Exploring an Alternative Teacher Preparation Program: A case of interest convergence

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Abstract

Alternative Teacher Credentialing Programs (ATCPs) in the United States, prepare new teachers in as few as five weeks before they begin teaching in classrooms. Despite their expansion, little is known about how such programs prepare teachers of color (TOC) to teach historically marginalized students in schools. This study examines the preparation of TOC through a fast-track summer preparation program, the central practical experience of one urban ATCP, which has been successful in recruiting TOC. Guided by critical race theory and employing a qualitative case study approach, we examine the history and policy contexts that gave rise to the program as well as the experiences of participating TOC during the program. Our findings suggest that preparing TOC via the short-cut, ATCP pathway, in its current prevalent form, represents interest convergence (Bell, 1980). We call for new alternatives for ATCPs that can meaningfully serve students and TOC.

Key words: *Teacher Certification, Critical Race Theory, Urban Education, Instructional Pedagogy, Structural Racism*

Introduction

In the United States (US) and globally, education systems are often touted as central to elevating marginalized communities towards greater equity, especially economically (Griffiths, 2022; Paris & Alim, 2018). Yet, within neo-liberal structures these education systems function to perpetuate the systemic inequities and maintain the status quo (Griffiths, 2022; Paris & Alim, 2018). Indeed, in the US, education systems and schools have been repeatedly called out for their ongoing harm to marginalized communities, especially communities of Color, indigenous and low-income communities (Gee et.al., 2023; Lleras, 2008; Kozol, 1991). Nonetheless, education systems and schools remain sites of possibilities for greater equity, with teacher preparation playing a critical role in fostering more just and equitable teaching and ultimately learning (Lipman, 2023). That is, taking a critical and democratic approach to teacher preparation can work to shift the settled hierarchies of the current system (Sleeter, 2017).

In the US, teacher preparation programs have seen an ongoing and commoditizing shift. Centrally, Alternative Teacher Credentialing Programs (ATCPs) have proliferated the teacher preparation landscape over the last four decades (Redding & Smith, 2016). ATCPs refer to programs that provide shortcuts to teaching for prospective non-certified students who at least hold a Bachelors degree (Adelman, 1986). Many ATCPs focus on quickly (often in four to five weeks) preparing teacher candidates to teach in classrooms in marginalized communities. This differs significantly from traditional teacher preparation programs that require a year or more to complete and include hundreds or hours of practical preparation. Today, ATCPs enroll approximately 30% of teacher candidates in the United States (King & Yin, 2022).

ATCPs emerged in the late 1980's in the US to address teacher urgent shortages (Darling-Hammond, 1990). The programs were policy driven and aimed to address shortages in high-need subjects, such as mathematics and science, and in high-need schools experiencing shortages of teachers. These acute shortages are especially persistent in schools with large proportions of marginalized students (Zeichner 2017). The emergence of ATCPs shifted the teacher credentialing landscape, which was dominated by university programs where teacher candidates completed credentialing coursework after obtaining undergraduate degrees and prior to entering their own classrooms (Zeichner & Bier, 2015). Alternative certification programs now exist in nearly every state and have become less "alternative" (NEA, 2020).

The proliferation of ATCPs has been largely justified by their potential to address important equity and social justice problems facing the education community (Carver-Thomas, 2018). Nonetheless, within the neo-liberal context of schooling, this goal is situated within settled hierarchies of privilege and norms designed to maintain the status quo (Hall, 2022). Thus, efforts have mainly focused on increasing access for TOC to receive teaching credentials. Indeed, ATCPs do create greater access for aspiring teachers of color (TOC) where traditional programs have difficulties attracting TOC (Berry et al., 2008). For example, candidates of Color and from low-income communities who cannot afford to be out of the workforce for a year are more likely to enroll in ATPCs (Berry et al., 2008). In 2018, completers of ATCPs were 13% Black and 15% Latinx compared with 5% Black and 8% Latinx for traditional programs. Thus, ATCPs have been successful in attracting prospective TOC and helped the teacher education community to address the issue of cultural mismatch between predominantly White female middle-class teachers, and students of color at schools (Rasheed et.

al., 2020). Similarly, for marginalized, primarily school children of Color, addressing equity through ATCPs tends to largely focus on providing more teachers who look like them with little attention to the quality of teaching (Banerjee, 2017). Scholars point out the increasing commoditization of TOC (see Kohli, 2021). They note that simply recruiting more TOC without providing sufficient preparation may position them to perpetuate the existing unjust schooling system instead of contributing to transformative social change. ATCP completers also tend to leave the profession at higher rates than traditional programs, further destabilizing the teaching force (Carver-Thomas, 2018). Currently, there are few empirical studies that examine *whether* and *how* ATCPs prepare TOC to serve students of color to create a more just and thriving future.

The goal of this study is to closely examine *how the central clinical preparation of one ATCP came to be, and in what ways it prepares African American and Latinx teachers to work with marginalized students*. The ATCP is located in a western metropolitan city serving large populations of African American, and Latinx families. The focal ATCP was created to recruit and prepare African American and Latinx teachers to serve marginalized students. In this study, we focus on the ATCP's central practical component, the Summer Preparation Program (SPP). The SPP is a five-week summer clinical experience. Given the racialized focus of ATCPs and with our commitment to better serving marginalized students, we draw upon Critical Race Theory (CRT) to examine who the ATCP serves, how, and towards what ends (Bell, 1980; Milner, 2008).

Literature Review: ATCPs

Alternative pathways of preparing teachers are a contested issue (Zeichner, 2017). Advocates of ATCPs highlight three important problems that ATCPs can address. The first problem is the instability of the teaching workforce at high-need schools. Those schools suffer from high turnover and reliance on substitute teachers, which makes it difficult to create supportive learning environments (Guthery & Bailes, 2022). Advocates argue that ATCPs can stabilize high-need schools by quickly filling vacancies. Second, ATCPs can address the mismatch between teacher and student backgrounds. Most ATCPs are geared to attract TOC (Berry et al., 2008), and research suggests that having more teachers that share the backgrounds of their students can have a positive impact on students' learning outcomes (Carver-Thomas, 2018). Finally, ATCPs also attract nontraditional teacher candidates, and the early-entry nature of ATCPs makes credentialing accessible and affordable (Heath, 2024).

Despite advantages, critics of ATCPs raise concerns about these programs. First, ATCP completers tend to experience higher turnover rates, as much as double the rates of candidates from traditional preparation programs (Redding & Smith, 2016; Guthery & Bailes, 2022). Second, ATCPs have been critiqued for being atheoretical in their curriculum and pedagogy, focusing heavily on classroom management. This focus may contribute to, rather than address, instructional inequity (Zeichner, 2016). Third, critics point out that the "boot-camp approach" of some ATCPs undermines more traditional programs that can better develop teacher candidates' equity stances (Nygreen et al., 2015). Collectively, these critics suggest that ATCPs may undermine public K-12 education, as well as traditional

preparation programs, instead of addressing challenges facing U.S. public education (Zeichner, 2018).

Overall, the research on ATCPs remains scant (Whitford et al., 2017). A majority of research conducted on ATCPs is large scale using datasets about graduates' persistence, and students' standardized test scores (Clark & Isenberg, 2020). Characterized as 'horse-race' studies, many prior studies evaluated their outcomes comparatively with traditional programs. Calls have been made for finer grained examination of ATCPs' components to better understand program nuances (Cochran-Smith et al., 2015). Also, the outcomes of ATCPs, measured by summative indicators (e.g., student achievement, teacher retention) in large-scale studies have been mixed. ATCP prepared teachers have been found to be more effective in increasing student achievement than traditionally credentialed teachers in some studies (Henry et al., 2014) and less effective in others (Jang & Horn, 2017).

There are only a handful of qualitative studies that provide in-depth insights into ATCPs (e.g., Schneider, 2014). A small body of work uses teacher perception data such as interviews and surveys (Consuegra et al., 2014; Swars, 2015). Most of these studies are retrospective and focus on teachers' experiences once they are in their own classroom, providing narratives of graduates' ATPC experiences (Vasquez Heilig et.al., 2021; Souto-Manning & Emdin, 2020). Those studies have found dissonances between ATCPs' stated objectives focused on social justice and equity and what participants report experiencing (Schneider, 2014; Souto-Manning & Emdin, 2020). Examining the substance of the curriculum and instruction in ATCPs, especially their practical components are rare, and have relied on artifacts and materials rather than observations of what actually happens in programs

(Schneider, 2014). The studies that reveal the impact of ATCPs on their graduates can be built upon with an analysis of candidates' preparation experiences (Schneider, 2014; Souto-Manning & Emdin, 2020). These studies leave questions of how and why programs engage candidates as well as the connection between preparation and their classroom practices. Finally, few studies attend to power and race in the context of ATCP preparation and how these programs prepare teachers for a political and racialized schooling system (Cochran-Smith & Villegas, 2016).

Critical Race Theory and Interest Convergence as Analytical Lenses

We draw upon critical race theory (CRT) to examine African American and Latinx aspiring teachers' interactions with educators as they learn to teach during a five-week summer preparation program (SPP). CRT attends to race and power and how they manifest through individual interactions, relationships, and systems (Delgado & Stefancic, 2017). One central component of CRT is the concept of interest convergence (Bell, 1980). Interest convergence perpetuates a White dominant culture in the name of supporting people of Color (POC). For example, Bell (1980) critiqued the landmark Brown v. Board legal decision that desegregated schools in the US. Bell argued that the movement to improve the conditions (in this case educational) of Black people took place when they also served the white population. In the case of Brown v. Board, the decision served the white population by creating a global and public perception of the US as a more equitable country. Nonetheless, one of the repercussions of Brown v. Board was the virtual elimination of the Black teaching population and the move from "separate but equal" to "integrated but unequal." Additionally, today schools are as or more segregated as they were in 1965, due to policies and actions such as redlining and white flight (Orfield & Ee, 2014). Recognizing when and where the

interest of people of Color and White people converge or diverge can provide insights on how equity and anti-racist teacher educators can disrupt racialized power hierarchies through long-term, collective work (Milner, 2008).

Critical race theory has been taken up by educational scholars as a productive approach to examine race and power in education (Ladson-Billings & Tate, 2016). Critical Race Methodology can help analyze power and racialized experiences of teacher candidates in preparation programs, including in science (Mensah & Jackson, 2018). There are several CRT methodologies used in education including counter-narratives which provide voice and perspective against master narratives (Solórzano & Yosso, 2002), and testimonios which provide rich detailed accounts of marginalized teachers (Delgado Bernal, Buciaga, & Flores Carmona, 2012).

A CRT framework is particularly useful in studying the phenomenon of ATCPs, and Latinx and African American candidates' learning experiences facilitated by the summer preparation program for three reasons. First, CRT draws our attention to historical and sociopolitical contexts by which the ATCP came to be and why. Historicizing in education helps reveal the processes of shaping current structures, policies, and practices, by interrogating who they benefit and the narrative that was used to establish current conditions with a critical perspective. This approach also helps desettle dominant narratives that silence the voices of marginalized people in historical contexts (Ledesma & Calderon, 2015). Second, CRT helps us make links among power, positioning, roles, and social structures when examining marginalized people's experiences in an educational setting (Solórzano & Stefancic, 2017). Specifically, CRT put the following questions at the center of the inquiry into African American and Latinx candidates' learning to teach through ATCPs: whether and to what extent teacher candidates' racial identities are

acknowledged or taken up; when, where and how their ideas and voices are taken up; and how marginalized students are positioned in relation to the discipline of science and constructing knowledge. Third, the concept of interest convergence is useful in teacher preparation as "interest convergence can offer teacher education added language and tools to discuss race, its presence, its pervasiveness, and its consequence in the field" (Milner, 2008, p. 333). A premise of CRT is that racism underpins American society. Accordingly, Milner argues that it also permeates the policies and practices in the educational system, such as ATCPs. Understanding how these policies and practices of teacher preparation operate can provide opportunities to disrupt oppressive systems and facilitate work towards a more just educational system. Accordingly, the following questions guide our inquiry:

1. What are the historical and contextual factors that contributed to the development and structures of the focal ATCP and SPP? Who benefitted from the current structure and practices of the focal ATCP program given the historical and contextual backdrops?
2. How does the program prepare aspiring Latinx and African American teachers to teach minoritized students? To what extent and how do they have opportunities to see, notice, and discuss power, racism, and oppression manifested in school settings through interactions, curriculum, and pedagogy during the five-week SPP?

Method

This study employs a qualitative, ethnographic case study approach (Yin, 2013). Guided by critical race theory, we attend to the ways in which racialized power

manifests through deficit ideology of marginalized groups, colorblindness, and meritocracy (Solórzano & Yosso, 2002).

Study Context

We purposefully selected the focal ATCP due to its history of successfully preparing large numbers of TOC for marginalized communities, and high graduate retention rates. In addition, we selected this program because we had access to the history and context for the program's development based on long-term relationships with program staff. The community served by the program is predominantly African American and Latinx, with over 80% of students identified as low-income and over 30% designated as English Learners (ELs; hereafter called multilingual learners, MLs). There is a historical mismatch of demographics between students and teachers in the local large school district that the program serves. The district serves approximately 70% Latinx students in the community with 40% Latinx teachers. The population of Latinx teachers has grown over time but remains underrepresented. Historically, this large district has had high turnover rates, which had been reduced to 25% over 5 years at the time of the study, with some schools losing as many as 20% of teachers annually. The ATCP focused on staffing these high turnover schools. When the study began in 2017, the district reported that 39% of newly hired teachers were not fully certified or credentialed, an increase from prior years, and a reflection of ongoing shortages of qualified teachers in the district, especially in STEM fields.

The five-week Summer Preparation Program (SPP)

The SPP operated from 8:00am-1:30pm, with students participating from 9:00 am-12:00 pm. Each day began with Ms. Aguilar (all the names of participants are pseudonyms), the site administrator, introducing the day and preparation for

instruction. Mentor teachers and candidates, then transition to their classrooms with students, where they initially plan for 30 minutes. Formal instruction then begins, with students participating in fifty-minute classes in three core subjects (science, math, and English) with time for a snack break. Students rotated through each subject, so that all students participated in each subject daily. Each day concluded with a 30-minute subject area debrief, followed by a whole group, 30-minute debrief. The participating high school students were higher achieving students who received A's or B's for their grades. Students who were viewed as low-achieving were placed in a remediation program at the same school. In the SPP's first week, teacher candidates co-taught the lessons with their mentor teachers. From the second week, the candidates taught co-planned lessons individually while receiving feedback.

Participants

In this study, we focused on the preparation of four science teacher candidates, Ms. Jackson, Ms. Jordan, Mr. Beltran, and Mr. Vega (see Table 1). In addition, one mentor teacher, Mr. Labeth (a White man) and a site administrator, Ms. Aguilar (a Latina) participated in this study. Ms. Aguilar and Mr. Labeth were dedicated educators who had prior connections with the program.

Table 1

Participants' Demographics and Backgrounds.

Pseudonym	Race	Gender	Bilingual /Spanish	College	Major	Degree	Subject focus	Prior work experience if any
Mr. Beltran	Latinx	M	Y	Top Tier State University	Biology	B.S. + M.S.	Biology- Gen Ed	Researcher in a laboratory (4 years)
Ms. Jordan	African American	F	N	State University	Public health	B.S.	Biology- Special Education	Tutor and aid for Special Education (3 Years)
Ms. Jackson	African American	F	N	HSBCU	Biology	B.S.	Biology- Special Education	Straight from college
Mr. Vega	Latinx	M	N	Community College/Top Tier State University	Biology	B.S.	Chemistry- Gen Ed	Straight from college, some tutoring experience

During interviews, all the candidates noted that financial considerations impacted their decision to enter the ATPC. Mr. Vega, for example, shared that he "knew someone who took the traditional credential program, and it took him a year and a half, and it was just hard for him to work at the same time." Candidates' initial perceptions of what constituted good teaching were grounded in their own experiences in traditional science classes. For instance, Mr. Vega noted that his favorite professors "were the ones who 80% of the day were doing practice problems, showing you certain pitfalls." All candidates saw teaching as important while expressing the weight and responsibility that came with teaching and not wanting to "mess up."

There were nuanced but important differences among the four candidates in their motivations for teaching. During interviews, the two African American women highlighted their experiences with and their deep concerns about marginalized

students. Both Ms. Jackson and Ms. Jordan talked about the importance of supporting marginalized students and their academic success, rather than just teaching subjects. For example, Ms. Jackson expressed that she wanted to return to her community, therefore showing students that they could go to college and be successful.

Whereas the two African American women were drawn to teaching through their aspiration to become change agents, the two Latinx men were attracted to teaching due to their enjoyment of and success with science. Mr. Beltran and Mr. Vega had experience working in labs and tutoring small groups. When they considered job prospects, they found that they enjoyed teaching science, and their motivation was to improve science knowledge of their students.

Data Sources

To establish the historical and contextual backdrop of the SPP (research question one [RQ#1]), we gathered historical and policy documents as well as various artifacts related to the program. This included prior published articles, handbooks, website content, and other program materials. We additionally conducted two interviews with program leadership to gather information about the program's history and context.

To examine the preparation of teachers to work with minoritized students (research question two [RQ#2]), data were generated through observations, interviews, and artifact collection. The first author made daily observations and field notes from 18 days of the SPP (approximately 72 hours); conducted 21 interviews with the teacher candidates, and an interview with the site administrator (approximately 15 hours total). We also collected various artifacts including daily agendas, debrief

notes, peer observations, presentation slides, lesson plans, reflective journals, and student work samples.

Data Analysis

RQ#1: Understanding the ATCP's Historical and Contextual Backdrops

The analysis began by examining program materials including websites, handbooks, reports, and marketing materials to identify the goals, vision, and mission of the program. We then established a timeline of the program's development and structure through analytical notes on the historical and contextual backdrop that led to the establishment and growth of the SPP. In these notes, we identified the program goals and its participants over time, and the role that national and local policies played in shaping the SPP. Guided by the CRT framework, attention was paid to what drove program development, the growth of the program, as well as the shaping of instruction and pedagogical approaches (Solórzano & Stefancic, 2017; Milner, 2008). Specifically, we attended to power and race by focusing on what was privileged in the process of the program's decision making. Triangulation of the initial analysis and chronology was facilitated through interviews and additional artifacts collected (Hatch, 2023). The analysis resulted in a detailed historical timeline that unveiled the power dynamics and its shaping of the current SPP.

RQ#2: Examining the Type and Nature of African American and Latinx candidates' Experiences: Opportunities to See, Notice, and Discuss Power, Racism, and Oppression

To analyze the four candidates' experiences in the SPP, we first reviewed field notes, interview transcriptions, and artifacts while generating memos. We used the Cultural-Historical Activity Theory (CHAT) framework (Greeno & Engeström, 2013) to define the unit of analysis ('an event') and systematically describe the candidates' experiences in activities. CHAT drew our attention to how the candidates in the SPP were positioned and worked together in a community, what tools were used by the participants, and rules and community norms operationalized in the settings. . A total of 498 discrete events were identified from the data set. An example of an event was when Ms. Aguilar demonstrated an attention-getter to the teacher candidates during the whole group briefing to get the teacher candidates to look at her. The goal was to teach the candidates how to get students' attention through the model she provided.

All 498 events were organized into three groups: 1) The whole group meeting; 2) the planning and instruction; and 3) the small group reflection. A total of six codes emerged from the 82 events in the whole group meeting, four codes from 337 events in preparing and teaching lessons, and six codes from the 79 events of the debriefing meetings (see Table 2). Together, this systemic and descriptive characterization of 498 events helped describe the events of the five-week SPP, as well as the educator's priorities. We first focused on the 463 events that represented activities with goals that *could* provide candidates opportunities to see, notice, and discuss power, racism, and oppression related to experiencing or practicing teaching as part of candidate learning. Thirty-five events did not provide this opportunity.

Table 2

Descriptive Analysis of 463 Events Focusing on the Work and Activities of Teaching.

Whole group meeting: **Experiencing teaching as students** (*n*=82, 17.7%)			**Planning and instruction: Practicing teaching** (*n*=375, 81.0%)			**Small group reflection: Reflecting their instruction** (*n*=79, 17.1%)		
Codes	*N*	(%)	***Codes***	*N*	(%)	***Codes***	*N*	(%)
Procedures, policies, and logistics	41	(50.00)	Enlisting student participation	204	(54.40)	Managing students	43	(54.43)
Tools and strategies	20	(24.39)	Managing student behavior	71	(18.93)	Designing and refining instruction	20	(25.32)
Lesson planning	8	(9.76)	Attending to curriculum	65	(17.33)	Attending to student thinking	7	(8.86)
Community building and spirit	7	(8.54)	Attending to student thinking	35	(9.33)	Getting to know students	3	(3.80)
Context for teaching	4	(4.88)				Master teacher sharing about his career	3	(3.80)
Attending to student thinking	2	(2.44)				Connecting SPP to University work	3	(3.80)
Total	82		Total	375		Total	79	

Next, in-depth qualitative analyses were conducted using ‘key events.’ By key events we mean the events that reveal the opportunities and missed opportunities for candidates to see, notice, and discuss power, racism, and oppression in teaching. Two researchers, one female immigrant scholar of Color and one White

male teacher educator conducted analyses through weekly meetings over the course of a year. The researchers had a combined experience of over 20 years of teaching science in marginalized communities and working to prepare preservice teachers. Informed by the CRT framework, the following questions guided our analysis 1) When and how were candidates' and students' lived experiences and racialized identities, attended to, if at all, and how they were positioned within the SPP; 2) What were the program-recommended tools, skills, and practices, and how were their functions and purposes communicated, for whom and toward what ends; and 3) Whose voices and experiences were validated or silenced in the process of learning to teach?

Findings

We first present our analysis of the historical context of the program, attending to policy level and systemic forces that led to the creation and current SPP design. Next, we describe the four candidates' experiences and interactions in the 5 weeks long summer preparation program

Historical and Contextual Backdrops of the ATCP and SPP

The focal summer practical program (SPP) emerged from the success of an existing out-of-school weekend tutoring program started in the late 2000's. It was designed to address a persistent math 'achievement gap,' in particular for African American and Latinx students. The achievement gap issue was prevalent in the local educational community. In the program, students would meet for a few hours on Saturdays at local schools and were tutored by aspiring teachers from the partner university under the supervision of local classroom teachers. This approach was viewed as win-win-win, providing remediation for students, teaching

experience for aspiring teachers, and leadership experience for current teachers. Students who participated in the program showed higher gains in state standardized math exams compared with similar students who did not participate in the program. Thus, the program was credited with improving student outcomes.

The Premise and Motivation of the Program: Addressing "Urgent" Local Needs

A convergence of three urgent needs was to be addressed through the ATCP and SPP. These needs arose from national and state policies and were also internalized in the local schools, driving teacher preparation and interventions. Those needs were: 1) recruiting more TOC 2) recruiting more STEM and SPED teachers; and 3) producing resilient teachers who would persist in teaching under conditions that were viewed as difficult. As a program administrator shared,

> *Our candidates know that they're going into school sites that have a history of a revolving door for teachers. They know that they're signing up for very difficult assignments but they also know that the rotating door is not good for students and these students are as deserving as any other. They're special because we ask them to be very resilient and we look for that.*

These needs created a challenging situation for the SPP staff, who had less than five weeks with the teacher candidates.

A Program that Quickly Prepares Resilient African American and Latinx Teachers: Responding to Historical Needs

The stated mission of the ATCP is to "increase the number of credentialed teachers in STEM education," with a focus on increasing STEM visibility in schools through leadership and service. The program explicitly focuses on and partners

with high-need schools. For the SPP specifically, program leadership identified three goals, with the overarching goal of improving the learning opportunities of primarily African American and Latinx low-income students. Specifically, the SPP aimed to: (a) improve student learning and interest in STEM, (b) provide teacher candidates with pedagogical instruction and supervised field experience before they enter their own classroom, and (c) improve instructional practice of mentor teachers while providing leadership experiences. The time constraints placed on the SPP made working towards these goals extremely challenging. Ms. Aguilar, the site administrator, repeatedly shared challenges around time constraints with the summer program. For example, while referring to multiple tasks to prepare candidates, she shared that "it's time management on my piece, like we barely have any time, we got a little bit of time in the morning, and a little bit of time in the afternoon."

Who benefits and how from the structures of the SPP and how?

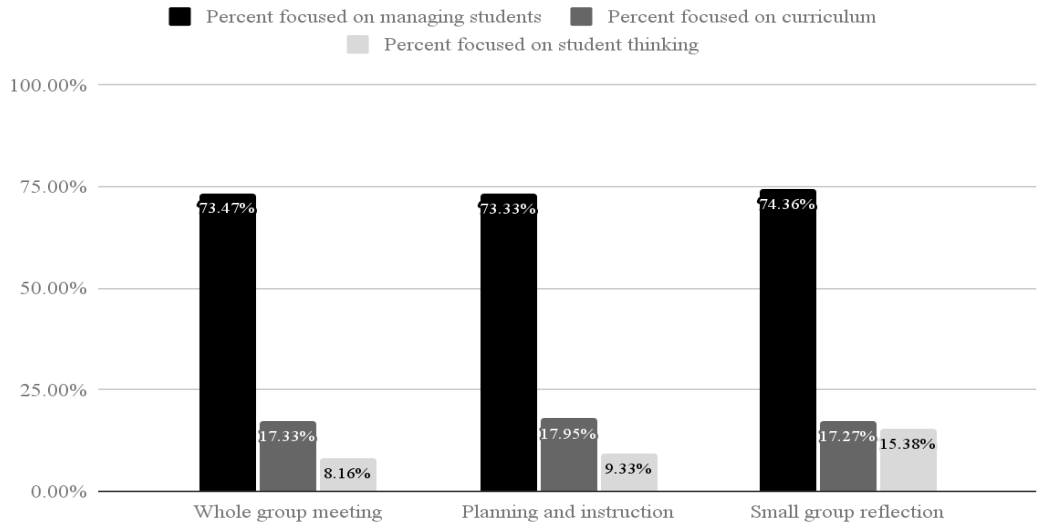
Based on the historical background and structures of the SPP, local schools, especially those with extremely high need for teachers, benefited from the program by filling open options with TOCs. The program itself reported that it was meeting its mission of supporting the needs of local schools and attracting more TOCs. The fast-track nature of the SPP created access for TOCs to enter the profession who may otherwise not have entered teaching. Nonetheless, there are questions raised about the quality of instruction that candidates were likely to provide and the potential long-term impact on students based on a short five-week practical preparation program.

Four Candidates' Experiences in the SPP-- (Missed) Opportunities to See, Discuss, and Act to Disrupt Power and Oppression

Our analysis of all SPP activities indicated that the learning activities during the SPP were primarily focused on supporting candidates to create an orderly classroom. About 75% of instruction related events focused on behavior management or enlisting student participation (*n*=345 out of 463 events; see Figure 1 below). In those activities, candidates were introduced to, or used practical tools, such as lesson plans, warm-ups, and student share-out routines. The candidates' attention to student compliance was also evident in their own classroom observations like "Students are all facing the front of the classroom" noted by Mr. Beltran. These priorities were reflected in the candidates' discourses as well. For example, Mr. Beltran, one of the Latinx teacher candidates, said that "I definitely want to get class management skills down." Of the 463 instruction related events, less than 10% focused on student thinking (*n*=43 out of 463, 9.3%; see Figure 1 below). Notably, the focus on managing behaviors and maintaining the orderly classroom echoed the priorities emphasized by local schools, program leaders, and participating teachers as noted in the prior section.

Figure 1

Focus of Activities in the SPP Across Settings



Note: The above percentages are based on a total of 463 events, 49 in whole group settings, 375 in planning and instruction, and 39 in small group reflection.

In the following, we present two events that illustrate the typical daily experiences of the candidates. Guided by our analytical framework, each vignette showed how power and race played out in practices across multiple settings. The first vignette focuses on candidates' positioning as learners of teaching during the whole group morning meeting. The second vignette illustrates the interactions between candidates with their mentor teacher as they prepare for instruction, and with students in a classroom as they taught lessons. We analyzed the ways in which power was operationalized through planning and in-the-moment classroom interactions over the content.

Vignette #1: We Need Tools to Ensure MLs' Participation and Fix Their Deficiencies

Each day began with a whole group meeting led mostly by Ms. Aguila at 8:00 am. Ms. Aguilar, as noted previously, was well aware of programmatic constraints, especially time, in leading the group. Of the 82 whole group morning meeting events, approximately half (40 out of 82 events, 48.8%) related to policies and procedures, such as reviewing schedules, and professional conduct expectations, which were marginally relevant to teaching itself. Among the 42 whole group events, approximately half focused on introducing tools and strategies (20 out of 42 events, 48%). Ms. Aguilar introduced various instructional tools, such as warm-ups and share-out routines using an '*experience, learn,* and *do'* routine. Eighteen of these tools and strategies segments occurred in the first two weeks of the SPP and two in the last two weeks.

The following vignette illustrates typical interactions during the morning whole group meeting. The observation took place on the third day of the SPP. The meeting was set up with three small tables, seated by subject. Each small group consisted of one mentor teacher and four to five candidates. In the focal vignette, Ms. Aguilar introduced a new strategy, a 'whiparound' to facilitate small group discussion and whole group share-out. She described it as "strategies you can implement in your lessons to address the [ELL] needs we identified."

Ms. Aguilar: What I want you guys to do is whiparound. The point of a whiparound is to hear other people and what strategies they called out… What are the strategies you called out to address [ELL] student needs? And we are going to do the 'compare and share' piece… so you can lengthen your list of strategies to support students. So whip around one person at a time. Let's start with the person with the shortest hair.

[The science group began sharing amongst themselves]

Mr. Beltran: So one strategy I think we can implement for the students who are still learning English is allowing them to use Google translate, so they can see the instructions in both English and Spanish.

[Google Translate was introduced the prior day by the science mentor teacher Mr. Labeth, which Mr. Beltran demonstrated to the group.]

Mr. Vega: I like the strategy where you bold the important words, so that students who might not be familiar with them know what's important, and students that maybe don't know what the word means, know that it's important for class.

[Mr. Vega shared a strategy he had learned the prior day during the meeting.]

Ms. Jordan: I was thinking of what I did yesterday, which was having the question on the board, as well as saying it. I did it in the beginning, but not at the end, and I had to keep repeating it. So if it's up there, they have that, ok, I hear and I also see it.

[Ms. Jordan shares an idea from her own experience teaching the prior day, having seen a positive impact on student learning from doing it.]

Ms. Jackson: I think that visual and tactile materials, if I was going to a new country, I might not understand words and symbols, but I could understand pictures. So maybe if you can make a connection between pictures and words, that's an easy way to learn vocabulary.

[Ms. Jackson put herself in students' shoes with her idea, leveraging her own experiences both as a student and world-traveler.]

In this first part, we see that Mr. Beltran and Mr. Vega, the two Latinx men, shared tools that were introduced by the program. In contrast, Ms. Jordan and Ms. Jackson, the two African American women, shared ideas based on their own experiences seeing students learn.

Ms. Aguilar brought the class back to the whole group discussion. She asked the designated spokesperson from each group to share some of what was discussed in the individual groups. Ms. Jordan shared out for the science group:

Ms. Jordan: So one of the important [strategies] we thought about was putting translations next to English text so that you can compare and you're able to match up vocabulary words from their language to English.

Ms. Aguilar: Can you also share what Mr. Labeth (mentor teacher) showed you guys?

Ms. Jackson: Yeah, it's an app that you can put on street signs. And it translates for you.

Ms. Aguilar: What's it called?

Mr. Labeth: It's called Google Translate. It can translate from any language back and forth. So any text you can just put your camera over it, and it will convert the words into the words of the other language...so that students can get the gist

Ms. Aguilar: I love it, just in terms of our personal use if you're traveling this summer anywhere...I know it's great for conversation…

Ms. Jackson presented the synthesis of their small group conversation by combining candidates' ideas. She noted ML students' difficulties in connecting two different languages to the meaning of vocabulary words. She suggested ways

to connect two languages by physically juxtaposing them. In this exchange we see that Ms. Aguilar highlighted a tool introduced by Mr. Labeth and shifted the share out away from ideas that embodied both personal experiences and program tools. Instead of leveraging the two African American women candidates' voices and lived experiences, she highlighted the program-recommended tools and strategies. This work of privileging program-recommended tools and strategies was repeated across the whole group morning sessions observed in this study.

Overall, this vignette reflected three salient patterns we saw across the events focusing on supporting ML students. First, the majority of conversation was focused on using strategies to help ML students to assimilate or decipher the dominant language. Throughout all the events, we rarely saw candidates discussing how to leverage multilingual students' linguistic and cultural assets to support their learning. In this setting, multilingual students were referred to as "English Language Learners," the official labeling that highlighted deficiency (Martínez, 2018). With this language, ML students were unintentionally positioned as a group that did not have what they needed to learn STEM subjects (González-Howard & Suárez 2021). Second, the tools and strategies were presented in a generic way. There was little attention to either students' backgrounds or disciplinary learning. This may be a result of the morning discussion's audience of candidates across disciplines. Notably, there were few further connections to disciplinary learning and students' backgrounds in the disciplinary meetings that followed the whole group. Third, through the discourses (either intentionally or unintentionally) students were essentialized by failing to attend to their communities, histories, and backgrounds beyond ELL or speaking English. It is notable that this silencing of the history and experiences of ML students was also reflected in the ways in which candidates' own interactions were facilitated in this setting.

Vignette #2: Teaching is All About Routines and Following a Roadmap

Planning and teaching a science lesson took place after the whole group meeting. Candidates had ~30 minutes to prepare the day's instruction. It was followed by three 50-minute instructional periods teaching the same lesson. Candidates in pairs typically alternated teaching each period (usually Ms. Jackson with Ms. Jordan, and Mr. Beltran with Mr. Vega). Planning and teaching were central SPP components, where the candidates worked directly with students. The descriptive thematic analysis of 337 events observed during the planning and instruction showed that the majority of candidates' interactions focused on maintaining an orderly classroom by planning or enacting various strategies to make sure students were on task (n=190 out of 337, 56%). About twenty percent of the events focused on behavior management (n=66 out of 337, 19.6%). Relatively few events reflected candidates' discussing the substances of students' science learning, such as working on curriculum (n=45 out of 337, 14%) or student thinking (n=35 out of 337, 10%).

The lessons observed throughout the 5-week SPP generally had the same routine. Typically, a lesson started with a warm-up question, taking attendance, students sharing-out, a combination of direct instruction and activities, and ending with an exit ticket. This routine was first presented by Mr. Labeth and became the norm of running instruction with little conversation about *how* and *why*. Early on, all of the science teacher candidates agreed to use the same strategies for consistency and to limit student confusion. The candidates took up the instructional structure and routines quickly. The following illustrates the co-planning and teaching activities on the third day of the SPP. Ms. Jackson and Ms. Jordan, co-designed and co-taught a lesson in the first period, then each taught one of the following two

periods. This vignette illustrates the processes and shifts between periods towards more student hands-on time.

Sticking to the Roadmap for Planning. During the morning small group meeting, Ms. Jackson and Ms. Jordan showed Mr. Labeth their 5E lesson plan, a tool that he previously introduced. Following the instructional routines, their lesson was designed as follows: a warm-up, teacher direct instruction on the definitions of simple machines, teacher describing the function of simple machines, students exploring each of the six simple machines at a station, and students completing an exit ticket. During the 30 minutes of planning time, Mr. Labeth and the two candidates discussed this lesson plan for about 15 minutes. As illustrated in the following, Mr. Labeth used the 5E model to provide his feedback on the candidates' lesson plan.

Mr. Labeth: When I look at this station type activity [where students would explore simple machines], you're not doing a lot of front loading, you're not teaching up front, right? you're not saying "hey, this is a simple machine." [Instead] You're telling them "you're exploring each station, and seeing how those work"

Ms Jackson: So you think we should do the stations first, and then we go over whatever they are?

Mr. Labeth: So that's a good question. Do [should] they do the stations first before you go over them? If you're looking at a 5E model, what is the first part of 5E?

Ms. Jordan: The engagement.

Mr. Labeth: Right, the 'Engage and Explore.' So that's not you talking, that's not you telling. Right? What is the role of the teacher in that first 'explore' piece?

Ms. Jordan: Just a facilitator, to observe the lesson, asking questions.

Mr. Labeth: And what are students doing?

Ms. Jordan: For exploring? Actually looking at the activities, making predictions.

In this exchange (and many events that we observed), Mr. Labeth identified an instructional problem in relation to the tool, the 5E model in this case. The focus was primarily on following the 5E lesson plan, giving privilege to this instructional model. Based on the conversation, the candidates decided to shift the lesson sequence, moving the hands-on activity before 'going over' the content. The modification of the instructional design was justified primarily in reference to the following 5E model.

Starting with a Real World 'Hook.' During the first period, a warm-up question was presented asking students how they would transport a heavy box home. This question was developed by Ms. Jackson and Ms. Jordan in an attempt to create a real world scenario that students could relate to, and was modeled by Ms. Jackson with a box full of notebooks.

Ms: Jackson: What if you had to carry this box home? [points to the box] You're walking, nobody is picking you up, no bike, how are you going to get this box home?

Student 1: I would carry it.

Ms. Jackson: You're going to carry it the whole way? You must live across the street! How about this table [Moving to another group]? How would you carry it home? [3 second pause] Carry it on your back? Carry it on your head?

Student 2: I would use a dolly

Ms. Jackson: A dolly? Possibly [Ms. Jackson then shifts to the classroom activity]

Ms Jackson: I don't want you guys to play with this stuff just yet [There was a simple machine set-up at each table], because I don't want anything to happen, but we just want to shift, take about 30 seconds at each station. So just look around and see what it is that might help you to take your box home.

In this exchange, Ms. Jackson elicited student responses about how to get a heavy box home. She moved from the *Engage* to the *Explore* of the 5E. The exchange provided two students with opportunities to share their ideas. It is notable that students' ideas that were directly relevant to the lesson (using a dolly) were not taken up. Despite the direct connection to the focal investigation of the lesson and the potential to build upon students' ideas, the students' ideas were rarely taken up throughout the observations. It appeared that the candidates were rather mechanistically moving through the 5Es' to complete the lesson than working to engage students meaningfully as originally intended by the 5E framework. .

Teaching with Tools and What Counts as Student Engagement. During the *Explore stage of the lesson*, students in small groups spent approximately two minutes at each of the six stations with a simple machine, guided by the prompt of familiarizing themselves with the machine and how it might help them get the box home. This was followed by a brief share out and direct instruction illustrated in the following exchange, where Ms. Jackson talked about one simple machine, the wheel and axle.

Ms. Jackson: [Picks up the wheel and axle] How would this help you guys? Carry it from one place to another?

Student: You can push it, it will help you roll it.

Ms. Jackson: You can just roll it, what's something else you could do?

[Two other students shared ideas]

Ms Jackson: What else would you use a wheel and axle for?

Ms. Jordan: In real life.

Student: A car

[Ms. Jackson then describes how wheels and axles are part of a car.]

Ms Jackson then transitions to presenting slides projected on the board.

> *Ms. Jackson: Work, scientifically, is when you apply force to an object and it moves in the direction of that force. When you push that box home you're working, that seems like work to me. So what are the two things that make things eligible to be work?*

In the share out, students had opportunities to interact with simple machines and share ideas. Similarly to the morning meeting where teacher candidates had opportunities to share out, the students' share-out was typically one- or two-word responses followed by teachers' presentation of a "scientifically" correct definition of the key term (i.e., work). There were rare incidents where students exchanged their ideas to build upon each other.

While enacting this lesson, the candidates noticed that the students were disengaged, in particular during the lecture. Subsequently, they decided to shorten the lecture and expand the hands-on activity, interpreting that the problem was having a long lecture. As a result, students came to have roughly triple the 'hands-on activity' time to work at their stations. There was neither substantive change in the lesson content nor the ways in which it was presented to students except a shorter lecture and more hands-on time. The instructional shift focused on explaining more about machines that students appeared to struggle with, responding to their needs (like the wedge and the screw). We did not hear discussion about which machines would be most effective individually or together to help take the heavy box home.

This vignette illustrates two patterns from the candidate's lesson preparation and instruction throughout the SPP. First, there is a focus on tools such as the 5E lesson plan. With efforts to follow instructional norms using the tool, the candidates

designed a lesson with little attention to student thinking and ideas. Second, while enacting the lesson, the candidates encountered various problems that could be educative moments for them, such as students' seeming disengaged. The problem tended to be interpreted in a simplistic way, such as 'too long lecture.' This appeared to limit opportunities for candidates to explore and develop their knowledge and practices of teaching the subject in a way of supporting deep and powerful learning.

Discussion

Based on the analyses, we argue that preparing TOC via the short-cut, ATCP pathway, in its current prevalent form, represents interest convergence in the name of equitable instruction and equitable teacher preparation (Bell, 1980). We unpack this claim by discussing the patterns emerging from the analysis. Specifically, we discuss three ways in which the ATCPs came to represent interest convergence: (a) by building on a problematic foundation of deficit perspectives toward marginalized students, (b) through constrained structures and resources of the ATCP that limit aspiring African American and Latinx teachers' robust development, and (c) by unproblematically endorsing colorblind curriculum and pedagogy that marginalizes teacher candidates of color as well as students of color.

Building on a Problematic Foundation of Deficit Perspectives of Marginalized Students

The focal ATCP came to represent interest convergence by grounding in narrowly defined meanings of successful teacher preparation and student learning. Our critical analysis of the historical genealogy of the program reveals that such

narrowly defined meanings of success were rooted in deficit-laden assumptions and colonized notions of people of color.

The primary measure of success in the focal ATCP was the preparation of additional TOC *quickly*. This was evident from the ATCP's mission statement that highlighted increasing the number of marginalized STEM teachers and STEM visibility at K-12 schools as an important goal. The ATCP was seen as successful for routing TOCs into classrooms in 'high need' schools. Indeed, the ATCP attracted and prepared African American and Latinx teachers. The idea of 'success as more Black and Brown teachers' largely reflected an outgrowth of policies at multiple levels, including granting agencies and local education agencies. The goal of recruiting more TOC also reflected the notion of race matching as a way of addressing educational inequity (Cherng & Halpin, 2016). As demonstrated by the analysis of the 463 instructional events of the SPP, candidates' preparation, however, provided limited opportunities for the TOC candidates to see, notice, and challenge racialized schooling systems and structural inequity; let alone opportunities to develop culturally sustainable, responsive practices that support powerful learning of students of color in urban communities. Kohli (2021) notes that simply recruiting more TOC without providing appropriate and sufficient preparation is merely a commoditization of TOC which further dehumanizes the schooling system. The fact that TOC, who brought critical perspectives about the schooling system, were positioned to reproduce the status quo of the unjust schooling experiences is troublesome.

In addition to the narrowly defined meaning of success of teacher preparation, in the focal ATCP, student success was primarily framed as improvement in standardized test scores. Low student achievement on standardized tests predicated

the foundation and growth of the ATCP. Within this narrowly defined meaning of student success, students were portrayed as lacking interest in STEM as rationale for the program's curricular approach. Recall that one of the central missions of the program was to increase student interest in STEM as well as improve knowledge. Thus, the students in the local schools, mostly from marginalized communities, were implicitly positioned as deficient and disinterested in STEM, and there was little programmatic attention to power and structural issues that undermined students' interest and success in STEM. The deficit perspectives were extended to the schools that teacher candidates were expected to work in, framed as "tough", "challenging", and "hard to staff" schools, as evident from the discourses across program documents and the people who facilitated the SPP. The perspectives ultimately worked as justification for an overarching programmatic focus on compliance and managing student behaviors in order for the teacher candidates of color to "be resilient in such tough schools."

In short, deficit-laden assumptions toward POC and their communities, which were projected in the narrowly defined meanings of success of teacher preparation and student learning, helped fuel the growth of ATCPs. Grounded in this problematic foundation, the program helped diversify the teaching workforce–an important reform goal supported by both White and non-White people–but it stopped there. The ATCP represented interest convergence by producing more TOCs but providing little preparation for them to challenge, disrupt and reimagine educational experiences that are essential to meaningfully serve marginalized students in urban schools.

Structure and Resources of the ATCP that Limit Teacher Candidates of Color' Robust Development

The structure and limited resources of the SPP, including limited time, appear to be one main contributor making the SPP representing interest convergence. Well-meaning and dedicated educators attempted to do the virtually impossible, to prepare novice teachers for their own classrooms in just five-weeks of practical experience. The analyses reveal that constrained by structure and limited resources, the SPP contributed to reproducing the current injustices experienced by marginalized students in K-12 settings. Problematic structures undergird the ATCP and SPP constraining them by time and urgency grounded in a call to quickly prepare African American and Latinx teachers to meet urgent (for the upcoming school year) local needs. The tensions revealed by the dedicated program leadership to meet this need with limited resources highlighted the structural constraints that the educators within the SPP must contend with. Ms. Aguilar perhaps captured it best in her exasperation of having to prepare candidates "in just five weeks," with mandates and expectations focused on classroom management. Our analysis revealed that approximately half of the events analyzed in the whole group meeting focused on logistics and the candidates' own compliance with rules (see vignette one). Similarly, recall Mr. Labath only had a few minutes to meet with Ms. Jackson and Ms. Jordan before they taught their lesson in vignette two. During that short period of time, he focused on following the lesson plan structure. The heavy emphasis on learning how to manage student behaviors, that was justified by the need to prepare teachers within five weeks, further showed how the structure and resources constrained the candidates to develop pedagogically toward equitable teaching. Limited time, external compliance requirements, and pressures to focus on maintaining an orderly classroom left little room to attend to the

complexity of supporting student learning and seeing students beyond caricatures and shallow labels.

The SPP's structural constraints were consistent with preparation programs that have been critiqued for perpetuating inequity. Zeichner (2017) for example, called for programs to stop sending teachers with minimum preparation and limited pedagogical training to underfunded schools, where they would teach scripted curricula to raise standardized test scores. The program's design itself, made it virtually impossible for the educators to create spaces to critically think, reflect, experiment, and re-imagine meaningful disciplinary learning of marginalized students, while providing an easier pathway for African American and Latinx candidates to become teachers. The structural and resource constraints fundamentally limited the opportunities for African American and Latinx candidates to develop robust conceptual and pedagogical tools to create powerful learning contexts for students of color. All in all, this raises the question of who the ATCPs are serving as they continue to grow in the landscape of teacher preparation.

Curriculum and Pedagogy that Marginalize the Voices of Teacher Candidates and Students of Color

Lastly, the ATCPs came to represent interest convergence by unproblematically endorsing colorblind curriculum and pedagogy that marginalizes teacher candidates of color as well as students of color. Our analyses show that interest convergence materializes pedagogically in the day-to-day activities of the SPP. Throughout the five weeks of activities we did not see any substantial attention to or conversations about students' backgrounds, ideas, or deep intellectual

engagement. This marginalization of the voices of teacher candidates and students of color was evident from the observed interactions across all three vignettes.

In vignette one, we saw the programmatic inattention to the participants' lived experiences with Ms. Jackson and Ms. Jordan. Privileging the use of program-recommended tools and strategies over candidates' ideas was recurring throughout the SPP. Similarly, in the second vignette, when a Latinx student mentioned the idea of using a dolly to move a heavy box home, the candidates missed the opportunities to meaningfully connect disciplinary learning with students' daily lives by acknowledging and building upon those ideas. This was not problematized in the later debriefing meeting. Throughout the five weeks, we rarely saw any events where candidates were guided to think about how to listen, honor, and leverage student ideas, cultural practices, home languages and experiences–one key feature of equitable instruction (Ladson-Billings, 1995). The pedagogy that the candidates were exposed to effectively erased and devalued students' home languages and cultures with narrow views of language and discipline, which in turn contributed to perpetuating the supremacy of English as the language of power.

Notably, in both our high level event analysis and the vignettes there was an overwhelming focus on *doing* or *what* of practice with little attention to the *why* of practice. We saw a classroom management approach, that is devoid of attention to context and students' diverse backgrounds, which feeds into a dominant and punitive structure that has been previously problematized as harmful to marginalized students (Milner & Tenore, 2010).

The focus on '*what' of practice* extended to routines evidenced in the instructional sequence of vignette two. Routines are certainly important to the classroom and

instruction. However, the fact that nearly all activities focused on the routines and maintenance of order raises questions. In our analysis of the 337 planning and teaching events, over three quarters of events (n=256, 76%) focused on maintaining an orderly classroom. Similarly, candidates' work of planning a lesson focused squarely on following a prescribed instructional approach (i.e., 5E model). The model could be productive if it was used as a tool for organizing student experiences in a way of guiding student thinking as it was originally intended. The focus of 'what to do' as prescribed in the 5E drew candidates' attention away from students' ideas and their lived experiences. Over time, we saw this instructional approach was reflected in the candidates' practice as well as their conceptualization of what good science teaching was. As evident from vignette two, candidates came to embrace the simplistic idea of 'more hands-on, less lecture is good.'

In short, the African American and Latinx teacher candidates left the SPP with some management tools, but they did not have the conceptual and pedagogical tools to purposefully understand, reach out to, and support students of color by disrupting the status quo. They were not made aware of, or equipped with resources to attend to their own identities, or the identities and histories of their students and the communities they would be teaching in. This fed into the candidates largely taking a dehumanizing pedagogical approach and the colorblinded science curriculum. By associating successful teaching with student compliance and on-task behaviors, these candidates were either intentionally or unintentionally positioned to reproduce existing inequitable science instruction that continuously marginalized students of color. The way students in nearby communities were supported based on the limited preparation appear to amount to "oppression with a hug" (Simmons, 2021).

Conclusion

The prevalence of ATCPs begs the question of how 'alternative' they are, given their proliferation in teacher preparation. We see this in the growth and expansion of the SPP. This trend is reflected nationally, where enrollment in traditional teacher preparation programs has nearly halved since 2010, whereas ATCPs have grown from accounting for 13% of teachers prepared in 2010, to 25% by 2019, with most ATCPs not affiliated with institutions of higher education (Yin & Partelow, 2020). The urgent teacher shortages that ATCPs aim to address have existed for decades. That is, we need teachers every year, and meeting annual needs does not seem to address the long-term shortage. In this respect it can be argued that ATCPs are working to deprofessionalize teaching by providing very limited preparation.

The mixed outcomes of ATCPs coupled with our findings raise questions about the need to find alternatives to 'alternative' programs. In recent years, residency programs, which provide candidates with stipends and offset preparation costs have shown promise in attracting TOC and providing them with a full year of preparation under the guidance of a mentor teacher. These programs have been both federally and state funded, and are more costly than alternative preparation programs, but are likely to provide better preparation. Similarly, accelerated four-year Bachelor's degree plus credential programs have been growing, allowing candidates to complete their undergraduate degrees and credentials in four years, reducing the time and cost of preparation. These programs, though more accessible financially, are extremely demanding on students. Additional research should be conducted on both types of programs, and exploration of other alternatives that

work to disrupt current preparation systems that perpetuate inequity in both preparation programs and in K-12 classrooms.

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