEW OF CRITICAL SHORTAGE AREAS IN TEACHING

DEFINING CRITICAL SHORTAGE AREAS

Although various researchers and education organizations have analyzed different components of teaching shortages in the United States, a critical foundation for understanding this problem are definitions of shortage areas. The U.S. Department of Education (DOE) uses the term ‘teacher shortage area’ (TSA) to designate shortages in the teacher workforce in each state. The agency defines this term as:

An area of specific grade, subject matter or discipline classification, or a geographic area in which the Secretary determines that there is an inadequate supply of elementary or secondary school teachers.

The U.S. DOE allows each state’s Chief State School Office to use this definition to identify its own shortage areas for the federal government. However, each state’s defined shortage areas cannot exceed “5 percent of the total of all of the unduplicated full-time equivalent (FTE) elementary and secondary teaching positions” to become a federally-recognized shortage area. As noted above, Texas identified seven state-wide teacher shortage areas for the 2015-16 school year in STEM, CTE, special education, and ESL.6 As the next section will show, research also indicates that these shortages extend to demographic groups, especially for teachers of color.

THE SCOPE OF CRITICAL SHORTAGE AREAS

Reports and publications have noted several trends on critical shortage areas. In the area of shortages in specific subjects, an analysis of federal labor and teaching data published by Education Next notes that high demand for special education, science, and math teachers continues to be persistent issue as teachers often overpopulate areas such as early childhood education and English.7 As the report notes,

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4 Ibid., p. 3.
5 Ibid.
Almost every state continues to need special education teachers, a discrepancy that emerges from similar wages for special and regular education teachers.

Although the number of science and math teachers has increased over the last decade due to factors such as increased accountability for math proficiency under No Child Left Behind, districts and schools still need these teachers.

Few states listed English and early childhood education as critical shortage areas, suggesting that the majority of teachers remain in this area.  

Education World notes that the severity of these types of shortages has generated several adverse effects in the recruitment and retention of teachers, including:

- 42 states issuing emergency credentials to individuals without a background in education.
- 25 percent of new teachers failing to have licenses to teach in their respective fields.
- 20 percent of new teachers leaving within three years of starting; most of the individuals who leave have the highest college-entrance exam scores.

These critical shortages also disproportionately impact rural and urban areas. As the Association for Supervision and Curriculum Development (ASCD) notes, the shortage of teachers leads to "not enough teachers who are both qualified and willing to teach in urban and rural schools, particularly in those serving low-income students or students of color."

**CRITICAL SHORTAGE AREAS FOR MINORITY TEACHERS**

In addition to general shortages in subject areas and regions, another key critical shortage area is the relatively low number of teachers of color in the profession. According to the National Center for Education Statistics, 81.9 percent of public school teachers overall were white in the 2011-2012 school year and 83.0 percent of public high school (Grade 9-12) teachers were white. The disparity between the number of white teachers and teachers of color can be significant in areas with large numbers of minority students. As a 2015 article by *The New York Times* notes,

- In Boston, there is one Hispanic teacher for every 52 Latino students and one black teacher for every 22 African-American students; there is one white teacher to fewer than three white students.

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8 Bullet points adopted from Ibid.
In New York City, 60 percent of teachers are white; more than 85 percent of the students are racial minorities.

In Washington, DC, the city’s district has struggled to hire Hispanic teachers as Hispanic enrollment increased, even though 50 percent of all teachers are black.¹²

A study on trends in the teaching workforce published by the Consortium for Policy Research in Education also finds that minority teachers have significantly higher rates of turnover than their white counterparts, due to factors such as working conditions – namely the ability to work independently – and the capacity of teaching faculty to impact school decisions.¹³ As the authors note, “the same difficult-to-staff schools that are more likely to employ minority teachers are also more likely to offer less-than-desirable working conditions ... and these conditions account for the higher rates of minority teacher turnover.”¹⁴

The shortage of minority teachers is significant for two reasons: these teachers are more likely to work in underrepresented areas, and may help students from similar backgrounds improve their academic performance. A 2014 study published by the Center for American Progress, which focused on this topic, noted that:

Teachers of color are more likely to work and remain in high-poverty, hard-to-staff urban schools and districts than their white counterparts; in fact, they often consider it an important duty to do so. What’s more, teachers of color are known to be personally committed to the success of children of color, and they affect a wide range of student academic outcomes.¹⁵

Peer-reviewed studies have shown that the presence of minority teachers can lead to improved outcomes for students from the same minority group. As the Center for American Progress notes, research on this topic finds that the presence of teachers of color relate to positive outcomes in areas such as:

- Advanced-Level Course Enrollment
- College Attendance Rates
- Retention
- School Attendance
- Standardized Test Scores¹⁶

Recent studies reinforce these findings.¹⁷ For example, a 2015 article published by the Economics of Education Review examined how student achievement changed when

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¹⁴ Ibid., p. 24.


¹⁶ Bullet points adopted from Ibid., p. 6.
students switched between teachers of different races between Grades 3 through 10, and found that students who worked with teachers from the same race had improved academic outcomes. The study, which used administrative datasets from the Florida Department of Education, notes that these teacher-student pairs had a positive and “potentially policy relevant” impact on reading scores for black and white students and a significant impact on math scores for black, white, and Asian students. The study also found that lower-performing black and white students benefit from working with teachers from the same race.

Finally, an article published by The Atlantic suggests that exposure to minority teachers may benefit all students in their classrooms. As the article notes, “anecdotal and empirical evidence suggests that teachers of color can help disrupt what are often one-sided portrayals of the world and offer invaluable insight to students from different backgrounds.” This benefit is critical, as racial socialization—the process in which individuals develop their ethnic identities—occurs in same-race social networks. As a 2014 study published by Independent Teacher cited in the article notes, messages that white teens receive from their parents about race can be “contradictory and incomplete,” giving schools the task of exposing them to different perspectives that help build “productive and genuine relationships” between white and minority communities.

STRATEGIES FOR ADDRESSING CRITICAL TEACHER SHORTAGES

Despite the widespread recognition of the need to recruit and retain quality instructors, studies show that the most qualified educators are not working with the populations who need them most. In addition, teacher turnover is higher at low-performing, low-income schools with large minority populations.

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19 Ibid.
21 Ibid.
Ample research has been conducted to address the factors driving high teacher turnover and attrition at low-performing schools, finding that these problems stem mainly from dissatisfaction with compensation and the working environment. Studies show that salary plays a large role in teachers’ decisions to enter and remain in the profession. Similarly, teachers often identify working conditions as key factors in their decisions regarding the schools in which they want to teach. In this vein, teachers “identify low salaries and the organization’s working conditions (e.g., a lack of support, lack of resources, high teacher to student ratios, student discipline issues) as most often shaping their decisions to leave their schools or the profession.”

Districts attempting to recruit and retain qualified teachers often turn to incentive programs as a means to address these primary concerns.

Broadly, strategies for addressing teacher shortages fall into two categories – those that incentivize teachers to fill or stay in high-need positions and those that work to strengthen the pipeline of qualified teachers. The subsections that follow address financial and workplace incentive programs through an assessment of relevant literature and discuss teacher pipeline initiatives, specifically grow your own programs.

**FINANCIAL INCENTIVES**

Among strategies for addressing critical teaching shortage areas, one prominent approach is increasing teacher pay. Financial incentives are premised on the assumption that additional compensation can induce teachers to accept jobs they may otherwise not be inclined to accept (e.g. low-income schools, high priority subjects, at-risk populations). In their typology of economic incentive policies, Kolbe and Strunk (2012) outline six key incentive categories, presented in Figure 1.1 on the following page. Beyond the standard salary bonus, such programs may also incorporate student loan forgiveness, in-kind payments, and tuition tax credits, among others. However varied, all use economic inducements to increase the supply of qualified teachers, recruit for hard to fill positions, and promote teacher retention.  

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### Figure 1.1: Example Financial Incentive Policies

<table>
<thead>
<tr>
<th>INCENTIVE CATEGORIES</th>
<th>EXAMPLE POLICY TYPES</th>
</tr>
</thead>
</table>
| **Salary schedule modifications**  | ▪ State-mandated minimum salary levels  
▪ Across-the-board salary increases  
▪ Alternative salary schedules  
▪ “Frontloaded” or “backloaded” salary schedules |
| **Salary enhancements**             | ▪ Salary credits  
▪ Additional pay for teaching in geographic-or subject-shortage areas  
▪ Additional pay for certifications or credentials  
▪ Additional pay for extra responsibilities  
▪ Tax waivers and credits  
▪ Transportation subsidies |
| **Limited duration incentives**     | ▪ Signing bonuses  
▪ Relocation incentive  
▪ Credential or certification bonus  
▪ Performance-based rewards  
▪ Loan forgiveness  
▪ Home ownership assistance |
| **Education-and training-related incentives** | ▪ Tuition subsidies and remission  
▪ Pre-service teacher scholarships and stipends  
▪ Alternative routes to teacher certification  
▪ Tuition tax credits |
| **In-kind incentives**              | ▪ Housing assistance  
▪ Subsidized meals  
▪ Access to local amenities |
| **Retirement benefit waivers**      | ▪ Return-to-work policies  
▪ Deferred retirement |

Source: Kolbe and Strunk²⁶

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**Incentivizing High-Needs Teaching Position Transfers**

As noted above, there is a significant body of evidence suggesting that teachers make decisions about where to work based in large part on salary considerations. This knowledge informs many of the financial incentive programs in place to retain educators in high-need, critical shortage positions. These initiatives may offer signing bonuses or retention bonuses to “expert teachers” who agree to teach in challenging schools or under-staffed subjects. However, the evidence to support such transfer programs’ efficacy is limited, though it does highlight several important conclusions.

One widely-cited study, commissioned by the Institute of Education Sciences, examined the impact of financial incentives on quality teacher recruitment and retention. The

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investigation focused on implementation of the Talent Transfer Initiative (TTI) in seven school districts over the course of one academic year (2009-2010). TTI uses a value-added model to identify top teachers in a district. Program officers contact these teachers and offer them the chance to transfer to a low-performing school in their district in exchange for $20,000 paid over a two-year period. Exceptional teachers already working in underperforming schools are offered a $10,000 retention bonus paid over two years. Of the 1,000 effective teachers identified and 70 vacant positions, 63 teachers earned positions within TTI. These results indicate that, while excellent teachers can be enticed to teach in high-need schools by financial incentives, a large pool of candidates is needed to fill all vacancies. The researchers followed up with TTI teachers after one, two, and three years and found that during the two-year payment period, teacher retention was higher than average retention in the district (93 versus 70 percent). However, once the payments stopped, TTI retention dropped to align with district averages.

Overall, the research on transfer or retention incentives in high-needs schools is fairly sparse. Available research points to the limitations of such approaches, suggesting that financial incentives may not work in the long-term to retain quality teachers at challenging schools. Adamson and Darling-Hammond (2012) make the salient point that “many of the solutions offered for the inequitable distribution of teachers have been rendered less effective by large inequalities in school resources that translate into widely disparate teacher salaries and working conditions.” While transfer bonuses may work in the short-term, they do overcome the sizeable salary and workplace disparities that currently exist between high- and low-income schools.

**WORKPLACE INCENTIVE POLICIES**

Despite an overwhelming policy focus on financial incentives, much of the literature on teacher recruitment and retention, especially in high-need schools, indicates that monetary concerns are not the only, or even primary, factor in teacher decision-making. A 2009 *Education Week* piece describes an emerging focus on how workplace conditions play into educators’ decisions about where to teach:

> As states and districts increasingly explore tactics like performance-based pay, incentive programs, and bonuses to attract the best teachers to troubled schools, experts contend that such programs are unlikely to succeed over the long haul unless officials simultaneously work to improve school conditions and leadership capacity in these schools.

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Indeed, mounting evidence highlights the centrality of working conditions to teachers’ decisions to move to or remain in high-needs schools. For instance, a National Board for Professional Teaching Standards (NBPTS) survey of certified teachers conducted in 2005 found that financial incentives alone were not enough to entice teachers to high-need schools. Factors such as quality leadership, positive staff relationships, and supportive parents played important roles in teachers’ decision-making. Similarly, a large-scale study of California teachers found that the top reasons for teacher attrition were inadequate systems, bureaucratic impediments, and lack of collegial support. The study found that compensation was important to teachers, but unless the school environment was conducive to teaching, higher compensation would not improve retention.

While significant evidence points to the importance of workplace conditions in teacher recruitment, little work has been done to rigorously evaluate workplace policies or to determine the most important aspects of school environment. However, some of the most frequent teacher-identified priorities include: strong principals, skilled and supportive colleagues, adequate resources for teaching, smaller student loads, teacher autonomy, and high-quality professional development. Specific to high-needs schools, specialized preparation for teaching in challenging schools, support from more experienced teachers, and opportunities to connect with students outside of the classroom are important inducements.

**NBCT SUGGESTED WORKPLACE POLICIES**

In the absence of sufficient research to inform best practices, Hanover turns to expert suggestions regarding workplace policies to recruit and retain effective teachers. The 2005 National Board Certified Teacher Policy Summit brought together over 2,000 National Board Certified Teachers (NBCT) and leading policymakers to examine recruitment and retention efforts at high-need schools. The goal of the summit was to develop a set of policy recommendations to inform schools’ recruitment and retention efforts. The National Education Association (NEA) and Center for Teaching Quality (CTQ) compiled the results and identified five main guidelines:


36 Bullets quoted with some modifications from: Ibid., p. 6 – 14.
Transform the teaching and learning conditions in high-needs schools. Leaders should ensure that teachers in high-needs schools have the necessary resources to teach their students (universal pre-school, social service supports, technological tools, etc.) and that class sizes are manageable. According to the teachers, “many NBCT’s would teach in a high-needs school if they had a reasonable student load.” They feel that high stakes testing and incentives based on test scores are not the best way to gauge student or teacher performance. Moving to a high-needs district would pose additional challenges to meeting performance goals, and therefore bonuses would be more difficult to earn. NBCTs also called on schools to give teachers more time during the work week to collaborate with colleagues.

Prepare and support teachers for the specific challenges posed by working in high-needs schools. Special skills, such as community knowledge or training in culturally responsive teaching, are needed for work with high-needs students. Therefore, teachers entering these workplaces should receive specialized skills training and ongoing, effective professional development. They also call on leaders to pay more attention to new teacher mentoring and induction programs. These should be thoughtfully developed and supported by school administrators.

Recruit and develop administrators who can draw on the expertise of specially-prepared teacher leaders. The summit highlighted the importance of supportive school leaders who are not threatened by teachers’ leadership potential and allow teachers some flexibility in curriculum and lesson-design. Accomplished teachers “do not want to teach in a school where their expertise is not valued and respected.” Schools should provide avenues for experienced teachers to take on leadership roles and use their expertise to benefit schools (e.g. help with curriculum design, create impactful student assessments, reach out to parents).

Create a menu of recruitment incentives, but focus on growing teaching expertise within high-needs schools. Policymakers should not take a “silver bullet” approach to teacher recruitment and retention, but should instead provide a menu of incentives to address different teacher needs. They should also support emerging talent already in high-needs schools by encouraging these teachers to become board certified. The recommendations note that “financial rewards are needed to entice teachers to tough schools, but a large menu of incentives will be necessary to attract and retain the best ones.”

Build awareness among policymakers, practitioners, and the public about the importance of National Board Certification for high-needs schools. School leaders must recognize the skills and knowledge base of NBCTs in order to take advantage of them effectively. NBCTs are strategically equipped to take on leadership roles, mentor other teachers, assist in professional development, and contribute many other ways. Principals and superintendents need to recognize this.

While several of these recommendations are informed by teacher preferences, such as de-linking merit-based pay from standardized test scores or referencing NBCTs in leadership roles, the composite list provides actionable insights from the individuals most impacted by recruitment and retention programs.
STRENGTHENING THE TEACHER PIPELINE

While there is a general consensus in the literature that closing the minority teacher gap requires the dual approach of recruitment and retention, there is considerable evidence suggesting that much of the minority teacher shortage can be traced to an inadequate supply chain. Minority groups in the United States are more likely to lack access to the high-quality K-12 education and, subsequently, are less likely to satisfy the higher education requisite for entry into the teaching workforce. Furthermore, many of the most capable minority students are drawn to other professional fields that are perceived to be associated with higher salaries, social value, and prestige than education.

As a means of removing these barriers to the profession, many states, districts, and schools have enabled early prospective teacher identification programs to encourage, foster, and support students who have expressed interest in teaching. Evidence suggests that effective minority recruitment efforts must begin at an early age, and should typically engage students as early as middle and secondary school. Specifically, the National Education Association advises that districts and schools can identify and stimulate interest in education amongst minority students through “…school surveys, counseling, motivational workshops, summer college preparatory courses, [and] courses in educational theory and practice.”

GROW YOUR OWN PROGRAMS

Grow your own programs can be designed to support high school students, teachers, paraprofessionals, and/or community members through teacher training programs, including advanced training in particular areas of need. Such programs also often rely on strong partnerships with community organizations and institutions of higher education. Education Week notes that these programs take “many forms, based on the premise that outstanding educators and highly invested community members should have opportunities to grow professionally and increase their impact on their school.” As Figure 1.2 shows, these programs give high school students, paraprofessionals, and other members of the

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40 Ibid.
community financial assistance and training to pursue a career in education. In exchange, these individuals agree to work in underrepresented areas for a defined period of time.

**Figure 1.2: Common Elements of Grow Your Own Teacher Programs**

<table>
<thead>
<tr>
<th><strong>Main Sponsor</strong></th>
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<tbody>
<tr>
<td>States</td>
<td>Schools</td>
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<tr>
<td>Districts</td>
<td>Universities</td>
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<tr>
<th><strong>Target Participant Groups</strong></th>
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<tbody>
<tr>
<td>Students</td>
<td>Existing Teachers</td>
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<tr>
<td>Paraprofessionals</td>
<td>Members of the Community</td>
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<tr>
<th><strong>Program Partners</strong></th>
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<tbody>
<tr>
<td>School Districts</td>
<td>Community Colleges</td>
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<tr>
<td>Universities</td>
<td>Community Organizations</td>
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<th><strong>Program Design</strong></th>
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<tr>
<td><strong>Students</strong></td>
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</tr>
<tr>
<td>Students enroll in professional training courses in high school to receive teaching license; or</td>
<td></td>
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<tr>
<td>Students enroll in pre-professional courses in high school and receive funding to pursue teaching studies in postsecondary institutions.</td>
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<tr>
<th><strong>Paraprofessionals</strong></th>
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<tbody>
<tr>
<td>Paraprofessionals receive scholarships or loans to enroll in teaching courses at community colleges or universities.</td>
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<tr>
<th><strong>Existing Teachers</strong></th>
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<tr>
<td>Teachers receive funding to receive certifications in hard-to-staff areas.</td>
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<tr>
<th><strong>Requirements After Completing Program</strong></th>
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<tr>
<td>Participants must commit to teach in a district or school for a specific period of time;</td>
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<tr>
<td>Participants must commit to teach a specific area of study; or</td>
<td></td>
</tr>
<tr>
<td>Participants must commit to teach in a specific region of the state.</td>
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</tbody>
</table>

Source: *Education Week, Teacher Magazine* 45

In practice, most grow your own programs combine several elements to target specific participants, such as students and paraprofessionals, with mechanisms that accommodate their specific development as teachers. As Figure 1.3 shows on the following page, sponsors such as Boston University and Virginia Beach Public City Schools have developed programs where high school students take courses to become teachers. The other included example, Aurora Public Schools, provides its paraprofessionals with grants to enter teaching preparation programs. Section II provides additional details on grow your own programs, including research on their effectiveness.

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Figure 1.3: Examples of Grow Your Own Programs

**Boston University**
- Boston University (BU) and Educators Rising, an organization that helps high school students to explore the education profession, have created elective courses that help high school students gain practical experience in teaching.
- BU is providing the program with faculty, staff, students, curriculum, and facilities to its teacher advisors and students.

**Virginia Beach City Public Schools**
- Virginia Beach City Public Schools offers each high school in the district two Future Teacher awards.
- Each recipient receives a provisional contract to become a district teacher after obtaining a degree in an approved teacher education program.
- Principals select high school students who have excelled in their co-curricular Virginia Teachers for Tomorrow or Early Childhood Education program.

**Aurora Public Schools**
- Aurora Public Schools offers paraprofessionals in its schools the opportunity to pursue teaching work.
- Candidates who meet specific criteria related to their gender, race, lingual abilities, or willingness to teach underserved subjects receive grants to attend college and train with a mentor during the certification process.

Sources: Learning First Alliance, Teacher Magazine

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46 Content taken verbatim from
SECTION II: GROW YOUR OWN PROGRAMS

This section provides additional details on grow your own programs, as well as an overview of four statewide grow your own programs and three district-level programs. These programs target paraprofessional staff as well as middle and high school students. Hanover Research selected these profiles based on secondary sources that cite them as notable examples of such programs. This section begins with a review of research on the effectiveness of grow your own programs.

RESEARCH ON GROW YOUR OWN PROGRAMS

A small body of research and past program evaluations suggest that grow your own programs may have some degree of success in recruiting and retaining teachers in targeted areas. For example, a 2011 evaluation of the Teacher Cadet program operated by the South Carolina Center for Education Recruitment, Retention, and Achievement (CERRA) found that 41 percent of its high school participants planned to choose a teaching profession after college and 74 percent reported that the program gave them a more positive view of teaching.47 Similarly, Teach Tomorrow Oakland, a program operated by Oakland Unified School District, noted that in 2015 it had a 78 percent retention rate of participants completing their five-year commitment to teach in the district.48

However, some research has shown that grow your own programs often struggle with participant retention. In 2015, the Chicago Tribune reported that the Grow Your Own Illinois, a statewide program that recruits high school students, failed to meet its goal of producing 1,000 teachers by 2016. Instead, the program produced only 80 teachers due to high numbers of students dropping out of the program.49 Similarly, the Tampa Bay Times reported that the Urban Teaching Academy operated by Hillsborough County Public Schools failed to meet its goal of recruiting 75 participants in 2012 due to student attrition.50 In the case of recruiting teachers of color specifically, the 2011 evaluation of the South Carolina CERRA program notes that only 31 percent of students are minorities. Further, the program may only have limited success in building a long-term teacher workforce in general. In 2005, the program reported that only 10 percent of all past participants were in teaching positions.51

Justifying funding and financing of grow your own programs is another challenge that many states and districts face. The Chicago Tribune notes that Grow Your Own Illinois participants who dropped out did not have to pay back their loans for college tuition, fees, and books. The program also channeled “millions of dollars” to partner community organizations without any major oversight from the program.\textsuperscript{52} The Tampa Bay Times also reported that the Urban Teaching Academy, which previously relied on federal funding, only raised $17,000 for the program in 2012, even though it continued to enroll students in this program. The program’s staff noted that its creators did not have a plan for adjusting enrollment rates to the program’s revenue, placing it in a precarious fiscal position.\textsuperscript{53}

**STATEWIDE PROGRAMS**

**SOUTH CAROLINA CERRA PROGRAM**

A literature review produced by the Connecticut Regional Education Service Center Alliance, the umbrella organization for the state’s Education Service Centers, cites the South Carolina Center for Educator Recruitment, Retention, and Advancement (CERRA) as one of the most prominent statewide grow your own teacher programs for high school students in the United States. The initiative has two programs that target high and middle school students: The Teacher Cadet Program and ProTeam.\textsuperscript{54}

**TEACHER CADET PROGRAM**

The Teacher Cadet Program, which focuses on high school students, seeks to “encourage academically talented, high-achieving, high school students with exemplary interpersonal and leadership skills to consider teaching as a career.”\textsuperscript{55} The state launched the initiative at four South Carolina high schools in 1985. Since then, the program has expanded to 170 high schools and serves approximately 2,700 juniors and seniors every year. More than 60,000 students have participated in the Teacher Cadet Program.\textsuperscript{56}

In the program, students attend a college credit granting class taught by one teacher every day that discusses the educational system, teaching as a career, and current trends in education.\textsuperscript{57} Students also participate in field experiences, classroom observations, and self-assessments.\textsuperscript{58} In order to enter the program, students must have a 3.0 grade point average, five recommendations from their teachers, a personal essay, and interview with

\textsuperscript{52} Rado and Perez Jr., Op. cit.
\textsuperscript{56} Ibid.
\textsuperscript{58} Ibid., p. 4.
their staff. According to the program’s website, 33 other states have used this program as a model to recruit their students to become teachers.\(^\text{59}\)

**PROTeam**

The state also operates ProTeam, a grow your own program for middle school students. The program aims to:

- Help students who exhibit the potential for success learn about the skills they need to complete college and consider education as a viable career option.
- Expand the pool of minority and male teachers available to the public schools of South Carolina.\(^\text{60}\)

According to the program’s website, its approach has succeeded in attracting more male students and students of color since 1989. During the 2013-14 school year, 742 students at 25 middle schools completed the program. In this cohort, 38.3 percent were male and 39.1 percent were non-white. Eighteen of the 25 sites were located in a “Geographic Critical Need School” that serves underserved populations in these regions.

The program uses a curriculum called DreamQuest that can operate as a one semester or full year course. The curriculum aims to “help students set realistic goals for the future that include the steps to prepare for successful completion of high school and college,” while emphasizing “career development competencies” in areas such as education. As Figure 2.1 illustrates, the program uses a curriculum composed of seven modules where students explore their interests in professional careers, including pursuing teaching as a vocation.

**Figure 2.1: ProTeam DreamQuest Curriculum**

- **Module One – I Can Self-Reflect:** Students will evaluate themselves as individuals and identify their roles in society.
- **Module Two – I Can Communicate:** Students will examine the characteristics of effective communication.
- **Module Three – I Can Be Different:** Students will analyze the impact of personal and group differences on the school setting.
- **Module Four – I Can Think Positively:** Students will think more positively about their home and school relationships, their education, and their future.
- **Module Five – I Can Teach Others:** Students will recognize the characteristics of effective teaching.
- **Module Six – I Can Make Decisions:** Students will determine how wise decision making impacts their futures.
- **Module Seven – I Can Plan for a Successful Future:** Students will establish viable goals, including attending and graduating from college.

Source: CERRA\(^\text{61}\)


\(^{60}\) Bullet points adopted from “ProTeam.” Center for Educator Recruitment, Retention, and Achievement. http://cerra.org/ProTeam/program_overview.aspx
In addition to these modules, the program encourages schools to operate an afterschool club where students participate in “teacher like” activities.62

**IDAHO GROW YOUR OWN TEACHER SCHOLARSHIP PROGRAM**

A promising grow your own program identified by *Education Week* is the Idaho State Board of Education’s Grow Your Own Teacher Scholarship Program, which places bilingual education, English as a second language, and Native American teachers in classrooms serving historically underserved populations.63 The program is open to school district employees and volunteers who wish to pursue either:

- An Associate’s and/or Baccalaureate degree in education with a bilingual or English as a second language endorsement; or
- Native American students preparing to teach in school districts with significant Native American student populations.64

The program provides full-time students with up to $3,000 in scholarship funds. The program’s scholarship for part-time students depends on the number of credit hours and the fee charged to part-time students at the participating college or university. Currently, students can receive scholarships to attend Boise State University, College of Southern Idaho, Idaho State University, or Lewis-Clark State College.65

**MARYLAND STATE DEPARTMENT OF EDUCATION**

The Learning First Alliance cited the Teacher Academy of Maryland as another important grow your own program. The Academy, which is the product of a partnership between the Maryland State Department of Education and Towson University, includes 2,100 students in 18 out of 24 of the state’s districts.66 The program provides curriculum and professional development in a four-semester pathway program that concludes with a semester-long clinical internship.67 As Figure 2.2 shows, the program’s courses focus on teaching high school students the foundations of teaching and human development.

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61 Content taken verbatim from Ibid.
65 Ibid.
67 Ibid.
Figure 2.2: Courses for the Teacher Academy of Maryland

- **Human Growth and Development through Adolescence**: This course focuses on human development from childhood through adolescence. Key topics include theories of physical, cognitive, and psychosocial development, the effect of heredity and the environment, the role of caregivers and the family, health and safety concerns, and contemporary issues.

- **Teaching as a Profession**: This course focuses on the profession of teaching, including its history, purposes, issues, ethics, laws and regulations, roles, and qualifications. Key topics include current, historical, philosophical and social perspectives of American education, including trends and issues.

- **Foundations of Curriculum and Instruction**: This course explores curriculum delivery models in response to the developmental needs of children. Key topics include the development of varied instructional materials and activities to promote learning, classroom management strategies, and a supportive classroom environment.

- **Education Academy Internship**: The internship is the program’s final course. Students will have an opportunity to integrate content and pedagogical knowledge in their educational area of interest. They will have an opportunity to extend and apply their knowledge about teaching in a classroom setting under the supervision of a mentor teacher.

Source: Teacher Academy of Maryland

These courses and the rest of the program are similar to the Maryland Associate of Arts in Teaching (AAT) degree that aligns with the National Council for the Accreditation for Teacher Education standards. After taking these courses, students take the ParaPro test and PRAXIS I to formally enter districts as teachers.

**GROW YOUR OWN ILLINOIS**

As one of the most discussed programs in secondary sources, Grow Your Own Illinois serves as a critical example of programs that have struggled with major issues in reaching its goals. According to its website, the program, which started in 2005, “supports parents, community members, and paraprofessionals in low-income communities to become highly qualified teachers.” The program’s mandate comes from the 2005 Illinois Grow Your Own Teacher Act, which the state’s legislature passed to “prepare highly skilled, committed teachers who will teach in hard-to-staff schools in hard-to-staff teaching positions and who will remain in these schools for substantial periods of time.”

The program largely functions as a loan distributor that helps paraprofessionals gain a guaranteed position with their local school district. Candidates in the program receive forgivable college loans of up to $25,000 if they commit to working in underserved schools.

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68 Content taken verbatim from “Teacher Academy of Maryland (TAM).” Maryland State Department of Education. http://www.mdcteprograms.org/pos/hrs/tam.php
69 Ibid.
for five years.\textsuperscript{72} Candidates can use these loans to attend a network of colleges of education and community colleges.\textsuperscript{73} In Chicago, for instance, Chicago Public Schools partners with Chicago State University.\textsuperscript{74}

In addition to these partners, the program allows community organizations to assist with the management of the training and recruitment of teachers. In the Chicago area, for instance, Grow Your Own Illinois works with organizations such as:

- Action Now
- Chicago Public Schools
- Enlace Chicago
- Kenwood Oakland Community Organization
- Logan Square Neighborhood Association
- Metropolitan Family Services
- ONE Northside
- Southwest Organizing Project\textsuperscript{75}

As of 2011, the program served 15 high-need communities in the state, including eight in Chicago and individual locations in areas such as Alton, East St. Louis, Quad Cities, Rockford, Springfield, and the South Suburbs.\textsuperscript{76} In 2012, the White House Initiative on Educational Excellence for Latinos named the program as one of the “Bright Spots in Hispanic Education” due to its efforts to recruit Hispanic teachers.\textsuperscript{77}

Although the program has received accolades for its approach, news reports and state assessments suggest that it has struggled to meet its goals. In addition to the challenges noted previously, a 2011 evaluation report carried out for the Illinois Board of Higher Education also noted a range of issues related to the program’s capacity to retain students in the program, including the following:

- Only 38 percent of candidates sought credentials in hard to staff areas such as special education, bilingual education, mathematics, or science.
- The high percentage of candidates exiting the program prior to completion – 43 percent dropped out – suggest that the selection process does not identify a candidate’s capacity and commitment to complete the program.
- The program prepared and encouraged a small percentage of students to take the new Iowa Basic Skills Test; however, 60 percent of candidates had not passed the test.
- The regions with the largest programs received over $100,000 from the state to cover tuition, books and fees. However, operation cuts and the absence of a state budget have reduced enrollment from nearly 82 students to 37.\textsuperscript{78}

\textsuperscript{73} Hunt et al., Op. cit., p. iv.
\textsuperscript{75} Bullet points adopted from Ibid.
\textsuperscript{76} Ramírez, Op. cit.
\textsuperscript{77} Ibid.
Nevertheless, the *Chicago Tribune* notes that participating teachers found the program impactful, while lawmakers argue that the program is a powerful tool to address the gap in minority teachers working in areas with large number of minority students.  

DISTRIBUTION PROGRAMS

**BROWARD COUNTY PUBLIC SCHOOLS (FT. LAUDERDALE, FL)**

In 2005, *Curriculum Review* cited the Urban Academies program operated by Broward County Public Schools in Florida as an effective program. The district worked with partners such as Atlantic University of Florida to develop the program, which addresses a decline in the number of teachers working in underrepresented areas. In 2006, the program was recognized by the Ash Institute at Harvard University as one of the seven most innovative government programs in the United States.

Much like the Ready, Set, Teach! program, the Urban Academies program begins targeting younger students and provides older students with direct career education. The program looks for candidates as early as elementary school who show potential as future teachers. Students selected for the program enter a rigorous four-year high school program, which includes practical experience at local schools, exposure to higher education, and instruction from master teachers. During their senior year, high school students enter the academy program, where they work with mentors and student-teach in area grade schools. After completing the program, the students receive a Broward Teacher Fellowship to attend partner universities free of cost and earn a placement in Broward schools after their studies.

The program has been successful since its inception in 2000, placing over 360 teachers in underserved schools in the district. Among these teachers, 91 percent have remained in their positions for more than three years and 98 percent have reported satisfaction with their experiences. These successes led the Florida K-12 Public Schools Chancellor and the Florida Commissioner of Education to announce that seven other districts would receive $40,000 to use the Broward County program as a model for their own grow your own initiatives. The program also received a $100,000 Innovations in American Government Award in July 2006.

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82 Ibid.
84 Ibid.
MINNEAPOLIS PUBLIC SCHOOLS (MINNEAPOLIS, MN)

Among districts that have launched grow your own program, New America identified the Minneapolis Residency Program as a newer program that has been successful in the Midwest. The program, which is the product of a collaboration between the University of Minnesota’s Twin Cities campus and the Minneapolis Federation of Teachers, targets Minneapolis Public School employees who are seeking their elementary education license.\(^{88}\)

The 15-month program aims to:

- Diversify the MPS teacher workforce by creating a path to licensure that removes some of the barriers to entry into the teaching profession;
- Provide candidates with the preparation to be effective urban teachers through a robust clinical experience and targeted, practical coursework;
- Increase teacher retention at high-needs schools and;
- Increase student achievement and engagement.\(^{89}\)

In order to ensure that the program attracts individuals that are likely to remain in the district, the program only admits applicants who are currently working in its schools as behavior specialists, substitute teachers, or in other support roles.\(^{90}\)

In the 2016-2017 academic year, the program will include a year-long co-teaching experience with intervening summer courses at the University of Minnesota. Each Minneapolis Residency Program candidate will earn a salary of approximately $24,900 and benefits during the residency period and pay a reduced fee for the university's licensure program.\(^{91}\)

ARLINGTON INDEPENDENT SCHOOL DISTRICT (ARLINGTON, TX)

The Texas Association of School Boards identified Arlington Independent School District’s Ready, Set, Teach! program as a strong example of a grow your own program. The district created the program in 2005 to “build a foundation for learning the principles of effective teaching practices, be able to identify the qualities of effective schools and the personal characteristics needed by professionals to be successful in educational careers.”\(^{92}\)

The program provides students in Grades 8-12 with increasing levels of exposure to the profession of teaching throughout their studies. In Grade 8, students can complete a year-long Career and Technology in Higher Education Investigations course that allows them to

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88 \[1\] “Minneapolis Residency Program.” Minneapolis Public Schools. [http://humanresources.mpls.k12.mn.us/minneapolis_residency_program_2](http://humanresources.mpls.k12.mn.us/minneapolis_residency_program_2)

89 Ibid.

90 Ibid.


explore career courses in high schools and to develop their four-year plan of study. In their career education courses, students prepare instructional materials and practice planning and presenting lessons. The students also develop group activities at elementary and middle school field sites, where they work as interns under the supervision of instructors and mentors. After completing these courses, students have a chance to pursue a Letter of Commitment from the district that guarantees employment in its schools.

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