

Exhibit C

**Tucson Unified School District
Grow-Your-Own Programs:
Review of Current Programs, Analysis, and Conclusions**

This report reviews TUSD's "grow-your-own" ("GYO") programs, analyzes the results of the programs, reviews "grow-your-own" programs in other districts, surveys the current literature on such programs, and draws conclusions for improving TUSD's programs.

Generally, GYO programs are designed to encourage, incent and support individuals in becoming teachers in the sponsoring school district. GYO programs may be adopted to respond generally to teacher shortages, to generate particular types of teachers (for example math, bilingual, or exceptional education teachers), to encourage teachers of particular underrepresented race/ethnicity, or to target particular nascent teacher populations.

This report has five principal sections: first, a description of the current GYO programs offered by the District; second, a review of GYO programs at other districts; third, a review of literature related to GYO programs; fourth, conclusions from the data and reviews; and finally, strategies for going forward.

I. GYO PROGRAMS AT TUSD

A. Make the Move

TUSD began a GYO program in 2015-2016, directed to TUSD employees with a bachelor's degree, to support "making the move" to become a certified teacher at TUSD. The program currently has three tracks: (1) Exceptional Education, (2) Dual Language, and, most recently, (3) General Education. These programs provide tuition reimbursement during study, professional support and professional development opportunities, and additional hiring and retention stipends upon certification. Make The Move participants must attend Professional Development sessions related to the selected program (e.g. Ex Ed, TWDL). Exceptional Education and Language Acquisition departments track the attendance for those professional development sessions.

1. Exceptional Education.

This program offers employees with a bachelor's degree an alternate pathway to teacher certification in Exceptional Education. The benefits provided include tuition reimbursement up to \$5,000 over two years, a special study group for the NES 601 Special Education subject knowledge exam, and a hiring/retention stipend of \$5,000 over four years: Year 1- \$1000, Year 2- \$1000, Year 3- \$2000, Year 4- \$1000. Participation data from all four cohorts is shown below.

Make The Move 15-16 Cohort	
School Year	# of participants
15-16 SY	5
16-17 SY	4
17-18 SY	4
18-19 SY	4
Retention Rate from SY16 to SY17	80%
Retention Rate from SY17 to SY18	100%
Retention Rate from SY18 to SY19	100%

Make The Move 16-17 Cohort

School Year	# of participants
16-17 SY	12
17-18 SY	11
18-19 SY	9
Retention Rate from SY17 to SY18	92%
Retention Rate from SY18 to SY19	82%

Make The Move 17-18 Cohort

School Year	# of participants
17-18 SY	10
18-19 SY	9
Retention Rate from SY18 to SY19	90%

Make The Move 18-19 Cohort

School Year	# of participants
18-19 SY	9

2. Dual Language

This program offers current TUSD teachers who have already attained their Arizona teaching certification an opportunity to obtain the Spanish-Bilingual Endorsement from the Arizona Department of Education. The benefits include reimbursement for the Spanish Proficiency exam costs, and a stipend of an additional \$5,000 per year for three additional years after attaining the bilingual endorsement. Participation data from both cohorts is shown below.

Make The Move 17-18 Cohort

School Year	# of participants
17-18 SY	3
18-19 SY	4
Retention Rate from SY18 to SY19	100%

3. General Education

This program was introduced in the 2017-2018 school year and focused on Student Success Specialists who had their Bachelor's degree, providing a pathway and support for a general education teaching credential.

Make the Move – General Education

School Year	# of participants
17-18 SY	4

B. Arizona Teaching Fellows

Arizona Teaching Fellows works in conjunction with the University of Arizona's College of Education to help selected employees acquire their BA with financial support and the promise of employment with the District. Participants receive the following stipends: \$1,000 upon beginning the program at UA college of Education; \$1,800 throughout student teaching; \$400 upon completing the first year of teaching, \$600 for the second, and \$1,000 for the third. The District selected sixteen employees for the inaugural cohort in SY2018–19.

C. Leadership Prep Academy

The first of two programs under the District's Prospective Administrative Leaders Plan, the Leadership Prep Academy ("LPA") cultivates leadership skills of the District's certified staff interested in pursuing administrative positions. The District designed the LPA to produce a cadre of qualified candidates to fill positions for site principals, assistant principals, or central office directors.

The LPA meets for ten evening sessions throughout the school year. These sessions consist of presentations and discussions. Between sessions, the District requires LPA participants to attend Governing Board meetings and then discuss the meetings with the LPA staff and other attendees. The Interstate School Leaders Licensure Consortium (ISLLC) standards for leadership guides each LPA session, and the Superintendent's Leadership Team serve as instructors. Additionally, participants engage in book studies and develop a culminating project in preparation for administrative interviews.

The District selects participants for the program based on recommendations from principals, directors, or assistant superintendents. To ensure that the LPA fulfills the USP goal of diversifying the leadership staff, the District encourages administrators to identify prospective and aspiring African American and Hispanic candidates.

	Number of LPA Participants					
	African American	Hispanic	Asian/Pacific Islander	White	Native American	Total
SY17-18	1	9	2	22	2	36
SY16-17	4	13	0	9	0	26
SY15-16	1	4	0	5	0	10
SY14-15	2	7	1	12	0	22

In addition to the LPA, the District implemented a Leadership Development Academy to assist all Governing Board-approved new central and site administrators for SY2016-17 in transitioning to their new roles. The District learned from SY2015-16 that two academies were needed to support its newly approved site and central administrators as well as aspiring leaders (those not yet appointed to administrative roles). This allowed the District to fill LPA Cohort IV with "aspiring" leaders and expanded the administrative applicant/candidate pool for SY2017-18.

D. Masters Cohort in Educational Leadership

The second of the two programs under the District's Prospective Administrative Leaders Plan, the Masters Cohort in Educational Leadership is a partnership with the University of Arizona to provide certified teachers with financial assistance to obtain Masters Degrees in education leadership in two years.

	Number of MCEL Participants						Total
	AA	H	Asian/ P.I.	W	N.A.	Undis- closed	
SY17-18	0	3	0	0	0	0	3
SY16-17	0	0	1	4	0	0	5
SY15-16	0	5	0	8	0	1	14
SY14-15	3	6	0	1	0	1	11

II. Review of Other Programs

The District conducted an extensive survey of existing GYO programs in other school districts. The programs in the following table were identified through citations in the literature, a review of similarly-situated districts' websites, and a Google search, "Grow Your Own," to find programs districts self-identify as GYO.

School District	District's Specific GYO Program
Denver Public Schools	<p>Para to Teacher: Paraprofessionals in DPS continue to work full time while earning a Bachelor's degree and teaching certificate in four years. Funding is provided by a 2016 voter-approved mill levy and community donors. . DPS paraprofessional pool is about 65% people of color. DPS partners are Guild Education, Western Governor's University, University of Colorado Denver and The University of Northern Colorado. In 2016-2017, Gary Community Investments (https://www.garycommunity.org/) provided \$91,550 to DPS Foundation as seed money for the program. The application is through Guild Education (https://www.guildeducation.com/partners/dps)</p> <p>EdConnect: High school students enroll in and receive college credit for introductory teaching courses in pedagogy and social justice.</p>
Fresno Unified School District	<p>Teacher Pipeline: Prospective teachers participate in a continuum of teacher development programs-</p> <ul style="list-style-type: none"> • Teacher Academy: High school students enroll in teaching courses and intern as teaching aids in summer school classrooms. Participants are eligible for paraprofessional employment after graduation and given priority consideration in the Pipeline to Teaching Programs. • Para Academy: Paraprofessional employees enroll in courses applicable to their degrees in cohorts and receive stipends upon successful completion of the courses. • Transition to Teaching: College graduates enroll in a one-year credential program in which they prepare for the CBEST and CSET, substitute teach, receive a stipend, and are guaranteed 3-year

	<p>employment upon completion.</p> <ul style="list-style-type: none"> • Student Teacher Candidacy: University Seniors join a cohort of teacher candidates, student teach, receive free CBEST and CSET prep, and receive priority consideration for hiring. • Fresno Teacher Residency: College graduates receive teaching credential from Fresno State, apprentice in a classroom, receive a \$11,500 stipend, and are guaranteed employment. • Internship: University students work as salaried teachers as they attend a partnering university's credential courses.
Mesa Unified School District	Grow Your Own Teachers: MPS high school graduates who pursue teaching degrees receive funding for college textbooks and supplies. The program is conducted in partnership with Mesa Community College Schools. The program is for current MPS Instructional Assistants. A list of scholarships that participants can apply for. The list can be found at http://www.mpsaz.org/hr/matters/files/tl3c_scholarships_ay14-15.pdf .
School District of Osceola County Florida	Future Teachers Academy: High School students receive a scholarship to study teaching at Valencia College and University of Central Florida and are guaranteed employment in the district after graduation.
Chicago Public Schools	In 2004, the Logan Square Neighborhood Association (LNSA) and Action Now formed a coalition with several other community organizations to pursue a policy solution to the teacher retention crisis. Specifically, they wrote and successfully advocated for the <i>Grow Your Own Teacher Education Act</i> , which institutionalized the LNSA's approach to teacher recruitment. This brought in a state-funded \$1.5 million planning grant. In 2005, legislators allocated an additional \$3 million in funding that went statewide to a total of 11 consortia of community groups, school districts and either two- or four-year universities. Although beginning with parents and paraprofessionals, the program explicitly targeted community members who specifically wanted to teach in their neighborhood public schools but could not afford college. Unfortunately, in 2015, GYO Illinois faced a budget impasse when the state's budget crisis began, leaving only one program standing at Northeastern Illinois University in Chicago. The success of this 10-year effort is the presence of "120 GYO teachers in 88 schools teaching more than 2,000 students" (http://www.growyourownteachers.org).
North Kansas City School District	Grow Your Own (pilot): High school students who want to pursue teaching with hands-on experience sign up for college coursework, and two years of tuition-free community college.
Virginia Beach Public Schools	Virginia Teachers for Tomorrow: High school students enroll in dual credit teaching courses and become eligible for the Future Teacher Award, a guarantee that the district will hire the winner upon graduation from college.
Lawrence Township	District Based Alternative Certification: Paraprofessionals maintain their current job and complete coursework for certification at the School of

Metropolitan School District (Indianapolis)	Education at Indiana University-Purdue University Indianapolis over 18 months.
Houston Independent School District	Teach Forward Houston: Graduating high school students receive a fellowship, providing tuition support to earn a BS in teaching from the College of Education and return to teach at the district upon graduation.
La Crosse School District (Wisconsin)	Grow Our Own - Teacher Diversity: Community members receive a scholarship covering all tuition and fees from the University of Wisconsin La Crosse to receive their bachelor's degree and teaching license; paraprofessional employees are able to keep their jobs as they participate.
Raytown School District (Missouri)	Grow Your Own: Graduating high school students receive a total of \$10,000 over a four-year period while earning a degree and teaching certificate, are guaranteed to be hired in the district upon graduation, and receive loan forgiveness after four years teaching in the district.
Lincoln County School District (Oregon)	Teacher Education Pathway: Community members participate in a four-year program where participants, in the first two years, keep their jobs as they earn their Associates degrees at the local community college; in the third year, carpool to or watch online lectures at Western Oregon University; and in the fourth year student teach in Lincoln County School District with preferential treatment for post-graduation hiring.
Roanoke County Public Schools	Teachers for Tomorrow: High school students enroll in teaching courses, which include weekly visits to elementary schools and Head Start programs.
Grand Prairie Independent School District (Texas)	Strong Teachers Day One: College graduates enroll in a 6-month alternative certification program wherein they are paid to student teach and commit to teach in the district for at least three years after graduation.
Duplin County School District (North Carolina)	Minority Teachers Scholarship-Loan: Five graduating high school students receive a yearly \$5,000 scholarship to enroll in a teaching program Minority Teacher Assistant's Stipend: Teaching assistants working towards certification earn a \$3,000 stipend.
Niagra Falls City School District	Grow Your Own: Two district alumni or employees earn a scholarship to study teaching at the College of Education at Niagara University.
Cassville R-IV School District (MO)	Future Teachers of America: High school students enroll in the club where participants can learn basic teaching skills through an online library of video lectures and practice those skills mentoring elementary school students struggling in reading. Teach and Train: High school students enroll in a dual credit introductory teaching course, and once completed, participate in a year-long teaching internship in the district.
Center School District (MO)	Center Professional Studies: High school students enroll in this career pathway program, which includes dual credit, where, in grade 9 they take a

	college and career exploration course, in grade 10 they take a psychology and sociology course, in grade 11 they take a child development course, and in grade 12 they take an introduction to the teaching profession course.
Columbia Public Schools (MO)	EdX Intern Program: High school students intern in summer school classrooms.
Fort Zumwalt School District (MO)	Grow Your Own Teachers Program: Graduating High school students receive a forgivable \$3000 loan per semester in exchange for agreeing to teach in the district after graduation.
Parkway Schools (MO)	Spark!: High school students enroll in immersion teaching courses at the elementary school and can receive dual credit at three Missouri universities.
Denton ISD (Texas)	Program is called Teach Denton, and starts with K-12 students. The program began in 2014 in partnership with North Central Texas College and Texas Women's University. Teachers in any grade level can nominate a student "who exhibit natural teaching qualities like empathy or a willingness to help classmates." Students accepted into Teach Denton participate in different campus activities that are put on by the campus liaison for the program. At the high school level, the program operates an internship class teaching basic pedagogical concepts, spend time with teachers at Denton ISD elementary and middle school campuses to gain experience in the classroom. College credit at NCTC or TWU is available for the internship course. Teaching scholarships are available to Teach Denton students through TWU. (https://www.dentonrc.com/news/growing-their-own-denton-isd-s-teach-denton-program-named/article_8ebe5776-aa98-53f9-a43d-2e16bd643c53.html)
Various Districts in the Mississippi Delta	Educational Leader Cohort Program: Delta State University partnered with local districts to actively recruit future administrators from among teachers who had demonstrated a commitment to work in hard-to-staff schools for a principal training program. Half of the recruits each year are black.

III. Review of Literature

The following reviews the academic literature related to Grow Your Own programs, summarizing each article and identifying district-level best practices.

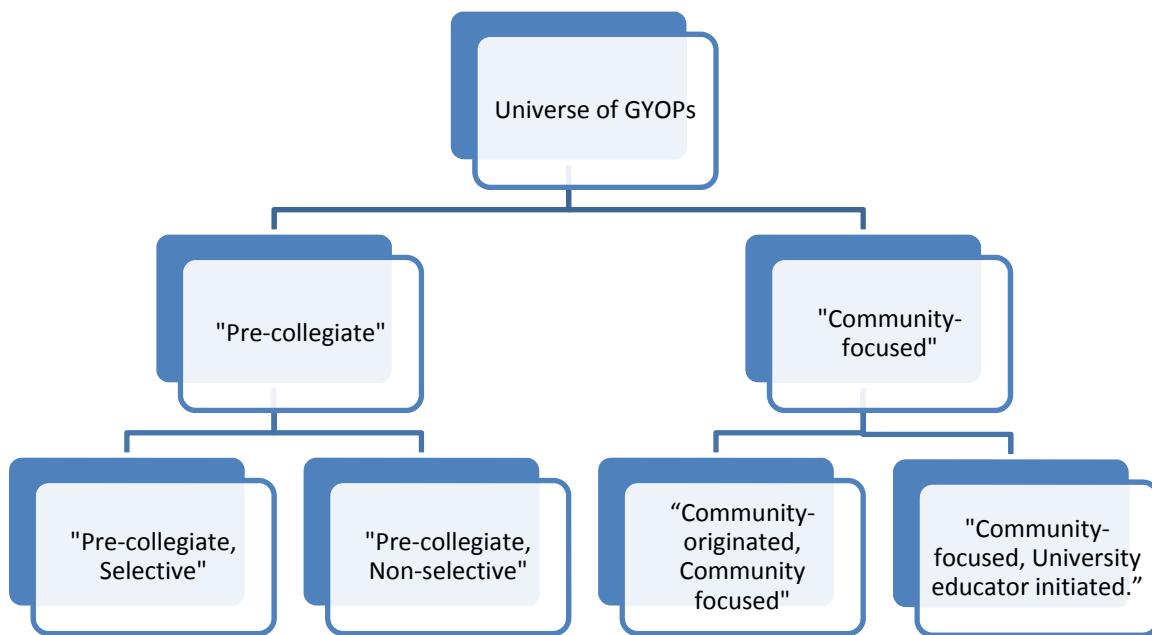
Angela Valenzuela, Grow Your Own Educator Programs: A Review of the Literature with an Emphasis on Equity-based Approaches, Intercultural Development Research Association (2017).

Valenzuela's article is "an overview of the research on Grow Your Own (GYO) educator programs as a strategy for states and district [sic.] to employ to help recruit and retain teachers of color." Specifically, the article discusses (1) the lack of minority teachers in primary and secondary schools, (2) the differences between pathways, pipelines, and partnerships, (3) the difference between GYO and traditional teacher-preparation models, and (4) specific GYO-

program types that both increase the number of minority teachers and ensure that those teachers are “critically conscious leaders.”

Although the literature often uses them interchangeably, pathways and pipelines emphasize different dimensions of GYO programs. Pathways connote a program’s emphasis on shepherding students of color into the teaching profession to overcome teacher shortages. Pipelines connote a program’s emphasis on bridging the gaps between the various stages in teacher development, e.g., between high school graduation and college enrollment, to overcome the tendency of once-interested individuals to get sidetracked on their way to certification. In any case, pathways and pipelines are most successful when they involve community partnerships, e.g., k-12 school districts with universities, and deliberately foster prospective teachers’ race consciousness and perception of teachers as agents of change.

Valenzuela finds that although most teacher-preparation models teach the importance of diversity and social justice, GYOPs better advance these goals because they recruit from the communities they profess to serve. Similarly, Valenzuela maintains that a partnership is only truly GYO if they emphasize recruiting diverse teachers more than recruiting “top teachers.” Valenzuela divides and ultimately subdivides the universe of GYOPs into four categories as follows.



Whereas both “pre-collegiate” pathways recruit exclusively from K-12 students, “pre-collegiate selective,” unlike “pre-collegiate, non-selective” further limits its recruits to high-achieving K-12 students. Similarly, whereas both “community-focused” pathways seek to prepare teachers who will be “agents of change in service to their communities,” “community-originated, community focused” programs are initiated by community organizations, while “community-focused, university educator initiated” programs are initiated by teacher educators.

Valenzuela concludes GYO programs, and research on them, are too much in their infancy to accurately compare program effectiveness. Still, she concludes some best practices are emerging;

programs should have a social justice mission, train teachers to be race conscious, and have close ties to the community.

Conra D. Gist et al., Examining Grow Your Own Programs Across the Teacher Development Continuum; mining Research on Teachers of Color and Nontraditional Educator Pipelines, Journal of Teacher Education (2018).

This article is a literature review of “GYO programs focused on recruiting local TOC [Teachers of Color] through community-focused and precollegiate pipelines.” Its premise is that TOCs “possess a form of ‘community cultural wealth’ [CCW] that imbues them with ‘an array of knowledge, skills, [and] and abilities’ to effectively teach Black and Brown youth.” The article synthesizes data sources related to these two types of pipelines from 1996 to 2016 and defines how GYO programs recruit, prepare, and retain TOC.

The authors derive five “implications” from their findings. First, the best GYO programs for TOC value their CCW and offer “curriculum and pedagogy tailored to tap their cultural wealth.” Second, successful GYO partnerships emphasize job placement for program graduates. Third, there is dearth of research on how to best recruit, prepare, and retain TOC, and on how these teachers impact student learning. Fourth, there is a dearth of research on how to fund GYOs; what is clear is that GYO pipelines without diversified funding often dry up when a single funding source disappears. Fifth, to further develop GYO models, current GYO programs need to get together and compare their programs on a deeper level than the shallow program descriptions currently offered in the literature.

Jonelle Adams & Alexandra Manuel, *Grow Your Own Teachers: Enhancing Educator Pathways to Address Teacher Shortage and Increase Diversity*, State of Washington Professional Educator Standards Board (2016).

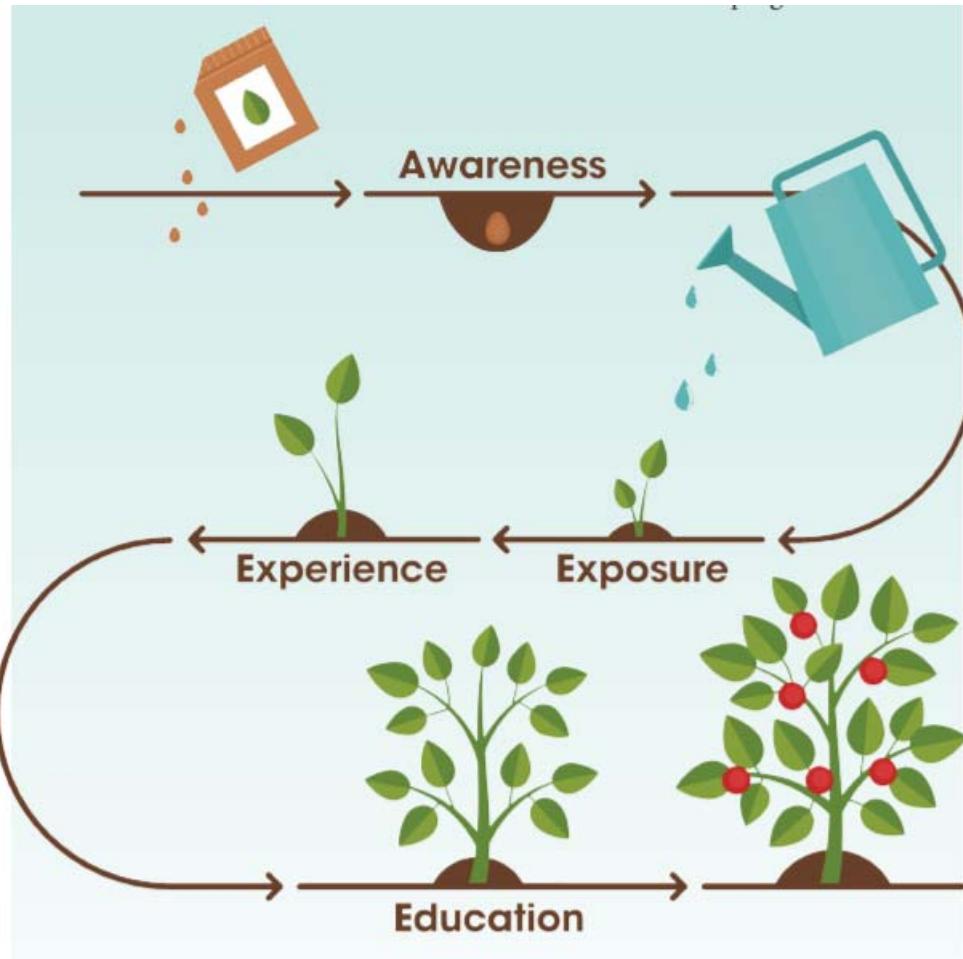
In this article, the State of Washington Professional Educator Standards Board reviewed existing programs nationwide to ultimately recommend that the state adopt a statewide GYO initiative based on cross-sector partnerships. The Board offered the following district-level strategies as part of an overall GYO blueprint:

- Districts will need to take the lead and build partnerships to customize teacher preparation to meet the district’s need.
- Engage district HR in professional development to address teacher shortage and develop GYO pipeline.
- Recruit highly skilled immigrants and career changers who can provide the needed candidates for district programs that provide “learning how to teach while teaching” either as a resident intern or teacher of record.
- Provide “Grow Your Own” Professional Development for districts and preparation providers to explore and share best practices for creating GYO programs.
- Establish local GYO policies and advisory boards to provide oversight and guidance.
- Establish school board level policies to support “Grow Your Own” programs and clarify commitments to educator workforce.
- Develop data supports to help track and evaluate the results of the GYO initiative.
- Provide testing support to candidates of alternative route pathways and RWT students for admission and completion of education preparation programs.

- Establish a work group to review testing policy and barriers impacting underrepresented populations entering the profession.

Grow Your Own! A Resource Guide to Creating Your Own Teacher Pipeline, Office of Educator Quality, Missouri Department of Elementary and Secondary Education (2016).

The Missouri Department of Elementary and Secondary Schools' Office of Educator Quality created a "Resource Guide" for Missouri school to use in creating their own GYOs. The Office outlined the "steps to construct a Grow Your Own model":



At the Awareness level, districts "build a base of support among educators and key stakeholder in [the] community about a Grow Your Own teacher pipeline." At the Exposure level, districts "expose students at all levels (elementary, middle and high school) to the benefits of being a teacher. At the Experience level, districts "cultivate authentic early learning experiences for middle and high school students with aspirations or dispositions to become educators. Finally, at the Education level, districts "prepare aspiring teacher candidates for a four-year education degree program."

And the Office identified "key aspects of Grow Your Own" for districts to remember as they implement each step:

Financial Incentives to Teach

- Full or partial scholarships (private and public sources)
- Forgivable loans (private and public sources)
- Federal loan forgiveness programs (Title I schools)
- District benefits packages

Culture of Collaboration

- Public school districts
- Area colleges and universities
- Community partnerships/business sponsorships
- State education agency

Curriculum Design and Delivery

- Introductory education coursework (middle school and high school)
- Dual credit - A+ Program
- Cultural Competence Modules: *Rural and Urban Settings*
- Standards-based learning experiences: *Educators Rising, Teacher Cadets, CAPS - Teaching and Learning Strand*

Positive Promotion of Education Careers

- Enhance image of the education profession
- District-focused recognition of educator achievements
- Recruit untapped talent as early as middle school



Workforce Development Initiative

- Reduce critical shortage areas
- Educator training and development
- Workforce stabilization and diversification
- Specialized preparation (SPED/ESL/STEAM, urban ed.)

Success of Existing GYOs

- Illinois Grow Your Own (statewide initiative)
- Ft. Zumwalt (SPED, MA and SC subject areas)
- Community Foundation of the Ozarks (Ozark region)
- Cassville (rural remote community)

Early Field Experience and Exposure

- Junior teaching assistants
- High school tutors at the elementary and middle school levels
- College of Education campus visits
- Education-themed career fairs at high schools
- Summer internships for high school juniors and seniors
- Substitute teaching/student-teaching opportunities

Community Building

- Former student's desire to give back and teach at home
- Sense of community pride
- Strong relationships between staff and students

Building a Strong and Diverse Teacher and Principal Recruitment Pipeline, Coalition for Teaching Quality (2016).

In addition to strategies for increasing teacher diversity, The Coalition for Teaching Quality offers three strategies for recruiting principals. First, “modernize recruiting practices and analytics for matching principals with schools.” Districts can use online screening tools to weed out candidates “who are not intrinsically motivated to lead schools” and “expand the diversity of the candidate pool.” Second, “provide assistant principals with increased responsibilities and professional development.” Districts can avoid pigeonholing assistant principals as disciplinarians and increase their instructional leadership “through on-going, targeted professional development that will motivate them to become a principal.” Third, “expand grants and loan forgiveness opportunities for prospective assistant principals and principal[s].” Because becoming a school administrator requires advanced degrees, too many prospective school leaders choose careers with lower entry costs; financial aid can help sustain would-be principals.

APA Consulting, *Keeping Up with the Kids: Increasing Minority Teacher Representation in Colorado*, prepared for the Colorado Department of Education (December 16, 2014).

The Colorado Department of Education (CDE) hired APA Consulting to prepare this report in response to Colorado legislation requiring the CDE to study and strategize how to better recruit and retain high quality minority teachers in Colorado schools.

APA Consulting used a mixed-methods approach. First, it developed a set of initial research questions to guide what data it would collect and how to analyze it. Second, from the data, it synthesized the emerging themes. And third, from the themes, it offered recommendations for

how key parties could better recruit and retain high quality minority teachers. The emerging themes and recommendation relevant to district GYO programs were as follows:

- K-12 programs are regarded as successful in recruiting teaching candidates, but not necessarily candidates of color.
- K-12 programs rely on strong relationships. First, the relationship between advisors and students is essential as they consider teaching as a career. Second, the relationships between high schools and colleges are essential to help young adults to not fall off the pathway during transitions.
- K-12 programs often rely on grant funding, but this is a weak business model for creating long-lasting relationships.
- Programs recruiting college grads avoid the costs of paying for college and focus on finding candidates with interest in teaching.
- Alternative certification programs' primary benefit is reducing the cost of entering the profession by allowing the participants to keep their full-time jobs while obtaining the requisite education in teaching.
- Operating its own teacher preparation programs, in collaboration with local universities allows Denver Public Schools to control who is recruited and how they are trained.

Amaya Garcia, Building A Bilingual Teacher Pipeline: The Portland Public Schools and Portland State University Dual Language Teacher Partnership, New America (September 2017).

Garcia's article is the second in a series of articles examining new ways to prepare bilingual teachers. The series highlights specific programs in specific districts designed to develop their own bilingual teachers to show the diversity of models available to implement these programs successfully. This article specifically highlights Portland Public Schools and Portland State University's Dual Language Teacher Partnership, an alternative pathway to certification that allows participants to work as teachers while pursuing an education degree and license.

Garcia notes several takeaways from observing the program. First, this model requires little to no change to policy, state law, and licensure. Instead, the key element of success for this model is having an administrator to help participants navigate the pathway to certification. Second, participants see themselves as agents of change, motivated to ensuring that traditionally underserved students have better access to quality-education. Third, the program is addressing an oft-neglected need to provide student services to support non-white students navigate historically all-white institutions.

Dixie McCollum, A Mixed Methods Study Identifying Reoccurring Themes in Policies and Processes in Grow Your Own Teacher Recruitment and Retention Programs (Dec. 2011) (EdD dissertation, University of Missouri-Columbia)

McCollum provides a historical overview of GYO programs. The earliest program McCollum identifies is from the Fort Worth School District in 1988. This program focused on helping the district's non-teaching employees become teachers through paid time off to attend class and bonuses for completing 12 credit hours. Programs really began proliferating across the country in the 90s. As an example of their continued proliferation, McCollum cites Vail Unified School District's efforts in 2006 to recruit its own teachers from the ranks of its classified staff by collaborating with Pima Community College to offer classes on its high school campuses and pay participants' college tuition. Finally, McCollum finds that the "research consistently pointed

out there is simply not adequate information available on specific recruitment and retention strategies employed by states and districts.” McCollum’s own research was limited observing commonalities between five programs and asking the directors for their perceptions of best practices.

Strategies for Addressing Critical Teacher Shortages, Hanover Research (April 2016).

Hanover Research summarizes existing strategies to address teacher shortages. GYO programs are one such strategy. The article paints a picture of inconsistent research on GYO effectiveness: “A small body of research and program evacuations suggest that some state- and district-wide grow your own programs have successfully retained their trainees However, other reports suggest that grow your own programs have struggled to meet recruitment goals, retain participants, and in some cases manage their finances.”

The Grow Your Own Collective: A Critical Race Movement to Transform Education (Policy Brief) GYO Collective (July 2018).

“This article extends the focus on recruitment and retention by proposing a model that recognizes the need to counter the educational context of white supremacy through Grow Your Own (GYO) programs.” The article’s author, GYO Collective, is a collective of education-related professionals and scholars formed in 2016. Its purpose is study and support GYO programs with a Critical Race Theory (CRT) framework.

CRT applied to GYO programs, according to the authors, has four key tenets. First, “[r]acism is everywhere and all the time.” Second, “[t]he purpose of schools is to silence students and educators of color. Third, “White interests attempt to colonize every effort that centers students or educators of color.” And four, “[n]urturing, valuing, and centering the perspectives of students and educators of color are the way to transform the first three tenets.”

The authors offer several recommendations. First, “central to effective recruitment is the notion of partnering with local community organizations that are familiar with target populations.” Second, offering GYO programs off campus is a “way[] of decentering the racially hostile campus climate that university-based programs reflect.” And third, there are very few programs that account for all four developmental stages, so best practice is to incorporate both high school- and college-based programs.

González et al., *Grow Your Own Special Programs: Contributing More Than Diversity*, Midwest & Plains Equity Assistance Center, (2018)

González et al., offer background on the achievement gap, discuss how it is exacerbated in the special ed context, and examine how GYO’s can reduce it. The authors conclude that GYOs must deal with three inherent tensions:

- How to design programs that meet the needs of nontraditional students, who, because of their age, careers, and familial responsibilities, are not “able to focus on school as their main priority.”
- How to comply with state standards without failing historically underserved students: “state requirements such as basic skills and/or professional knowledge exams can also act

as barriers for students that have been out of formal education programs for extended periods of time, did not go through the US educational systems, or speak a language other than English as their dominant language (Skinner, 2010). In these situations, even with additional language or tutoring supports, some students find these standardized barriers insurmountable and are sometimes counseled out of GYO programs (Hunt, Gardner, & Hood, 2011; Skinner, 2010). High stakes exams are a historical remnant of using culturally biased exam mechanisms to exclude certain students in the name of evidence.”

- How to streamline the path to special ed while still providing the extra training and support special ed teachers need.
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The authors “firmly believe that although GYOs are a promising path for advancing equity in special education, completion rates cannot be the singular marker of success. GYOs not only overcome a teacher shortage, they increase the Community Cultural Wealth: “an ‘array of knowledge, skills, abilities and contacts possessed and utilized by Communities of Color to survive and resist macro and micro-forms of oppression.”

Dan Brown, *The Grow-Your-Own Game Plan*, 75 Educational Leadership 8 (May 2018).

Brown, a GYO program consultant, provides a GYO game plan, outlining the roles of the key stakeholders: state education agencies, district, colleges of education, teachers’ unions, and regional allies (e.g. chambers of commerce). The following are the roles that Brown Recommends for district-level players:

- **Superintendent:** supports the whole teams’ efforts.
- **Teacher-quality Office:** “guide program-related professional development.”
- **Career & Technical Education Office:** “maintain administrative components like keeping the work-based learning industry-aligned.”
- **Human Resources Office:** hire GYO program graduates and provide other incentives.
- **Career Centers:** implement teacher academies and build pathway to undergraduate studies with partner universities.
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Although he concedes, “one size never fits all in education,” Brown is convinced that the best GYO programs give participants hands-on experience working with students: “Lived experience is the most valuable clay for molding a person’s identity as a committed future educator—and the strongest armor against the discouragement they inevitably will face in the profession.”

Peter Swanson, Georgia’s Grow-Your-Own Teacher Programs Attract the Right Stuff, 3 High Sch. J. 94, 119-133.

Swanson’s study analyzes 262 participants in a Georgian GYO, “Future Educators of America.” The study is motivated by what Swanson sees as a lack of evidence for the effectiveness of GYO programs in reducing teacher shortages. Piggy-backing on other scholarly work indicating (a) that passionate teachers score similarly on the Holland vocational personality test, and (b) that “individuals begin to crystallize vocational preference between ages 14 and 18,” Swanson sought to see if FEA participants, too, had those traits. Swanson’s goal was to uncover whether the GYO was actually targeting potential teachers. Swanson found that they did.

More than just confirming the GYO's effectiveness at attracting young people with personalities compatible for teaching, the findings show that vocational tests can be effective tools in selecting GYO participants. Once participating, Swanson urges that FEA directors work to get participants in both classrooms (to get field experience) and on school-of-education campuses (to get participants thinking about studying teaching in college).

Finally, Swanson cautions against exclusively recruiting GYO participants with high grade point averages. His study showed little correlation between grade point average and personality aptitude for teaching. Perhaps, he theorizes, passion can more than compensate for native intelligence in producing successful teachers.

Erika Hunt, et. al., *Illinois Grow Your Own Teacher Education Initiative: Formative Evaluation and Preliminary Recommendations*, Center for the Study of Education Policy Illinois State University (prepared for Illinois Board of Education (October 2011).

This article is a “formative evaluation report” on 16 Illinois GYO programs. After identifying emerging patterns, the authors offer five recommendations.

1. GYO projects should begin with a needs assessment from projected teacher vacancies, and target GYO candidates that fill the revealed needs.
2. GYO projects should provide participants support at each benchmark in their training to ensure participants continue to progress.
3. GYO projects should partner with other institutions (e.g., district-level projects with universities)
4. GYO projects should define intended outcomes and evaluate actual outcomes to improve the project.
5. GYO projects should continually look for additional funds from various sources to provide participants with financial aid, scholarships, stipends, etc.

Dorothy Hines and Kayla Mathis, *Regional Specific Incentives for Teacher Recruitment and Retention*, North Carolina Department of Public Instruction, Financial and Business Services Internship Program (July 2007).

Hines and Mathis evaluate existing efforts across North Carolina to recruit and retain teacher is both rural and urban schools. The authors find that successful High school GYO programs provide career education and collaborate with universities and the greater community. They recommend recruiting sophomores to enroll in online education courses (partnered with the university) as juniors, and to earn credit as teaching aids in local elementary and middle schools as seniors.

Preparation Through Partnership: Strengthening Tennessee’s New Teacher Pipeline, TN Dep’t of Educ. (April 2017).

Premised on the conviction that successful teacher pipelines require strong partnerships between school districts and educator preparation providers, the authors analyze current efforts and make recommendations for how to strengthen these partnerships to ensure Tennessee schools have enough high-quality teachers. Their recommendations are summed up in the following infographic.

A Roadmap for District and Teacher Preparation Programs to Build and Sustain Strong, Bold Partnerships¹¹

INITIATION STAGE

- 1** Districts should understand their talent pipeline and discuss these needs with teacher preparation programs.
- 2** Partners should set the initial vision and goals together, with a focus on relationship-building and trust.
- 3** Partners should align on rubrics and key expectations for program graduates.
- 4** Partners should commit to sharing and looking at data together to drive action.

IMPLEMENTATION STAGE

- 5** Partners should jointly select and train mentor teachers and strategically place candidates.
- 6** Partners should ensure coursework matches clinical experiences and district language.
- 7** Partners should communicate and meet frequently.
- 8** Partners should spend more time in schools together.

CONTINUOUS IMPROVEMENT STAGE

- 9** Partners should be open to change and regularly step back to honestly discuss progress and challenges.
- 10** Partners should ensure that district needs drive shifts in teacher preparation programs' pipelines, structures, and systems.

Grow Your Own Teachers Initiatives Resources, Texas Comprehensive Center at American Institute for Research (Jan 2018).

The authors review the literature to answer six GYO-related questions posed by the Texas Education Agency:

Why are districts and states adopting Grow Your Own teacher programs?

The majority of teachers tend to work in schools near their hometowns, indicating that localized Grow Your Own efforts may have merit. The majority of teachers also tend to teach in schools that are similar to those they attended as students, which may negatively impact the quality or quantity of teacher candidates for lower performing schools. Grow Your Own programs, developed in partnership between university-based teacher education programs and local high schools, encourage high school students to consider becoming a teacher. Although these programs may differ in their scope and emphasis, many have similar components, including college visits, college readiness skills, and promoting the teaching profession by tutoring younger children.

What evidence of success for Grow Your Own teacher programs exists?

Little research or literature exists on the success of Grow Your Own programs; most of the information available comes from specific program evaluations, which focus on providing recommendations for continuous improvement, or from anecdotal evidence provided in promotional publications. The available research suggests that many Grow Your Own programs focus on recruiting adults from the local community and face challenges based on the academic

preparation of the Grow Your Own candidates. Programs that focus on recruiting high school students to the profession have shown more success. The cost-benefit of these programs for districts is unclear.

What motivates teachers to enter or exit the teaching workforce?

Many teachers join the teaching workforce because they have a desire to serve or because they enjoy working with children; however, teachers often cite burdensome paperwork or workloads and poor compensation as reasons for leaving. New teachers often prefer to teach in districts close to their hometowns and are more likely to apply to schools with student populations that reflect their own backgrounds. Concerns about safety, perceptions of low pay, a lack of opportunities for advancement, and the difficulties facing education in general are barriers to entering the profession. Teachers cite strong principal leadership, supportive colleagues, and autonomy as reasons they stay in the profession.

At what point would an intervention be most likely to encourage someone to consider the teaching profession?

Studies suggest that high school recruitment programs may be more effective than programs targeting adults to move into teaching. Partnerships between K–12 schools and institutions of higher education (IHEs), including community colleges, are important for teacher recruitment. Community colleges are particularly important entry points for minority teachers.

What factors are most powerful in motivating future teachers of color?

The research shows that the diversity of the teaching workforce is critical for many reasons. Teachers of color who reflect minority students have positive effects on minority student achievement, advanced-level course enrollment, college attendance rate, retention, and school attendance. Though teachers of color also show greater commitment to high-need student populations, they are underrepresented in the teaching workforce, and generally have higher rates of attrition than White teachers. In general, minority students have lower college matriculation rates, reducing the pool of potential teacher candidates. Programs targeting high school minority students to become teachers should consider the nuanced reasons these students may be attracted to teaching, the supports they need to complete a preparation program successfully, and the school culture and support that promote retention.

What factors are most powerful in motivating future teachers in rural areas?

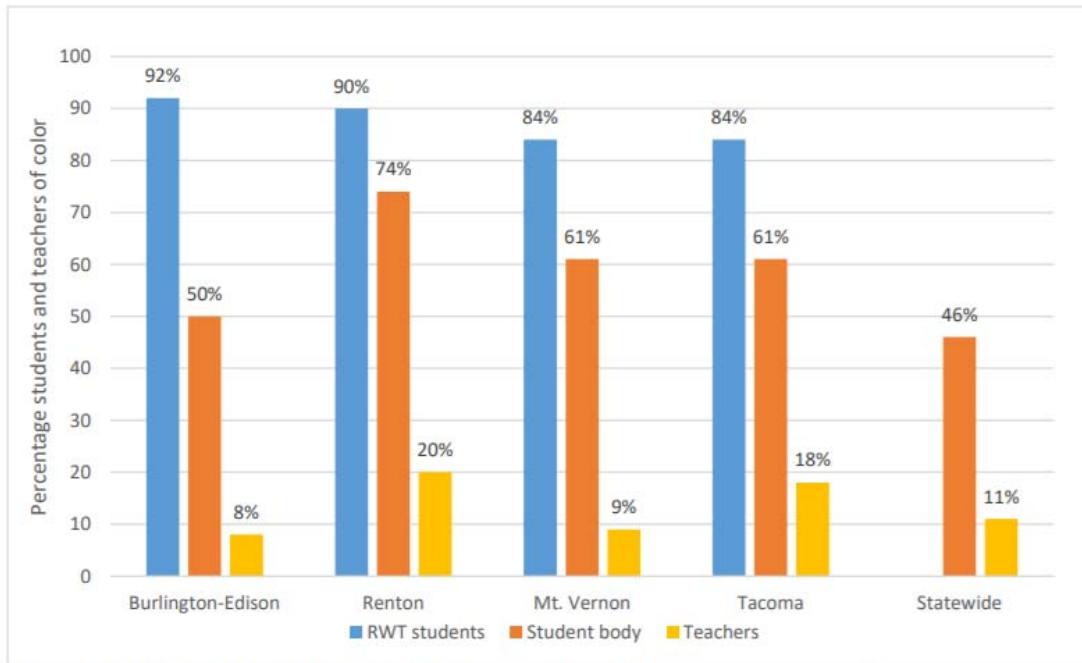
Grow Your Own teacher programs are promising solutions for hard-to-staff rural districts because the teacher candidates are accustomed to a rural lifestyle and have community ties. Emphasizing that teacher candidates will have the opportunity to serve students from the same community may be a successful recruitment strategy.

Beth Greiger & Megan Rosenberg, *Recruiting Washington Teachers: 2017 – 2018 Annual Report*, Professional Educator Standards Board (2018).

Greiger and Rosenberg produced an annual report evaluating Washington State's GYO pilot program, Recruiting Washington Teachers (RWT). The authors sought to answer how well the

program was meeting its three goals/objectives: (1) to increase diversity in the teacher workforce by recruiting diverse RWT participants, (2) to close the opportunity gap by providing an effective curriculum, and (3) diminish the teacher shortage by increasing the percentage of students attending college and studying teaching. The following charts summarize the respective results.

1. Percentage of People of Color in the School Population by Grantee and Subgroup



Source: OSPI State Report Card, 2018; RWT learning laboratory progress reports, 2018

2. Program Components

Students were asked to indicate to what extent the following Teacher Academy program components have helped support them in achieving their academic and career goals.

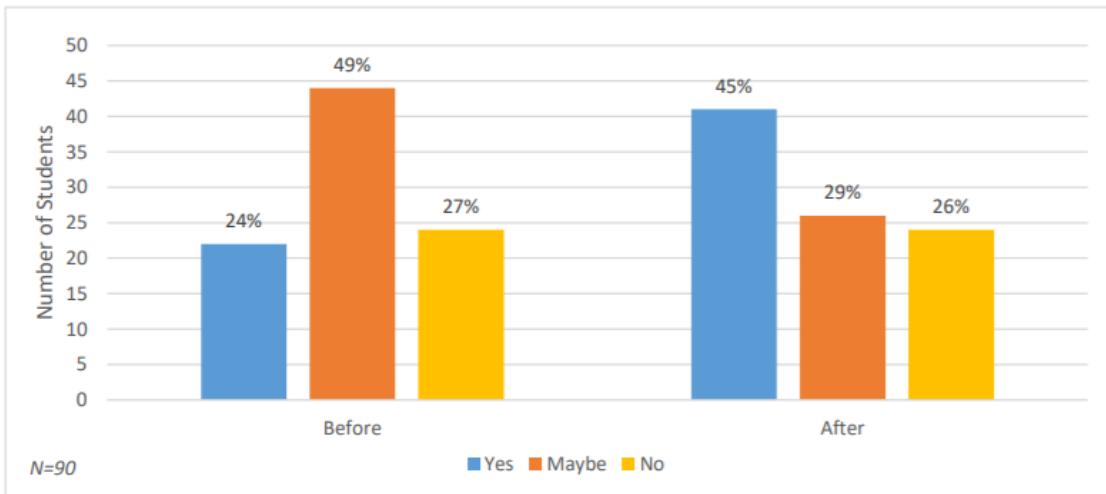
Program component	Total N=**88-92		
	Not at all or Slightly	Moderately	Quite a bit or A great deal
Classroom field experience/practicum	11%	20%	68%
The course itself (curriculum, content)	20%	24%	59%
Advising (working one-on-one with the Teacher Academy teacher to discuss your goals and how to achieve them)	21%	23%	56%
College campus visits	22%	20%	58%
Summer Academy N=18	17%	33%	50%

*Data reported accounting for nonresponse

Source: RWT student survey, 2018

3. College Plans

Students were asked if they were/are considering a career in teaching, before joining the Teacher Academy vs. at the end of the school year



Source: RWT student survey, 2018

IV. Conclusions

A. Current District Efforts.

The District is making significant efforts along three GYO pathways: first, growing its own specialized teachers from the population of general education teachers; second, growing its own certified teachers from the ranks of its non-certified employees; and third, growing its own leaders from the ranks of its certified employees.

Tucson and the State of Arizona both have an African American population of 5%. TUSD employs African Americans for 16% of our non-site administrators and 11% of our site administrator's positions. The percentage of African American and Hispanic administrators has increased for the past three years. This data is shown in the table and graph below.

Non-Site Administrators										
	White		Black/African		Hispanic/Latino		Asian or P.I.		American	
	N	%	N	%	N	%	N	%	N	%
Tucson		45.5%		5.0%		42.6%		3.0%		2.9%
State		54.9%		5.0%		31.4%		3.8%		5.3%
District										
SY 2013-14	28	55%	9	18%	12	24%	0	0%	2	4%
SY 2014-15	23	51%	8	18%	13	29%	0	0%	1	2%
SY 2015-16	32	57%	10	18%	14	25%	0	0%	0	0%
SY 2016-17	32	62%	7	13%	13	25%	0	0%	0	0%
SY 2017-18	26	57%	7	15%	12	26%	0	0%	1	2%
SY 2018-19	23	53%	7	16%	12	28%	0	0%	1	2%

Site Administrators										
	White		Black/African		Hispanic/Latino		Asian or P.I.		American	
	N	%	N	%	N	%	N	%	N	%
Tucson		45.5%		5.0%		42.6%		3.0%		2.9%
State		54.9%		5.0%		31.4%		3.8%		5.3%
District										
SY 2013-14	69	53%	8	6%	50	39%	0	0%	2	2%
SY 2014-15	62	49%	8	6%	54	43%	0	0%	3	2%
SY 2015-16	66	50%	9	7%	54	41%	0	0%	3	2%
SY 2016-17	60	45%	13	10%	54	41%	1	1%	4	3%
SY 2017-18	58	44%	13	10%	56	42%	1	1%	4	3%
SY 2018-19	60	45%	14	11%	55	41%	0	0%	4	3%

B. Key takeaways from the survey and the literature

Our survey revealed three categories of GYO programs across districts nationwide: one, programs wherein high school students enroll in coursework or in-class internships; two, programs where graduating high schoolers receive financial incentives to study teaching, often made contingent on returning to teach in the district; and three, programs where district employees, and sometimes adult community members, are given financial incentives to continue their education in education. Noticeably few districts have programs in more than one of the categories.

Several conclusion emerge from the literature. First, although the literature agrees on the importance of reducing the teacher shortage with diverse recruits, there seems to be very little scholarly research on the effectiveness of GYO programs in accomplishing this. What evidence exists is mostly anecdotal.

Second, the little evidence there is suggests that the most effective GYO programs involve district – university partnerships. Before graduation, districts can offer introductory coursework and, most importantly, hands-on experience for high schoolers teaching in elementary and middle school classrooms. At graduation, districts (working with the university and private donors) can provide financial aid for students to study education in college and make it contingent on the students returning to teach in the district upon certification.

Third, cultural awareness and administrative support can go a long way to keep diverse participants on the pathway to teaching. Transition points along the pathway—like that between high school graduation and college—are when participants are most susceptible to dropping out. Step-by-step instruction from dedicated counselors can help participants navigate administrative hurdles along the way. And helping participants understand their role in advancing social justice can provide the motivation to carry them through to certification, and ultimately, employment in the district.

V. Strategies for Moving Forward

Based on the above reviews, the District has determined that it can most benefit from (a) maintaining and expanding the Make the Move program, and (b) redoubling efforts with the Arizona Teaching Fellows program. TUSD will explore with Pima Community College and the University of Arizona to offer increased financial support to graduating seniors who have shown an aptitude for teaching in exchange for each recipient's commitment to study education and teach in the district for a minimum of three years after graduation.

The District is currently evaluation options to develop a culturally relevant curriculum (CRC) pathway through university work and will begin tracking recruiting effectiveness in that area.

To support the current Make-the-Move programs, the District is planning to collaborate with NAU for a Master's program that will offer an alternative pathway to certification for anyone with a Bachelor's Degree. The NAU program will offer a significant tuition reduction to participants and the District will target existing TUSD staff who hold a Bachelor's Degree and wish to move into the classroom.

Additionally, there is a Northern Arizona University (NAU) cohort planned for the 2019-2020 school year that will offer teachers a second pathway to Principalship. The NAU cohort will be supported by a tuition reduction with a possible District stipend for completion of the program.

In its September 6, 2018 order, the Court directed the District to consider the viability of a pilot GYO program for African American administrators. [ECF 2123, at 42.] This had not been part of the Special Master's recommendation, and came too late to implement for SY18-19, as the budget had been set. The LPA program, however, is a strong foundation on which to build or expand such a pilot. For SY19-20, the District will evaluate an expansion of the LPA program for District Level leadership positions, including the possibility of extending incentives such as hiring and retention stipends similar to those used for the TDP, and support for getting an administrator certification.