Examining Grow Your Own Programs Across the Teacher Development Continuum: Mining Research on Teachers of Color and Nontraditional Educator Pipelines

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Abstract
Grow Your Own (GYO) programs are cited in recent policy briefs as viable pathways for increasing the racial/ethnic diversity of teachers, yet recent scholarship on GYO programs is minimal. To address this issue, this article investigates what we know, and do not know, about GYO programs, by examining a range of data sources on different types of GYO program teacher pools (e.g., middle/high school, paraprofessional, community activists/parents mentors) and making sense of findings over a continuum of teacher development (e.g., recruitment, preparation, induction, and retention). Based on a research synthesis within and across GYO program teacher pools, we argue implications for policy, practice, and research that should accompany increased recommendations for expanding GYO models for Teachers of Color.

Keywords
Grow Your Own programs, education reform, Teachers of Color, equity

Homegrown pathways to teaching have typically offered access to the profession for people of color from varied class, social, and linguistic backgrounds (Tanner & Tanner, 1968). Often times they are community-teachers-in-the-making with longtime dedicated service as parents, school aides, and activists. The notion of the community teacher is grounded within the sociopolitical and historical context of communities of color (Murrell, 2001). Indeed, early trailblazing Black feminist educators like Septima Clark were committed to the liberatory possibilities schools presented for Black youth and marginalized communities at large. And as W. E. B. DuBois (1902) noted more than a century ago, “If the Negro was to learn, he must teach himself, and the most effective help that could be given him was the establishment of schools to train Negro teachers” (p. 1) who were from the communities of the children they served. Although extensive research has documented the value Teachers of Color (TOC) add to the profession (Villegas & Irvine, 2010), less focus has been given to excavating the literature on what works and why it relates to homegrown pathways for TOC. To address this issue, our article describes a literature review on Grow Your Own (GYO) programs and TOC along the teacher development continuum.

GYO Conceptual Grounding and Recruitment Frame
GYO programs are cited in recent policy briefs (Albert Shanker Institute, 2015; Learning Policy Institute, 2016) as viable pathways for addressing shortages and increasing the racial/ethnic diversity of teachers, yet there are few current research reviews available to understand what we know about how these teachers are developed. With this in mind, we worked to identify what knowledge has been produced related to local community-based TOC from nontraditional (i.e., not middle class, in early 20s, or attending college full-time) and often overlooked GYO teacher pools (i.e., local high school students, community activists and leaders, crossing guards, cafeteria workers, social service workers, teacher aides, religious leaders, custodial staff, and parents) in an

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attempt to understand the experiences of TOC who traverse through them, along the continuum. To do this, we frame the design and structure of support offered by GYO programs for TOC as an integrated system taking place across the teacher development continuum—recruitment (i.e., mechanisms that support entry into program), preparation (i.e., curriculum, pedagogy, and structures that support learning), and retention (i.e., mechanisms, such as professional development and mentorship, that support teachers to remain in the profession). We also conceptually situated GYO programs as grounded in grassroots racial and justice movements or initiatives (Irizarry, 2007; Skinner, Garreton, & Schultz, 2011) committed to the academic and professional development of local community TOC (Murrell, 2001). This is consistent with the idea that TOC possess a form of “community cultural wealth” that imbues them with “an array of knowledge, skills, and abilities” (Yosso, 2005, p. 77) to effectively teach Black and Brown youth.

This notion of Community Cultural Wealth (CCW) offers a strong critique of Bourdieu’s widely utilized construct of cultural capital because of the way in which it normalizes White middle class cultural values while pathologizing other ways of knowing. A CCW perspective views the knowledge, skills, and experiences of people of color as valuable assets encompassing six forms of capital including “aspirational, navigational, social, linguistic, familial, and resistant capital” (Yosso, 2005, p. 77). These forms of capital can be applied to understand the strengths that TOC bring to their profession. For example, aspirational capital refers to the way communities of color manage to stay hopeful in the face of seemingly insurmountable challenges. This is consistent with the notion that TOC are likely to possess strong beliefs in the ability of students of color to succeed even when those students face significant personal challenges. This also relates to resistant capital, an ability to persist despite obstacles, and navigational capital, which refers to an ability to traverse social institutions to access resources and achieve goals. For TOC to remain in the profession, they often draw on deep reserves of navigational and resistant capital as well as a combination of social (i.e., collective and fictive networks across multiple community groups) and familial (i.e., family resources and values) capital. Also, the notion of linguistic capital frames multilingualism as strength. TOC who have strong cultural and linguistic connections with their students are more likely to build strong relationships.

Grounded in this conceptual framing of the CCW that TOC potentially bring to the profession, we utilize two primary GYO recruitment frames to organize findings in our literature review: (a) a community-driven focus to increase the number of teachers from the local geographic community (e.g., community activists, parents, and paraprofessionals) and (b) a precollegiate pipeline focus to increase the number of middle and high school students of color entering the teaching profession. GYO programs utilizing these recruitment frames often recruit candidates at the local level who are typically entering undergraduate programs for the first time (or returning after having taken time away; Abbate-Vaughn, 2007; Skinner et al., 2011). In our literature review, we give significantly less attention to college graduate recruitment pools (e.g., mid-career changers, military service officers) for TOC as alternative certification programs, often without a GYO CCW perspective on TOC, have made significant efforts to recruit this group, though not necessarily to teach in the local communities in which they live (Gist, 2017).

Teasing out GYO recruitment frames in the literature sharpens attention to the needs and differences among these subgroups of homegrown teachers, which can expand our nascent understandings of how these teachers are developed. We see our review as a notable contribution to the field because there are little to no current literature reviews addressing the intersection of (a) a specific examination of GYO programs via two specific subgroups of future TOC, (b) an organization and examination of findings related to teacher development along a continuum, and (c) an analysis of findings via CCW framework. In sum, our review represents a novel effort to avoid unintentional replication of research investigations, and advance implications for future studies based on the current literature.

Method

The scope of the literature review is to understand the design and structures that anchor GYO programs, and the experiences of TOC in them. Although there is scholarship investigating particular program efforts related to diversifying the teacher workforce in edited books (Embry-Jenlink, 2012; Sleeter, Neal, & Kumashiro, 2014), research syntheses (Achinstein, Ogawa, Sexton, & Freitas, 2010; Quirocho & Rios, 2000), and special issues (Jackson & Kohli, 2016; Sleeter & Thao, 2007), our literature review specifically examines GYO programs focused on recruiting local TOC through community-focused and precollegiate pipelines. As there are limited research reviews on GYO programs and TOC that explore the variance and commonalities across teacher pools, we examined data sources between 1996 and 2016 to determine what we know about TOC along the teacher development continuum, with a focus on the following questions: (a) What recruitment frames and designs do GYO programs employ? (b) What types of preparation practices do GYO programs offer? and (c) What retention supports do GYO programs implement? Our aim here was to answer these questions based on a synthesis of data sources.

Leech and Onwuegbuzie (2008) conceptualized sources as including a typology of research material to challenge the field to consider a broader definition of literature. In an effort to capture a range of knowledge sources about GYO programs, we used Google Scholar, a search engine that in addition to listing empirical research articles, provides access to multiple source types to assist with developing more nuanced understandings of knowledge produced about Grow Own
Problems over the last 20 years. Thus, instead of solely relying on traditional databases such as JSTOR and ERIC, we sought out what Packard (2007) refers to as “fugitive literature” to find additional sources that “exist outside” of “traditional peer-reviewed” (p. 58) databases, but are still valuable nevertheless. The expansive Google Scholar portfolio offered access to state and federal policy briefs, evaluation reports, and program source documents (e.g., program recruitment booklets and implementation toolkits; Jacsó, 2008). Given the expansive use of the term Grow Your Own and the variety of ways it is applied to different teacher pipelines, we used the following search terms to identify data sources: grow your own and teachers of color, community-based organizations, paraprofessional, high schools, middle schools, teacher education, and men of color. Men of color was included as a search term because there are some efforts in the field to advance gender specific GYO recruitment initiatives, such as a focus on Black males (Jones & Jenkins, 2012). Ultimately, this search resulted in the review of 64 data sources, which included 41 data sources for the school and community-driven pipelines (i.e., 14 empirical studies, five policy briefs, and 22 program source documents, descriptions/book portraits, or evaluations), and 23 data sources for the middle and high school pipelines (i.e., nine empirical studies, two policy briefs, and 12 program source documents, descriptions/portraits, or evaluations).

The source analysis for our review of literature involved the following steps: (a) initial mining of data sources using search terms to identify relevant sources, (b) reviewing identified data source abstracts to determine relevance related to framing questions on GYO and TOC, (c) reading sources and categorizing findings utilizing tables and/or analytic memos related to each component of the teacher development continuum, (d) engaging in constant comparative analysis to identify themes across sources, (e) writing research syntheses on findings for each GYO pipeline, and (f) exploring overarching themes across the GYO pipelines. For instance, findings from the school and community-driven pipeline sources were categorized related to each component of the teacher development continuum, and constant comparative analysis was executed to note emerging themes. After engaging in this process for the school and community-driven pipeline related to recruitment, an emerging theme was that recruitment models are uniquely fashioned to attract nontraditional pools. A CCW analysis was applied to note the type of capital that aligned with the strength-based perspective framing the community-driven pipeline, and comparisons to the precollege pipeline were explored.

Findings: GYO Community and School Teacher Pipelines

The community and school teacher pipelines investigated in our review mostly focused on nontraditional TOC. The program designs were divergent and multifaceted, in terms of institutional initiators and the type of supports offered. As it relates to preparation in particular, several programs noted critical views of education, knowledge, and pedagogy, and invested in the CCW of their future TOC by developing structures and strategies to circumvent the challenges and obstacles they may likely face. Studies pointed to TOC drawing from their CCW to overcome barriers to their professional dreams. Despite these efforts, many TOC did not successfully matriculate through these programs, but the TOC who did graduate remained in the classroom largely due to their ability to draw from their sources of CCW.

Recruitment and Program Design: Seeing and Believing in the CCW of TOC

Recruitment frames for this teacher pipeline typically focus on adult members of the local school and geographic community, such as paraprofessionals, school cafeteria workers, crossing and security guards, and custodial staff as well as parents, community activists, and religious leaders. Federal policies to address social and economic inequity originally created a pathway to the profession for local school community members (Tanner & Tanner, 1968). These mandates for paraprofessionals were connected both to concerns about academic achievement and poverty (Committee on Paraprofessionals, 1977). It is important to note that paraprofessionals are typically identified for career ladder programs after already working in schools for a period of time. This differs from other community recruits such as parents, community activists, and cafeteria workers entering community-based GYO programs through routes other than the paraprofessional pipeline. For example, the original Parent Mentor Program in Chicago, spearheaded by Logan Square Neighborhood Association, sought to first organize parents, mostly bilingual and Latino, in schools through building relational capital and hearing local concerns about the quality of education available to children in their communities (Warren, 2011). The organizers valued the CCW of the parents and believed in their potential to positively impact schools. Eventually, community resource centers were created at local schools, and some parents expressed desire to become teachers, which resulted in a type of parent teacher pipeline that recruited parents (Warren, 2011).

In this instance, the community and school leader recruitment frame situates the social and linguistic capital of teachers as assets that are highly desirable (Madda & Schultz, 2009). GYO teacher candidates recruited from the local school and community pipeline are typically nontraditional students (i.e., not White, middle class, in early 20s, or attending college full-time; Irizarry, 2007; Shroyer et al., 2009). For example, the University of Illinois at Chicago developed Project 29, a partnership with the Chicago Public Schools designed to increase the number of bilingual Latino/a teachers in the school district, to recruit candidates from the community to earn their teaching
credential while working as bilingual education support personnel (Sakash & Chou, 2007).

The importance of thoughtfully selecting people from the community who can successfully transition as teachers was also a strong theme for this teacher pool (Fenwick, 2001). Various programs required different acceptance stipulations, such as provide recommendations by community members (Rogers-Ard, Knaus, Epstein, & Mayfield, 2012), meet scholarship requirements (C. R. Reyes & McNabb, 1998), demonstrate commitment to children and community (Lau, Dandy, & Hoffman, 2007), and have a substantial number of years working as a school and/or community leader (Skinner et al., 2011). In addition, there was a recognition that the selection process needed to incorporate an expansive view of teacher potential (Lau et al., 2007). Rather than viewing teacher potential as a narrow set of knowledge and skills, a strength-based CCW view appeared to characterize the process.

The design of most GYO programs focused on school and community leaders revealed common structures such as offering academic, social, and financial supports (i.e., writing and test preparation workshops, payment for certification exams, tuition assistance, scholarships, living stipends, child care, and transportation supports; Ross & Ahmed, 2016); release time from school (Lau et al., 2007); organizing small entry in cohorts (i.e., 20-40 candidates per program year; C. R. Reyes & McNabb, 1998; Shroyer et al., 2009); counseling and mentorship supports (Becket, 1998; Lau et al., 2007; McCullom, 2011); and flexible time frames for program completion (e.g., ranging from 2 to 8 years; Becket, 1998).

The institutional initiators for the development of GYO school and community leader focused programs varied tremendously, from private foundations (Clewell & Villegas, 1999; C. R. Reyes & McNabb, 1998), school districts (Muller, 2010, 2011, 2012), educator preparation programs (Okezie, Alhamisi, & Glimps, 2016; Sleeter et al., 2014), community-based organizations (Irizarry, 2007; Skinner et al., 2011), federal funding initiatives (Tejwani, Nakamoto, Hoffman, & Flaherty, 2013), union organizing (Abramovitz & D’Amico, 2011), and minority serving institutions (Irvine & Fenwick, 2011). Still, the lead organization typically worked in partnerships with at least one or more additional institutions. For instance, the University of San Francisco partnered with K-12 schools throughout Northern California, the Multicultural Alliance, and AmeriCorps to recruit a majority TOC career-changers to work toward their teaching license while serving as paraprofessionals in their communities (Nuñez & Fernandez, 2006).

In general, the literature suggests nontraditional TOC from GYO school and community-focused programs are less likely to be recruited than other teacher pools. The 2002 Federal Transition to Teaching Grants were administered to take place over a 5 to 6-year period and attracted a variety of different program types (e.g., alternative certification programs and paraprofessional pipelines), institutional bases (i.e., community-based organization, institution of higher education, and school district), and geographic locations (i.e., urban, rural, and suburban). One interesting finding based on this federal funding effort was that new programs tend to gravitate to mid-career changers and college degree holders to recruit teachers opposed to paraprofessionals and community activists without college degrees (Tejwani et al., 2013). This finding is particularly relevant when considering the importance of school and community teacher pipelines that see and believe in the CCW of TOC.

**Preparation: Investing and Drawing From the CCW of TOC**

Many of the GYO programs designed for locally based school and community TOC have conceptual and theoretical frameworks that take a social reconstruction view of education (Skinner et al., 2011), utilize a critical multicultural curriculum (C. R. Reyes & McNabb, 1998), employ an expansive use of knowledge sources (Becket, 1998), and enact culturally responsive and critical pedagogical practices (Lau et al., 2007; Rogers-Ard et al., 2012). These ideological and curricular commitments are connected to concerns about racial and structural barriers aspiring TOC face within teacher education programs and schools. For instance, the CCW of paraprofessionals in the Model Support System for Paraprofessionals participated in Saturday seminars that focused on the familial, social, and linguistic capital of bilingual paraprofessionals by encouraging them to develop their voices about their experiences in the educational system. Based on Freire’s work that views literacy as a humanizing means of empowerment, the seminars worked to counter the silencing of nondominant perspectives through a series of writing experiences (C. R. Reyes & McNabb, 1998). The importance of such pedagogical supports that value nontraditional TOC’s CCW is apparent when compared with research on bilingual paraprofessionals who may encounter unresponsive curriculum and microaggressions in classrooms in traditional teacher education programs (Amos, 2013). Pabon, Anderson, and Kharem (2011) described the Urban Community Teachers Project (UCTP), an effort to increase the number of male teachers in New York City, and noted, at times, men of color struggled to maintain grades and were discouraged by race-blind teacher education curriculum. Navigational and resistant capital are particularly relevant for TOC in the absence of preparation supports.

A review of GYO Illinois evaluation reports revealed that significant numbers of aspiring TOC were counseled out of the program prior to graduating (Hunt, Garndner, Hood, & Haller, 2011; Hunt, Kalmes, Haller, Hood, & Hesbol, 2012; Perona et al., 2013; Perona, LaSota, & Haefele, 2015). Certification exams were identified as a significant structural obstacle for these aspiring GYO teachers, a finding that is consistent with research on racial bias and disparity in teacher performance on exams (Petchauer, 2014; Tyler, 2011). The Teach Tomorrow in Oakland program, a district-based GYO
model recruiting local college graduates of color, highlighted challenges when recruiting Black males by describing the following statistics from one recruitment year: 22 Black males attended an informational session, 15 participated in the interview process, eight did not pass the certification exam, one moved out of state, and one was placed in a fall cohort (Rogers-Ard et al., 2012). Economic exclusion, standardized testing, and racially biased definitions of teacher quality were identified as key factors excluding TOC from the teaching workforce. Some GYO school and community leader programs, such as Call Me Mister (Jones & Jenkins, 2012), focused specifically on recruiting men of color from the local community to undergraduate programs, offered summer institutes, co-teaching internships, and individualized personal development plans to support their successful matriculation. Other GYO programs worked to fight structural obstacles that cause candidates to exit before receiving their degrees by providing test preparation workshops, Friday release days, emergency funds, and requiring midterm grades (Lau et al., 2007).

Aside from structural barriers, relational capital (i.e., the nature of relationships with paraprofessionals and teachers, students, and school leadership) also impacted preparation experiences of individuals in GYO programs. Rueda and Monzó (2002) applied a sociocultural approach (an apprentices model applied by meditating learning through collaborative activities) to interpret the relationships between 32 Latino paraprofessionals (career paraprofessionals, aspiring teachers, and paraparaprofessional turned teachers) to consider the features of productive learning contexts. Power differences, limited opportunity for interaction, and teacher constraints restricted their abilities to build relationship capital that valued assets and encouraged solidarity. In this study, their ability to draw from their CCW was confined in the school setting. Morales and Shroyer (2016) examined the experiences of nontraditional, bilingual, Latinas in a qualitative multiple case study, and found their personal agency to thrive in teacher education programs was prompted by hardships, which resulted in their commitment to enhance the educational experiences and opportunities of culturally and linguistically diverse students. In this case, TOC thrive despite, and not in the absence of, unsupportive preparation and school contexts. These candidates possessed forms of aspirational and navigational capital as they maneuvered through unsupportive institutional contexts.

GYO programs that invested in the CCW of candidates of color worked to address these relational issues through a combination of the following: (a) establishing collaborations across departments and colleges to demonstrate a shared collective commitment to preparation (Ross & Ahmed, 2016), (b) focusing curriculum content on the needs of their school communities (geographic type, racial/ethnic, cultural makeup; Rogers-Ard et al., 2012), (c) creating teacher academies and TOC associations (Robinson, Paccionne, & Rodriguez, 2003), (d) planning classes in the local community (Skinner et al., 2011), and (e) celebrating success and achievement (C. R. Reyes & McNabb, 1998). The findings here are significant for thinking about how preparation and supports can invest and build on the CCW of TOC.

Retention: High Rates Despite Barriers

Even in the face of structural and relational challenges, if GYO school and community leaders complete the preparation phase, the literature suggests they have high retention rates in schools. In this sense, the resistant capital of these teachers becomes evident due to their decisions to remain in the profession despite barriers working to push them out. For instance, recent dissertation studies identify GYO community and school leader program graduates being more likely to stay (McCullom, 2011), possessing strong connections in their schools (Mahan, 2010), and exhibiting professional engagement and commitment (Berecin-Rascon, 2008). Abramovitz and D’Amico (2011) conducted a study on the Leap to Teacher (LTT) program, a paraprofessional to teacher pipeline, and found that almost 60% of LTT teachers remained in the profession and city 6 years later. Lau et al. (2007) described findings from a survey for Armstrong Atlantic State University (AASU) program graduates and noted a 10-year 95% classroom retention rate of program graduates. The researchers attribute the high retention rate to a strict screening process and a provision of mentoring support along the teacher development continuum.

In a follow-up evaluation study of the 6-year Wallace Reader’s Digest project that funded 27 paraprofessional pipelines, Clewell and Villegas (2001) found that of the three teacher pools (emergency certification, Peace Corps members, and paraprofessionals), paraprofessionals were more likely to stay in the classroom. Ross and Ahmed (2016) described a graduate community-focused pipeline program that locally recruits immigrant teachers in the community to teach a growing immigrant population, and discovered 10 to 15 years after graduation, the teachers had close to 62% retention. Fortner, Kershaw, Bastian, and Lynn (2015) found in their study of North Carolina Teaching Assistants that teachers who began as teacher aides first, were more effective in elementary grades in reading and math (i.e., value-added test score gains), and were more likely to remain as classroom teachers, in comparison to teachers without prior teaching experience. Across these program outcomes, it is not yet clear what factors contribute to the variance in retention rates (e.g., 62% vs. 95%) as one report clarifies key factors such as selection criteria (Lau et al., 2007) while others note either only retention rate comparisons with emergency certification programs (Clewell & Villegas, 2001) or teachers who did not have prior experience as teacher aides (Fortner et al., 2015).

Furthermore, the high retention rates do not necessarily indicate the GYO community and school leaders are entering school spaces without challenges, but, rather, these teachers...
may remain and learn to draw on their navigational capital to experience success. Wenger, Dinsmore, and Villagómez (2012) identified the school and neighborhood context as being particularly relevant to the teaching and learning experiences of the Latina paraprofessionals turned teachers, noting the importance of strong university–school partnerships, and collegial collaboration that views teaching as intellectual and community-oriented work. Rogers-Ard et al. (2012) described the need to develop a responsive, community-centered culturally responsive teacher evaluation model that integrates school, district, and university perspectives to redefine race-neutral interpretations of teacher quality. Skinner et al. (2011) described cohort and professional development meetings for teacher candidates and graduates led by community organizers to keep the aspiring and current teachers invested and connected to the program as long as they reside in the community. Looking across the body of literature, however, few GYO school and community pipelines offer tailored professional development supports after program completion.

Funding also arose as an important factor related to retention. The literature revealed a range of financial entities that have advanced the development and expansion of these programs: private foundations (Clewell & Villegas, 1999), state allocations (McAlister, Mediratta, & Shah, 2011), universities funding (C. R. Reyes & McNabb, 1998), and federal grant initiatives (Morales & Shroyer, 2016; Osterling & Buchanan, 2003; Ross & Ahmed, 2016; Tejwani et al., 2013; White, Bedonie, de Groat, Lockard, & Honani, 2007). However, many of these financial resources dictated by private foundations were time sensitive (C. R. Reyes & McNabb, 1998), dissolved over time with shifts in university mission (Ross & Ahmed, 2016), or have been stymied by changes in the political representation at the state level (Skinner et al., 2011). Thus, while program visionaries may value the CCW of TOC from the school and community pipeline, identifying consistent funding sources to support these efforts over time, in particular after program completion, is challenging.

Findings: Middle and High School Teacher Pipelines

The recruitment frames that characterized the middle and high school pipelines were primarily focused on increasing interest in the teaching profession, and not necessarily driven by a commitment to bring more students of color in the teaching profession. The initial recruitment commitments of these pipelines also influenced whether or not a CCW perspective for TOC shaped the focus of preparation experiences. In general, there is little to no research on the types of support offered to retain TOC who graduate from these programs, or the impact they have on their future students.

Recruitment and Program Design: Limited Focus on the CCW of TOC

A report released by ACT (2015) found that the number of high school graduates interested in becoming teachers continues to decline at alarming rates. Only 4% of 1.9 million U.S. high school graduates who took the ACT test indicated an interest in pursuing a career as an educator. Furthermore, more than 70% of those high school students interested in pursuing a career in education were White and predominantly female (75%), indicating a lack of racial/ethnic diversity among those students interested in education. Given that the largest potential supply of future TOC can be found in public high schools around the country (Torres, Santos, Peck, & Cortes, 2004), it is important that we examine early recruitment efforts that seek to encourage high school students of color to consider a teaching career (Tandon, Bianco, & Zion, 2015).

Numerous high school teacher pipeline programs have been developed to encourage high school students to pursue teaching as a profession with the idea of remaining in their communities to teach (Bolich, 2003; Education Commission of the States, 2003; National Education Association, 2009; Recruiting New Teachers, 1993, 1996). More than two decades ago, Recruiting New Teachers (1993, 1996) published several comprehensive reports investigating hundreds of precollegiate GYO teacher recruitment programs. These reports identified more than 250 programs located throughout the United States serving a high percentage (64%) of students of color. Although nearly half of these programs have since closed (Torres et al., 2004), Toshalis (2014) speculates that there could be hundreds of local early recruitment programs that exist outside of state funding structures. Without a current and comprehensive database, it is impossible to know how many programs exist or the number of middle and high school students they serve. The need for such a database was also apparent for community and school teacher pipelines.

The overall goals of many middle and high school GYO programs are to stimulate an interest in a teaching career while also demystifying the college experience (Sleeter & Milner, 2011; Tandon et al., 2015) by providing students with academically challenging curriculum experiences, and in some cases offering college credit. The data sources revealed there is an intentional effort to recruit from within communities, but a critical lens grounded in the CCW of TOC does not typically shape these efforts. This is distinctly different from some community teacher pipeline efforts that made explicit attempts to recruitment TOC and articulate the value TOC bring to local school communities in their program mission (Skinner et al., 2011). The design of most middle and high school pipeline programs starts with a partnership between school districts and teacher preparation programs (Sleeter & Milner, 2011; Torres et al., 2004; Toshalis, 2014). These collaborations provide mutual benefit
between school district precollegiate teacher recruitment programs and their university partners. From the school district’s perspective, partnerships with colleges and universities provide access to resources and opportunities for their students. For colleges of education, the partnership could result in a pipeline to their teacher preparation program. The level of collaboration varies depending on the breadth and depth of the program. For instance, Reed (2007) describes a middle school pipeline project lead by the University of South Dakota School of Education and reservation school, in which teacher candidates work with Native American middle school students to design and co-teach lessons to stimulate an interest in the teaching profession.

Middle and high school GYO programs range in design scope from after school clubs and summer courses to year-long precollegiate courses offering college credit and teaching academies or magnet programs. Students are recruited for these programs through various methods including hosting informational events, career fairs, teaching clubs, and teacher referrals (Reaching New Teachers, 1996). Many programs select students based on a number of criteria including above-average GPA, application essays, and teacher or school administrator recommendations. Because middle and high school GYO programs vary greatly in structure, levels of state or school district support, and types of partnerships with teacher preparation programs, there is no single program description that would serve as a standardized model (Toshalis, 2014).

**Preparation: Scant Curricular Focus on CCW of TOC**

Among the several hundred middle and high school GYO programs reviewed in the literature (Berrigan & Schwartz, 2000; Bolich, 2003; Education Commission of the States, 2003; National Education Association, 2009; Recruiting New Teachers, 1996; Torres et al., 2004; Toshalis, 2014), perhaps the most well-known is the Teacher Cadet program, which was established in South Carolina in the late 1970s (Berrigan & Schwartz, 2000). Since then the program has grown and is currently being offered in some form in at least 33 states (Toshalis, 2014). The Teacher Cadet program is designed for high-achieving high school students and, like other precollegiate GYO programs, students can earn college credit through partnerships with teacher preparation programs while they learn about teaching and participate in a tutoring experience working with young children. Developed by the South Carolina Center for Teacher Recruitment, the Teacher Cadet curriculum, currently in its 10th edition, has been described as “perhaps the most widely adopted and historically successful curriculum specifically constructed for GYO programs” (Toshalis, 2014, p. 226). Also, in a research report on Phi Delta Kappa Future Educators Association, an organization that supports local high school future teacher programs, Ding, Richardson, Gates, and Bickel (2007) found high school pipeline programs often organize activities such as holding teacher appreciation days, shadowing teachers for a day, engaging in community service projects, tutoring students, and taking field trips at nearby universities. Most of these programs, however, do not explicitly build on the CCW of TOC. This differs in contrast to findings of some community leader programs that brought speakers and community leaders to affirm the familial, resistant, and social capital of TOC (Lau et al., 2007; Rogers-Ard et al., 2012) as well as individualized plans that tap their aspirational and navigational capital to stay motivated and focus on traversing the challenges they face (Jones & Jenkins, 2012).

A number of relatively new high school GYO programs have emerged in recent years that were created with the specific intent of encouraging students of color to enter the teaching profession. The Paterson Teachers for Tomorrow (PT4T; Hill & Gillette, 2005), Pathways2Teaching (Bianco, Leech, & Viesca-Mitchell, 2011; Goings & Bianco, 2016; Tandon et al., 2015), and Oregon Teacher Pathway (Villagómez, Easton-Brooks, Gomez, Lubbes, & Johnson, 2016) were created through strong partnerships between universities and school districts, have a college readiness focus, and offer students college credit while they explore becoming a teacher through coursework and field experience. These programs are anchored in strong critical theoretical frameworks emphasizing the importance of CCW. For example, PT4T was a collaborative project between the Paterson, NJ Public Schools, and the College of Education at William Paterson University of New Jersey (Hill & Gillette, 2005). Hill and Gillette (2005) described the program’s foundation as being rooted in theoretical perspectives that “foreground issues of race, class, and gender and power” (p. 45).

Similarly, the Pathways2Teaching program (Bianco et al., 2011; Goings & Bianco, 2016; Mitchell-Viesca, Bianco, & Leech, 2013; Tandon et al., 2015) and the Oregon Teacher Pathway program (Villagómez et al., 2016) were both developed using critical theoretical frameworks. The Pathways2Teaching program, a collaborative project between the University of Colorado Denver and several local school districts, offers a year-long concurrent enrollment program informed by critical race curriculum, critical pedagogy, and sociopolitical development theory. By examining historical and contemporary educational inequities, the hope is that students of color begin to see themselves as holders of important knowledge, experiences, and cultural wealth thereby positioning them to become equity oriented, community responsive future teachers. Herrera, Morales, Holmes, and Terry (2011) described findings from a district recruitment model (i.e., educator preparation program recruited from five local school districts) for culturally and linguistically diverse students that offered a literacy seminar designed for culturally and linguistically diverse students that included differentiated language support for each student as well as authentic
assessments of underlying literacy proficiencies that hone the CCW of students. Despite these efforts, it is clear that middle and high school pipelines, depending on their explicit commitment to preparing TOC, may or may not, draw on the CCW of candidates to construct culturally responsive preparation curriculum that is embedded within the context of the communities they seek to serve.

**Retention: A Vacuum of Placement Outcomes**

Although middle and high school pipeline programs have been in existence for decades, they are not well researched and, as a result, we know little about their long-term impact on recruiting new teachers or diversifying the teacher workforce (Sleeter & Milner, 2011; Torres et al., 2004; Toshalis, 2014). Many of the middle and high school pipeline programs that do exist have not captured comprehensive data on the number of students who have completed the program, achieved state licensure, and entered the classroom as teachers (Torres et al., 2004). Furthermore, there is a great need for follow-up studies on pipeline programs so that we have a better understanding of effective program features and successes (Sleeter & Milner, 2011; Toshalis, 2014). In a recent study, Quinones (2018) found Puerto Rican teachers who traversed through a high school pipeline experienced structural barriers in teacher education programs and schools that at times limited their successful and long-term transition to teach in their communities.

To combat barriers at the educator preparation phase, some school and teacher education partnerships develop or cultivate different types of bridge programs that build on students’ CCW. More specifically, these bridge programs appear to focus on aspirational, social, and navigational capital. Treviño, Hite, Hallman, and Ferrin (2014) described a Latino Educators of Tomorrow program that offered culturally responsive mentoring by Latino mentors for Latino students, which involved discussing family and community experiences, and educational goals, as a mentorship structure for high school students transitioning to college. Survey data from program participants revealed that the mentors’ emphasis on students’ CCW influenced students’ plans to become teachers in the future, but financial obstacles hindered their beliefs that they could become a teacher. R. Reyes (2007), through a study of Mexican women’s experiences in a federally funded College Assistance Migrant Program, found scholarship and mentoring programs can assist students with successfully navigating common obstacles they may face should they decide to enter teacher education programs. Flores, Clark, Claeys, and Villarreal (2007), describing the Academy for Teacher Excellence’s mission to recruit and retain local Latino teachers from the community via a bridge program, emphasized the importance of providing supports for incoming Latino freshman through summer institutes and orientation sessions that acknowledge the central role cultural, linguistic, gender diversity plays in any retention strategies. Further evidencing the importance of program focus on CCW, outcomes from the Herrera et al. (2011) school district recruitment model indicate effective retention approaches, such as the development of strong social networks that integrate a sense of familial membership and wellness, that resulted in 80% of teacher candidates eventually graduating from the College of Education. This is a particularly noteworthy finding in comparison with some community and school leader teacher pipelines that yielded high attrition rates prior to graduation.

While these studies offer a glimpse of what can be possible and is needed with respect to retaining precollegiate students of color from the community as they enter teacher education programs, there is limited research documenting what this process entails, if and where graduates from the pipelines decide to teach, and how long they are retained in their schools. In part, this is reflective of funding issues that often limit the ability of programs to offer teacher development supports on a continuum as many programs cited in the literature are no longer in existence (Toshalis, 2014). Collectively, the research on retention related to the middle and high school pipelines suggests commitments to recruitment outreach research on retention efforts as participants transition to college and universities, and eventually their own classrooms.

**A Discussion of GYO Teacher Pipelines for TOC**

A key goal guiding the development of this literature review was to organize and examine two GYO teacher pipelines to better understand their program features as well as how they function and are formed when focused on TOC. Looking across data source findings from the school and community, middle and high school, pipelines suggest that while recruitment frames may focus on recruiting local community teachers, they may or may not have a CCW view of TOC from these communities. In the literature we reviewed, the school and community pipelines were more likely to reflect CCW commitments whereas, with the exception of relatively new middle and high school pipelines, they were less likely to do so. Part of these differences can be viewed as connected to the varied partners involved in initiating and maintaining these programs, which influences the identified preparatory agency, teacher pool focus, timing of preparation, and program location. For example, at times teacher education programs and ethnic studies programs partnered to tailor curriculum drawing from TOC’s CCW (White et al., 2007), high school pipelines created articulation agreements to offer college credit (Tandon et al., 2015), community-based organizations offered social and professional supports as a buffer against structural obstacles (Skinner et al., 2011), and district paraprofessional programs partnered with teacher education programs to offer student teaching hours during work time in
schools in a responsive fashion (Lau et al., 2007). However, given that an integrated system of teacher development support was not always apparent for middle and high school pipelines, and many community-focused GYO programs did not have clearly articulated commitments from school districts to place teachers, it appears partnerships, though forged, are not always operating in a manner that optimize possibilities for increasing the number of TOC entering classrooms in their local communities (Hunt et al., 2012).

There was also variability in terms of the GYO program selection process as it relates to whether or not a CCW lens was utilized to inform needed supports upon their initial entry and throughout their preparation experiences to increase their likelihood of successfully graduating the program. In particular, for the school and community pipeline, criteria were at times, but not resolutely, tailored to recognize the CCW of TOC (Lau et al., 2007), entice poorly represented TOC (Okezie et al., 2016), and attempt to pre-assess capacity for long-term development (i.e., challenges juggling school, work, family, numerous certification exams) in ways that increase the likelihood of successful program completion (Jones & Jenkins, 2012; Perona et al., 2015). With respect to the middle and high school pipeline, there was a need for open and flexible selection to middle and high school programs to be coupled with the creation of scholarship and mentorship (R. Reyes, 2007) and/or bridge program supports (Flores, Clark, Claey, & Villarreal, 2007) to increase the likelihood of candidates entering and persisting through the program.

The curricular commitments of the school and community pipelines, in some cases, appeared to have a more critical view of education, knowledge, and pedagogy, with their commitments to invest in the CCW of TOC to challenge barriers to their academic and professional advancement. This was less likely to be the case for the middle and high school pipeline, with the exception of the work underway at the Oregon Pathway and Pathways2Teaching programs. Thus, the barriers TOC had to confront required that they draw from their CCW, and look to their programs to alleviate these obstacles. And it appeared that the capacity of programs to alleviate obstacles varied significantly within and across the two pipelines, although the school and community pipeline were more likely to exhibit efforts to build on and affirm the CCW students brought to their programs.

Furthermore, the attrition rates at the preparation stage for some school and community programs ranged between 40% and 50% (Perona et al., 2015), and though not uncommon for nontraditional college students in general, are noticeably high. Thus, looking squarely at and addressing structural factors that contribute to the significant exodus of potential school and community pipeline teachers from educator preparation is critical. It is also worth noting that the available retention data, while limited in general, revealed important retention outcomes for future investigation. With respect to the local school and community teacher pool, school retention was high for paraprofessionals (Abramovitz & D’Amico, 2011; Fortner et al., 2015) and community-focused teachers (Perona et al., 2015). The middle and high school pipeline, however, did not evidence extensive efforts to facilitate the seamless transition from high school to teacher education programs and eventually K-12 classrooms, with the exception of findings from Herrera et al. (2011), and thus, there was a vacuum of data on outcomes.

Finally, as it relates to an integrated system of supports that extend from recruitment to placement in schools, evidence of tailored professional development supports for GYO program graduates was thin. Still, it appears to some extent that TOC from school and community pipelines were able to draw from their CCW in ways that enabled them to remain (Lau et al., 2007), although there was little evidence of program retention supports that continue to invest in TOC’s CCW beyond program completion. While we are not clear on exact numbers of middle and high pipeline students who enter teacher education programs, supports that aid their successful matriculation are vital (Quinones, 2018). A lack of professional development support is also likely connected to the perennial funding issue noted in the data sources, which weakens the stability of programs over long periods of time (Treviño, Hite, Hallam, & Ferrin, 2014). Without consistent funding, it is unlikely that the necessary retention supports can be executed, or research studies conducted to understand the long-term impact of teachers from these programs. In this sense, beginning with the end in mind with respect to the creation of sustainable GYO programs is key as it relates to ensuring a system of supports at each point on the teacher development continuum.

**Implications**

It is clear that additional scholarship is needed to advance the nascent field of study on GYO programs and TOC. As such, we offer the following brief implications for GYO programs committed to the recruitment and retention of nontraditional TOC from the local community.

1. Central to the review findings is the valuing of TOC’s CCW by some GYO programs in ways that affirm their humanity and enable them to persist. This suggests that the application of strength-based and critical frameworks anchoring these pipelines are vital for recruiting TOC from nontraditional pathways. It also highlights the fact that while programs may be characterized as GYO, they may foster different types of experiences for TOC across programs depending on their commitments. There must be selection practices designed to value TOC’s strengths, and curriculum and pedagogy tailored to tap their cultural wealth.

2. While the research suggests GYO program partners can be formed across a range of stakeholders, without thoughtful formations designed to
place GYO program graduates, they may do little to support the successful development of TOC in the profession. Thus, common commitments to the CCW of TOC should be established across partners, such as educator preparation, school district, and community-based organization, to support their retention.

3. There is a significant need for research on nontraditional TOC in GYO programs related to (a) understanding and addressing preparation structures and policies (e.g., acceptance criteria, exam requirements, mentorship) that push out or retain a significant number of aspiring teachers, (b) the types of teacher learning supports needed to develop their academic disciplinary knowledge and pedagogical practice, (c) factors that influence the retention of teachers despite school-based challenges, and (d) empirical and longitudinal studies investigating their impact on student learning, engagement, and school context.

4. Another common theme connected to the need for research is the challenge of long-term funding for many of these GYO pipelines as several of the programs in the review are no longer in operation. It is clear GYO program funding sources must be diversified at the local, university, state, and federal levels for sustainability beyond initial funding periods. The creation of funding initiatives that support the enhancement and development of GYO programs with a long-term vision is needed. Furthermore, funding that supports the creation of databases of community and school teacher pipelines, and middle and high school teacher pipelines, would be beneficial.

5. In lieu of immediate funding for research, or state and federal education policy provisions to spur the development and growth of GYO models, active GYO programs across pipeline types should organize to produce knowledge about their work that extends beyond the program descriptions that are currently available in the literature.

School and community teacher pipelines, and middle and high school teacher pipelines, are poised to offer important innovations to the teacher education field for recruiting and preparing local community TOC. Yet, if these programs are to realize the promise of placing and retaining TOC with CCW that creates valuable connections to and learning opportunities for their students, significantly more attention, in the form of funding, research, and policies, will be needed to actualize their potential to transform students’ learning experiences in our schools. The aforementioned implications are possible guideposts for program developers, policy makers, and researchers interested in advancing GYO programs that create viable pathways to the profession for nontraditional TOC.

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